PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL COMMITTEE, ODISHA HELD ON 30TH JANUARY, 2024

The SEAC met on 30th January, 2024 at 03:30 PM by Virtual mode (VC) through video conferencing in Google Meet under the Chairmanship of Sri Shashi Paul. The following members were present in the meeting.

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

CONSIDERATION OF OLD PROPOSALS (COMPLIANCE RECEIVED):

The compliances furnished by the proponents were verified by the members through e-mail and also proceedings of the meeting were confirmed by the members through e-mail. The decision of the committee on case-to-case basis as follows:

ITEM NO. 01

PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S M G MOHANTY (PATABEDA IRON AND MANGANESE MINES) FOR PATABEDA IRON AND MANGANESE MINES FOR EXPANSION OF PRODUCTION OF IRON ORE FROM 180000 TPA TO 572305 TPA ALONG WITH CRUSHING AND SCREENING PLANTS OVER AN AREA OF 19.425 HA LOCATED AT VILLAGE PATABEDA UNDER KOIRA TEHSIL IN SUNDARGARH DISCTRICT OF SHRI RAJIV LOCHAN MOHANTY-EC

1. This proposal is for environmental clearance of M/S M G Mohanty (Patabeda Iron and Manganese Mines) for Patabeda Iron and Manganese Mines for expansion of production of iron ore from 180000 TPA To 572305 TPA along with crushing and screening plants over an area of 19.425 Ha. located at village - Patabeda under Koira - Tahasil in Sundargarh District of Shri Rajiv Lochan Mohanty.
2. **Category:** This is a Category – B project which falls under schedule 1(a) - Mining of Minerals as per the EIA Notification 2006 and amendments thereafter.
3. **Mining Lease details:** Initially, Patabeda Iron & Manganese mining lease was granted over 19.425 ha. on 03.04.1986 to M/s M.G. Mohanty for a period of 20 years by Department of

Steel & Mines, Govt of Odisha. M/s M.G. Mohanty is a partnership firm, having its registered office at 2A, Forest Park, Bhubaneswar-751009, District - Khordha, Odisha. Sri Rajib Lochan Mohanty is the Managing Partner and lawful attorney of M/s M.G. Mohanty, Since the mining lease have been extended for 50 years in all total w.e.f. 03.04.1986 to 02.04.2036 as per section 8A (3) of Mines and Minerals (Development and Regulation) Amendment Act, 2015. So, Supplementary lease deed has been executed on 01.08.2016. Total lease area comprises of 19.425 ha., out of which, 16.507ha is of forest land and 2.918 ha is of non-forest land.

Particulars	**As per EC granted on 09.01.2007**	**Proposed for expansion**
Method of Mining	Opencast semi-mechanized method involving blasting with single shift basis.	Open cast fully-mechanized mining method with double shift basis.
Production Capacity	1, 80, 000 TPA	5, 72, 305 TPA (542625 TPA iron ore from Excavation + 29680 TPA Saleable iron ore from re-handling of dump)
Water requirement	15 KLD	30 KLD
Solid waste	1802 m^3 / month	319916 Ton/ Plan period
Mineral Beneficiation	There is one no. of Crushing unit of 120 TPH& one mobile screening unit of 250 TPH exists in the lease area. (CTO obtained)	Additionally, one mobile crusher of 250 TPH and 250 TPH mobile screening unit are proposed.
Project cost	2.0 Cr.	20.0Cr.

4. Earlier, environmental clearance for production of 0.18 MTPA of iron ore has been obtained vide letter no - J-11015/41/2006-IA.II (M) on dated 09.01.2007 from MoEF& CC, Govt. of India.

5. **TOR Details:** Terms of Reference (TOR) was issued by SEIAA, Odisha vide proposal no. – SIA/OR/MIN/77960/2022 on dated 03.11.2022.

6. Modification to the review of mining Plan has been approved by the Indian Bureau of Mines, Bhubaneswar on 16.03.2022 for a period from 2022-23 to 2025-26 by the Indian Bureau of Mines, Bhubaneswar.

7. Site specific wildlife conservation plan has been approved 01.07.2009. The recent additional water demand will be sourced from nearby Ground water source. So, NOC for drawl of ground water has been obtained from CGWA for 30 KLD. Consent to operate for operation of mine has been obtained from SPCB, Odisha, which is valid till 31.03.2026.

8. Total lease area comprises of 19.425ha., out of which, 16.507ha is of forest land and 2.918ha is of non-forest land. Out of total forest land, 15.622 ha has been accorded forest clearance vide no: 5-ORC039/2007-BHU on dated 17.08.2009 and the rest safety zone of

0.885 ha has been applied for FC as per OM vide no - FC-11/151/2022-FC on dated 07.11.2022.

9. **Public hearing details:**Public hearing conducted successfully on 09-05-2023 at 10:00 A.M at Football Play Ground of Patabeda Village under Koira Block of Sundargarh District. Issues raised during public hearing were air pollution and mitigation measures, water pollution and management, blasting&ground vibration, plantation &soil erosion, employment and peripheral development issues.TotalRs 300.0 lakhs will be spent towards Public hearing demand under CER Activities in 5 years.

10. **Location and Connectivity**: The proposed mines is located at Mouza – Patabeda, Tahasil – Koira, in Dist – Keonjhar, Odisha with Khasra no/Compartment no – 24/202, 24/203, 24/204, 26/197, 26/198, 26/199, 26/201, 27/189, 27/190, 27/191, 27/200, 27/205, 26/196/248. The site is bounded by Latitude:21^{0}55'45.15980" to 21^{0}56'01.68076"N and Longitude: 85^{0}22'21.57196" to 85^{0}22'35.98813"E, bearing toposheet no. F45 N/5. The mine is accessible from Koira town (on NH-215) in Sundargarh district covering a distance of 17 km all weather road. The mine is also accessible from Joda town in Keonjhar district covering a distance of 27 km consisting of 17 km between Joda&Jaribahal and 10 Km between Jaribahal& the mine. Nearest NH is NH 215 - 9.0 Km; Nearest Railway station is at Barbil – 41 Km; Nearest Railway Siding is at Juruli: 6.5 Km; Nearest Air Port is at Jharsuguda: 150 Km; Nearest Air strip at Tanto @ 12.0 Km; Nearest Water bodies – KakarpaniNala –1.5 KM – W, SunaNadi – 3.0km – N , Baitarani River –6.5 km –E. Nearest Reserve Forest - Siddamath RF –3.0km– NW&Baitarani RF –4km –NE.There is no Wild Life Sanctuary or National Park within the study area of 10 km. However, Karo - Karampada elephant corridor is located at about 15.0 km from the mine lease area

11. **Total Production:**

Year	Total Handling (t)	ROM Quantity (t)	ROM Quantity Saleable Mineral (t)	Total dump handling (t)	Recovery of Saleable Mineral (t)	Total Saleable (t)	Total Iron Ore to be produced (t)
2022-23	180750	166950	166950	80136	29680	**196630**	**196630**
2023-24	548775	431575	429450	80136	29680	**459130**	**461255**
2024-25	495850	493050	437550	80136	20440	**457990**	**513490**
2025-26	542625	542625	531750	55188	29680	**561430**	**572305**
Total		**1634200**	**1565700**	**295596**	**109480**	**1675180**	**1743680**

12. **Method of Mining & Mining plan details:** Open cast fully-mechanized mining method will be adopted with the deployment of machines like wagon drill, Compressor, Hydraulic excavators & Tippers etc. Bench height of 10m and minimum width of 10m are proposed to achieve the enhanced production target and the bench slope will be kept nearly vertical (80^0) with horizontal. The operations will be on double shift basis with deployment of 100 mm diameter blast hole drills for loosening of hard rock mass, 2.1 m^3 capacity excavators for excavation, 2.1 m^3& 1.5 m^3 excavator for feeding and loading, 25 tonne to 35 tonne capacity dumpers for transportation of ROM ore to the screening and crushing plant and waste to the

waste dump. There is one no. of crushing unit of 120 TPH & one mobile screening unit of 250 TPH exist in the lease area. One more mobile crusher of 250 TPH and mobile screening of capacity 250 TPH are proposed.

13. Land use:

Particulars	Area put on use at start of proposed period(ha)	Land use at the end of proposed Modification period(ha)
Area under mining	6.5	7.066
Waste dumping	1.138	1.838
Mineral Storage	7.065	5.38
Infrastructure ()Workshop/Administrative building etc.	1.048	1.278
Roads	0.824	1.024
Mineral Separation Plant	0.6	0.6
Magazine	0.05	0
Garland drain, Retaining wall, Settling Tank etc.	0.91	0.949
Greenbelt	1.29	1.29
Total	**19.425**	**19.425**

14. **Waste generation and management details:** Total 133800 t of OB materials will be generated from ROM and 186116 t of waste from re-handling of dump will be generated during plan period. A total of 68500 t of mineral reject will be generated from the ROM.As re-handling of Dump-1 will be continued in the plan period, dumping of generated waste will be carried out on dump-3. Maximum height of the terrace will be kept 10m and individual terrace slope will be maintained 37°and overall slope will be maintained 28° with the horizontal. No liquid effluent will be generated at mining site. Domestic waste water generated will be treated in septic tank followed by soak pit. This mine is based on zero discharge concepts. Protective measures like retaining wall, garland drain & settling tank have already been built up around the waste dump and quarry. However, maintenance and cleaning work will be continued during this plan period. In addition, retaining wall and garland drain have been proposed for waste dump.

15. **Baseline study details:** Baseline environmental data generation in and around Patabeda Iron & Manganese mines has been carried out during March to May, 2022 (summer season).

- **Ambient Air Monitoring** - Ambient Air Quality was monitored at the eight (8) locations, during the monitoring season with the frequency of monitoring for 2 days per week at each sampling station. The AAQ analysis indicates that the concentration of PM_{10} varied from 52 to 80 µg/m^3, $PM_{2.5}$ from 31 to 50µg/m^3, SO_2 from 4.3 to 17.5 µg/m^3, NO_X from 9.2 to 21.0 µg/m^3 and Benzene,BaP. Ni, As, &Pb were found below detection limit.
- **Ambient Noise level** - Noise monitoring was carried out at 8 locations as per the standard prescribed by CPCB. Noise level varies from 42 to 71 dB (A) during Day

time and 36 to 67 dB (A) during Night time, which are below the prescribed limits of CPCB.

- **Water Quality Status** - Water quality sampling was carried out at 8 locations as per the CPCB standards out of which 4 locations were of Surface Water & 4 locations were of Ground water.
- **Surface water Quality** - pH values varied between 7.05 to 7.21 while Turbidity varies from 0.03 to 5.9 NTU, Dissolved Solids varied from 158 to 258 mg/L, Dissolved oxygen varies from 5.2 to 6.8 mg/L, BOD varied from <1 to 3.0 mg/L and Chloride values varied between 8.0 to 12.0 mg/L. Iron values varied from <0.05 to 0.543 mg/L and Nitrate values varied from 1.05 to 1.93 mg/L..
- **Ground water Quality** - pH values varied between 6.90 to 7.61 while Turbidity ranged from 0.5 to 4.98 NTU. Dissolved Solids varied between 132 to 266 mg/l and total hardness varied from 89 to 161 mg/l. Chloride values varied between 9 to 16.0 mg/l. Calcium values varied between 15.0 to 36.0 mg/l, Zinc values varied from 0.050 to 0.261 mg/l & Lead, Copper, Manganese, Fluoride, Mercury, have been observed below detection limit.
- **Soil Characteristic** - Soil samples were collected once during study period from 4 locations within the study area. The bulk density of soil samples varies from 1.2 to 1.8 gm/cm^3; while porosity varies from 34 to 42.5 %. Potassium ranges from 0.04 gm/cm^3 to 0.18 gm/cm^3, Sulphate ranges from 0.01 gm/cm^3 to 0.02 gm/cm^3, Nitrogen ranges from 0.07 gm/cm^3 to 0.1 gm/cm^3 and SAR ranges from 0.59 gm/cm^3 to 0.75 gm/cm^3.

16. **Total water requirement & wastewater management:** The total water requirement will be 30 KLD comprising 20 KLD for mining & dust Suppression, 5 KLD for greenbelt and 5 KLD for domestic use. No liquid effluent will be generated at mining site. Domestic waste water generated will be treated in septic tank followed by soak pit. Mine will be operated in 'Zero Discharge of liquid Effluent'.
17. **Power requirement:** The power requirement for the mining complex (including office) shall be around 50 KW. The supply of electrical energy for the mine site shall be sourced from TPWODL and 3.08 KW from Solar system, which has already been installed. Apart from it, around 1000 litres of diesel will be consumed for running the mines vehicles per month.
18. **Rainwater harvesting details**: Three numbers of settling ponds of capacities 1472 m^3, 1176 m^3 and 858 m^3 has been constructed to arrest the surface runoff water in side lease area. A big catch pit of 55m length x 20m width and depth varying 5m to 10m has been constructed outside lease area for storage of rainwater. Additional garland drain of 280 m and retaining wall of 110m proposed for expansion.
19. **Greenbelt details:** A Green belt over 1.290 ha.has been developed by planting native species in consultation with the local DFO around the ML area. Over 1.411 ha.of land of existing dump slope, land between dump, pit and road has been planted

with native plant species. A total of 18738 plants has been planted. A total of Rs 37.30 lakhs has been spent for plantation.

20. **Employment details**: Directly 138 persons and indirectly more than 300 people will be employed by the project.

21. **Project cost**: Total Cost of the Project is RS. 2000.0 Lakhs. EMP capital cost is RS. 50.0 Lakhs, and Recurring Cost is RS. 50.0 Lakhs and CSR Cost is 300.0 Lakhs.

Sl No	Particulars	Capital Cost (in Lakhs)	Recurring cost (in Lakhs)
1	**AIR POLLUTION CONTROL**		
	Mobile water sprinkler	12.0	5.0
	Fixed water sprinkler	5.0	1.0
	Dry fog system for crusher & Screen	15.0	2.0
	Maintenance of Wheel Washing Facility	-	1.0
	EMC Manpower		10.0
	Misc.		1.0
	Sub-Total	**32.0**	**20.0**
2	**WATER POLLUTION CONTROL**		
	Construction of retaining wall/garland drain, check dam &Settling Pond	8.0	3.0
	Construction of water harvesting pond	4.0	1.0
	Maintenance of ETP & STP		3.0
	Misc.		3.0
	Sub-Total	**12.0**	**10.0**
3	**NOISE POLLUTION CONTROL**		
	PPE, Lubrication etc.	--	2.0
4	**ENVIRONMENTAL MONITORING**	--	10.0
5	**PLANTATION**	6.0	5.0
6	**OCCUPATIONAL HEALTH MANAGEMENT**	--	3.0
	Sub-Total	**6.0**	**20.0**
	Grand Total	**50.0**	**50.0**

22. **Environment Consultant**: The Environment consultant **M/s Srushti Seva Private Limited, Nagpur** along with the proponent made a presentation on the proposal before the Committee on 20.11.2023.

23. The SEAC in its meeting dated **20-11-2023** decided to take the decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
i)	The present proposal is for expansion in production of Iron ore whereas the material storage area and magazine area has been	The area of mineral storage is a dynamic feature i.e. based on availability the unused area can be utilized for the purpose. The guideline of Indian Bureau of Mine in this regard is enclosed as **Annexure-A**. At present the mineral storage yards are on the unutilized area over 7.65 ha which

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	reduced and no area is proposed. Justify how the proposed area will be adequate for the proposed material storage and magazine and submit the layout showing the storage area, magazine area with area dimensions.	shall be reduced to 5.38 Ha during 24-25 as part area of mineral storage shall be utilized for other purpose. Also, at present the mine is operated in one shift which will be 2 shifts after enhancement of production due to which dispatch will be more on a regular basis and for a longer duration as compared to the present dispatch pattern and requirement of stacking of ore shall be less. In view of the same the mineral storage yard has been in the proposed plan shown less than the earlier plan area. The plan approved by Indian Bureau of Mines, Govt of India is enclosed for kind reference where the area and layout have been clearly shown (**Annexure B**).
ii)	Details of previous rejects/wastes generated from previous production. Total proposed quantity of sub ore/waste is being planned to sell in the proposed expansion to be duly certified from Director of Steel and Mines.	Till date around 1,20,000 tonnes of waste have been produced from mining operation which have been stored in Dump 3 & Dump 4. Similarly, a total quantity of 394661 tonnes of wastes have been stored in Dump 1 & 2 which contain sub grade ore to the tune of 32% (analysis report of NABL lab enclosed As **Annexure C**) and are marketable at the present scenario. Due to this planning has been made to re-handle these dumps which has been incorporated in the mining plan and has been approved by IBM, Bhubaneswar. The table No 4.3.3 at page 53 & 54 of the approved mining plan is attached for kind reference (**Annexure D**). Department of Mines, Govt. of Odisha has already communicated regarding classifications of Iron ore dumps and alienation of sub-grade minerals therefrom in its letter MXXIC-59/11/14601/DM dated 30.12.2011. Copy of the letter enclosed as **Annexure-E**.
iii)	Copy of mining plan and Consent to Operate indicating the approval of the selling/re handling the overburden/wastes.	Till date our production is within the Environmental Clearance quantity of 180000 tonne/annum of saleable ore. However, for selling/re-handling of waste, mining plan is duly approved by IBM, Bhubaneswar. The table No 4.3.3 at page 53 & 54 of the approved mining plan is attached for kind reference (**Annexure D**) and CTE from SPCB obtained (**Annexure-F**). The CTO will be applied after obtaining EC from SEIAA, Odisha.
iv)	Details of Over Burden (OB) generated in previous mining and its management. Further, explain the process of separation of sub ore from wastes, commercial utilization of collected sub ore after separation and its management.	Till date around 1,20,000 tonnes of OB/waste have been produced from mining operation which have been stored in Dump 3 & Dump 4 with due terracing supported by retaining wall and garland drain. Similarly, a total quantity of 394661 tonnes of wastes have been stored in Dump 1 & 2 which contain sub grade ore to the tune of 32% (analysis report of NABL lab enclosed As **Annexure C**) and are marketable at the present scenario. Due to this, planning has been made to re-handle these dumps which has been incorporated in the mining plan and has been approved by IBM, Bhubaneswar. The table No 4.3.3 at page 53 & 54 of the approved mining plan is attached for kind reference (**Annexure D**). It is planned to segregate the saleable material through eye estimation substantiate with regular chemical analysis of both

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		the saleable and waste materials. This practice is followed by nearby mines of Sundergarh and Keonjhar districts. After due separation of material, the wastes shall be dumped in the dump yard and the saleable material shall be sold.
v)	Detailed note on dump management, void area management and OB dumping.	• Maximum height of the terrace will be kept 10m and individual terrace slope will be maintained 37^0 and overall slope will be maintained 28^0 with the horizontal. • No liquid effluent will be generated at mining site. Domestic waste water generated will be treated in septic tank with soak pit combination. This mine is based on zero discharge concepts. • Protective measures like retaining wall, garland drain & settling tank have already been built up around the waste dumps and quarry. However, maintenance and cleaning work will be continued during this plan period. In addition, retaining wall and garland drain have been proposed for extension as per the proposed waste dump. • Conceptually the voids will be backfilled partly using the stored wastes of the dump and will be rehabilitated through plantation.
vi)	Revised wildlife conservation plan along with its extension up to closure of mines duly certified by concerned DFO.	Site Specific Wild Life Conservation Plan has been prepared and approved from PCCF (WL)/Wild Life Warden of the State. In this regard we understood our SPWLCP is valid up to March 2024 (copy of letter is attached as Annexure G) and we have applied to the DFO, Bonai for SPWLCP for next 5 years to be prepared by wildlife warden Bonai and got it approval from CWLW, Odisha. The guideline of CWLW, Odisha is enclosed as **Annexure-H.**
vii)	Detailed note on parking plaza for enhanced production and its management along with travel road radius for bigger truck movements. Further, submit a copy of permission from Director of Steel and Mines, Govt. of Odisha declaring to use the parking as a part of the Mining lease area.	The lease has a parking plaza in the mining lease area. As per the requirement about 6 bigger truck movements per hour shall be required for the expansion project requiring parking and allied areas for about 30 trucks @ 60 sq m per truck on an average. About 0.23 ha of land has been proposed under heading 'Infrastructure" for the purpose. The location plan showing this is enclosed as **Annexure-B** (Index 5A).
viii)	Details of surface RL and bottom RL of Mining lease area.	As per the approved mining plan the TOP RL of the ML area is 725 msl and bottom RL is 602 msl. The ultimate mine working will be till 615 msl.
ix)	Detailed note on how OB will be used in back filling with its management and the quantity of saleable	The mining lease area slopes from north to south direction. During conceptual period the deeper parts of the quarry shall be backfilled to the extent up to 20 m using the stored wastes of the dump to create a gently sloping ground from north to

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	product to be sold.	south. After part backfilling the level at the northern part of the remnant quarry shall be around 660 msl whereas that of southern part shall be around 632 msl. The total quarry area including the backfilled portions and the broken up areas shall be brought under plantation for rehabilitation. Conceptually, a total quantity of 8290450 tons of iron ore from mining and a tentative quantity of 126290 tons of iron ore from re-handling of existing dumps (sub-grade stacks) shall be sold.
x)	Compliance report of TOR points.	ToR compliance report is enclosed As **Annexure – I**.
xi)	SOP for collection of samples for Air and Water.	SOP for Air and Water sample collection is enclosed as **Annexure – J1 & J2**.
xii)	Compliance to NEERI recommendations.	Compliance to NEERI recommendation is enclosed As **Annexure – K**.
xiii)	The PP may submit the current status of Settling pond, analysis of settled solids, generation of fines/tailings and its management.	There are 3 no. of existing settling ponds within the ML area with dimensions of 368, 336 and 212 sq.m with depth varying from 4 to 5m. Silt was analysed and the report is enclosed as **Annexure L**. The fines/tailing recovered from the settling tanks are dumped at the proposed dump and precautions in the shape of Retaining wall and Garland drain are being adopted to avoid their flow with the surface runoff. The SOP of de-siltation/management of fines/tailing is enclosed as **Annexure-M**.

Considering the information furnished and the presentation made by the consultant **M/s Srushti Seva Private Limited, Nagpur** along with the project proponent, the SEAC recommended for grant of Environmental Clearance with stipulated conditions as per **Annexure – A** and following specific conditions.

a) The proponent shall utilize different grades of iron ore (ROM) and waste generated according to IBM guidelines.

b) The proponent shall carryout compensatory afforestation for the project site.

c) The proponent shall adopt additional measures for dust suppression.

d) Conversion of Gochar / Grazing land if involved in lease area shall be made before going for mining activity.

e) Rainwater harvesting structures shall be implemented.

f) The lessee shall take adequate safeguard measures to ensure the free flow of the nearby tributaries/nallahs if any.

g) The EC is limited to secondary crushing and screening operations (dry process) as per approved mining plan. Under no circumstances, the lessee shall carry out any beneficiation activity (wet process) of low grade ore.

h) All the ores (45-55) and +55 grades shall be used and ores & rejects shall be transported as per approved mining plan for their use. Only temporary stacks shall be operated. The mine shall avoid segregation & generation of fines and flow of silt during rainy session.

i) Green processes like Controlled drilling, Environment friendly blasting, safe transportation and conveying, silt-management shall be followed as per guidelines.

j) The settling pond shall be relocated to a convenient location away from the OB dump. The sizes of settling ponds shall be determined based on available past rainfall data.

k) The mine shall explore the possibility of replacing the nozzles with the ones that will produce fine atomized spray instead of coarse water droplets for dust suppression.

l) The mine shall carry out the slope stability study of the OB dumps and mine benches for the enhanced production capacity.

m) The proponent has planned to re-handle the waste-dumps which contain 32% of marketable sub-ores. So the production of sub ores may exceed the limit of 180000 tonnes/annum (for environmental clearance). So precautions should be taken for production of sub ores from dumps.

n) Revised Wildlife Conservation Plan, duly approved by competent authority, shall be finalized and implemented at the earliest possible and not later than one year.

ITEM NO. 02

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. DEVAVRAT HOMES PRIVATE LIMITED FOR PROPOSED RESIDENTIAL PROJECT [B+S+9] MULTI STORIED RESIDENTIAL APARTMENT WITH 2 NOS. OF BLOCKS MIG GROUP HOUSING BLOCK OVER REVENUE PLOT NO.:- 1002/5921,1004,1005,1009,909/6301,910,911 KHATA NO.725/3514,725/5380,725/543,725/1689,725/5027,725/5019,725/4983 WITH TOTAL BUILT UP AREA OF 34992.83 SQM & TOTAL PLOT AREA - 8794.59 SQM / 2.180 AC /0.872 HA AT KALARAHANGA, BHUBANESWAR, DISTRICT : KHORDA OF SMT. SUNITA CHOUDHARY – EC

1. This proposal is for Environmental Clearance of M/s. Devavrat Homes Private Limited for proposed Residential Project [B+S+9] multi storied Residential apartment with 2 nos. of Block. MIG group Housing block over Revenue Plot No.:- 1002/5921, 1004, 1005, 1009, 909/6301, 910, 911 Khata No.725/3514, 725/5380, 725/543, 725/1689, 725/5027, 725/5019, 725/4983. The Total built up area of 34992.83 sqm & Total plot area - 8794.59 Sqm / 2.180 Ac /0.872 Ha at Kalarahanga, Bhubaneswar, District – Khorda, Odisha of Smt. Sunita Choudhary.
2. **Category:** As per EIA Notification, 2006 and its subsequent amendments, the proposed project falls under Item of Schedule to the EIA Notification, 2006 – category "B" or activity 8 (a): Building and Construction Projects.

3. **Location and Connectivity:** The proposed project is located at Plot No.: - 1002/5921,1004,1005,1009,909/6301,910,911, Khata No.: 725/3514, 725/5380, 725/543, 725/1689, 725/5027, 725/5019, 725/4983 at Mouza-Kalarahanga, Dist-Khurda, Odisha bearing Toposheet no: F45T15 and kissam of land is Gharabari. Geo-coordinates of project site is 20°21'56.84"N 85°50'23.75"E to 20°21'56.55"N 85°50'23.76"E. Site is flat land with average elevation of 20-25 m AMSL. Project site is well connected with New Bhubaneswar road which connects to Nandankanan Road at the distance of 1.6 km East direction. Proposed project site also connects to NH-16 (7.96-SE) to the project site. Site connects to Bhubaneswar puri Highway-316 at a distance of 7.76 km in South East direction. Bhubaneswar New railway station is 1.6 km away in North. Bhubaneswar railway station is 10.87 km away in South. Biju Patnaik International Airport 12.74 km in South West. Chandaka RF is 9.94 km (W) And Nandankanan Zoo is 3.32 km (NNW)
4. The site is coming under Bhubaneswar Development Authority
5. The total plot area is 8794.59 Sqm / 2.180 Ac /0.872 Ha , with total built-up area 34992.83 sqm.
6. The Building Area Details of the Project in tabulated form:

Total Built Up Area	**34992.83 m^2**
Total FAR Area	**26910.68 m^2**
F.A.R	**3.059**

LULC OF PROJECT SITE	AREA IN SQM	%
Ground floor coverage area	3083.09	35.06
Area for Internal Roads	2963	33.69
Others area	873.3	9.93
Greenbelt Area	1875.2	21.32
TOTAL	8794.593	100

FLOOR WISE AREA DETAILS

Floor	MIG	Parking	Others	Total Building Area
Basement	197.42	3897.61	66.9	4161.93
Stilt	68.67	2899.83	114.59	3083.09
1st Floor	2960.51		122.58	3083.09
2nd Floor	2960.51		122.58	3083.09
3rd Floor	2960.51		122.58	3083.09
4th Floor	2960.51		122.58	3083.09
5th Floor	2960.51		122.58	3083.09
6th Floor	2960.51		122.58	3083.09
7th Floor	2960.51		122.58	3083.09
8th Floor	2960.51		122.58	3083.09
9th Floor	2960.51		122.58	3083.09
	26910.68	6797.44	1284.71	34992.83

Total FAR Area	26910.68 m^2
F.A.R	3.059
Maximum height of building	Block-1 (for MIG)-29.20 m (B+S+9)
Total no. of Dwelling Units	267 MIG Units
No. of Floors	(Basement1+Stilt+9)
Total no. of Dwelling Units	267 MIG Units

7. **Water requirement:** Total water requirement for the project is 187 KLD which will be sourced from Municipality Supply/ CGWA. Total Fresh Water requirement is 123 m^3/day. Total Flushing Water requirement is 64 m^3/day. Total Water requirement is 187 m^3/day (fresh water + flushing water).

Sl. No.+	Name of Building	No. Of Blocks	Total No. of Units	Type of unit with capacity	Occupancy	Total Water in Lpcd	Fresh water @90 LPCD	Flushing water @45 LPCD	Waste Water Generate In Ltr.			Total
									From Domestic Use	From Flushing	Total Waste Water Generated	Treated water Recovered
1	Block-A	1	267	2BHK-45 @5	225	30375	20250	10125	16200	9112.5	25312.5	20250
				3BHK-222 @5	1110	149850	99900	49950	79920	44955	124875	99900
2	Floating Population				134	6030	2680	3350	2144	3015	5159	4127.2
	Total	1	267		2629	186255	122830	63425	98264	57082.5	155347	124277
						187 KLD	123 KLD	64 KLD	99 KLD	57 KLD	156 KLD	124 KLD

8. **Waste water generation and management:** Waste water generation from the proposed project is 156 m^3/day. Treated water recovered is 124 m^3/day. Reuses of treated water 124 m^3/day in dry seasons. 50 KLD of water will be discharge to nearest drain only during rainy season. Waste water will be treated in a STP having capacity 200 KLD.

9. Presently there is no municipal (PHED) water supply system located near our project site. Hence the daily fresh water requirement will be met through ground water during the operation phase. When public supply water system is available around the project site, then supplied water will be used to meet the daily fresh water requirement. NOC from Public Health Division regarding water supply and Sewerage Connection to the proposed project VIDE LETTER NO. 18298 On dated 21.12.2022.

10. **Power requirement: Total power requirement for the proposed project is** 1500 KW /1 no of 200KVA DG sets. Source will be from TPCODL (TP CENTRAL ODISHA DISTRIBUTION LIMITED). There is provision of Power backup for the residential project will be through DG sets of total capacity 1 No. 200 KVA silent DG Set. Height of the DG Set Stack will be 32.3 m.

Power Requirement	1500 KW
Power backup	200 KVA
Renewable energy	75 KW

11. **Solar generation details:** The Solar Power Demand For Campus area Light , Main Gate Light will be 75 KW (5% of total demand)

12. **Rain Water Harvesting:**

Rain Intensity		120	MM/Hr	
Retention Time		15	Min	
Sl No	Location	Area	Run off Co-efficient	Run Off Per Hr
1	Roof Top	3,083	0.9	333
2	Road (Paver Block)	2,963	0.7	249
Sl. No.	Location	Area	Run off Co-efficient	Run off per Hr.
3	Others	873	0.3	31
4	GREEN BELT	1,875	0.3	68
	TOTAL	8794.59		613
	Run Off For 15 Min			153
	Volume			24.7
	No. of Recharge pit REQUIRED			9.22
	No. of Recharge pit Proposed			16

13. **Parking Requirement:** FAR Area is 26910.68 sqm. Parking required is 25% of total FAR Area i.e., 6727.66 sqm. Parking area provided=8075 sqm (more than 30 % of total FAR Area) Total ECS provided -328 nos. For 4 wheelers-273 nos. & 2 wheelers-270 nos.

FLOOR AREA			
	F.A.R AREA	Parking (As approved in BMC PLAN) SQM	PARKING PROVIDED AREA
BASEMENT FLOOR	197.42 SQM	3897.61 SQM	4042.00 SQM
STILT FLOOR	68.97 SQM	2899.83 SQM	4051.00 SQM
	TOTAL	6797.44 SQM	8075.0 QM

14. **Green Belt Development**: Green belt will be developed over an area of 1875.32 sqm which is 21.32% of the total plot area. Total no. of plants to be planted - 160 numbers, spacing between plants. – Approx. 2-3m & 2 tier plantation.

15. **Solid Waste Management:** Total solid waste generation will be 1.183 Ton/day. The solid waste generated from project will be mainly domestic in nature and the quantity of the waste will be 0.808 Ton/day. Solid wastes generated will be segregated into biodegradable 294 T/Day. The biodegradable organic wastes will be treated inside the premises by OWC (Organic Waste Converter).having capacity of 300 kg/day. Recyclable and non-recyclable wastes will be disposed through Govt. approved agency.

16. **Project cost**: The estimated project cost is 60 crores and cost for EMP is capital cost is 94 Lakhs Annually and recurring cost 5.55 Lakhs.

Source	Capital Cost (In Lacs)	Recurring Cost (In lacs)
Landscaping	10	1
Rain Water Harvesting	11	0.3
Solid Waste Management	10	0.5
STP	50	2.5
Acoustic Enclosure & DG Set Stack	10	0.5
Environmental Monitoring	3	0.75
Total	94	5.55

17. **Environment Consultant:** The Environment consultant **M/s Visiontek Consultancy Services Pvt. Ltd. Bhubaneswar** along with the proponent made a presentation on the proposal before the Committee on 31.07.2023.

18. The SEAC in its meeting held on dated 31-07-2023 recommended the following:

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

i) Details of road connectivity to the project site with layout.

ii) Possibility of segregation of grey water and black water and its usage for plantation and car washings thereby reduce the discharge amount of treated water to drain.

iii) Revised water balance with revised calculation of waste water and STP details. Quantity of sludge generation to be calculated.

iv) Traffic Study Report to be submitted duly vetted by institute of repute.

v) Detailed drainage plan, internal drainage details, drainage permission with supporting documents applied for NOC for drainage from concerned authority.

vi) Copy of all statutory clearances applied/obtained.

vii) Detailed calculation of greenbelt with breakup and dimensions.

viii) Layout plan and width of road for movement of Fire Tender.

ix) Copy of fire recommendations.

x) Detailed break-up of solar power to be generated, consumed, including capacity of PV cell capacity, connected devices and the percentage of solar energy added total power demand.

xi) Ensure that the differences between the reduced level of the bottom of rainwater harvesting pits, STP bottom and the reduced level of ground water during rainy season and summer season are adequate for effective recharge of collected rainwater, to avoid contamination of waste water with recharge rain water. Submit details of water table level, basement reduced level, and reduced level of STP bottom. Layout plan to be submitted.

xii) Parking in terms of space and ECS for 4 wheelers, 2 wheelers to be calculated separately for dwellers & visitors (floating population) indicating the norm as well and showing it in the layout map & be submitted.

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

i) Environmental settings of the project site.

ii) Construction activity, if any started at the site.

iii) Road connectivity to the project site.

iv) Drainage network at the site.

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

vi) Any other issues including local issues.

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

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
1.	Details of road connectivity to the project site with layout.	Details submitted in compliance report.	-
2.	Possibility of segregation of grey water and black water and its usage for plantation and car washings thereby reduce the discharge amount of treated water to drain.	Details submitted in compliance report.	-
3.	Revised water balance with revised calculation of waste water and STP details. Quantity of sludge generation to be calculated.	Total Fresh Water requirement is 123 m^3/day. The detailed water requirement is in compliance report.	50KLD Treated water will be discharged into drain in Monsoon season only. In Non monsoon period it is ZLD.
4.	Traffic Study Report to be submitted duly vetted by institute of repute.	Traffic report has been submitted duly vetted from OUTR, Bhubaneswar (Formerly CET Bhubaneswar)	Based on the traffic study conducted at the three locations, it was found that the LOS is 'A' during peak hours for Entry Gate of Project Site; LOS is "B" during peak hours at Patia Station Square and LOS is "A" during peak hours at intersection of approach road to Project Site & Injana-Singada Road. LOS during peak hours for horizon year 2027 for road near Entry Gate of

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
			Project Site is "A", for road at Patia Station Square is "B" and for intersection of approach road to Project Site & Injana-Singada Road is "A".
5.	Detailed drainage plan, internal drainage details, drainage permission with supporting documents applied for NOC for drainage from concerned authority.	Small maps of drainage plan, internal drainage details alongwith copy of Permission/NOC from Superintending Engineer, Public Health Division, BBSR for water supply and sewerage connection has been submitted.	-
6.	Copy of all statutory clearances applied/obtained.	FIRE NOC, BMC Approval and Permission for electricity, water supply and drainage has been submitted.	-
7.	Detailed calculation of greenbelt with breakup and dimensions.	The greenbelt area is 1875.32 sqm. (21.32% of the plot area) for plantation(160nos.) Breakup and dimensions not provided as the whole area is kept for greenbelt as seen in layout.	-
8.	Layout plan and width of road for movement of Fire Tender.	Width of the road 6meters. Master layout plan for project area and parking layout plan shows the movement of Fire Tender.	-
9.	Copy of fire recommendations.	Copy of Fire recommendations is submitted.	-
10.	Detailed break-up of solar power to be generated, consumed, including capacity of PV cell capacity, connected devices and the percentage of solar energy added total power demand.	The Solar Power Demand For Campus area Light , Main Gate Light will be 50 KW (2% of total demand).	-
11.	Ensure that the differences between the reduced level of the bottom of rainwater harvesting pits, STP bottom and the reduced level of ground water during rainy season and summer season are adequate for effective recharge of collected rainwater, to avoid contamination of waste water with recharge rain water. Submit details of water table level, basement reduced level, and reduced level of STP bottom. Layout plan to be submitted.	Road Level Inside Project Roads – 103.57 Basement Floor Level-103.67 Road Level In Front Of Our Project-102.30 STP Top level – 103.57 STP Floor – 99.32 Bottom Level Rain Water Harvest Pit-98.57 Ground Water Level In Dry Season-89.07 Ground Water Level In Monsoon Season- 95.00	-
12.	Parking in terms of space and ECS for 4 wheelers, 2 wheelers to be calculated separately for dwellers & visitors (floating population) indicating	Total ECS is 328/8075 sqm 4 wheelers- 273, 2 wheelers – 270. Details is in compliance report.	-

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	the norm as well and showing it in the layout map & be submitted.		

20. The proposed site was visited by the Sub-Committee of SEAC on 2108.2023. Following are the observations of the Sub-Committee of SEAC:

a) PP and consultant team were present and explained the layout.
b) There are no construction activities undertaken at project site except a part of compound wall foundation to protect the approach road to site.
c) The site is connected with a public concrete road.
d) PP stated that they have applied to BMC for provision of road side drain which is to be constructed in future otherwise they will construct drain by the side of the road till connecting the natural nullah which is at about 700m distance from site.
e) PP has to submit either the NOC from concerned road authority for construction of road side drain by PP connecting the natural nullah or the document from appropriate authority in support of their planning for construction of such road side drain as well as NOC for allowing excess rain water/ treated water from this project site to this road side drain.
f) The PP has to submit the layout showing the drainage network starting from building site to natural nullah. The drain design needs to be prepared and approved by appropriate authority considering the data of RLs of bottom of drain at strategic locations and invert level of natural nallah, the run off calculations during highest rain fall, so that the area is not flooded with rain water during heavy rainfall. The maximum ground water level vs proposed ground level, the parking area, RWH etc (after construction) needs to be considered taking into account the maximum rainfall of the area for adequate structural stability.
g) PP need to submit the documents in support of building approval application, Fire NOC / recommendations, firefighting provisions and fire corridor.

Considering the information furnished and the presentation made by the consultant, **M/s Visiontek Consultancy Services Pvt. Ltd. Bhubaneswar** along with the project proponent, the SEAC recommended for grant of Environmental Clearance valid for 10 years with stipulated conditions as per **Annexure – B** in addition to the following specific conditions. **However, SEIAA, Odisha may consider to issue EC, after the Project Proponent submit an undertaking inform of legal affidavit that they shall make necessary arrangement to adopt Zero Liquid Discharge (ZLD) and / or construct drain for discharge of treated water, after acquiring land (Govt. or Private land) obtaining permission and possession as the case may be before going for construction of the project, as there is no existing drain nearby as observed during site visit and also same has been informed by the concerned authority to the Project Proponent.**

i) The Proponent before implementation of the project shall convert the land to Gharabari and shall take the ownership of the land if not already taken.

ii) The Proponent shall obtain permission/NOC from Executive Engg. (PHD) and / or from the appropriate authority for disposal of excess STP treated water to the nearest drain without which the Proponent will not start construction work. Also, in case of the connecting drain passing through others land (Govt. or Private land), the Proponent shall obtain the permission and possession as the case may be.

iii) The proponent shall use solar energy at least to the tune of 5%of total power requirement as proposed.

iv) The proponent shall obtain permission from concerned Fire Safety Authority.

v) Trees located within the project area shall be transplanted to alongside the boundary green development area.

vi) The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of project report.

vii) The project proponent shall maximise utilisation of treated water in flushing, plantations and ground washings etc. as per need to reduce water discharge to drain. This shall be verified in future compliance report.

viii) All compliances submitted/ committed by PP(s) shall be strictly adhered to them in addition to all the conditions/ specific conditions of EC.

ix) The proponent shall obtain permission from Water Resources department, Odisha for use of ground water.

x) The PP shall ensure permissions for discharge of treated / excess rain water in drains constructed by them / or BMC before starting the construction work.

xi) The project proponent has to obtain necessary permission from the CGWA / CGWB/ water resource department along with other conditions related to portability of the ground water for use of ground water during the operational phase of the project till WATCO supply of water is made available at the project site

ITEM NO. 03

PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S SAHEJ TOWERS PVT. LTD FOR PROPOSED RESIDENTIAL BUILDING OF '7S+22' STORIED OVER AN BUILT-UP AREA 33364.526 SQM AT MOUZA- PATIA, TAHASIL- BHUBANESWAR, DIST- KHORDHA OF SRI UJJWAL SINGH - EC

1. This proposal is for Environmental Clearance of M/s Sahej Towers Pvt. Ltd for Proposed Residential Building of '7S+22' storied over an built-up area 33364.526 sqm at Mouza-Patia, Tahasil- Bhubaneswar, Dist- Khordha of Sri Ujjwal Singh.
2. **Category**: The project falls in item 8(a) of Building and construction project as per the EIA Notification, 2006 and 2009 and subsequent amendments thereof of MoEF & CC.
3. **Project Details**: The proposed construction is a multi-storeyed Residential Building comprising of 1 no. (one) block which is of configuration 7S+22 Floors over a total plot area of 4046.86 Sqm or 1.00 Acre in favour of M/s Sahej Towers Pvt. Ltd. The multistoried residential project will be developed at Plot No-306/1813, Khata No- 474/101 in Mouza-Patia, Tahasil - Bhubaneswar of Khordha district. A tinshed structure of previous land owner of approx. 130 sqm builtup area is present in the plot area which will be dismantled after obtaining EC of the proposed proposal.

4. **Location and connectivity**: The proposed residential building project site is located at Plot No. 306/1813 in Khata No. 474/101, Mouza- Patia, Tahasil- Bhubaneswar, Dist- Khordha, Odisha. The location of the project area can be seen in Survey of India Topo sheet no. F45T15.The geographical co-ordinates of proposed project site is bounded between Latitude 20^0 21' 16.36" N to 20^0 21' 18.08" N and Longitude 85^0 49' 43.97" E to 85^0 49' 44.99" E. The Project site comes under Bhubaneswar Development Authority. The project site is not located within ESZ, ESA and CRZ area. The project site is connected to NH-16 at a distance of 6.5 km and Nandankanan Road at a distance of 0.2 km. The residential project is easily approachable and commercially viable as the project site is connected to an external PWD road with a road width of 24.0 m. A 60.0 m wide C.D.P road is proposed which is connected to the existing PWD road. Adjacent roads of 11.0 m wide in the western side and 7.0 m wide in the eastern side of the boundary of the proposed project is present.

5. **Area Details:**

S. No	Details of Land Use	Area in Sqm
1.	Plot Area	4046.86
2.	Net Site Area	3395.28
3.	Total Proposed FAR Area	23617.504
4.	Total Proposed Non-FAR Area	9747.022
5.	Total Built-up Area	33364.526
6.	Total Green Area	877.82
7.	Height of the Building	109.05 Mts

6. Approval from Bhubaneswar Development Authority, Bhubaneswar vide Letter No-17629/BMC, Bhubaneswar dated 13-04-2023 has been received by the project proponent.

7. NOC for water supply is obtained vide NOC No. CGWA/NOC/INF/ORIG/2023/18347, valid from 26/04/2023 to 25/04/2028.

8. **Power requirement:** The daily power requirement for the proposed residential project is assessed to be 1548.72 KW which will be fed from 800 KVA transformer (2 Nos.) and sourced from TP Central Odisha Distribution Limited .Provision of DG set having 450 KVA capacity (2 Nos.) for power back up in the residential complex proposed. Solar power contribution will be 10.3% (160 KVA) which will be generated from solar panels.

Description	Energy Required (KW)	Energy Saved (KW)	Energy Saved (KW) in %
Compact Fluorescent Lamp (CFL)	152	152	13.7
Light Emitting Diodes (LED)	78		
Conventional Street Lights	3.12	2.88	
Solar Street Light	2.88		
Electrical Water Heaters	198	58	
Solar Water Heaters	87		

Other Energy Requirements	1027.72	-	
Total Energy Requirement in Project	1548.72	212.88	

9. **Water requirement:** The total water requirement of the project during occupational stage is 136 KLD, out of that the fresh water requirement is 83 KLD will be sourced from Bore well and the recycled water is 53 KLD.

SI. NO.	REQUIREMENT	QUANTITY (KLD)
1	Domestic Water	83
2	Flushing Water	39
3	Gardening	3.5
4	Fire,S.Pool & Others	10.5
	Total	136

10. **Wastewater/STP details:** It is expected that the project will generate approx. 101 KLD of wastewater. The wastewater will be treated in onsite STP of 125 KLD capacity. The treated effluent will be reused for flushing, greenbelt and miscellaneous uses. Surplus treated effluent will be discharged to existing drain near the project site.

11. **Parking details:** The total parking required for the project is 5904.376 sqm and the total parking area provided is 7342.37 sqm. Visitor's parking provided is 734.23 sqm. In terms of ECS @ 32 Sqm: Cars 136 + E.V. Parking 70 = 206 ECS. Bike parking - 234 Nos. D.A. Parking – 2Nos.

Total parking Required @ 25% of FAR area	5904.37 Sqm
Total Parking Provided	7342.34 Sqm
First Stilt Parking (Ground Floor Parking)	911.89
Second Stilt Parking (First Floor Parking)	1101.93
Third Stilt Parking (Second Floor Parking)	1147.31
Fourth Stilt Parking (Third Floor Parking)	1145.96
Fifth Stilt Parking (Fourth Floor Parking)	990.16
Sixth Stilt Parking (Fifth Floor Parking)	1046.65
Seventh Stilt Parking (Sixth Floor Parking)	998.44

12. **Rainwater harvesting:** The total no. of rain water harvesting pits provided is 14.0 nos. and volume of rainwater to be harvested will be 78.75 Cum. Peak hourly rainfall has been considered as 140 mm/hr. The recharge pit of dimensions diameter 1.8 m and depth 3.0 m is constructed for recharging the water

13. **Fire fighting installations:** Fire fighting system will be installed as per recommendation of Odisha Fire Service Department and as per the guideline of NBC. NOC for the same is applied to and is in process.

14. **Green belt development:** Green belt will be developed over an area of 877.82 Sqm (25.85 %) of the plot area; by planting 85 nos. of the local species like *Aracaceae, Cupressus Sempervirens, Washingtonia Robusta.*

S.No.	Scientific Name	Common Name	No of Plants
1	*Aegle marmelos*	Bael	10
2	*Emblica officinailes*	Amla	10
3	*Azadirachta indica*	Neem	10
4	*Mimusops eleugi*	Maulsari	10
5	*Lagerstromea parviflora*	Dhaura, Lendia, Bakli	10
6	*Syzygium cumini*	Jamun	10
7	*Adina cordifolia*	Kadamba	10
8	*Saraca indica*	Asoka tree	10
9	*Pongania pinnata*	Karanja	5
		Total	**85**

15. **Solid waste management:** From the residential building the total solid waste will be about 455.0 kg/day. The generated solid waste from the residential building will be segregated as biodegradable and non-biodegradable. Proper waste management practices will be adopted during collection, storage and disposal of the generated solid waste, construction and demolition waste.

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. **Project cost:** Estimated cost of the project is Rs 97.65 Crores. Environment Management Cost is **Rs** 64.0 Lakhs.

Table: ENVIRONMENT MANAGEMENT - BUDGET DURING OPERATIONAL PHASE

Sl. No	Activity	Capacity /Area/Nos.	Capital Cost (Lakhs)	Recurring Cost (Lakhs)
1	STP	125 KLD	35.0	4.0
2	Landscaping & Planting trees	80.0	3.0	0.5
3	Solid waste Management	455 Kg/Day	5.0	1.5
4	RWH Pit Installation	14.0	4.0	1.0
5	Environmental Monitoring*	Air, Water, Soil & Noise	5.0	2.0

Sl. No	Activity	Capacity /Area/Nos.	Capital Cost (Lakhs)	Recurring Cost (Lakhs)
		Total	52.0	9.0

17. **Environment Consultant:** The Environment consultant **M/s Right source Industrial Solutions Pvt. Ltd.** along with the proponent made a presentation on the proposal before the Committee on 19.06.2023.

18. The SEAC in its meeting held on dated **19-06-2023** recommended the following:

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

i) Revised KML file showing the project area boundary.

ii) Supporting documents regarding ownership of land with kisam of land.

iii) Undertaking by Project proponent in Notary stamp paper that the proposed project area doesn't come under any litigation as encroachment is seen in the KML file presented.

iv) Detailed drainage plan, internal drainage details, drainage permission with supporting documents and NOC for drainage from concerned authority.

v) Possibility of segregation of grey water and black water and its usage for plantation and car washings thereby reduce the discharge amount of treated water.

vi) Status of NOC/permission letter from CGWA/WR Deptt, Govt. of Odisha respectively for drawl of ground water.

vii) Layout plan and width of road for movement of Fire Tender.

viii) Site layout w.r.t location of DG set and Stack including calculations of stack height and its connection layout plan beyond the height of building.

ix) Detailed break-up of solar power to be generated, consumed, including capacity of PV cell capacity, connected devices and the percentage of solar energy added total power demand.

x) Letter approved by BMC in support of management of household waste.

xi) There is a difference in EMP budget submitted in documents online (Rs. 64 lakhs) and presentation (capital cost – Rs. 52.0 lakhs and Rs. 9.0 lakhs as recurring cost). Which one is correct? This shall be clarified.

xii) RL of the bottom of the rainwater discharge pit as well as RL of ground water table during rainy and summer season

xiii) Detail plan of drainage for discharging excess treated sewage water

xiv) Source of water for use during construction phase.

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

i) Environmental settings of the project site.

ii) Construction activity, if any started at the site.

iii) Road connectivity to the project site.

iv) Drainage network at the site.

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

vi) Any other issues including local issues

19. 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
1.	Revised KML file showing the project area boundary.	Revised KML file showing the project area boundary has sent to your mail I.D – seac.odisha.2019@gmail.com. Pdf format of KML boundary has been attached for your reference as **Annexure – X.**
2.	Supporting documents regarding ownership of land with kisam of land.	The RoR documents regarding ownership and kisam of land has been submitted for your reference as **Annexure – I.**
3.	Undertaking by Project proponent in Notary stamp paper that the proposed project area doesn't come under any litigation as encroachment is seen in the KML file presented.	Affidavit of undertaking for no litigation has been submitted for your reference as **Annexure-II.**
4.	Detailed drainage plan, internal drainage details, drainage permission with supporting documents and NOC for drainage from concerned authority.	Drainage plan and application for permission for drainage has been applied near the authority which Ack. Copy has been attached for your reference as **Annexure-III.**
5.	Possibility of segregation of grey water and black water and its usage for plantation and car washings thereby reduce the discharge amount of treated water.	Dual pluming design plan for the project has been attached for your reference as **Annexure-IV.**
6.	Status of NOC/permission letter from CGWA/WR Deptt, Govt. of Odisha respectively for drawl of ground water.	NOC from CGWA for withdrawal of ground water has been submitted for your reference as **Annexure-V.**
7.	Layout plan and width of road for movement of Fire Tender.	Layout plan for movement of fire tender and permission from the authority has been submitted for your reference as **Annexure –VI.**
8.	Site layout w.r.t location of DG set	Site layout with respect to location of

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	and Stack including calculations of stack height and its connection layout plan beyond the height of building.	DG set and stack has been submitted for your reference as **Annexure-VII.** The stack height is calculated as per CPCB guidelines H = h+0.2 x √KVA = 109.05+0.2 x √450 KVA = 109.05+4.242 (0.2* 21.21) = 113.29 Mts. Each D.G set will be provided with 113.29 Mts height of Stack for effective dispersion of pollutants.
9.	Detailed break-up of solar power to be generated, consumed, including capacity of PV cell capacity, connected devices and the percentage of solar energy added total power demand.	Detail calculation of solar power generated consumed including capacity of PV cell and percentage of solar energy used has been submitted for your reference as **Annexure-VIII.**
10.	Letter approved by BMC in support of management of household waste.	Application letter regarding management of house hold waste has been applied near the authority. The acknowledgement copy has been submitted for your reference as **Annexure –IX.**
11.	There is a difference in EMP budget submitted in documents online (Rs. 64 lakhs) and presentation (capital cost – Rs. 52.0 lakhs and Rs. 9.0 lakhs as recurring cost). Which one is correct? This shall be clarified.	Environmental management cost mentioned as 64 Lakhs in the summary. The detailed break up was given in Conceptual plan. The same was presented in project presentation. Environmental Management budget Cost during Construction period will be 12.0 Lakhs and During Operation period 52.0 Lakhs, i.e 64.0 Lakhs. Recurring budget allocated during construction period will be 5.5 Lakhs and 9.0 Lakhs during operational period, i.e 14.5 Lakhs.
12.	RL of the bottom of the rainwater discharge pit as well as RL of ground water table during rainy and summer season	Rl of the bottom of the rain water discharge pit and RL of the ground water table during rainy and summer season have been submitted for your reference as **Annexure –XI.**
13.	Detail plan of drainage for discharging excess treated sewage water	Revised plan of drainage for discharge excess treated sewage water has been submitted for your reference as **Annexure-III.**
14.	Source of water for use during construction phase.	During construction phase the water will be sourced by tanker as mentioned in the conceptual plan.

20. The proposed site was visited by the sub-committee of SEAC on **21.09.2023**. Following are the observations of the sub-committee:

a) Project proponent and consultant representative were present and explained the lay out plan.

b) It was observed that there were previous construction activities in the land. Of which almost 50% of the prior construction were demolished and 50% are still remaining. The party is asked to demolish the entire structure.

c) The Project site is located near the Patia railway station road adjacent to KIIT square. The land is connected to above road which is around 25m in northern side. One sub road is there also in the western side of the plot.

d) There is a municipality drain running in between the road and designated plot. Around 10 ft width of entire stretch of northern side land (from the drain to land) does not belong to the proponent. The PP has explained that they have applied to the concerned authority for handing over the land to the party. Without which discharge of drainage water may not be possible. Hence, the party is asked to provide necessary permission letter from the concerned authority for further consideration.

e) The party is advised to submit the detail lay out plan for internal drainage system and discharge of drainage point. The PP may be asked to submit document/permission for the drainage connection from the appropriate Govt. authority.

f) The proposed construction is having 07 stilt and 22 residential floors, almost 29 storied. Hence, a structural stability certificate from BDA should be submitted.

g) High-rise buildings normally affect the thermal environment due to heat island effect. It is suggested PP may conduct a study on this aspect and bring out possible remedial measures.

h) The traffic study vetted by a reputed institute is to be submitted.

i) In regards to green belt few plantations are there, but more plantations are required to meet the standard.

j) All other points covered during presentation are to be complied.

21. The SEAC in its meeting dated **17-11-2023** decided to take the decision on the proposal after receipt of the following from the proponent.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
1.	There is a municipality drain running in between the road and designated plot. Around 10 ft width of entire stretch of northern side land (from the drain to land) does not belong to the proponent. The PP has explained that they have applied to the concerned authority for handing over the land to	In between the road the designated plot leaving the municipal drain the remaining plot area is in our ownership. It has been mentioned in the earlier CDP, where there was a provision of 200 meter road. For that reason we have left that area for future expansion.	---

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	the party. Without which discharge of drainage water may not be possible. Hence, the party is asked to provide necessary permission letter from the concerned authority for further consideration. **In case the land (10ft width) belongs to private owners, POA or ownership of land for passage of drain should be obtained and submitted in addition to permission from authority to discharge excess treated water.**	In the mean time BDA has released CDP 20-30 which has presently available in BDA website where the road has revised to 100 meter and the same being attached here with for your reference as **Annexure-I**. No acquisition has been made / no acquisition notice has been served to us in spite of the above facts. In this regard we have already notified to the competent authority of BDA. The ownership of the designated land is completely in our ownership and the schedule of the land boundary has mentioned in our sale deed which is attached for your reference as Annexure-I (a). Hence there is no requirement of seeking permission from the authority to passing the drain in the designated land for discharge of our treated water to the Municipal drain.	
2.	Structural stability certificate from BDA should be submitted.	The structural stability certificate is vetted by IIT Bombay has been submitted for your reference as **Annexure-II**.	-
3.	Traffic study vetted by a reputed institute is to be submitted.	Traffic study report of that area is vetted by KIIT University; Bhubaneswar has been submitted for your reference as **Annexure-III**.	As per Traffic report, the present LOS is "B" After 10 years the LOS would be "C"
4.	As construction is still there as per site visit report, KML file after complete demolition to be submitted.	The constructed houses will be used for our office and store house purposes which will not affected in our construction work we will submit you the KML file before start of our project work.	-
5.	Status of Airport Authority of India Clearance.	NOC from Airport Authority of India has been attached for your reference as **Annexure-IV**.	-

Considering the information furnished and the presentation made by the consultant, **M/s Right source Industrial Solutions Pvt. Ltd. Hyderabad** along with the project proponent, the SEAC recommended for grant of Environmental Clearance valid for 10 years with stipulated conditions as per **Annexure – C** in addition to the following specific conditions. **As per report, 50% construction which is there needs to be demolished. Hence, SEIAA may consider to issue EC after receipt of latest KML file after demolition.**

i) The Proponent before implementation of the project shall convert the land to Gharabari and shall take the ownership of the land if not already taken.

ii) The Proponent shall obtain permission/NOC from Executive Engg. (PHD) and / or from the appropriate authority for disposal of excess STP treated water to the nearest drain without which the Proponent will not start construction work. Also, in case of the connecting drain passing through others land (Govt. or Private land), the Proponent shall obtain the permission and possession as the case may be.

iii) The proponent shall use solar energy at least to the tune of 5%of total power requirement as proposed.

iv) The proponent shall obtain permission from concerned Fire Safety Authority.

v) Trees located within the project area shall be transplanted to alongside the boundary green development area.

vi) The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of project report.

vii) The project proponent shall maximise utilisation of treated water in flushing, plantations and ground washings etc. as per need to reduce water discharge to drain. This shall be verified in future compliance report.

viii) All compliances submitted/ committed by PP(s) shall be strictly adhered to them in addition to all the conditions/ specific conditions of EC.

ix) The proponent shall obtain permission from Water Resources department, Odisha for use of ground water.

x) The PP has clarified that the land through which they will construct the drain belongs to them. So, the PP will not commence construction unless the drain lay out is finalized and permission given for the same by the authority to discharge excess treated water.

xi) The PP shall ensure permissions for discharge of treated / excess rain water in drains constructed by them / or BMC before starting the construction work.

ITEM NO. 04

PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S TESKO HOTELS & MALLS INFRAPROJECTS PVT. LTD. FOR COMMERCIAL HOTEL BUILDING B+S+9 STORIED OVER A BUILT-UP AREA 36830.99 SQM LOCATED AT MOUZA - CHANDRASHEKHARPUR, TAHASIL- BHUBANESWAR, KHORDHA OF SRI ANUP LAKHOTIA - EC

1. This proposal is for Environmental Clearance of M/s Tesko Hotels & Malls Infra projects Pvt. Ltd. for Commercial Hotel Building B+S+9 storied over an built up area 36830.99 sqm located at Mouza - Chandrashekharpur, Tahasil- Bhubaneswar, Khordha of Sri Anup Lakhotia.
2. **Category**: This project falls under Category "B", Project or Activity 8(a) - Building and Construction projects as per EIA Notification dated 14th Sep, 2006 as its amendments.

3. **Project details:** M/s Tesko Hotels & Malls Infra Projects Pvt. Ltd is proposing the Commercial cum Hotel Building project in the Plot Area of 12140.6 sqm.

4. **Airport clearance:** Airport NOC was obtained with NOC ID: BHUB/EAST/B/030223/744292, Dt.28.03.2023.

5. **Location and Connectivity:** The proposed site is located at Plot No - 321 (C/2), Khata No. - 619 of Mouza - Chandrashekharpur, Tahasil - Bhubaneswar, District – Khordha, Odisha. The Geographical co-ordinates of the project site is Latitude: 20^0 19' 21.76" N to 20^0 19' 16.00" N and Longitude: 85^0 48' 05.56" N to 85^0 48' 02.24" E. The area comes under Survey of India Toposheet No: F45T15. The project site is connected with National Highway NH-16 towards South at a distance of 4.0 km. The Bhubaneswar town is located at a distance of 3.8 km. The nearest Railway station is Bhubaneswar Railway station is at a distance of 7.5 km, SE direction from project site. Biju Patnaik Airport is at 7.0 km (South). Bhubaneswar Fire Station is located at a distance of 4.7 km.

6. **Built Up Area Details:** Plot Area is 12140.60 Sqm. Total Proposed FAR Area is 22196.78 Sqm. Total Built-up Area is 36830.99 Sqm. Green Area is 1672.72 Sqm. Height of the Building is 39.83 Mts. No. of Blocks is 1 Block with B+ S+9 Floors. No. of Rooms is 123.

S. No	Details of Land Use	Area in Sqm
1.	Plot Area	12140.60
2.	Total Proposed FAR Area	22196.78
3.	Total Proposed Non-FAR Area	14,634.21
4.	Total Built-up Area	36830.99
5.	Total Green Area	1672.72
6.	Height of the Building	39.83 Mts

7. **Parking Area:** Parking Required as per BDA: (40% of Proposed F.A.R) = 8878.71 Sqm. Provided Parking area is 11045.82 Sqm. In terms of ECS @ 32 Sqm : Cars 345 + Bike parking – 115 Nos.

8. **Water Requirement:** The total water requirement of the project during occupational stage is 110 KLD. Domestic Water required is 104 KLD. Flushing Water will be 39.0 KLD. No Objection Certificate for Ground Water Abstraction was obtained with NOC from CGWB with NOC No. CGWA/NOC/INF/ORIG/2023/17946. Dt.15.03.2023 Valid up to 14/03/2028.

Domestic Water Requirement	143.0 KLD
Fresh water	104.0 KLD
Flushing water	39.0 KLD
Waste Water Generated (@ 80% fresh water + 100% flushing water)	83 +39 =122 KLD
STP Capacity Provided (at 1.2 times of W.W generated)	150 KLD
Treated waste water from STP (@90%)	110 KLD

9. **Waste water generation and management:** Waste water generation is 122 KLD which will be treated in STP of capacity 150 KLD proposed to be constructed at the site. Treated water

from the STP will be used for flushing and horticulture purpose. STP will be provided with MBBR Technology

10. **Solid Waste Management:** Total solid waste generation will be 460 Kg/Day. Garbage will be 442.5 Kg/Day in which Biodegradable Waste 265.5 Kg/Day @ 60% will be treated in In-house Organic Waste Convertor and Non-Biodegradable waste 177Kg/Day @ 40% will be Sent to Authorized Vendors as per SWM Rules 2016. Landscape waste will be 0.083 Kg/Day. STP Sludge generation will be 17.08 Kg/day.

WASTE SOURCE	DISPOSAL
Garbage – 442.5 Kg/day	▪ Segregation at Source & Disposed properly as per SWM Rules 2016 ▪ Bio-Degradable – 265.5 Kgs/day – Organic Waste Convertor ▪ Non-Bio-Degradable – 177 Kgs/day – (Authorized Re-cyclers/vendors)
STP Sludge – 17.08 Kg/day	▪ Which is used as manure
Landscape waste - 0.083	▪ Which is used as manure

11. **Rainwater Harvesting:** Rain Water will be harvested through 10 nos. of Rain Water recharging pits.

Rainwater Harvesting				
Type of Area	Area (in m^2)	Coefficient of run-off	Peak rainfall intensity during one hour of rainfall (in m)	Rain water harvesting potential/hour (in m^3)
Roof-top area	4856.59	0.95	0.140	645.93
Green Area	1672.72	0.10	0.140	23.42
Total storm water load on the site with per hour retention is				669.35
Considering 15 minutes retention time, total storm water load				167.34
Taking the radius as 1.5 m and effective depth as 3.0 m , volume of a RWH pit (π r2h)				21.87
Hence no. of pits required in approx = Total storm water load considering 15 minutes retention time / Volume of a RWH pit				8 nos. required and provided 10nos.

12. **Power Requirement**: The total consolidated electrical load estimate for proposed project is about 1628.8 Kw. Power backup in case of grid failure will be by 2 nos. of DG sets of 1010 KVA and 1250 KVA (1) capacities.

13. **Solar Power Generation:** Solar power generation is 89 KVA PV solar panels. This will be utilized for solar assisted water heating system.

Table: Energy savings

Description	Energy Required (KW)	Energy Saved (KW)	Energy Saved (KW) in %
Compact Fluorescent Lamp(CFL)	152	152	13.0
Light Emitting Diodes (LED)	78		
Conventional Street Lights	3.12	2.88	
Solar Street Light	2.88		
Electrical Water Heaters	198	58	
Solar Water Heaters	87		
Other Energy Requirements	1027.72	-	
Total Energy Requirement in Project	1628.8	212.88	

14. **Green Belt Development:** Green belt will be developed over an area of 1672.72 Sqm (13.77 %) of the plot area by planting 152 nos. of plant species like Neem, Bel, Gooseberry, Acacia, Chakunda etc.

15. **Firefighting Arrangements:** The height of the building is upto 39.83 mts. Fire Extinguisher, First Aid Hose Reel, Wet Riser, Yard Hydrant, Automatic Sprinkler System, Manually operated Electronic Fire Alarm System, Underground Static Water Tank, Overhead Tank will be provided as safety measures in the building block. Internal road of 6.0 mt width has been demarcated for movement of fire vehicle. Fire NOC recommendation issued with number RECOMM1204130052023001248, Dt.05.06.2023.

16. **Traffic Study:** Traffic Composition after development of the project will be good. Traffic study report was prepared by School of Civil Engineering, KIIT Deemed to be University, Bhubaneswar.

17. **Project cost:** The project cost is estimated to be Rs. 98.80 Crores and there is a budgetary provision of Rs.12 Lakhs as capital cost and Rs.7.0 Lakhs as recurring cost during construction phase and Rs.59 Lakhs as capital cost and Rs.10.0 Lakhs as recurring during operational phase towards environmental protection measures.

Table: EMP budget during operational phase

S.No	Activity	Capacity /Area/Nos.	Capital Cost (Lakhs)	Recurring Cost (Lakhs)
1	STP	150 KLD	40.0	4.0
2	Landscaping & Planting trees	152	6.0	2.0
3	Solid waste Management	460 Kg/Day	4.0	1.0
4	RWH Pit Installation	10.0	4.0	1.0
5	Environmental Monitoring	Air, Water, Soil & Noise	5.0	2.0
Total			59.0	10.0

18. **Environment Consultant**: The Environment consultant **M/s Right source Industrial Solutions Pvt. Ltd. Hyderabad** along with the proponent made a presentation on the proposal before the Committee on 05.07.2023.

19. The SEAC in its meeting held on dated **05-07-2023** recommended the following:

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

a) Details of width of fire corridor, service road, DG space etc.

b) Possibility to explore separate ramps for entry and exit in parking area. Further, separate parking area for Hotel and Mall shall be explored.

c) Detailed drainage plan, internal drainage details, discharge point, drainage permission with supporting documents applied for NOC for drainage from concerned authority.

d) Certificate from the concerned DFO that location is not coming within Notified Eco-Sensitive Zone of Chandaka-Dampada Wildlife Sanctuary.

e) Detailed calculation of greenbelt with breakup and dimensions and provision to increase the greenbelt minimum up to 20% as the proposal for 13% greenbelt is not acceptable.

f) Ensure that the differences between the reduced level of the bottom of rainwater harvesting pits and the reduced level of ground water during rainy season are adequate for effective recharge of collected rainwater and submit the report for the same.

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

i) Environmental settings of the project site.

ii) Construction activity, if any started at the site.

iii) Road connectivity to the project site.

iv) Drainage network at the site.

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

vi) Any other issues including local issues.

20. 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
1.	Details of width of fire corridor, service road, DG space etc.	The width of Fire Corridor is 6 meter and service road is also 6 meter. The location of DG space has shown in the drawing has been attached for your reference as **Annexure –I**.
2.	Possibility to explore separate ramps for entry and exit in parking area. Further, separate parking area for Hotel and Mall shall be explored.	We have separated the entry and exit in parking area for hotel guests, visitors and service which has been shown in the drawing has been attached for your

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		reference as **Annexure –I.**
3.	Detailed drainage plan, internal drainage details, discharge point, drainage permission with supporting documents applied for NOC for drainage from concerned authority.	Detailed drainage plan with discharge point has been attached for your reference as **Annexure-II.**
4.	Certificate from the concerned DFO that location is not coming within Notified Eco-Sensitive Zone of Chandaka-Dampada Wildlife Sanctuary.	NOC from the DFO, Chandaka Wild Life Division has been attached for your reference as **Annexure-III.**
5.	Detailed calculation of greenbelt with breakup and dimensions and provision to increase the greenbelt minimum up to 20% as the proposal for 13% greenbelt is not acceptable.	Revised calculation of greenbelt with breakup has been attached for your reference as **Annexure-IV.** Total Plot area - 12140 Sq.m. Required Greenbelt @ 20% - 2428Sq.m. Proposed Greenbelt area- 2472.94 Sq.m. (@20.37%
6.	Ensure that the differences between the reduced level of the bottom of rainwater harvesting pits and the reduced level of ground water during rainy season are adequate for effective recharge of collected rainwater and submit the report for the same.	The ground water level of RWH pit of rainy season and non – rainy season has been attached for your reference as **Annexure-V.**

21. The proposed site was visited by the sub-committee of SEAC on **08.08.2023**. Following are the observations of the sub-committee:

a) PP and Environment Consultant were present at site and explained the project layout.

b) No construction work started at the site.

c) The site was having road at the both front and back side. The road at the entry side is the sub road having width of about 30 ft only. Although 200 ft road goes in front of it, but the same is connected at a distance and there is no direct access from the frontage of the site.

d) Since the project is pure commercial, they were asked to show the provisional BDA approval, fire clearance etc. which they could not as they are yet to apply. Thus, the PP needs to submit the following documents before considering for EC. BDA provisional approval, Fire NOC, BMC NOC to connect the extra treated water to the adjacent drain, airport authority NOC, Firefighting measures provisions, Ground water permission.

e) There is a high-tension tower situated at one corner, thus permission if required to be obtained from appropriate authority and submitted.

f) Stack position to be placed in a manner to avoid smoke to the neighbouring hospital and residential community

g) Information sought during presentation with regard to green belt, parking plan, DFO permission etc. need to be submitted.

22. The SEAC in its meeting dated 17-11-2023 decided to take the decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
1.	BDA provisional approval letter, NOC from BMC to connect the extra treated water to the adjacent drain	Provisional approval letter from BMC, Bhubaneswar has been attached for your reference as **Annexure –I**. The discharge of extra treated water to adjacent drain has been applied near BMC. Copy of Acknowledge has been attached for your reference as **Annexure - I (a)**.	-
2.	There is a high-tension tower situated at one corner, thus permission if required to be obtained from appropriate authority and submitted.	It has to be intimated you that the said tower position I out of our project layout area. As per the National building code of India we have left sufficient distance (more than 35 m) as per provision. The layout plan showing the distance of tower has been attached for your reference as **Annexure-II**.	-

Considering the information furnished and the presentation made by the consultant, **M/s Right source Industrial Solutions Pvt. Ltd. Hyderabad** along with the project proponent, the SEAC recommended for grant of Environmental Clearance valid for 10 years with stipulated conditions as per **Annexure – D** in addition to the following specific conditions.

i) The Proponent before implementation of the project shall convert the land to Gharabari and shall take the ownership of the land if not already taken.

ii) The Proponent shall obtain permission/NOC from Executive Engg. (PHD) and / or from the appropriate authority for disposal of excess STP treated water to the nearest drain without which the Proponent will not start construction work. Also, in case of the connecting drain passing through others land (Govt. or Private land), the Proponent shall obtain the permission and possession as the case may be.

iii) The proponent shall use solar energy at least to the tune of 5%of total power requirement as proposed.

iv) The proponent shall obtain permission from concerned Fire Safety Authority.

v) Trees located within the project area shall be transplanted to alongside the boundary green development area.

vi) The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of project report.

vii) The project proponent shall maximise utilisation of treated water in flushing, plantations and ground washings etc. as per need to reduce water discharge to drain. This shall be verified in future compliance report.

viii) All compliances submitted/ committed by PP(s) shall be strictly adhered to them in addition to all the conditions/ specific conditions of EC.

ix) The proponent shall obtain permission from Water Resources department, Odisha for use of ground water.

x) The PP will not commence construction unless the drain lay out is finalized and permission given for the same by the authority to discharge excess treated water & storm water.

ITEM NO. 05

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 Reportfor 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, 35 pprox.. 23 km towards West direction, Nearest Airport- BijjuPatnaik International Airport, 35pprox.. 230 km towards SE direction, Nearest Highway-NH-200, 35pprox.. 7.0 km in NE direction, SH-24, 35pprox.. 9.2 km in East direction.Nearest Forest-Lariapali RF, 35pprox.. 2.0 km towards NE direction, Open mixed Jungle, 35pprox.. 9.0 km towards WSW direction. Nearest School/ Collage- Deheripali PUP School, 35 pprox.. 1.2 km NW, Nearest Hospital- Sub divisional Hospital, Kuchinda, 35pprox.. 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 Replenishment Study has been carried out in Drone Survey Method. The Pre monsoon study was carried out in **20.05.2022** and Post Monsoon was in **25.11.2022**. The Common safe workable area in pre-monsoon and post-monsoon Replenishment Study was calculated as **12,600 m^2**. Difference in Standard Elevation of Pre Monsoon and Post Monsoon found to be **0.70m** and volume of replenished sand calculated as **8,820m^3**. Based on this estimation, at least 60% (i.e., **5,292 Cum.**) replenishable quantity of sand available for mining of this period which may allow for mining activity. But, the approved quantity of sand 2500 cum, as per the Mining Plan. So, PP has requested to permit the approved minable quantity as per the application.

11. **Baseline study details:** Baseline Study was conducted in December 2020 to February 2021.

    a) **Air quality**: Ambient Air Quality monitoring reveals that the minimum & maximum concentrations of PM_{10} for all the 7 AAQ monitoring stations were found to be 57.43 µg/m^3 at AQ2 and 87.26 µg/m^3 at AQ1, respectively. As far as the gaseous pollutants SO_2 and NO_x are concerned, the prescribed CPCB limit of 80 µg/m^3 for residential and rural areas has never surpassed at any station. The maximum & minimum concentrations of SO_2 were found to be 14.36µg/m^3 at AQ1 & 6.39 µg/m^3 at AQ5 respectively. The maximum & minimum concentrations of NO_X were found to be 21.73µg/m^3 at AQ1 & 10.3µg/m^3 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 36approx., 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 on 21.11.2023.
18. The SEAC in its meeting held on dated **21-11-2023** decided to take decision after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
1.	The project proponent shall submit the distance of the water project from the proposed site, effect of mining on it and the safety measures taken.	The distance of the water project is 0.80 km which is situated in the downstream of the lease area. It is small minor irrigation project which will not effect on our mining project which will not effect on our mining activity. The distance certificate copy from Tahasildar, Kuchinda has been attached for your reference as **Annexure-I.**	-
2.	The project proponent shall demarcate the safety zone w.r.t. to the Bridge.	The road bridge is situated upstream of the lease area which is 0.20km away from the lease area. We are leaving 300 meter inside the lease area as safety zone area, which image has been attached for your reference as **Annexure-II.**	-
3.	The project proponent shall find out the common workable area and production w.r.t. that area after leaving the safety zone.	The detail calculation of the common workable area and production after leaving the safety zone has been attached for your reference as **Annexure-III.**	As per approved mining plan, Mineable Reserve area = 23223 Sq.m The total lease area excluding safety zone = 16,324 Sq.m.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
			During Replenishment Study the available sand for mining is = 6,315 X 0.70 = 4,420.5 m^3

19. The SEAC observed the following :

i) As per the replenishment study report, the pre-monsoon survey was done on 20th May 2022 and post monsoon survey was done on 25th November 2022 by UAV / drone (Photogrammetry method). Based on above the common water free mineable area is reported to be 6315 m^2, which is less than 72.8% of the mineable area (23223 m^2) mentioned in the approved mining plan. This difference in the mineable area needs to be reconciled. Further the approved mining plan states that mining over an area of 2500 m^2 on riverbed sand every year also needs to be revised for mining over the entire water free mineable area under the mining lease.

ii) The replenishment study report has mentioned the mRL of the riverbed sand to be 211.81 m and 212.51 m inferring a deposit of 0.7 m sand on the riverbed. This reported difference of sand in the replenishment study report is not considered significant as it is very much less than the error of elevation (Z) measurement, which is mentioned to be 5.71938 m. The approved mining plan however mentions the depth of the riverbed sand till water level to be 1 m and also states the quarry floor level mRL to be 210 mRL after mining. The mRL details in the approved mining plan are in agreement with those reported in the replenishment study report.

Considering the information furnished and the presentation made by the consultant, **M/s Parivesh Environmental Engineering Services, Lucknow, Uttar Pradesh** along with the project proponent, the SEAC recommended for grant of Environmental Clearance for the proposal valid upto lease period with stipulated conditions as per **Annexure – E** and following specific conditions:

a) Amended EIA Notification dated 25th July, 2018, Guidelines for sustainable sand mining, 2016 and Enforcement and Monitoring Guidelines for Sand Mining, January 2020 of MoEF&CC, Govt. of India shall be adhered to in execution of Mining as per **Annexure –F.**

b) Sand extraction shall be limited to quantity and depth as per replenishment study report. Regular replenishment study as per guidelines to be conducted and report to be submitted.

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

d) Avenue plantation and plantation on both sides of the haulage road in consultation with/ on the advice of concerned Forest Department, Government of Odisha & W.R. Department Government of Odisha as well.

e) Stone patching with plantation in between along the stretch of the bank associated with sand mining and necessary ramp construction shall be made.

f) No natural water course shall be obstructed or diverted for the purpose of sand mining.

g) As per Sand Sustainable Guidelines, 2020, the proponent shall ensure that no mining should be allowed below water level.

h) Mining of 3789cum of riverbed sand or the first year may be recommended as per the following calculation. 6315 m^2 common water free area X 0.6 m depth of sand mining subject to appropriate revisions in the approved mining plan.

ITEM NO. 06

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR TANTRA BAUXITE MINE WITH PROPOSED EXCAVATION OF 1000000 TPA OF BAUXITE HAVING OVER AN AREA OF 106.138 HA. LOCATED AT VILLAGE - TANTRA, SUB-DIVISION - BONAI, DISTRICT SUNDARGARH OF SRI PRABHU DAYAL 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 to obtain Environmental Clearance for Tantra Bauxite Mine with proposed excavation of 1000000 TPA of Bauxite having over an area of 106.138 Ha. Located at Village: Tantra, Sub-division- Bonai, District Sundargarh of Sri Prabhu Dayal Agrawal.
3. **Category**: As per the EIA Notification S.O. 1533, dated 14th September 2006 and subsequent amendments, this project falls under Category B1 (Minor Mineral Projects).
4. Originally the mining lease was granted in favour of Shri Prabhu Dayal Agrawal on 08.07.1991 over an area of 106.138 hectares or 262.271 acres for 20 years. But as per the Mines and Minerals (Development and Regulation) Amendment Act 2015 read with rule 66 of OMMC Rule 2016, the period of lease has been extended up to 20 years i.e., 07.07.2031 through Renewal Mining Lease Deed dtd. 08.07.2011.
5. The Tanta Bauxite Mine is a Mining Lease area was executed for Mining of Bauxite ore in favour of Shri Prabhu Dayal Agrawal over an area of 106.138 ha. or 262.271 acres comes under village Tantra, Bandhal & Rengua in Koida Tahasil of Sundargarh District, Odisha.
6. The copy of representation letter no. Tantra/108 dt. 20.01.2023 received from Sri P.D. Agrawal to inform that the aforesaid mining lease was executed on 08.07.1991 for a period of 20 years in favour of Sri P.D. Agrawal. The term of a said lease expired on 07.07.2011. The lessee has filed 1st RML application on 16.03.2010 over the entire area for Bauxite, Iron & Manganese Ore under the provision of rule 24A (1) of MC Rules, 1960 in due time which is pending for disposal. The mining operation in the leasehold area was discontinued due to expiry of original lease w.e.f. 08.07.2011 & remained non-operational for continuous period of 2 years up to 07.07.2013 which attracts the provision of section 4A (4) of MMDR Act, 1957. As such the State Govt. declared the said lease as lapsed w.e.f. 07.07.2013 under section 4A (4) of MMDR Act, 1957 read with rule 28(1) of MC Rules, 1960 vide Govt. Proceeding No. 9625/SM dt. 29.09.2015.
7. The lessee preferred Revision application against the said lapsing order of State Govt., where in the Revisional authority set aside the impugned order of State Govt.

dt. 29.09.2015 and directed the State Govt. to re-consider the lapsing in view of observations of Hon'ble Supreme Court of India in its order dt.04.04.2016 in WP(C) No. 114/2014 (Common Cause) which is being re- examined by the State Govt. through personal hearing of the lessee. Moreover, under section 8A (3) of MMDR Amendment Act, 2015, the State Govt. have not extended the validity of lease period i.e. up to 07.07.2041. As such the said lease would be deemed to be consider as subsisting lease.

8. In pursuance to the judgment dt. 02.08.2017 of Hon'ble Supreme Court of India, the DDM, Koira has issued Demand notice vide his letter No. 4356/Mines dt.18.11.2021 to the lessee for payment of compensation amount of Rs.14,23,524/- under section 21(5) of MMDR Act, 1957 in violation for production of minerals show raised without lawful authority or in excess of the lower of approved limit under statutory clearance for the period from 2000-2001 to 2010-2011 in respect of the mine, which has already been paid by the lessee through e-challan on 03.01.2022.

9. The lessee has processed before the concerned authorities for obtaining of valid statutory clearances such as Mining Plan, Forest Clearance, Environmental Clearance etc. in respect of the mines which is pre-requisite for extension of the validity period of the said lease under section 8A (3) of MMDR Amendment Act, 2015.

10. As per the documents submitted by the lessee, 3rd meeting of Project Screening Committee of the proposals in respect of Tantra Bauxite Mine held on 18.01.2023 for processing as per F.C Rules, 2022 through VC, wherein the lessee was directed to file approval of Mining Plan online for FC. Approval of Review of Mining Plan without such clearance the extension of validity of lease period under section 8A (3) of MMDR Amendment Act, 2015 is not feasible.

11. Earlier, Terms of Reference (TOR) issued by MoEF & CC, New Delhi vide letter number J- 11015/178/2009-IA. II(M) dated 19th August 2010 for undertaking mining operation in the lease area.

12. Consent to establish has been obtained from State Pollution Control Board, Odisha vide letter no. 1739/III-CON (NOC)-296/2009-10 dtd. 21.06.2011 and for 100 TPH crusher unit, Consent to Establish has been issued vide letter no.11459/IND-I-CON-5654 dated 2 0.07.2009.

13. Earlier, public hearing for renewal of mining lease and enhancement of Bauxite ore 1.2LTPA to 1.0 MTPA in production was conducted on 12.05.2011.

14. The present proposal for environment clearance is proposed for enhancement in production of bauxite from 3,786,75 TPA to 9,997,02 TPA from the lease area.

15. The entire area is DLC forest land having kissam - pahad as per land schedule.

16. **Location and connectivity**: Tantra bauxite mining lease area is situated in village Tantra of Bonai Tahasil in Sundargarh district, Orissa. The area forms a forest land. This area falls under Latitude 21^0 53' 46" N to 21^0 54' 33' N and Longitude 85^0 10' 18" E - 85^0 11' 10" E in the Toposheet no. 73 G/1. The total area of the mining lease is 106.138 Ha. The highest altitude of the area is 784.0 m from M.S.L and the lowest altitude is 643.1 M.S.L.

17. **Reserves and production**: The revised mineable reserve of useable bauxite in the lease area is 1,63,45,127 MT. Keeping in view the production of bauxite@ 9,99,702 per annum, life of the mine will be 16.3 years or say 16 years after this modified scheme period.

18. **Mining method**: Presently the mining is being carried out by semi mechanized opencast method. However, with the existing proposal there is the planning for fully mechanized mining operation in the lease area. There is an existing 200 TPH crusher present in the lease area and proposal for installation of another 200 TPH crusher in the lease area. The crushing screening and sorting will be carried out within the lease area. The saleable bauxite will be raised and stacked near earmarked stack yard after being crushed as per the requirement. The usable refractory grade and steel grade bauxites will be transported by hiring trucks. The trucks will be loaded by pay loaders.

19. **Waste generation and management**: A quantity of 1884450$m^3$of swollen waste will be generated due to mining during the conceptual period. The waste generated during excavation will be utilized for mine road construction and other allied infrastructure and if required will be shifted to the proposed dump. At the end of the conceptual period a total area of 45.1175 hectare is to be degraded under mining. As no part of the lease area is getting exhausted, no backfilling proposal has been proposed in this scheme period.

20. **Water requirement**: Water requirement for the project is 15 KLD and will be met from ground water.

21. **Greenbelt**: Till date 0.5 Ha. of plantation zone with 1000 saplings has been made within the ML area. Huge plantation has been carried out within the lease area i.e., along the Safety Zone, OB dump and dump Slope. During this monitoring period 1000 nos. of plantation has been done over an area of 0.5 Ha.

22. **Manpower**: Total 116 nos. of workers will be indirectly employed, and 30 nos. will be directly employed for mining of Bauxite ore in the lease area.

23. **Project cost**: The cost of the project will be 14 Crores.

24. **Environment Consultant**: The Environment consultant **M/s Green Circle. INC., Vadodara** along with the proponent made a presentation on the proposal before the Committee on 07.07.2023.

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

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
1.	Certified copy of the production limit set for the unit prior to 1994 and after 1994.	The authenticated Production prior to 1994 as well as after 1994 is attached as **Annexure- 1.** Authenticated production since 1994 is Nil as mention in the DDM, Koira letter vide No.- 6820, Dtd.18.11.2017 is attached as **Annexure- 2.**	Authenticated year wise Production details duly certified by DDM, Koira from year 2000-01 to 2010-11 is submitted.
2.	Certified copies of year-wise production details prior to 1994 and after 1994 from mining officer.	DDM, Koida letter showing production w.e.f. 2001 wherein production prior to 1994 is shown Nil. Hence the total production from 2001 has been demanded U/s 21 (5) of MMDR ACT. The same is attached as **Annexure- 2.**	Authenticated year wise Production details duly certified by DDM, Koira from year 2000-01 to 2010-11 is submitted.
3.	Copy of approved mining plan prior to 1994.	Not applicable.	
4.	Copy of letter of Steel and Mines Department, Govt. of Odisha to the lessee validating the grant of extension of the mining lease in favour of the lessee.	The DMG, Steel & Mine Department letter requiring Mining Plan EC & FC for extension, Vide letter no.- DMO-MCIIIMISC-0005-2023-2562 / DoMG, Dtd. 21.02.2023 is attached in **Annexure- 3.**	In the above said letter it is mentioned that extension of the mining lease in favour of the lessee is not extended.
5.	The lease lapses in 2011 but, mining operation was continued after 2011 and concerned DFO stopped mining operation for not having Environmental Clearance and Forest Clearance. In pursuance to the judgment dt. 02.08.2017 of Hon'ble Supreme Court of India, the DDM, Koira has issued Demand notice vide his letter No. 4356/Mines dt.18.11.2021 to the lessee for payment of compensation amount of Rs.14,23,524/- under section 21(5) of MMDR Act, 1957 in violation for production of minerals show raised without lawful authority or in excess of the lower of approved limit under statutory clearance for the period from 2000-2001 to 2010-2011 in respect of the mine, which has already been paid by the lessee through e-challan on 03.01.2022. Justification that why it should not be considered as a violation case? With supporting documents of Notification along with the production figures.	Lease laps w.e.f. 07.07.2013. The said letter Vide No.9625, Dtd.29.09.2015 is attached in **Annexure- 4.**	----
6.	Earlier, Terms of Reference (ToR) issued by MoEF&CC, New Delhi	The EC can't be processed at MoEF & CC due to lapsing of mines w.e.f.	----

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	vide letter number J-11015/178/2009-IA. II(M) dated 19th August 2010 for undertaking mining operation in the lease area. Earlier, public hearing for renewal of mining lease and enhancement of Bauxite ore 1.2 LTPA to 1.0 MTPA in production was conducted on 12.05.2011 and final EIA report was submitted to MoEF&CC, Govt. of India for Consideration of EC. Reason for non-consideration of EC by MoEF&CC, Govt. of India for the proposal at that time with supporting documents.	07.07.2013. The said letter Vide No.-9625, Dtd.29.09.2015 is attached in **Annexure- 4.**	
7.	Copy of all Consent to Establish and Consent to Operate obtained from the Pollution Control Board, Odisha.	Copies CTE no.- 10082/Ind-II-NOC-5782, Dtd. 18.06.2015 & CTO letter no. 11459/IND-I-CON-5654, Dtd. 20.07.2009 are **Annexure- 5 & Annexure- 6.**	submitted
8.	Detailed note on history of the mine chronologically and details of statutory clearances obtained for operation of the mines.	Detailed note on history of the mine chronologically and details of statutory clearances obtained is attached in **Annexure- 7.**	----
9.	Supporting documents that the mining lease has not lapsed and is in name of Lessee. Copy of the extension of the mining lease from the Steel and Mines Department.	The DMG, Steel & Mine Department letter requiring Mining Plan EC & FC for extension, Vide letter no DMO-MCIIIMISC-0005-2023-2562/DoMG, Dtd. 21.02.2023 is attached in **Annexure- 3.**	----
10.	Receipt of Royalty paid (if any).	Royalty challan is attached in **Annexure- 8**	challan is attached
11.	Approved mining plan of Bauxite mine along with Cross sectional Sketch plan of Bauxite mine.	IBM Approved Cross sectional sketch map is attached in **Annexure- 9**	submitted
12.	Current Status and supporting documents that the applicant has applied for Forest Clearance for the project.	FDP has been applied. The supporting documents are attached herewith as **Annexure- 10.**	Application submitted for Forest clearance on dated 15.02.2023 vide proposal no. sw/108381/2022.
13.	Details analysis of quantity and quality of bauxite present in mine.	Approved page No.- 09 of Mining Plan showing the quantity of reserve 16345127 Tones and NABL quality analysis report are attached as **Annexure – 11 & Annexure - 12** respectively.	submitted
14.	Note on blasting management, slope study analysis and water management.	The details of blasting management at page no. 21, 22, 26 & 27, slope study analysis at page no. 19 and water management at page no. 09 (PMCP) are described in approved	submitted

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		mining plan. The pages of approved mining plan attached herewith as **Annexure – 13.**	

26. The SEAC in its meeting held on dated **23-08-2023** decided to defer the proposal to next meeting as information submitted by the proponent requires more deliberation.

27. The SEAC in its meeting held on dated **17-11-2023** decided to take decision on the proposal after receipt of the following from the proponent: The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
i.	The DMG, Steel & Mine Department letter requiring Mining Plan EC & FC for extension, Vide letter no.- DMO-MCIIIMISC-0005-2023-2562 / DoMG, Dtd. 21.02.2023 indicates that extension of the mining lease in favour of the lessee is not extended. This has to be clarified.	The extension of 50 year lease period with effect from 07.07.2011 under 8(a)3 and 8(a)6 of MMDR Act is subject to compliance and statutory clearances. So the DoMG vide its letter Dtd. 21.02.2013 has sought statutory clearances. After statutory clearances the extension of lease period will be issued from the Steel and Mines Department under the said provision of law. The provision is for deemed extension lease period, which was granted prior to 12.01.2015 i.e date of amendment of MMDR Act. And which has to be followed on obtaining the statutory clearances only. Hence the mining plan as well as the EC and FC are the mandate of the Act.	-----
ii.	The lease lapses in 2011 but, mining operation was continued after 2011 and concerned DFO stopped mining operation for not having Environmental Clearance and Forest Clearance. In pursuance to the judgment dt. 02.08.2017 of Hon'ble Supreme Court of India, the DDM, Koira has issued Demand notice vide his letter No. 4356/Mines dt.18.11.2021 to the lessee for payment of compensation amount of Rs.14,23,524/- under section 21(5) of MMDR Act, 1957 in violation for production of minerals show raised without lawful authority or in excess of the lower of approved limit under statutory clearance for the period from 2000-2001 to 2010-2011 in respect of the mine, which has already been paid by the lessee through e-challan on	We accept our project as a violation case. So no supporting document is applicable.	**This will be treated as violation case.**

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	03.01.2022. You had been asked to justify as to why it should not be considered as a violation case? With supporting documents of Notification along with the production figures. No justification has been given in earlier letter.		
iii.	Earlier, Terms of Reference (ToR) issued by MoEF&CC, New Delhi vide letter number J- 11015/178/2009-IA. II(M) dated 19th August 2010 for undertaking mining operation in the lease area. Earlier, public hearing for renewal of mining lease and enhancement of Bauxite ore 1.2 LTPA to 1.0 MTPA in production was conducted on 12.05.2011 and final EIA report was submitted to MoEF&CC, Govt. of India for Consideration of EC. You had been asked to give reason for non-consideration of EC by MoEF&CC, Govt. of India for the proposal at that time with supporting documents. In reply, you have intimated that the MoEF&CC, Govt. of India had intimated that EC can't be processed at MoEF &CC due to lapsing of mines w.e.f. 07.07.2013. In this connection you have to justify how EC can be processed at SEIAA, Odisha due to lapsing of mines w.e.f. 07.07.2013 and extension of the mining lease has not been sanctioned in favour of lessee.	The lapse order vide No. 9625/IV(BX)SM- 181/2015/SM, Bhubaneswar, Dtd. 29.09.2015 w.e.f 07.07.2013 is set aside vide order Dtd. 11.05.2016 in RA No. 22/82/2015/ RC-I by Ministry of Mines, Govt. India, New Delhi (as reveled in the para No. 2 of the DoMG letter). Hence the DoMG directed vide letter No. DMO-MCIII-MISC-0005-2023-2562/DoMG, Dtd. 21.02.2023 to obtain the FC, Mining Plan, & EC, for extension of the mining lease.	----

28. The SEAC observed the following:

Since, this is a violation case as reported by the PP in compliance report. Presently, the Hon'ble Supreme Court has stayed the operation of said OM of SOP dtd. 7th July, 2021 and OM dtd. 28th January, 2022. Hence, the proposal may be returned to SEIAA, Odisha for further action.

ITEM NO. 07

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S BIO-TECH SOLUTIONS FOR COMMON BIOMEDICAL WASTE TREATMENT FACILITY (CBWTF) AT PLOT NO. 155/1020 AND 15/1025, VILLAGE: JAMAPALLI, TEHSIL: BINIKA, DISTRICT: SUBARNAPUR OF SRI RAJENDRA KUMAR SAHU - EC

1. This proposal is for Environmental Clearance of M/s. Bio-Tech Solutions for Common Biomedical Waste Treatment Facility (CBWTF) at Plot no. 155/1020 and 15/1025, Village: Jamapalli, Tehsil: Binika, District: Subarnapur of Sri Rajendra Kumar Sahu.
2. **Category:** This project falls under Category "B" of Project activity 7 (da) - Development of Common Bio Medical Waste Treatment Facility projects as per EIA Notification dated 14th Sept, 2006 as its amendments.
3. **TOR details:** Terms of Reference was issued by SEIAA, Odisha vide letter No. 4959/SEIAA dated 28.07.2022 for the proposed project.
4. **Location and connectivity:** The proposed project is located at Plot No. 155/1020 and 15/1025, Village: Jamapalli, Tehsil: Binika, District: Subarnapur, State: Odisha. The geographical co-ordinates of project site are 21° 5'20.87"N to 21° 5'21.12"N and 83°45'41.75"E to 83°45'45.60"E. it falls under Toposheet no.: 64O12, 64O16, 64P9 & 64P13. The nearest residential area is Village: Jamapalli at 600 m towards SW direction and nearest town is Binika town at 10 km towards SSE direction. The nearest highway is NH-126A at a distance of 1.18 Km in North Direction. The nearest Railway Station is Dungripalli Railway Station at a distance of 22.0 Km in West direction. The nearest Airport is Veer Surendra Sai Airport, Jharsuguda at 96 KM NNE direction & Biju Patnaik International Airport, Bhubaneswar at 232Km SE direction. The nearest water bodies are Jira River: 5.0 Km NE Direction, Mahanadi River: 7.5 Km SE Direction and Choki Nala: 7.5 Km S Direction. The nearest reserve forest is Singhijuba RF: 1.30 Km SW Direction, Ghatasan RF: 8.0 Km SE Direction and Bishalbari PF: 9.0 Km S Direction.
5. There are no National Park/Wildlife Sanctuary/ Eco-sensitive zone are within 10 km radius of the Project Site.
6. **List of Statutory Clearances:**
    a. Consent to establish has been obtained vide consent no. 6053/IIICON (NOC)/164/2021-22 dated 18.11.2021.
    b. Letter from DFO obtained vide office order no. 289/4F (Misc) dated 30.11.2021.
7. **Public hearing details:** The Public hearing was conducted successfully on 28.06.2023 at 10.00AM in the weekly market ground of Sanindpur village.
8. **Baseline study conducted:** Baseline study was conducted during Pre-Monsoon season of 2022 i.e. from 1st March 2022 to 31st May 2022.

a) **Ambient Air monitoring: -** PM_{10} is within range of 50 µg/m^3 to 70.4 µg/m^3, $PM_{2.5}$ is within range of 30.5 µg/m^3 to 44.5 µg/m^3, SO_2 is within range of 11.2 µg/m^3 to 23.7 µg/m^3 and NO_X is within range of 12 µg/m^3 to 27.3 µg/m^3.

b) **Water quality monitoring:** The result of surface water samples collected shows that the pH varies from 7.53 to 7.79, Total Hardness varies from 197.26 to 716.82 mg/l, Total Dissolved Solids varies from 341 to 862 mg/l, BOD varies from 10.0 to 29.0 (mg/l), COD varies from 24.21 to 67.0 (mg/l). The result of ground water samples collected shows that the pH varies from 7.52 to 7.75, Total Hardness varies from 149.38 to 226.79 mg/l, Total Dissolved Solids varies from 270 to 381 mg/l and Flouride content varies from 0.2 mg /l. to 0.23 mg/l.

c) **Ambient Noise monitoring:** Minimum and maximum noise levels recorded during the day time were from 48.86 Leq Db and 53.18 Leq Db respectively and minimum and maximum level of noise during night time were 39.76 Leq Db and 43.72 Leq Db.

d) **Soil monitoring:** The pH of the samples ranged from 7.25 to 7.41, which is slightly to moderately alkaline, Organic matter ranges from 0.29% to 0.45%, the concentration of Nitrogen ranges from 143.56 Kg/ha to 190.84 Kg/ha, Phosphorus ranges from 11.67 Kg/ha to 27.11 Kg/ha and Potassium ranges from 176.11 Kg/ha to 201.94 Kg/ha

9. **Water requirement:** The total water requirement for the proposed project will be 9 KLD (Fresh water 5.5 KLD + Treated water 3.5 KLD). Water will be sourced from Ground Water. Out of the total water requirement 3.5 KLD will be used for washing purpose i.e. vehicle washing & area washing, 2.0 KLD will be used for the scrubber, 1.5 KLD will be used for the Domestic consumption and 2.0 KLD will be used for the Greenbelt development.

10. **Wastewater details:** Total effluent generation would be 5.0 KLD which will be treated with the help of ETP and the treated water will be used for Greenbelt development, Scrubber and Washing. Domestic waste water will be treated with the help of the Septic tank followed by Soak pit.

Sl. No.	Particulars	Water Requirement (KLD)	Fresh Water	Treated Water	Effluent Generated	Treatment
1.	Vehicle Washing	3.0	2.0	1.0	3.0	6 KLD of ETP with ZLD Concept is Proposed for Wastewater treatment
2.	Scrubber	2.0	2.0	-	2.0	
3.	Greenbelt	2.0	-	2.0	-	
4	Area Washings	0.5	-	0.5	-	
5	Domestic	1.5	1.5	-	-	Septic Tank followed By Soak pit
Total		9.0	5.5	3.5	5.0	

11. **Power requirement and solar power details:** Total power requirement for the proposed project would be approx. 150 kVA which will be sourced from TP western Odisha Distribution Limited (TPWODL). Additionally 1 No. of DG set will be provided of capacity 75kVA to be used in case of power supply failure/emergency.

12. **Solar Power generation:** About 3000 sq. ft. roof top area will be there, which will be used for installation of solar panels for generation of 15 kVA electricity generation which will be 0.1% of the total power consumption.

13. **Rainwater harvesting details:** As the proposed facility is for management of infectious biomedical waste, there are possibilities rainwater getting contaminated at site hence rain water recharge pits shall not be installed. Proper storm water drainage system shall be laid to ensure and prevent any contamination before disposal into natural drain or collection tank for its use for washing or maintaining green areas.

14. **Solid waste generation:** Municipal Solid waste of quantity approx. 3.75 kg/day will be generated (considering 0.125 kg /person). Hazardous waste like Used oil (0.5 TPA), Incineration waste (15-20 kg/hr) and ETP sludge (80-100 kg/month) of hazardous waste will be generated.

15. **Mitigation of solid waste produced:** Municipal solid waste will be segregated into organic and inorganic waste. Organic waste will be managed by composting whereas inorganic waste will be sent to authorize waste management agency.

Schedule	Type of the Hazardous waste	Quantity	Mode of Disposal
5.1	Used Oil	0.5 TPA	Reused as lubricant in plant and machinery/ send to authorized recyclers.
36.2	Incineration Ash	15-20 Kg/hr	Send to TSDF site for land filling.
34.3	ETP Sludge	80-100 Kg/Month	Send to TSDF site for land filling.

16. **Greenbelt development:** Green belt will be developed over 33.36% area of the total plant area. Out of the 1.058 acre of the plant area, 0.353 acre will be developed for plantation. Considering 2500 nos of trees per ha, this CBWTF area will require 358 trees for raising greeneries around the unit. Hence, we are proposing total 360 trees. A budget of approx. Rs. 1.05 Lakh has been kept for green belt development.

17. **Total Employment:** Total 30 persons are proposed to hire for plant operations including officers, skilled and unskilled workers.

18. **Project cost:** The estimated project cost is 1.90 Crores and capital cost for EMP is 34.05 lakhs and recurring cost is 5.85lakhs.

Details of CER activities

Sr. No.	Activities	Budgetary Details (in lakhs)
1.	Providing infrastructure facilities such as beds, medical instruments etc. to the medical centres in Adampur government hospital	1.0
2.	Distributions of Dust Bins and arrangement of Garbage disposal to local authorities.	0.20
3.	Solar light installation at village	1.0
Total		2.20

Details of EMP activities

Sr. No.	Particulars	Capital Cost (In Lakhs)	Recurring Cost (In Lakhs)
1	Solid & Hazardous Waste management	5.0	1.5
2	Water and Waste water management	10.0	2.0
3	Air Pollution Control & Monitoring System	15.0	1.5
4	Greenbelt Development	1.05	0.35
5	Occupational Health & safety, Fire Protection measures	3.0	0.50
Total		**34.05**	**5.85**

19. **Environment Consultant:** The Environment consultant **M/s Gaurang Environmental Solutions Pvt. Ltd, Jaipur** along with the proponent made a presentation on the proposal before the Committee on 02.12.2023.

20. The SEAC in its meeting dated **02-12-2023** decided to take the decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
i)	Permission from local authority for settling up of the proposed project.	Permission from the local authority i.e., Gram panchayat NOC is enclosed herewith as **Annexure 1.**	submitted
ii)	Submit a detailed layout of the proposed project showing all process, materials storage, and handling units.	Detailed plant layout demarcating the process area, entry/exist. Vehicle washing area, Greenbelt etc. has been enclosed as **Annexure 2.**	Submitted
iii)	Regarding disposal of the incinerator ash it is mentioned as landfill in the online documents. However, during the presentation it was mentioned for disposal at M/s. Re-Sustainability limited site (TSDF). The proponent needs to submit clarification in this regard.	No land filling has been proposed at the site. The Ash generated from incinerator will be handed over to the nearest TSDF site.	-
iv)	Precautionary measures shall be undertaken for protection of adjacent agricultural lands and nearby school located at 400m, distance.	Details of precautionary measures to be implemented for protection of adjacent agricultural lands and nearby school located at 400m distance are enclosed as **Annexure 3.**	complied
v)	A buffer zone of 500m needs to be demarcated around the project site as per CPCB guidelines.	Map demarcating buffer zone of 500m around the project site is enclosed as **Annexure 4.**	complied
vi)	Details of the wastewater treatment system/technology adopted with inlet and outlet water parameters.	Details of the wastewater treatment system/technology proposed to be installed along with (As it is s proposed Greenfield project) outlet water parameters are enclosed as **Annexure 5.**	complied
vii)	Precautionary measures to be undertaken during transportation of the biomedical waste as well as their storage and handling from their source of generation.	Precautionary measures proposed to br implemented for transportation of biomedical waste as well as their storage and handling from their source of generation is enclosed as **Annexure 6.**	complied

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
viii)	Specific measures to be followed by the M/s. Re-Sustainability limited for handling the incinerator waste for disposal.	The details of clarification for disposal of the Incineration waste at M/s Re-Sustainability limited are enclosed as **Annexure 7.**	complied
ix)	Precautionary measures followed for storing the diesel at the project site.	Diesel will be stored at project site following below mentioned precautionary measures. 1. Diesel will be stored in drums under covered storage. 2. Only trained and experienced personnel will be deployed for handling operations of Diesel. 3. All safety precautions will be taken at the storage area of the Diesel. 4. Fire protection measures and fire extinguishers will be provided at the area. 5. Emergency evacuation and response plan will be made and will be implemented in case of emergencies.	-
x)	The proposed site is located within 75 K.M. from another existing CBWTF at Balangir. A petition has been received from the proponent of CBWTF at Balangir not to allow this proposed CBWTF at Binika, Dist. Subarnapur as same is not confirmed to the siting criteria as per CPCB guidelines. The PP has to clarify as to why this proposal shall not be rejected due to non-confirm to the siting criteria. A detailed writeup in this regard shall be submitted.	Detailed write-up in regards of the proposed site located within 75 K.M from another existing CBWTF at Balangir is enclosed as **Annexure 8.** The project proponent has clarified the following: • Distance from other CBWTFS is not less than 70 kms. • In this point there are other CBWTFS in other states are very nearest, and those comes under same district of a state nearing about 2 kms distance on road way and those have been granted with the "Environment Clearance" for set up of CBWTF and the detailed are presented in the next points showing the nearest CBWTFS within the radius of 70 kms. On road way where the air distances will be naturally less than road ways. The next point table shows the clear idea about the nearer to	Justification submitted

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		nearest CBWTFs has been operating and has obtained EC.	

After detailed discussion, the SEAC recommended to return the proposal to SEIAA, Odisha with a request to seek clarification from CPCB, Delhi whether EC can be granted to this CBWTF as per clarification given by the project proponent indicating that EC has been granted in other CBWTF of other State within a distance of 2 kms from another CBWTF.

ITEM NO. 08

PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR BABUPALI STONE QUARRY OVER AN AREA OF 20.63 ACRES OR 8.35 HECTARES BEARING KHATA NO. 44 & 45 PLOT NO. 41,199,214, 216, 274 IN THE VILLAGE BABUPALI, TAHASIL JUJOMURA, DISTRICT SAMBALPUR OF SRI MURARILAL AGRAWAL – EC

1. The SEAC in its meeting held on dated **02-12-2023** observed that the proposed Babupali Stone Quarry lease area consists of 4 nos. patches away from each other at significant distance. The distance between these 4 patches is more than 500meters as observed in kml file. The SEAC opined that the 4 nos. of patches having significant distance from each other cannot be considered as a single lease. Hence, it is decided to defer the proposal and consider the proposal for presentation after submission of clarification from concerned authority i.e. Tahasildar Jujomura/ Dept. of Steel and Mines regarding why these 4 small patches shall be considered as one single lease and not in cluster, as the distance between the 4 small quarries is more than 500meters.
2. The proponent has furnished the compliance and the SEAC verified the same as follows:
   i) The mentioned stone quarry was auctioned as a new source after due inclusion in DSR. The source is spread over four patches bearing khata No. 44 & 45. Plot No. 41, 199, 214, 216,234 in village Babupali under Jujomura Tahasil of Sambalpur District, Odisha. The Public Hearing was conducted on 17.01.2023.
   ii) Finally, after completion of the required official procedure, the application for Environmental Clearance was made before the SEIAA, Odisha (File No-SIA/OR/MIN/424302/2023) and the date for the presentation for the EC was fixed. During the presentation, the point was raised regarding the inclusion of the four patched under one lease keeping in view the distance between different patched crossing 500m limit. Regarding this objection the below points may kindly be perused that
   iii) These different patched have been declared as one sairat source by the controlling authority before auctioning due to limited exposures of the building stone and has been incorporated in the DSR as one sairat although the separating distance between the isolated patch in the north west part (Patch – 1) and the Patch – 2 in the south east is around 900.

iv) As cluster of these four patched has been declared as one sairat, auction has been made for the total cluster and the applicant has become the successful bidder for the cluster of these four patches.

v) Similarly, mining plan has been prepared and approved by the Authorized Officer for the cluster consisting of these individual four patches.

vi) Thereafter, all procedures to be adopted for the cluster EC namely TOR, Public hearing etc. have been observed excepting the fact that the application has been made for a single source due to above mentioned reasons.

After detailed discussion, the SEAC decided to call for a detailed presentation for the proposal.

ITEM NO. 09

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. ODISHA MINERAL EXPLORATION CORPORATION LIMITED (OMECL) FOR PRODUCTION OF IRON ORE 2.0 MTPA FROM RENGALBEDA (NE) IRON ORE BLOCK OVER M.L AREA OF 24.203 HA. VILLAGE- NUAGAON & GANDHALPADA, TEHSIL- BARBIL, DISTRICT- KEONJHAR OF SRI SHAILENDER KUMAR SINHA (DIRECTOR, GEOLOGY) - EC

1. This proposal is for Environmental Clearance of M/s. Odisha Mineral Exploration Corporation Limited (OMECL) for production of Iron Ore 2.0 MTPA from Rengalbeda (NE) Iron Ore Block over M.L area of 24.203 Ha. Village- Nuagaon & Gandhalpada, Tahasil-Barbil, District- Keonjhar of Sri Shailender Kumar Sinha (Director, Geology).
2. **Category:** The project falls under category "B" or activity 1 (a) - Mining of Minerals under EIA Notification dated 14th September 2006 as amended from time to time.
3. To ensure meeting the iron ore requirements of the end-use-industries, the State Government with the approval of Ministry of Mines, Government of India, communicated vide Letter No.16/71/2020-MVI, dated 05.01.2021 has reserved the Rengalbeda (NE) Iron Ore Block over an area of 24.203 hectares in Barbil Tehsil, Keonjhar District in favor of OMECL, under section 17A (2) of MMDR Act 1957 vide Notification No. 946/SM, Bhubaneswar, dated 28.01.2021 by Department of Steel & Mines, Odisha.
4. **Letter of Intent:** The State Government of Odisha issued letter of Intent(LOI) vide Letter No. 2215/SM, Bhubaneswar, dated 26.02.2021 to Odisha Mineral Exploration Corporation Limited (OMECL) for grant of Mining Lease for Rengalbeda (NE) Iron Ore Block over an area of 24.203 hectares (as per DGPS survey) in village Nuagaon and Gandhalpada under Barbil Tehsil, Keonjhar District of Odisha State, for a period of 50 years.
5. Mining Plan with Progressive Mine Closure Plan has been approved by IBM vide letter No: MP/A/43-ORI/BHU/2020-21/dt. 09.04.2021 under Rule 16(1) of MCR, 2016 and Rule 23 of MCDR, 2017 respectively for a period of 5 years after execution of the lease deed for production of iron ore to the tune of 2.0 MTPA (RoM).
6. NOC from CGWA for drawl of ground water (60 KLD) vide ref. no. CGWA/NOC/MIN/ORIG/2022/16596 valid up to 30.09.2024. Application for allocation of surface water (120 KLD) from Dept. of Water Resources, Govt. of Odisha, shall be submitted prior to commencement of mining operation.

7. Site-Specific Wild-Life Conservation Plan (SSWLCP) is under preparation by Divisional Forest Officer, Keonjhar Forest Division based on the information submitted by OMECL vide letter no. 785/OMECL/2022 dtd. 06.08.2022 with a copy to Divisional Forest Officer, Bonai Forest Division vide letter no. 786/OMECL/2022 dtd. 06.08.2022

8. Application for diversion of 24.203 ha of forest land submitted by OMECL vide proposal No. FP/OR/MIN/1142246/2021, dated 17.05.2021 is under examination by PCCF(Nodal) for onward recommendation for approval.

9. **Statutory approval:**

S. No.	Particulars	Status	Approval by	Letter No./Proposal No.	Date
Approvals obtained					
a)	Approval of the Central Government for reservation	Approved	Government of India Ministry of Mines	16/71/2020-MVI	05.01.2021
b)	Approval for the Land	Approved	Government of Odisha Steel & Mines Department	946-IV(B)SM-14/2020/SM	28.01.2021
c)	Letter of Intent	Approved	Government of Odisha Steel & Mines Department	2215-IV(B)SM-14/2020/SM	26.02.2021
d)	Approval letter for Mining Plan along with Progressive Mine Closure Plan (PMCP)	Approved under Rule 16(1) of MCR, 2016 & Rule 23 of MCDR, 2017	Indian Bureau of Mines	MP/A/43-ORI/BHU/2020-21	09.04.2021
e)	Ground water Clearance	Approved	Central Ground Water Authority (CGWA)	NOC No. CGWA/NOC/MIN/ORIG/2022/16596	Valid from-01.10.2022 Valid up to-30.09.2024
Approvals in Pipeline					
i)	Forest Clearance	Proposal at PCCF(N)	Central Government	FP/OR/MIN/142246/2021	17.05.2021
ii)	Site specific Wildlife conservation Plan	Plan preparation at DFO, Keonjhar	PCCF(WL) & CWLW	-	-

10. The proposed mine for extraction of Iron Ore is located in two villages namely Nuagaon & Gandhalpada, Tehsil- Barbil of Keonjhar District of Odisha granted over an area of 24.203 Ha. under which 17.034 Ha.is revenue forest land and 7.169 Ha.is non-forest land recorded as forest as on 25.10.1980 (SABIK).

Village	Khata No.	Plot No.	Total Land Area (Ha.)
Gandhalpada	46	50/p, 52/364/p, 52/p, 49/p, 48/p, 51/p, 47/p	2.117
Nuagaon	60	395/572/p, 395/p, 389/566/p, 393/p, 390/p, 296/p	18.974
	62	397/p, 395/571/p, 390/568/p, 390/567/p, 396/p, 394/p, 389/p	3.112
TOTAL			24.203

11. **TOR detail:** SEIAA, Odisha authority issued Terms of Reference (Standard & Specific) for the proposed project Vide File No. 3015/SEIAA on dated 28th September 2021.

12. **Public hearing details:** Public Hearing in respect of Keonjhar district was conducted on 21.05.2022 at 11.00 A.M at Village Gandalpada, G.P.-Guali, P.S- Rugudihi (Khata No. 48(AJA), Plot No. 194, Area- Ac. 1.150 dec) in Keonjhar District in accordance with the Ministry of Environment, Forest & Climate Change, Govt. of India, EIA Notification No. SO-1533(E) dtd. 14.09.2006. Issues raised in public hearing area employment, health care, rehabilitation, mines operation, welfare and pollution control measures. Cost of Public hearing compliances is allocated approx. Rs.100.45 Lakhs under CER. This cost will be continue based on public demand for future. All costing are done with terms of health, education, and infrastructure and environment protection.

13. **Location and connectivity:** The Project area is located between latitude 21° 57' 51.56" N to 21° 58' 09.73" N & longitude 85° 16' 03.72"E to 85° 16' 29.78" E and is covered by survey of India Toposheet No. F45H4, F45H8, F45N1, F45N5 (formerly 73G/5) in Villages Nuagaon & Gandhalpada; Tehsil – Barbil, District- Keonjhar in the State of Odisha. The mining lease area is approachable from Barbil town covering a distance of 26 km. The mining lease is connected by NH-215 (Panikoili- Rajamunda), which is passes through the lease area. Also, the area can be approachable from Koira -Rajamunda Road which is by the side of NH - 215 at a distance of 6 km. The District Head Quarters Keonjhar is at a distance of 85 km from lease area. The nearest railway station is Barbil railway siding which is 25 Km away from the Rengalbeda (NE) Iron Ore Block. Banspani Railway Station, which is 30 km away from the block, lying on Tatanagar - Barbil section of the South-Eastern Railway. Nearest river is Karo Nadi at 1.23km. No National Park or Wildlife Sanctuary within 10 km radius. Nearest Reserve forest is Mendhamaruni RF – 2.12 km. Jharkhand - Odisha Interstate Boundary is at 5.19km.

14. The lease area does not form a part of any National Park or Wildlife Sanctuary or Critical Wildlife habitat. No protected area is situated in the lease area or within the Zone of Influence. The lease area is surrounded by a series of existing mines and no important wild animals are noticed in the area.

15. **Topography & Drainage:** The Lease area is generally a semi-rugged terrain with elongated hill trendings in NW-SE direction, low mounds and wide valleys. Maximum elevation - 594 m above MSL and Minimum elevation - 548 m above MSL.

16. Geometry of the ore body has been reconstructed using borehole intersection data with 100 m borehole spacing. Strike influence has been considered in most cases as 50 m on both the directions. Tonnage factor is considered as 3.5 gm/cc for high grade ore and 2.7 gm/cc for low grade ore. A factor of 20% is excluded towards accuracy in sampling. 100% recovery factor has been taken into account for estimation of reserve as the deposits are bedded stratiform and tabular of irregular habit with lateritic cap underlain by hematite jasper or shale. Some interbands of waste materials are also found.

17. **Life of Mine:** The production rate planned for the mine is 2.0 MTPA. Considering 16.3 Million Tonnes of probable category (UNFC code: 122), the expected life of the mine at the above mentioned rated capacity will be around 9 years including existing plan period. Further exploration will be proposed in the conceptual period to prove existence of mineralization beyond existing UPL. This will further add to resources thus will increase life of mine beyond lease period.

18. **Reserves and Mining:** Total Reserves - 2,72,82,778.96 Tonnes (Fe > 45%), 46,96,888.40 (Fe > 45% < 55%) and 2,25,85,890.56 (Fe > 55%).The annual production is targeted at 2.0 MTPA of ROM. The mine is proposed to be worked by mechanized opencast mining method by engaging HEMM with deep hole drilling and blasting. The blasted ROM will be fed to a Crushing/Screening unit for further sizing and screening to CLO (+10-40/+5 - 18mm) and fines (-10/-5mm). The output is to be sent to designated stack yards which will be sold to industries.

19. **Mining method:** The Rengalbeda (NE) Iron Ore Block is to be considered under Category-A (Fully Mechanized Opencast category) as per the IBM guidelines. The mine is proposed to be worked by mechanized opencast mining method by engaging HEMMs with deep hole drilling and blasting. Bench height & width are proposed to be 10 m and 15 m respectively. Average bench slope is proposed to be 70°- 80°. Drill hole diameter is proposed to be 115 to 150mm. Blasting is proposed to be carried out with emulsion/slurry explosive. NONEL is proposed to be used to control ground vibration & better optimization in blasting. The blasted ROM is proposed to be fed to mobile crusher & screening plants for further sizing and screening to CLO (+10-40 / +518mm) and fines (-10/-5 mm). The output is to be sent to designated stack yards for selling in domestic markets. The production capacity envisaged for the mine is 2 million tonnes of ROM per year. Blast hole drilling are proposed by DTH drills of 115/150 mm dia. Single or multi row drilling with hole to hole delay are proposed. Proper charging, stemming and control blasting by using NONEL of different delay interval are proposed to reduce the ground vibration. Waste/ ROM material is proposed to be loaded into 25 - 35t capacity dumpers using 2.5-4.5m3 excavators which in turn is to be transported to dump yard or crushing & screening units. ROM after processing in crushing and screening plants is to be stacked in the designated stock yards within the lease hold area for selling to buyers. The output is to be sent to designated stack yards which will be sold to industries.

20. **Production Details:** The year-wise in-situ tentative excavation for the first five years from the date of opening of the mine is given as follows :-

Year	Quarry	Total Tentative Excavation	Top Soil	OB/SB/IB	ROM (M Cu. m)			ROM: Waste
					Ore	Mineral Rejects	Total ROM	
		M CuM	M CuM	M CuM	M CuM	M CuM	M CuM	CuM: CuM
1st Year	Pit-1	0.81	0.00	0.02	0.53	0.26	0.79	1:0.02
Sub Total		**0.81**	**0.00**	**0.02**	**0.53**	**0.26**	**0.79**	**1:0.02**
2nd Year	Pit-1	0.81	0.00	0.01	0.53	0.27	0.80	1:0.016
Sub Total		**0.81**	**0.00**	**0.01**	**0.53**	**0.27**	**0.80**	1:0.016
3rd Year	Pit-1	0.67	0.00	0.009	0.65	0.01	0.66	1:0.014
Sub Total		**0.67**	**0.00**	**0.009**	**0.65**	**0.01**	**0.66**	**1:0.014**
4th Year	Pit-1	0.80	0.00	0.003	0.79	0.01	0.80	1:0.004
Sub Total		**0.80**	**0.00**	**0.003**	**0.79**	**0.01**	**0.80**	**1:0.004**
5th Year	Pit-1	0.69	0.00	0.004	0.66	0.03	0.69	1:0.006
Sub Total		**0.69**	**0.00**	**0.004**	**0.66**	**0.03**	**0.69**	**1:0.006**
Grand Total		**3.78**	**0.00**	**0.046**	**3.16**	**0.58**	**3.74**	**1:0.012**

21. **Bench Geometry**: In course of mining a single quarry having total 8 nos. of benches will be developed. The top RL of the bench will be at 580 m and bottom RL of the bench will beat 500m. ROM will be trucked to screen plant while waste will be trucked to the earmarked wasted area. As there is overburden present in the proposed excavation area, all benches will be developed in the ore body. The waste generation due to removal of the inner burden will give rise to the average stripping ratio of 1:00046 M T / Cum during the modified plan period. The individual bench faces will be kept nearly vertical (70°-80°) whereas the overall quarry slope angle (the angle between the line joining the toe of bottom bench and the crest of the top bench with the horizontal) is/ will be maintained at less than 45°with the horizontal.

22. **Overburden Management**: A total of 0.1 Million CuM of wastes will be generated from entire Rengalbeda (NE) Iron ore Block up toconceptual stage. Out of the total 0.1 Million CuM of waste generated up to conceptual, approximately 30% i. e. 0.03 Million CuM will be utilized for road formation, maintenance and berm formation and the remaining 0.07 Million CuM waste will be dumped at proposed dump location during the conceptual period.The OB dumps areas will be compacted and afforestation will be carried out on the terraces as well as along the slopes before rehabilitation. Topsoil being generated during mining shall be used for rehabilitation & also for avenue plantation.

23. **Waste generation and storage**: Cumulative quantity of 0.046 million m3 waste will be generated during the approved Mine Plan period. It will be stored in waste dumps over total area of 0.589 ha. Top & bottom of the dump will be 580 mRL & 500 mRL respectively. Retaining wall & garland drains along with settling pits will be constructed to protect the

surrounding environment from wash-offs etc. and after that waste material shall be disposed of in a retreating fashion.

24. The garland drains will be dug around 1 m beneath the adjoining contour level at the lower peripheral areas of the dump. The width of the drains shall be around 1.5 m. A series of 3 settling pits along bottom of the dump of 10 m length, 10 m width and 3 depth will be provided to arrest the wash-off solid particles. The settling tank will be provided with two compartments each of around 5 m width to arrest the suspended solids. The retaining walls will be of 1.5 m height and 1.2 m width at the top and around 1.5 m at the base.

25. Total RoM of iron ore produced from the mine will be subjected to screening and crushing. The lumpy ore gregated in the screening process will be crushed and further screened to produce 0-10mm/ 0-5mm (Fines), 10-40 mm/ 5-18mm (CLO). The sized ore along with the generated fines will be stored in the earmarked stackyards.

26. A road connection from NH 215 to mineral processing & stacking yard at NE corner near OB dump will be made for this provision of approximate 300 m X 15 m concrete road has been planned with a budgetary provision of 30.0 Lakhs in EMP budget.

27. Transportation of iron ore has been proposed through 4 nos. of railway sidings such as Jurudi Railway Siding, Barbil Railway Siding, Barsua Railway Siding & Banspani Railway Siding.

28. During the 1st and 2nd year of plan period, ultimate pit limit is 550 m AMSL. So, there will be no seepage during this period. The seepage will start from the 3rd year mining operation due to intersection of ground water table. Prior to the intersection; the dewatering permission shall be obtained from CGWA.

29. **Water requirement:** The total water requirement is about 180 KLD (For Drinking & Domestic Uses - 60 KLD and for Mining Operations, dust suppression and Plantation - 120 KLD). For Ground water abstraction of 60KLD, NOC has been obtained from CGWA vide no. CGWA/NOC/MIN/ORIG/2022/16596; which is valid from 01.10.2022 to 30.09.2024. For 120 KLD Surface water allocation shall be obtained from Dept. of Water Resources, Govt. of Odisha after obtaining EC.

Year	Ground water(m^3/year)	Surface water(m^3/year)	Total Requirement (m^3/year)	Mine Seepage (m^3/year)	Reduction of consumption (m^3/year)	% of reduction
1st	21,900	43,800	65,700	0	65,700	0
2nd	21,900	43,800	65,700	0	65,700	0
3rd	21,900	43,800	65,700	189.02	65,510.9	1.0
4th	21,900	43,800	65,700	4,487.70	61,212.3	0.93
5th	21,900	43,800	65,700	9,022.47	56,677.5	0.86

30. **Rainwater harvesting:** Total Rainwater Harvesting potential is 10650m^3/Year or 0.011 MCM. So % of recharge & rainwater harvesting potential is 10650/ 83647.75 x 100 = 12.73 %.

Sl. No.	Particulars	Area (m^2)	Run off Coefficient	Rainfall (m)	Rainwater potential (m^3/Year)
a)	Roof Top of building/ shed	90	0.85	1.561	119.42
b)	Road/Paved area	16520	0.65	1.561	16762.02
c)	Open Land	179440	0.2	1.561	56021.17
d)	Green Belt	45890	0.15	1.561	10745.14
	Total (m^2)	241940			83647.75

31. **Power Requirement:** Power utilization for this project is 241 KW and DG sets of 125 KVA will be used for emergency backup.Power permission will be obtained from TP Northern Odisha Distribution Limited (TPNODL) after obtaining EC.

32. **Diversion of Transmission Power** Line: A 132 KV transmission line is passing through M.L area from OPTCL Grid Station (132/33 KV) at Barbil under Keonjhar district to Kamanda Steel Plant of M/s Rungta Mines Ltd. (RML) in village Kamanda in Sundargarh District. Out of 31.806 ha of approved forest land pertaining to transmission line of M/s RML, 1.551 ha comes within Rengalbeda Mining Lease of M/s OMECL. The high-tension power line passes through the M.L area, which may adversely affect the mining, hence, considering safety aspects, OMECL requested M/s RML for revision in the alignment of the transmission line. M/s RML issuedNoCvide letter No. RML/KSP-466/417/22-23 dtd. 20.12.2022 in favor of OMECL and also submittedforest diversion proposal (vide no. FP/OR/TRANS/408503/2022) by re-routing the transmission line outside the ML area to enable OMECL to use 1.551 ha of forest land for mining and ancillary purposes.

33. **Solar power detail:** Total Solar Power provision for the proposed project is 113 x 50 = 5650 W which is 6 KW. Percentages of Solar Power out of total Power save = (6/ 241) KW x 100= 2.48 says 2.5%.

34. **Mode of transportation:** The proposed production of mine is 2.0 MTPA (ROM) corresponding to the production of 2.0MTPA Saleable Iron Ore. Therefore 70% of the dispatch i.e. 1.40 MTPA will be by public railway siding and maximum 30% of the dispatch i.e. 0.60 MTPA will be by road. Transportation of iron ore has been proposed through 4 nos. of railway sidings such as Jurudi Railway Siding, Barbil Railway Siding, Barsua Railway Siding & Banspani Railway Siding.

35. **Traffic density study** conducted by NIT Rourkela for carrying capacity of road inside the mines and at haulage roads, intersecting points of haulage road with public road are covered in this EIA Report. From the findings, it is observed that the existing road network will be adequate to accommodate the additional traffic load and complied with IRC guidelines and LOS ranges from 'A – B'.

36. Greenbelt:

Year	Location	Area of Plantation (Ha)	No of Saplings	Cost of Plantation	Location	Name of the Species
1st Year	Between boundary pillar A to C	0.25	625	93750	Boundary Safety zone area	Neem, Mango, Chakunda, Sissam, Krishnachuda, Radhachuda, Shrubs
2nd Year	Between boundary pillar C to D	0.28	700	105000		
3rd Year	Between boundary pillar D to G	0.50	1250	187500		
4th Year	Between boundary pillar G to A	0.35	875	131250		
5th Year		Maintenance				
Total		1.38Ha.	3450nos.	Rs.517500		

37. Baseline details: Collection of the baseline data including Air, Water, Soil, Noise, Ecology & Biodiversity commenced between 1st October, 2021 to 31st December, 2021 covering Post-Monsoon season.

a) **Ambient air quality:** PM10 varied from 43.7 to 94.2 µg/m3, PM2.5 from 22.7 to 50.3 µg/m3 , SO_2 from 4.6 to 16.3 µg/m3, NOx from 10.3 to 30.3 µg/m3 and CO from 0.16 to 0.67 mg/m^3. Respirable free silica (%) ranged from 0.37 to 0.69.

b) **Surface water analysis:** Surface water samples show slight variations in colour which values lies between 5 Hazen units to 25. pH value is consistent and lies around 7 with a maximum value of 7.5 (SW 7) to a minimum of 6.7 (SW 6). Dissolved Oxygen values ranges from 4.6 mg/l (SW 6) to 6.3 mg/l (SW 1). Turbidity varies from 6.7 (SW 4) to 24.5 (SW2) NTU. Chloride value ranges from 9.0 mg/l (SW1) to 22.0 mg/l (SW4). Total Dissolved Solids range from 29.0 mg/l (SW1) to 162.0 mg/l (SW4). Electrical Conductivity value ranges from 47.8 (SW 7) to 248.6 (SW 4) Oil and grease value lie below detectable level for all locations. BOD ranges from 2.0 mg/l (SW 5) to 2.8 mg/l (SW 6) & not detected in other locations. Higher value of BOD is due to anthropogenic activities. None of the heavy metals are detectable as well as neither are Phenolic compounds detectable in any of the samples. Total coliform values lie between 14 (SW4) to 47 (SW6).

c) **Ground water analysis:** Groundwater samples are all within the acceptable limits with respect to colour. The odour and taste of groundwater is also agreeable. Turbidity values ranges from less than 1 (GW 7) to 4.92 (GW 3) NTU. pH values varies from 5.5 (GW 6) to 6.4 (GW 8). Total hardness varies from 12.0 (GW 2 & GW 7) to 78 (GW 6) mg/l. Chloride content varies 4.0 mg/l (GW 1 & GW 7) to 34.0 mg/l (GW 6). TDS values

range from 14.0 (GW 2 & 7) to 143 (GW 6) mg/l. Calcium and Magnesium values are within permissible limits. Heavy metals and hexavalent chromium are all below detectable level. Aluminium and Boron are also not detectable in groundwater samples. Fe varies from 0.08 mg/l (GW 8) to 0.8 mg/l (GW 3). Total Alkalinity ranges from 6.0 mg/l (GW 6) to 29.0 mg/l (GW 8). Electrical conductivity values range from 59.4 (GW 8) to 61.2 (GW 4). Nickel, potassium, silica, and ammonia is not detectable in the study area

d) **Noise study**: Project site (ANQ 6) at Rengalbeda village adjacent to NH-215 (Panikoili-Rajamunda) road due to heavy vehicle movements shows the highest values (day time) in October, November & December is 60 dB(A), 61.3 dB(A) & 62.9 dB(A) respectively. The Second highest values (day time) of Ambient Noise is observed in N4, located school area (Nilachal High school, Guali) which is situated Near NH- 215 (Panikoili-Rajamunda Road) due to heavy vehicle movements in October, November & December is 56.2 dB(A), 55.6 dB(A) & 57.3 dB(A) respectively. In night time maximum value observed in in October, November & December is 52.1 dB(A), 51.2 dB(A) & 51.4 dB(A) respectively at ANQ 6 location due to heavy vehicle movement activities

e) **Soil quality**: Soil samples were collected and analysed to obtain results for 20 parameters Conductivity values ranges from 33.2 (SQ2) to 119.7 (SQ5) µS/cm. pH value is varies 5.62 (SQ6) to 7.94 (SQ5). This indicates that the soil is neutral and lies between optimum range for most plants. Fe value is varies from 33.9. (SQ1) to 5.67 (SQ4) Percent. Bulk density ranges from 1.11 (S2) to 1.25 (S6) gm/cc. Clay is presence in all locations due to deep weathering profile in the area ranging up to 30 m in some locales. Also, compaction of soil is moderate, and porosity is varies from 38.11 (SQ1) to 58.11 (SQ2) percent. SiO2 is varies from 51.4 (SQ4) to 55.7 (SQ1) percent.

38. **Employment generation**: The estimated total manpower requirement for the mining project is 366 persons [direct employment 130 persons + indirect (Contractual) employment 236 persons]. Preference for employment will be given to the local villagers. Indirect employment opportunities will also arise for the local people.

Category	Post	Qualification	Departmental	Contractual	Total
Management	First Class Mines Manager	First Class Mines Manager's Certificate of Competency	1	-	1
	Second Class manager	Degree in Mining Engineering/ 2nd class mines manager certificate of competency	3	3	6
	Geologist	M. Sc. In Geology/Applied Geology	3	-	3
Supervisory	Engineer	Foremen's Certificate of Competency	3	9	12
	Foreman	Mate's Certificate of Competency	3	6	9
	Surveyor	Surveyor's Certificate	2	2	4

		of Competency			
	Blaster	Blaster's Certificate of Competency	4	-	4
Highly Skilled	HEMM Operator	Experienced with a valid license	10	120	130
	Clerical staff	Graduate and experienced	20	20	40
Skilled	Mining Mate	Experienced with a valid license	6	6	12
	Other Supporting Staffs	Experienced with a valid license	10	20	30
	Others	Experienced	15	30	45
Un-Skilled	Security	Experienced	50	20	70
Total			130	236	366

39. **Rehabilitation and Resettlement (R&R) Plan** - The people residing in the lease area will be rehabilitated as per the State Govt. guidelines and the socio-economic study has been carried out by the organization empanelled by Nabakrushna Choudhury Centre for Development Studies (NCDS), Bhubaneswar Odisha. As per the survey conducted by Nabakrushna Choudhury Centre of Development Studies (NCDS), 16 families (13 original families and 3 extended families) residing in the forest land within mining lease area will be displaced for the project and the assistance will be as per the provisions of RFCTLAR&R Act, 2013 and Odisha Resettlement & Rehabilitation Policy, 2006.

40. **Project cost**: Estimated cost of project is Rs. 3804.66 Lakhs. CER cost total approx. Rs. 100.45 Lakhs. EMP budget includes total Capital Cost of approx. Rs. 108 lakhs and Recurring Cost of Rs. 75.5 Lakhs.

Sl. No.	Category	Capital Cost (in Rs. Lakh)	Recurring Cost (in Rs. Lakh)
1.	Water Pollution & Rain water Harvesting	40.0	12.0
2.	Air Pollution Controlling	16.0	5.0
3.	Green Belt Development	17.00	4.5
4.	Environmental Monitoring	15.0	48
5.	Safety & Disaster Management Plan	20.0	6.0
Total		108.0	75.5

41. There are no court cases or violation cases pending against the PP.

42. The Environment consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Patia,** along with the proponent made a presentation on the proposal before the Committee on 03.05.2023.

43. The SEAC in its meeting dated **03-05-2023** decided to take the decision on the proposal after receipt of the following from the proponent. The proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
1.	Entire land is forest land. Stage-I Forest Clearance is not obtained but applied for the same. Hence, present status of Forest Clearance.	During scrutiny of Forest Diversion proposal (No. FP/QR/MIN/142246/2021) by PCCF(N) for recommendation to Govt. of India for consideration of Stage –I FC, few observation has been sought and the same is under compliance by OMC.
2.	"Silt and Desilting" management with silt composition and periodic desilting SOP to be submitted as it was a specific issue raised during public hearing.	Standard operating procedure for Silt and desalting management is enclosed herewith as **Annexure – I.**
3.	Mitigation measures to prevent ground water pollution as there will be intersection in third year.	The detailed hydro geological study has benn conducted by Geo Climate Risk Solutions Pvt Ltd. An accredited Agency by CGWA for Rengalbeda (NE) Iron Ore Block. As reported in the study report, 25 m^3/ day will be generated from mine seepage during 5th year plan period. The entire water will be utilized for green belt development, the relevant pages of the report depicting the same is enclosed herewith as **Annexure – 2.**
4.	Tabulated form on different grades of ore, their utilization/non utilization, management and the quantity of waste generated and storage plan.	The different grades of ore proposed to be generated and their utilization along with quantity of waste generated and its storage plan is enclosed herewith as **Annexure – 3.**
5.	Detailed note on explosive storage and blasting management and specific safety measures to be taken to avoid accidents as the National Highway is passing through the lease site.	There will be no storage of explosive within the mine site. Adequate measures shall be taken for control blasting and NONEL technology is proposed to be used to control ground vibration & better optimization in blasting. Safety measures proposed for NH-215 is detailed in the sheet enclosed herewith as **Annexure – 4.**
6.	Issues raised during public hearing and commitments of the proponent.	The issues raised during public hearing and its commitment for fulfillment is enclosed as **Annexure-5.**
7.	Minor minerals ore analysis of the lease site according to the IBM guidelines.	The mineralogical and Chemical analysis of iron ore Sample as per the Geological Report of Rengalbeda (NE) Block conducted by Geological Survey of India is attached herewith as **Annexure – 6.**
8.	Detailed note on presence of Hexavalent Chromium, Manganese, Arsenic and all other heavy metals in the ground and surface water samples	Ground water and Surface water samples collected within the study area found that the concentration of Hexavalent chromium, Manganese, Arsenic and other heavy metals are

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	collected from the project area for EIA study.	well below the prescribed standards. The copy of the baseline report is enclosed as **Annexure – 7**.
9.	High Tension Power Transmission Line is passing within lease area; same to be relocated outside lease area as proposed. An undertaking to this effect shall be submitted.	Undertaking to the effect for relocating the high-tension power transmission line outside the lease area is attached as **Annexure - 8**.
10.	A school is nearby; detailed SoP for safety of children of school due to transportation and blasting.	Adequate measures shall be taken for control blasting and NONEL technology is proposed to be used to control ground vibration & better optimization in blasting. Safety measures proposed for NH-215 is detailed in the sheet enclosed herewith as **Annexure – 4**. Adoption of above safety measures shall take for safety of School Children due to transportation and blasting.
11.	Number of villages nearby the mine.	There are 2 nos. of villages nearby mines: 1. Gandhalpada (1.0 Km;E) 2. Nuwagan (1.3 Km;NE)
12.	Plan for water reuse / recycle for reducing water consumption for mining to be furnished.	Adequate care shall be taken as per the following for recycle and reuse of water for reducing the water consumption from source: 1. Sewage treatment plant shall be established and approx. 70-80% treated water shall be utilized for green belt development. 2. Wheel wash facility shall be installed with water re-circulation system. 3. Workshop effluent shall pass through oil & grease trap and the water free from oil & grease shall be utilized for dust suppression.

Considering the information furnished and the presentation made by the consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Patia** along with the project proponent, the SEAC recommended for grant of Environmental Clearance with stipulated conditions as per **Annexure – G** and following specific conditions. However, the Environmental Clearance shall be issued by the SEIAA, Odisha after receipt of Stage-I Forest Clearance from the proponent as stipulated in MoEF&CC, Govt. of India office memorandum no. J-11013/41/2006-IA.II(I), dated 09.09.2011 and office memorandum no. J-11013/41/2006-IA.II(I), dated 18th May, 2012.

a) The proponent shall utilize different grades of iron ore (ROM) and waste generated according to IBM guidelines.

b) The proponent shall carryout compensatory afforestation for the project site.

c) The proponent shall adopt additional measures for dust suppression.

d) Conversion of Gochar / Grazing land involved in lease area shall be made before going for mining activity.

e) Rainwater harvesting structures shall be implemented.

f) The EC is limited to secondary crushing and screening operations (dry process) as per approved mining plan. Under no circumstances, the lessee shall carry out any beneficiation activity (wet process) of low-grade ore.

g) All the ores (45-55) and +55 grades shall be used and ores & rejects shall be transported as per approved mining plan for their use. Only temporary stacks shall be operated. The mine shall avoid segregation & generation of fines and flow of silt during rainy session.

h) Green processes like Controlled drilling, Environment friendly blasting, safe transportation and conveying, silt-management shall be followed as per guidelines.

i) **NEERI recommendations particularly related to SOTM shall be complied at the earliest possible and an undertaking to that effect indicating timeline shall be submitted before start of operations.**

MEMBER SECRETARY, SEAC

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE OF M/S M G MOHANTY (PATABEDA IRON AND MANGANESE MINES) FOR PATABEDA IRON AND MANGANESE MINES FOR EXPANSION OF PRODUCTION OF IRON ORE FROM 180000 TPA TO 572305 TPA ALONG WITH CRUSHING AND SCREENING PLANTS OVER AN AREA OF 19.425 HA LOCATED AT VILLAGE PATABEDA UNDER KOIRA TEHSIL IN SUNDARGARH DISCTRICT OF SHRI RAJIV LOCHAN MOHANTY - EC.

(I) Statutory compliance

(i) This Environmental Clearance (EC) is subject to orders/ judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.

(ii) The Project proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August,2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.

(iii) The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, 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 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.

(iv) This Environmental Clearance shall become operational only after receiving formal NBWL Clearance from MoEF&CC subsequent to the recommendations of the Standing Committee of National Board for Wildlife, if applicable to the Project,

(v) This Environmental Clearance shall become operational only after receiving formal Forest Clearance (FC) under the provision of Forest Conservation Act, 1980, if applicable to the project.

(vi) Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish / Consent to Operate from the concerned State Pollution Control Board.

(vii) The PP shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development & Regulation), Act, 2015 and rules & regulations made there under. PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.

(viii) The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made thereunder in respect of lands which are not owned by it.

(ix) The Project Proponent shall follow the mitigation measures provided in MoEF&CC's Office Memorandum No. Z-l1013/57/2014-IA.II (M), dated 29th October, 2014, titled "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

JNayak
Environmental Scientist, SEAC

area".

(x) The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water for the project.

(xi) A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.

(xii) State Pollution Control Board shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar's Office for 30 days.

(xiii) The Project Authorities should widely advertise about the grant of this EC letter by printing the same m at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board and web site of the Ministry of Environment, Forest and Climate Change (www.environmentclearance. nic.in). A copy of the advertisement may be forwarded to the concerned MoEF&CC Regional Office for compliance and record.

(xiv) The Project Proponent shall inform the MoEF&CC/SEIAA, Odisha for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.

(II) <u>Air quality monitoring and preservation</u>

(i) The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM_{10}, $PM_{2.5}$, NO_2; CO and SO_2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.

(ii) Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM_{10} and $PM_{2.5}$ are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from ah sources shall be regularly controlled by installation of required equipments/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of

Environmental Scientist, SEAC

dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEF&CC/ Central Pollution Control Board.

(III) Water quality monitoring and preservation

(i) In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEF&CC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.

(ii) Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.

(iii) Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.

(iv) The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/ adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-a-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEF&CC / SEIAA, Odisha. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, SEIAA, Odisha, Central Ground Water Authority and Regional Director, Central Ground Water Board, State

JNayak
Environmental Scientist, SEAC

Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.

(v) Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J-20012/1 /2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.

(vi) The project proponent shall construct retaining wall and settling pond within the lease area. Further, check dams shall be constructed at strategic locations in which rain water passes in rainy season. Finally, the excess supernanted after sedimentation shall be allowed to spill away through stone pitch structure to the nearby valley.

(vii) De-silting of agricultural lands in buffer zone and beyond including nearby Nalas/rivers perennially periodically and perpetually caused due to wash up of minerals/OB/dumps shall be done as per SOP submitted. A legal affidavit shall be submitted within 6 months from the date of issue of Environmental Clearance to this effect with periodicity of de-silting.

(viii) Detail design of the existing retaining wall and the proposed for the expansion from a chartered Civil Engineer shall be submitted within 6 months from the date of issue of Environmental Clearance to ensure that no silt after wash up is escaped from the core / buffer zone of the mines.

(ix) An area of 3.40Ha shall be kept for public use as pond and road. Hence, remaining 52.956Ha shall be planted during life of the mine in a phased manner i.e. within a period of 20 years.

(x) Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office, MoEF&CC annually.

(xi) Industrial waste water (workshop and waste water from the mine) should be properly collected and treated in an ETP as proposed so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.

(xii) The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board.

(IV) <u>Noise and vibration monitoring and prevention</u>

(i) The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS

JNayak
Environmental Scientist, SEAC

guidelines.

(ii) The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.

(iii) The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The worker engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.

(V) Mining Plan

(i) The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc.. No change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management, O.B & dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form to Short Term Permit (STP), Query license or any other name.

(ii) The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of Mines/Department of Mining & Geology as required under the Provision of the MMDR Act, 1957 and Rules/ Guidelines made there under. A copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and verification.

(iii) The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-a-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEF&CC and its concerned Regional Office / SEIAA, Odisha.

JNayak
Environmental Scientist, SEAC

(VI) **Land reclamation**

(i) The Overburden (O.B.) generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by D.G.M.S w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of top soil/OB dumps. The topsoil shall be used for land reclamation and plantation.

(ii) The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.

(iii) The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.

(iv) The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.

(v) The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slope stability report shall be submitted to concerned regional office of MoEF&CC, Govt. of India, Bhubaneswar as well as SEIAA, Odisha.

(vi) Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and topsoil / OB / waste dumps to prevent runoff of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.

(vii) Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the comers of the garland drains.

Jnayak
Environmental Scientist, SEAC

(viii) The top soil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as per the guidelines framed by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of dumps. The topsoil shall be used for land reclamation and plantation purpose.

(ix) The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.

(VII) Transportation

(i) No Transportation of the minerals shall be allowed in case of roads passing through transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers.

(ii) The Main haulage road within the mine lease should be provided with a permanent water arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.

(iii) Traffic management shall be done as per recommendation of Traffic Management Study Report.

(iv) The Project Proponent shall provide parking plaza for the heavy vehicles within the lease area as recommendation of NEERI.

(VIII) Green Belt

(i) The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side

JNayak
Environmental Scientist, SEAC

of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.

(ii) The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.

(iii) The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.

(iv) The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt.

(v) And implemented in consultation with the State Forest and Wildlife Department. A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.

(IX) <u>Public hearing and human health issues</u>

(i) The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking, etc. The check-ups shall be undertaken once in six months and necessary remedial/ preventive measures be taken. A status report on the same may be sent to MoEF&CC Regional Office and DGMS on half-yearly basis.

(ii) A commitment in form of an undertaking for periodical occupational health checkup of the employee and the local people shall be done through an occupational health expert as per the detailed action plan submitted with the proposal within 6 months from the date of issue of Environmental Clearance.

JNayak
Environmental Scientist, SEAC

(iii) The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, Diarrhoea in children under five, respiratory infections due to bio mass cooking. The proponent shall also create awareness and educate the nearby community and workers for Sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carryout base line HRA for all the category of workers and thereafter every five years.

(iv) The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) estimation in Blood; For Inorganic Chromium- Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests all tests would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminium, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray. Only conventional X-Ray will be accepted for record purposes and not the digital one). X-Ray must meet ILO criteria (17 x l4 inches and of good quality).

(v) The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass Index and it should stay between 18.5 -24.9, (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities, (c) At the end of their leaving job there should be no Diminution in their Lung Functions Forced Expiratory Volume in one second (FEV1),Forced Vital Capacity (FVC), and the ratio) unless they are smokers which has to be adjusted, and the effect of age, (d) their hearing should not be affected. As a proof an Audiogram (first and last need to be presented), (e) they should not have developed any Persistent Back Pain, Neck Pain, and the movement of their Hip, Knee and other joints should have normal range of movement, (f) they should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEF&CC annually along with details of the relief and compensation paid to workers having above indications.

Jnayak
Environmental Scientist, SEAC

(vi) The Project Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.

(vii) Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.

(viii) The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration.

(ix) Issues raised and recorded in proceedings of public hearing w.r.t. environment / pollution / CER shall be complied by the Mining Authority as per OM F. No. 22-65/2017-IA.III, dated 30.09.2020 of MoEF&CC, Govt. of India.

(X) <u>Corporate Environment Responsibility (CER)</u>

(i) The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 or as proposed by SEAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual report of implementation of the same along with documentary proof viz. photographs, purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement.

(ii) Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purposes. The Year wise expenditure of such funds should be reported to the MoEF&CC and its concerned Regional Office / SEIAA, Odisha.

(XI) <u>Miscellaneous</u>

(i) The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC.

(ii) The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.

(iii) The project proponent shall establish a solar power plant with 30KVA capacity within the lease area as proposed.

JNayak
Environmental Scientist, SEAC

(iv) The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MoEF&CC & its concerned Regional Office, SEIAA, Odisha, Central Pollution Control Board and State Pollution Control Board.

(v) A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEF&CC.

(vi) The proponent shall comply all the specific conditions as recommended by CSIR-NEERI on carrying capacity study (as applicable) in time bound manner as proposed.

(vii) The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.

(viii) The project proponent shall augment infrastructure on drinking water, health care and education in nearby villages as per time bound action plan submitted.

(ix) The project proponent shall obtain permission from DGMS under 106(2b) to carry out blasting operation within the lease area.

(x) The concerned Regional Office of the MoEF&CC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEF&CC officer(s) by furnishing the requisite data / information / monitoring reports.

(xi) Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Environmental Scientist, SEAC

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR OF M/S. DEVAVRAT HOMES PRIVATE LIMITED FOR PROPOSED RESIDENTIAL PROJECT [B+S+9] MULTI STORIED RESIDENTIAL APARTMENT WITH 2 NOS. OF BLOCKS MIG GROUP HOUSING BLOCK OVER REVENUE PLOT NO.:- 1002/5921, 1004, 1005, 1009, 909/6301, 910, 911 KHATA NO.725/3514, 725/5380, 725/543, 725/1689, 725/5027, 725/5019, 725/4983 WITH TOTAL BUILT UP AREA OF 34992.83 SQM & TOTAL PLOT AREA - 8794.59 SQM / 2.180 AC /0.872 HA AT KALARAHANGA, BHUBANESWAR, DISTRICT : KHORDA OF SMT. SUNITA CHOUDHARY– EC.

PART A - SPECIFIC CONDITIONS:

1. Consent to Establish / Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
2. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc. as per National Building Code including protection measures from lightening etc.
3. The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
4. The project proponent shall ensure that the guidelines for building and construction projects issued vide this Ministry's OM NO.19-2/2013-IA.III dated 9th June, 2015, are followed to ensure sustainable environmental management.
5. The proponent shall obtain prior clearance from the Standing Committee of the National Board for Wild Life if the project will be located within any Eco-Sensitive Zone of Wild Life Sanctuary.

TOPOGRAPHY AND NATURAL DRAINAGE

6. The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape and other Sustainable Urban Drainage Systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water. Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.
7. The permission from competent authority will be obtained to discharge the excess storm water to drain if any. The proponent shall renovate the existing drain to accommodate the discharge and maintain it perennially.
8. Permission for construction of drain alongside the adjacent NH under construction for allowing the proponent to discharge the treated waste water as well excess runoff water during monsoon from NH Authority shall be obtained. The construction of drains shall be synchronized with the completion of the construction of the Housing Project.

JNayak
Environmental Scientist, SEAC

WATER REQUIREMENT, CONSERVATION, RAIN WATER HARVESTING, AND GROUND WATER RECHARGE

9. As proposed, fresh water requirement from ground water shall not exceed 123 KLD.
10. A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.
11. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC and SEIAA, Odisha along with six monthly Monitoring reports.
12. Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc. and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.
13. Use of water saving devices/ fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc.) for water conservation shall be incorporated in the building plan.
14. Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.
15. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
16. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits of 16 nos. shall be provided.
17. Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering. The proponent shall also obtain permission from Water Resources Department, Govt. of Odisha for drawl of water.
18. The proponent shall keep one bore well as standby domestic water source once municipal water supply is made available in the project area.

SOLID WASTE MANAGEMENT

19. The provisions of the Solid Waste (Management) Rules, 2016, E-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
20. Disposal of muck during construction phase shall not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
21. Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials. Wet garbage shall be composted in Organic Waste Converter. Adequate area

Jwalak
Environmental Scientist, SEAC

shall be provided for solid waste management within the premises which will include area for segregation, composting. The inert waste from group housing project will be sent to dumping site.

22. Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.

23. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the Municipal Solid Waste generated from project shall be obtained.

SEWAGE TREATMENT PLANT

24. Sewage shall be treated in STP of capacity 200 KLD. The treated effluent from STP shall be reused for flushing, horticulture & Filter backwash.

25. Excess treated water shall be discharged to the drain only after getting the permission from the concerned authority. The proponent shall renovate the existing drain to accommodate the discharge and maintain it perennially. To this effect the proponent has to give a legal affidavit before going for construction activity.

26. A certificate from the competent authority shall be obtained for discharging treated effluent/ untreated effluents into the Public sewer/disposal/drainage systems along with the final disposal point.

27. Separate large recharge pits shall be constructed inside the project area to accommodate the rainwater in case the housing project period and the CDP of the Govt. does not synchronize with reference to construction of road and drain.

28. No sewage or untreated effluent water would be discharged through storm water drains.

29. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the SEIAA, Odisha before the project is commissioned for operation. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.

30. Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.

31. The proponent shall obtain permission from the concerned authority to discharge the liquid waste to any drain i.e. the competent authority of the drain and "Nala" before commencement of any activity at the project site.

ENERGY

32. Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC. Outdoor and common area lighting shall be LED. Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC

Environmental Scientist, SEAC

specifications.

33. Energy conservation measures like installation of CFLs / LED for the lighting the area outside the building should be integral part of the project design and should be in place before project commissioning. Used CFLs, TFL and LED shall be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination.

34. Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 5% of the demand load or as per the state level/ local building bye-laws requirement, whichever is higher. Follow super ECBC requirement of ECBC 2017 and provide compliance report.

35. Solar power shall be used for lighting in the apartment to reduce the power load on grid. Separate electric meter shall be installed for solar power. Solar water heating shall be provided to meet 20% of the hot water demand of the commercial and institutional building or as per the requirement of the local building bye-laws, whichever is higher. Residential buildings are also recommended to meet its hot water demand from solar water heaters, as far as possible.

36. Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction material quantity. These include Fly Ash bricks, hollow bricks, AACs, Fly Ash Lime Gypsum blocks, compressed earth blocks, and other environment friendly materials. Fly ash should be used as building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016. Ready mixed concrete must be used in building construction.

37. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project shall be submitted.

AIR QUALITY AND NOISE

38. Construction site shall be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3-meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, murram, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution. Wet jet shall be provided for grinding and stone cutting. Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.

39. All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules, 2016. All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.

Jnayak
Environmental Scientist, SEAC

40. **Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.**

41. The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Low sulphur diesel shall be used. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.

42. For indoor air quality the ventilation provisions as per National Building Code of India shall be provided.

43. Ambient noise levels shall conform to residential standard both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitored during construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB / SPCB.

GREEN COVER

44. No tree cutting/transplantation of existing trees has been proposed in the instant project. A minimum of 1 tree for every 80 m^2 of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping. As proposed approx. 1875.32 Sqm (21.32%) of the plot area shall be provided for green area development.

TOP SOIL PRESERVATION AND REUSE

45. Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stockpiled appropriately in designated areas and reapplied during plantation of the proposed vegetation on site.

TRANSPORT

46. A comprehensive mobility plan, as per Ministry of Urban Development best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria.
    - Hierarchy of roads with proper segregation of vehicular and pedestrian traffic.
    - Traffic calming measures
    - Proper design of entry and exit points.
    - Parking norms as per local regulation

47. A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project.

48. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in

Jwalak
Environmental Scientist, SEAC

this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

49. Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during non-peak hours.
50. A dedicated entry/exit and parking shall be provided for commercial activities.
51. Barricades shall be provided around project boundary.
52. Speed of the vehicles shall be restricted upto 15 kmph by erecting speed bumps at regular intervals at project site and proper signage shall be provided for guided vehicular movement and speed restrictions.
53. Parking shall be prohibited on the access road to the proposed project site.
54. Footpath shall be seamless with sufficient width.
55. No vehicles shall be allowed to stop and stand in front of the gate on main access.
56. A buffer of minimum 10 m shall be maintained between the entry/exit gate and the road to avoid traffic congestion.
57. The Traffic Management Plan prepared by the proponent shall be duly validated and certified by the State Concerned Competent Authority and shall have also their consent before implementation.

ENVIRONMENT MANAGEMENT PLAN

58. An Environmental Management Plan (EMP) shall be prepared and implemented to ensure compliance with the environmental conditions specified above. A dedicated Environment Monitoring Cell with defined functions and responsibility shall be put in place to implement the EMP. The environmental cell shall ensure that the environment infrastructure like Sewage Treatment Plant, Landscaping, Rain Water Harvesting, Energy efficiency and conservation, water efficiency and conservation, solid waste management, renewable energy etc. are kept operational and meet the required standards. The environmental cell shall also keep the record of environment monitoring and those related to the environment infrastructure.

OTHERS

59. Provisions shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
60. A First Aid Room shall be provided in the project both during construction and operations of the project.
61. The company shall draw up and implement corporate social Responsibility plan as per the Company's Act of 2013.

JNayak
Environmental Scientist, SEAC

62. As per the MoEF&CC, Govt. of India Office Memorandum F.No.22-65/2017-IA.III dated 1st May 2018, the project proponent is required to prepare and implement Corporate Environment Responsibility (CER) Plan. As per para 6(II) of the said O.M. appropriate funds shall be earmarked for the activities such as infrastructure creation for drinking water supply, sanitation, health, education, skill development, roads, cross drains, electrification including solar power, solid waste management facilities, scientific support and awareness to local farmers to increase yield of crop and fodder, rain water harvesting, soil moisture conservation works, avenue plantation, plantation in community areas etc. The activities proposed under CER shall be restricted to the affected area around the project. The entire activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.

PART B – GENERAL CONDITIONS

1. A copy of the Environmental Clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.
2. The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to the SEIAA, Odisha and MoEF&CC, Govt. of India and its concerned Regional Office.
3. Officials from the Regional Office of MoEF&CC, Bhubaneswar who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection.
4. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.
5. The SEIAA, Odisha reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
6. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, the Forest Conservation Act, 1980 and the Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.
7. These stipulations would be enforced among others under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and the EIA Notification, 2006.
8. The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the SEIAA, Odisha. The advertisement shall be made within Seven days from the date of receipt of

Trayak
Environmental Scientist, SEAC

the Clearance letter and a copy of the same shall be forwarded to the Regional Office of MoEF&CC, Bhubaneswar.

9. Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

10. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad / Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.

11. The proponent shall submit/upload six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF&CC, Govt. of India, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO_2, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

12. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF&CC, Govt. of India by E-mail.

JNayak
Environmental Scientist, SEAC

ANNEXURE - C

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR OF M/S SAHEJ TOWERS PVT. LTD FOR PROPOSED RESIDENTIAL BUILDING OF '7S+22' STORIED OVER AN BUILT-UP AREA 33364.526 SQM AT MOUZA- PATIA, TAHASIL- BHUBANESWAR, DIST- KHORDHA OF SRI UJJWAL SINGH – EC.

PART A - SPECIFIC CONDITIONS:

1. Consent to Establish / Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
2. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc. as per National Building Code including protection measures from lightening etc.
3. The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
4. The project proponent shall ensure that the guidelines for building and construction projects issued vide this Ministry's OM NO.19-2/2013-IA.III dated 9th June, 2015, are followed to ensure sustainable environmental management.
5. The proponent shall obtain prior clearance from the Standing Committee of the National Board for Wild Life if the project will be located within any Eco-Sensitive Zone of Wild Life Sanctuary.

TOPOGRAPHY AND NATURAL DRAINAGE

6. The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape and other Sustainable Urban Drainage Systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water. Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.
7. The permission from competent authority will be obtained to discharge the excess storm water to drain if any. The proponent shall renovate the existing drain to accommodate the discharge and maintain it perennially.
8. Permission for construction of drain alongside the adjacent NH under construction for allowing the proponent to discharge the treated waste water as well excess runoff water during monsoon from NH Authority shall be obtained. The construction of drains shall be synchronized with the completion of the construction of the Housing Project.

WATER REQUIREMENT, CONSERVATION, RAIN WATER HARVESTING, AND GROUND WATER RECHARGE

9. As proposed, fresh water requirement from ground water shall not exceed 83 KLD.
10. A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed the quantity of water allotted to the project under consideration and the balance water available.

Jnayak
Environmental Scientist, SEAC

This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.

11. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC and SEIAA, Odisha along with six monthly Monitoring reports.
12. Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc. and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.
13. Use of water saving devices/ fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc.) for water conservation shall be incorporated in the building plan.
14. Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.
15. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
16. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits of 14 nos. shall be provided.
17. Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering. The proponent shall also obtain permission from Water Resources Department, Govt. of Odisha for drawl of water.
18. The proponent shall keep one bore well as standby domestic water source once municipal water supply is made available in the project area.

SOLID WASTE MANAGEMENT

19. The provisions of the Solid Waste (Management) Rules, 2016, E-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
20. Disposal of muck during construction phase shall not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
21. Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials. Wet garbage shall be composted in Organic Waste Converter. Adequate area shall be provided for solid waste management within the premises which will include area for segregation, composting. The inert waste from group housing project will be sent to dumping site.
22. Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.

J Nayak
Environmental Scientist, SEAC

23. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the Municipal Solid Waste generated from project shall be obtained.

SEWAGE TREATMENT PLANT

24. Sewage shall be treated in STP of capacity 125 KLD. The treated effluent from STP shall be reused for flushing, horticulture & Filter backwash.

25. Excess treated water shall be discharged to the drain only after getting the permission from the concerned authority. The proponent shall renovate the existing drain to accommodate the discharge and maintain it perennially. To this effect the proponent has to give a legal affidavit before going for construction activity.

26. A certificate from the competent authority shall be obtained for discharging treated effluent/ untreated effluents into the Public sewer/disposal/drainage systems along with the final disposal point.

27. Separate large recharge pits shall be constructed inside the project area to accommodate the rainwater in case the housing project period and the CDP of the Govt. does not synchronize with reference to construction of road and drain.

28. No sewage or untreated effluent water would be discharged through storm water drains.

29. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the SEIAA, Odisha before the project is commissioned for operation. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.

30. Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.

31. The proponent shall obtain permission from the concerned authority to discharge the liquid waste to any drain i.e. the competent authority of the drain and "Nala" before commencement of any activity at the project site.

ENERGY

32. Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC. Outdoor and common area lighting shall be LED. Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC specifications.

33. Energy conservation measures like installation of CFLs / LED for the lighting the area outside the building should be integral part of the project design and should be in place before project commissioning. Used CFLs, TFL and LED shall be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination.

JNayak
Environmental Scientist, SEAC

34. Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 5% of the demand load or as per the state level/ local building bye-laws requirement, whichever is higher. Follow super ECBC requirement of ECBC 2017 and provide compliance report.

35. Solar power shall be used for lighting in the apartment to reduce the power load on grid. Separate electric meter shall be installed for solar power. Solar water heating shall be provided to meet 20% of the hot water demand of the commercial and institutional building or as per the requirement of the local building bye-laws, whichever is higher. Residential buildings are also recommended to meet its hot water demand from solar water heaters, as far as possible.

36. Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction material quantity. These include Fly Ash bricks, hollow bricks, AACs, Fly Ash Lime Gypsum blocks, compressed earth blocks, and other environment friendly materials. Fly ash should be used as building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016. Ready mixed concrete must be used in building construction.

37. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project shall be submitted.

AIR QUALITY AND NOISE

38. Construction site shall be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3-meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, murram, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution. Wet jet shall be provided for grinding and stone cutting. Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.

39. All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules, 2016. All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.

40. **Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.**

41. The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Low sulphur diesel shall be used. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.

JNayak
Environmental Scientist, SEAC

42. For indoor air quality the ventilation provisions as per National Building Code of India shall be provided.

43. Ambient noise levels shall conform to residential standard both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitored during construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB / SPCB.

GREEN COVER

44. No tree cutting/transplantation of existing trees has been proposed in the instant project. A minimum of 1 tree for every 80 m^2 of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping. As proposed approx. 877.82 Sqm (25.85 %) of the plot area shall be provided for green area development.

TOP SOIL PRESERVATION AND REUSE

45. Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stockpiled appropriately in designated areas and reapplied during plantation of the proposed vegetation on site.

TRANSPORT

46. A comprehensive mobility plan, as per Ministry of Urban Development best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria.
    - Hierarchy of roads with proper segregation of vehicular and pedestrian traffic.
    - Traffic calming measures
    - Proper design of entry and exit points.
    - Parking norms as per local regulation

47. A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project.

48. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

49. Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during non-peak hours.

Environmental Scientist, SEAC

50. A dedicated entry/exit and parking shall be provided for commercial activities.
51. Barricades shall be provided around project boundary.
52. Speed of the vehicles shall be restricted upto 15 kmph by erecting speed bumps at regular intervals at project site and proper signage shall be provided for guided vehicular movement and speed restrictions.
53. Parking shall be prohibited on the access road to the proposed project site.
54. Footpath shall be seamless with sufficient width.
55. No vehicles shall be allowed to stop and stand in front of the gate on main access.
56. A buffer of minimum 10 m shall be maintained between the entry/exit gate and the road to avoid traffic congestion.
57. The Traffic Management Plan prepared by the proponent shall be duly validated and certified by the State Concerned Competent Authority and shall have also their consent before implementation.

ENVIRONMENT MANAGEMENT PLAN

58. An Environmental Management Plan (EMP) shall be prepared and implemented to ensure compliance with the environmental conditions specified above. A dedicated Environment Monitoring Cell with defined functions and responsibility shall be put in place to implement the EMP. The environmental cell shall ensure that the environment infrastructure like Sewage Treatment Plant, Landscaping, Rain Water Harvesting, Energy efficiency and conservation, water efficiency and conservation, solid waste management, renewable energy etc. are kept operational and meet the required standards. The environmental cell shall also keep the record of environment monitoring and those related to the environment infrastructure.

OTHERS

59. Provisions shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
60. A First Aid Room shall be provided in the project both during construction and operations of the project.
61. The company shall draw up and implement corporate social Responsibility plan as per the Company's Act of 2013.
62. As per the MoEF&CC, Govt. of India Office Memorandum F.No.22-65/2017-IA.III dated 1st May 2018, the project proponent is required to prepare and implement Corporate Environment Responsibility (CER) Plan. As per para 6(II) of the said O.M. appropriate funds shall be earmarked for the activities such as infrastructure creation for drinking water supply, sanitation, health, education, skill development, roads, cross drains, electrification including solar power, solid waste management facilities, scientific support and awareness to local farmers to increase yield of crop and fodder, rain water harvesting, soil moisture conservation works, avenue plantation, plantation in community areas etc. The activities proposed under CER shall be restricted to the affected area around the project. The entire

JNayak
Environmental Scientist, SEAC

activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.

PART B – GENERAL CONDITIONS

1. A copy of the Environmental Clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.
2. The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to the SEIAA, Odisha and MoEF&CC, Govt. of India and its concerned Regional Office.
3. Officials from the Regional Office of MoEF&CC, Bhubaneswar who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection.
4. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.
5. The SEIAA, Odisha reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
6. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, the Forest Conservation Act, 1980 and the Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.
7. These stipulations would be enforced among others under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and the EIA Notification, 2006.
8. The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the SEIAA, Odisha. The advertisement shall be made within Seven days from the date of receipt of the Clearance letter and a copy of the same shall be forwarded to the Regional Office of MoEF&CC, Bhubaneswar.
9. Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
10. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad / Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The

Jnanajaki
Environmental Scientist, SEAC

clearance letter shall also be put on the website of the company by the proponent.

11. The proponent shall submit/upload six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF&CC, Govt. of India, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO_2, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

12. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF&CC, Govt. of India by E-mail.

Environmental Scientist, SEAC

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR OF M/S TESKO HOTELS & MALLS INFRAPROJECTS PVT. LTD. FOR COMMERCIAL HOTEL BUILDING B+S+9 STORIED OVER A BUILT-UP AREA 36830.99 SQM LOCATED AT MOUZA -CHANDRASHEKHARPUR, TAHASIL- BHUBANESWAR, KHORDHA OF SRI ANUP LAKHOTIA – EC.

PART A - SPECIFIC CONDITIONS:

1. Consent to Establish / Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
2. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc. as per National Building Code including protection measures from lightening etc.
3. The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
4. The project proponent shall ensure that the guidelines for building and construction projects issued vide this Ministry's OM NO.19-2/2013-IA.III dated 9th June, 2015, are followed to ensure sustainable environmental management.
5. The proponent shall obtain prior clearance from the Standing Committee of the National Board for Wild Life if the project will be located within any Eco-Sensitive Zone of Wild Life Sanctuary.

TOPOGRAPHY AND NATURAL DRAINAGE

6. The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape and other Sustainable Urban Drainage Systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water. Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.
7. The permission from competent authority will be obtained to discharge the excess storm water to drain if any. The proponent shall renovate the existing drain to accommodate the discharge and maintain it perennially.
8. Permission for construction of drain alongside the adjacent NH under construction for allowing the proponent to discharge the treated waste water as well excess runoff water during monsoon from NH Authority shall be obtained. The construction of drains shall be synchronized with the completion of the construction of the Housing Project.

WATER REQUIREMENT, CONSERVATION, RAIN WATER HARVESTING, AND GROUND WATER RECHARGE

9. As proposed, fresh water requirement from ground water shall not exceed 104 KLD.
10. A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed the

JNayak
Environmental Scientist, SEAC

quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.

11. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC and SEIAA, Odisha along with six monthly Monitoring reports.
12. Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc. and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.
13. Use of water saving devices/ fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc.) for water conservation shall be incorporated in the building plan.
14. Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.
15. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
16. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits of 10 nos. shall be provided.
17. Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering. The proponent shall also obtain permission from Water Resources Department, Govt. of Odisha for drawl of water.
18. The proponent shall keep one bore well as standby domestic water source once municipal water supply is made available in the project area.

SOLID WASTE MANAGEMENT

19. The provisions of the Solid Waste (Management) Rules, 2016, E-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
20. Disposal of muck during construction phase shall not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
21. Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials. Wet garbage shall be composted in Organic Waste Converter. Adequate area shall be provided for solid waste management within the premises which will include area for segregation, composting. The inert waste from group housing project will be sent to dumping site.
22. Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.

Environmental Scientist, SEAC

23. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the Municipal Solid Waste generated from project shall be obtained.

SEWAGE TREATMENT PLANT

24. Sewage shall be treated in STP of capacity 150 KLD. The treated effluent from STP shall be reused for flushing, horticulture & Filter backwash.

25. Excess treated water shall be discharged to the drain only after getting the permission from the concerned authority. The proponent shall renovate the existing drain to accommodate the discharge and maintain it perennially. To this effect the proponent has to give a legal affidavit before going for construction activity.

26. A certificate from the competent authority shall be obtained for discharging treated effluent/ untreated effluents into the Public sewer/disposal/drainage systems along with the final disposal point.

27. Separate large recharge pits shall be constructed inside the project area to accommodate the rainwater in case the housing project period and the CDP of the Govt. does not synchronize with reference to construction of road and drain.

28. No sewage or untreated effluent water would be discharged through storm water drains.

29. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the SEIAA, Odisha before the project is commissioned for operation. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.

30. Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.

31. The proponent shall obtain permission from the concerned authority to discharge the liquid waste to any drain i.e. the competent authority of the drain and "Nala" before commencement of any activity at the project site.

ENERGY

32. Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC. Outdoor and common area lighting shall be LED. Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC specifications.

33. Energy conservation measures like installation of CFLs / LED for the lighting the area outside the building should be integral part of the project design and should be in place before project commissioning. Used CFLs, TFL and LED shall be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination.

Jnayak
Environmental Scientist, SEAC

34. Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 5% of the demand load or as per the state level/ local building bye-laws requirement, whichever is higher. Follow super ECBC requirement of ECBC 2017 and provide compliance report.

35. Solar power shall be used for lighting in the apartment to reduce the power load on grid. Separate electric meter shall be installed for solar power. Solar water heating shall be provided to meet 20% of the hot water demand of the commercial and institutional building or as per the requirement of the local building bye-laws, whichever is higher. Residential buildings are also recommended to meet its hot water demand from solar water heaters, as far as possible.

36. Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction material quantity. These include Fly Ash bricks, hollow bricks, AACs, Fly Ash Lime Gypsum blocks, compressed earth blocks, and other environment friendly materials. Fly ash should be used as building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016. Ready mixed concrete must be used in building construction.

37. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project shall be submitted.

AIR QUALITY AND NOISE

38. Construction site shall be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3-meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, murram, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution. Wet jet shall be provided for grinding and stone cutting. Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.

39. All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules, 2016. All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.

40. **Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.**

41. The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Low sulphur diesel shall be used. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.

Jnayak
Environmental Scientist, SEAC

42. For indoor air quality the ventilation provisions as per National Building Code of India shall be provided.

43. Ambient noise levels shall conform to residential standard both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitored during construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB / SPCB.

GREEN COVER

44. No tree cutting/transplantation of existing trees has been proposed in the instant project. A minimum of 1 tree for every 80 m^2 of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping. As proposed approx. 2472.94 Sq.m. (20.37%) of the plot area shall be provided for green area development.

TOP SOIL PRESERVATION AND REUSE

45. Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stockpiled appropriately in designated areas and reapplied during plantation of the proposed vegetation on site.

TRANSPORT

46. A comprehensive mobility plan, as per Ministry of Urban Development best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria.
    - Hierarchy of roads with proper segregation of vehicular and pedestrian traffic.
    - Traffic calming measures
    - Proper design of entry and exit points.
    - Parking norms as per local regulation

47. A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project.

48. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

49. Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during non-peak hours.

Environmental Scientist, SEAC

50. A dedicated entry/exit and parking shall be provided for commercial activities.
51. Barricades shall be provided around project boundary.
52. Speed of the vehicles shall be restricted upto 15 kmph by erecting speed bumps at regular intervals at project site and proper signage shall be provided for guided vehicular movement and speed restrictions.
53. Parking shall be prohibited on the access road to the proposed project site.
54. Footpath shall be seamless with sufficient width.
55. No vehicles shall be allowed to stop and stand in front of the gate on main access.
56. A buffer of minimum 10 m shall be maintained between the entry/exit gate and the road to avoid traffic congestion.
57. The Traffic Management Plan prepared by the proponent shall be duly validated and certified by the State Concerned Competent Authority and shall have also their consent before implementation.

ENVIRONMENT MANAGEMENT PLAN

58. An Environmental Management Plan (EMP) shall be prepared and implemented to ensure compliance with the environmental conditions specified above. A dedicated Environment Monitoring Cell with defined functions and responsibility shall be put in place to implement the EMP. The environmental cell shall ensure that the environment infrastructure like Sewage Treatment Plant, Landscaping, Rain Water Harvesting, Energy efficiency and conservation, water efficiency and conservation, solid waste management, renewable energy etc. are kept operational and meet the required standards. The environmental cell shall also keep the record of environment monitoring and those related to the environment infrastructure.

OTHERS

59. Provisions shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
60. A First Aid Room shall be provided in the project both during construction and operations of the project.
61. The company shall draw up and implement corporate social Responsibility plan as per the Company's Act of 2013.
62. As per the MoEF&CC, Govt. of India Office Memorandum F.No.22-65/2017-IA.III dated 1st May 2018, the project proponent is required to prepare and implement Corporate Environment Responsibility (CER) Plan. As per para 6(II) of the said O.M. appropriate funds shall be earmarked for the activities such as infrastructure creation for drinking water supply, sanitation, health, education, skill development, roads, cross drains, electrification including solar power, solid waste management facilities, scientific support and awareness to local farmers to increase yield of crop and fodder, rain water harvesting, soil moisture conservation works, avenue plantation, plantation in community areas etc. The activities proposed under CER shall be restricted to the affected area around the project. The entire

Jnayak
Environmental Scientist, SEAC

activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.

PART B – GENERAL CONDITIONS

1. A copy of the Environmental Clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.
2. The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to the SEIAA, Odisha and MoEF&CC, Govt. of India and its concerned Regional Office.
3. Officials from the Regional Office of MoEF&CC, Bhubaneswar who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection.
4. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.
5. The SEIAA, Odisha reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
6. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, the Forest Conservation Act, 1980 and the Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.
7. These stipulations would be enforced among others under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and the EIA Notification, 2006.
8. The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the SEIAA, Odisha. The advertisement shall be made within Seven days from the date of receipt of the Clearance letter and a copy of the same shall be forwarded to the Regional Office of MoEF&CC, Bhubaneswar.
9. Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
10. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad / Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The

JNayak
Environmental Scientist, SEAC

clearance letter shall also be put on the website of the company by the proponent.

11. The proponent shall submit/upload six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF&CC, Govt. of India, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO_2, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

12. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF&CC, Govt. of India by E-mail.

JNayak
Environmental Scientist, SEAC

ANNEXURE- E

STANDARD ENVIRONMENTGAL CLEARANCE CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR SAND MINING

Stipulated Conditions:

1. The project proponent should carry out River bed sand mining manually by engaging local laborers in force to check over exploitation of sand at the source.
2. Any change in the plan or quantity to be produced shall require prior approval of SEIAA.
3. There shall be a 'no working zone' to protect the embankment on both sides, road or rail bridge in the vicinity, if any, dam, weir, water intake structure of irrigation or drinking water project, or any cross drainage structure. 10 % of the width of river shall be left intact along the embankments on both sides as 'no mining zone'. Further, no mining shall be allowed within 200 m of any existing structures dam, weir, water intake structure of irrigation or drinking water project, or any cross drainage structure. In case of River Bridge, this no mining zone shall extend upto a minimum stretch of 200 meters from the bridge and it may extend upto 500 meters in sensitive locations. The lease area shall be accordingly curtailed to carve out the actual sand mining area within the leasehold. Exact map of the lease area, and the 'no mining zone' shall be drawn to scale, showing the DGPS coordinates of all corner points, and the location of the bridge, embankment, extraction route & other structures; and such map has to be submitted to SEIAA by the project proponent through the Tahasildar within three months of the date of issue of the EC. The quantum of sand allowed to be extracted will be worked out on the basis of the actual working area.
4. The lease area and the actual working area shall be demarcated on the ground by erecting durable masonry /concrete pillars by the project proponent.
5. The project proponent shall take prior statutory and regulatory clearance as required from the concerned authorities in respect of the project, before carrying out any operation.
6. Mining is not permissible within the water channel or stream flow area. No stream shall be diverted for the purpose of mining and no natural water course shall be obstructed. The mining or any ancillary activity shall not in any way disturb the flow pattern of the river water during the non monsoon period. There shall be no sand mining in the river during the rainy season or when there is flow of water in the river.
7. Sand mining operations shall not affect the existing sources for irrigation / drinking water / industrial purpose.
8. The natural sand dunes, if any, near or surrounding the lease area shall not be disturbed.
9. No transportation of the minerals shall ordinarily be allowed on any road passing through villages/habitations/forest land without prior explicit permission. Transportation

JNayak
Environmental Scientist, SEAC

of minerals through existing rural roads can be allowed only by the concerned Govt. Department/BDO and only after required strengthening, such that the carrying capacity of road is increased to handle the sand truck traffic. The project proponent shall bear the cost towards the widening and strengthening of existing public roads in case the same is proposed to be used for the project. No movement on any road is allowed on existing village road network without appropriately increasing the carrying capacity of such roads. Project proponent shall ensure that the road may not be damaged due to transportation of the mineral and transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and traffic density. Plying of sand extraction trucks may be allowed on roads / path ways passing close to schools, temples, hospitals and such other public places only with prior written permission of competent authority.

10. Vehicles hired for transportation of sand from the site should be in good condition and should have pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.

11. The vehicles shall not be overloaded and shall be covered with Tarpaulin. The Tahasildar may collect an appropriate road maintenance levy from the lessee as part of the lease conditions on the basis of quantum of sand transported, and utilize the proceeds of the levy for proper maintenance of the extraction paths and roads to prevent their degradation on account of plying of sand trucks.

12. The project proponent shall take all precautionary measures against causing damage to flora and fauna of the locality. The PP shall plant and nurse to full establishment a minimum of 50 number of saplings of native tree species along the approach roads, river banks and in community areas in consultation with the Gram Panchayat.

13. Water spray should be made on the road/extraction paths to control dust emission during transportation of sand.

14. The Project Proponent shall undertake phased restoration, reclamation and rehabilitation of land affected by mining and completes this work before abandonment of mine.

15. Environmental Management Plan (EMP) shall be implemented by PP to ensure compliance with the environmental conditions specified above. The year wise funds earmarked for environmental protection measures shall be kept in separate account and shall be spent according to the plan proposed. Year wise progress of implementation of EMP shall be reported to the SEIAA, Odisha and OSPCB along with the compliance report.

16. The proponent shall take necessary measures to ensure that there is no adverse impact of the mining operations on the human habitation if any, existing nearby.

17. It shall be mandatory for the project management to submit quarterly compliance reports on the status of implementation of the above stipulated environmental safeguards to the SEIAA, Odisha / SPCB, Odisha/ Regional Office of the MoEF&CC, Bhubaneswar, in hard and soft copies on 1st day of January, April, July, October of each calendar year, failing which EC is liable to be revoked.

Environmental Scientist, SEAC

18. River Bank stabilization shall be made through stone patching. Plantation of adequate number native species on river banks and both sides of haulage roads shall be made.

19. During transportation of sand, all traffic safety measures shall be taken to avoid any kind of accidents.

20. Bio - toilet provision shall be made.

21. Stone patching on river bank with plantation in-between and the ramp construction shall be done in consultation with and advice of concerned W.R.Deptt, Government of Odisha.

22. Necessary sprinkling on Haulage Road and Avenue plantation shall be done.

23. At the end of mine closure, the proponent shall immediately remove all the sheds put up in the quarry and all the equipment in the area before closure of the quarry.

24. The conditions stipulated in the environmental clearance will be closely monitored on the ground by the lease granting authority, i.e. the Tahasildar, who shall ensure compliance of the stipulated conditions and take corrective measures promptly in case of any non- compliance and also ensure that the project proponent submits quarterly compliance reports.

25. The concerned Regional Office of the MoEF&CC/ SPCB, Odisha shall periodically monitor compliance of the stipulated conditions as applicable for this project. The project authorities should extend full cooperation to the MoEF&CC officer(s)/SPCB officer(s) by furnishing the requisite data / information / monitoring reports.

26. A copy of the clearance letter shall be sent by the proponent to concerned Gram Panchayat /Panchayat Samiti /Zilla Parisad /Municipal Corporation / Urban Local Body as the case may be.

27. Project proponent shall obtain Consent to Operate from the OSPCB and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish / Consent to Operate from the State Pollution Control Board.

28. The SEIAA, Odisha may revoke or suspend this EC, if implementation of any of the above conditions is not satisfactory. The SEIAA, Odisha reserves the right to alter /modify the above conditions or stipulate any further condition in the interest of environment protection.

29. The Project Proponent (lease holder) shall inform the SEIAA of any change in ownership of the mining lease. In case, there is any change in ownership or mining lease is transferred, then mining operation can be carried out only after transfer of EC as per provisions of the para 11 of EIA Notification, 2006, as amended from time to time.

30. Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this environment clearance besides attracting penal provisions in the Environment (Protection) Act, 1986.

Jnayak
Environmental Scientist, SEAC

31. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act,1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/ High Court and any other Court of Law relating to the subject matter.

32. This Environmental Clearance (EC) is subject to orders/judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.

33. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act, 2010.

JNayak
Environmental Scientist, SEAC

Annexure - F

ESSENTIAL PHYSICAL CRITERIA AS PER ENFORCEMENT AND MONITORING GUIDELINES FOR SAND MINING, JANUARY 2020 OF MOEF&CC, GOVT. OF INDIA

Sl. No.	Essential Criteria	Reference
1.	"No Mining Zone": 1/4the part of the river width (excluding 3/4the central part of the river width) on both sides of the river towards the river bank	4.1.1 (Para - e) Page - 16
2.	a) Distance between two clusters : ≥2.5 km b) Area of mining lease area is a cluster: ≤10 ha.	4.1.1 (Para - k) Page - 19
3.	Concave River Bank : No extraction of sand	
4.	No mining if a) Upstream: Lease is 1 km from major Bridge and high ways or 5(x) of the Bridge / public civil structure / water intakes point subject to lease is located at a minimum 250 meter distance. Where x = Span of the bridge. b) Downstream side: Lease is 1 km from the major bridge and Highways Or 10x of the bridge / public civil structure /water intake point Subject to lease is located at a minimum distance of 500 meter where x = span of the bridge	4.3 (Para - h) Page - 23
5.	Mining depth : ≤ 3 meter (maximum 3 meter)	4.3 (Para - m) Page - 24
6.	Mining distance from river bank: 1/4th of the river width, But subject to not less than 7.5 meter	4.31 (Para - m) Page - 24
7.	Area for removal of minerals : ≤60% of mine lease area	4.3 (Para - s) Page - 25
8.	Minable sand per ha. Available for actual mining : ≤60,000 MT/Annum	
9.	Regular replenishment study and replenishment rate	

Jnayak
Environmental Scientist, SEAC

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR M/S. ODISHA MINERAL EXPLORATION CORPORATION LIMITED (OMECL) FOR PRODUCTION OF IRON ORE 2.0 MTPA FROM RENGALBEDA (NE) IRON ORE BLOCK OVER M.L AREA OF 24.203 HA. VILLAGE- NUAGAON & GANDHALPADA, TEHSIL- BARBIL, DISTRICT- KEONJHAR OF SRI SHAILENDER KUMAR SINHA (DIRECTOR, GEOLOGY) - EC

(I) Statutory compliance

(i) This Environmental Clearance (EC) is subject to orders/ judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.

(ii) The Project proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August,2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.

(iii) The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, 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 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.

(iv) This Environmental Clearance shall become operational only after receiving formal NBWL Clearance from MoEF&CC subsequent to the recommendations of the Standing Committee of National Board for Wildlife, if applicable to the Project,

(v) This Environmental Clearance shall become operational only after receiving formal Forest Clearance (FC) under the provision of Forest Conservation Act, 1980, if applicable to the project.

(vi) Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish / Consent to Operate from the concerned State Pollution Control Board.

(vii) The PP shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development & Regulation), Act, 2015 and rules & regulations made there under. PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.

(viii) The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made thereunder in respect of lands which are not owned by it.

(ix) The Project Proponent shall follow the mitigation measures provided in MoEF&CC's Office Memorandum No. Z-l1013/57/2014-IA.II (M), dated 29th October, 2014, titled "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".

Trinayak
Environmental Scientist, SEAC

(x) The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water for the project.

(xi) A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.

(xii) State Pollution Control Board shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar's Office for 30 days.

(xiii) The Project Authorities should widely advertise about the grant of this EC letter by printing the same m at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board and web site of the Ministry of Environment, Forest and Climate Change (www.environmentclearance. nic.in). A copy of the advertisement may be forwarded to the concerned MoEF&CC Regional Office for compliance and record.

(xiv) The Project Proponent shall inform the MoEF&CC/SEIAA, Odisha for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.

(II) <u>Air quality monitoring and preservation</u>

(i) The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM_{10}, $PM_{2.5}$, NO_2; CO and SO_2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.

(ii) Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM_{10} and $PM_{2.5}$ are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from ah sources shall be regularly controlled by installation of required equipments/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEF&CC/ Central Pollution Control Board.

Jnayak
Environmental Scientist, SEAC

(III) **Water quality monitoring and preservation**

(i) In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEF&CC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.

(ii) Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.

(iii) Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.

(iv) The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/ adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-a-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEF&CC / SEIAA, Odisha. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, SEIAA, Odisha, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.

Environmental Scientist, SEAC

(v) Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J-20012/1 /2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.

(vi) The project proponent shall construct retaining wall and settling pond within the lease area. Further, check dams shall be constructed at strategic locations in which rain water passes in rainy season. Finally, the excess supernanted after sedimentation shall be allowed to spill away through stone pitch structure to the nearby valley.

(vii) De-silting of agricultural lands in buffer zone and beyond including nearby Nalas/rivers perennially periodically and perpetually caused due to wash up of minerals/OB/dumps shall be done as per SOP submitted. A legal affidavit shall be submitted within 6 months from the date of issue of Environmental Clearance to this effect with periodicity of de-silting.

(viii) Detail design of the existing retaining wall and the proposed for the expansion from a chartered Civil Engineer shall be submitted within 6 months from the date of issue of Environmental Clearance to ensure that no silt after wash up is escaped from the core / buffer zone of the mines.

(ix) Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office, MoEF&CC annually.

(x) Industrial waste water (workshop and waste water from the mine) should be properly collected and treated in an ETP as proposed so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.

(xi) The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board.

(IV) <u>Noise and vibration monitoring and prevention</u>

(i) The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.

(ii) The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at

Environmental Scientist, SEAC

night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.

(iii) The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The worker engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.

(V) Mining Plan

(i) The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc.. No change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management, O.B & dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form to Short Term Permit (STP), Query license or any other name.

(ii) The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of Mines/Department of Mining & Geology as required under the Provision of the MMDR Act, 1957 and Rules/ Guidelines made there under. A copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and verification.

(iii) The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-a-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEF&CC and its concerned Regional Office / SEIAA, Odisha.

(VI) Land reclamation

(i) The Overburden (O.B.) generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB dumps like height, width and angle of slope shall be governed as per the approved Mining Plan

Environmental Scientist, SEAC

as per the guidelines/circulars issued by D.G.M.S w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of top soil/OB dumps. The topsoil shall be used for land reclamation and plantation.

(ii) The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.

(iii) The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.

(iv) The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.

(v) The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slope stability report shall be submitted to concerned regional office of MoEF&CC, Govt. of India, Bhubaneswar as well as SEIAA, Odisha.

(vi) Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and topsoil / OB / waste dumps to prevent runoff of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.

(vii) Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the comers of the garland drains.

(viii) The top soil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as per the guidelines framed by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of dumps. The topsoil shall be used for land reclamation and plantation purpose.

Jnayak
Environmental Scientist, SEAC

(ix) The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.

(VII) Transportation

(i) No Transportation of the minerals shall be allowed in case of roads passing through transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers.

(ii) The Main haulage road within the mine lease should be provided with a permanent water arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.

(iii) Traffic management shall be done as per recommendation of Traffic Management Study Report.

(iv) The Project Proponent shall provide parking plaza for the heavy vehicles within the lease area as recommendation of NEERI.

(VIII) Green Belt

(i) The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.

(ii) The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development

Jnayak
Environmental Scientist, SEAC

department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.

(iii) The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.

(iv) The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt.

(v) And implemented in consultation with the State Forest and Wildlife Department. A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.

(IX) <u>Public hearing and human health issues</u>

(i) The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking, etc. The check-ups shall be undertaken once in six months and necessary remedial/ preventive measures be taken. A status report on the same may be sent to MoEF&CC Regional Office and DGMS on half-yearly basis.

(ii) A commitment in form of an undertaking for periodical occupational health checkup of the employee and the local people shall be done through an occupational health expert as per the detailed action plan submitted with the proposal within 6 months from the date of issue of Environmental Clearance.

(iii) The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, Diarrhoea in children under five, respiratory infections due to bio mass

RJNayak
Environmental Scientist, SEAC

cooking. The proponent shall also create awareness and educate the nearby community and workers for Sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carryout base line HRA for all the category of workers and thereafter every five years.

(iv) The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) estimation in Blood; For Inorganic Chromium- Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests all tests would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminium, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray. Only conventional X-Ray will be accepted for record purposes and not the digital one). X-Ray must meet ILO criteria (17 x 14 inches and of good quality).

(v) The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass Index and it should stay between 18.5 -24.9, (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities, (c) At the end of their leaving job there should be no Diminution in their Lung Functions Forced Expiratory Volume in one second (FEV1),Forced Vital Capacity (FVC), and the ratio) unless they are smokers which has to be adjusted, and the effect of age, (d) their hearing should not be affected. As a proof an Audiogram (first and last need to be presented), (e) they should not have developed any Persistent Back Pain, Neck Pain, and the movement of their Hip, Knee and other joints should have normal range of movement, (f) they should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEF&CC annually along with details of the relief and compensation paid to workers having above indications.

(vi) The Project Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.

(vii) Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The

Jnayak
Environmental Scientist, SEAC

domestic waste water should be treated with STP in order to avoid contamination of underground water.

(viii) The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration.

(ix) Issues raised and recorded in proceedings of public hearing w.r.t. environment / pollution / CER shall be complied by the Mining Authority as per OM F. No. 22-65/2017-IA.III, dated 30.09.2020 of MoEF&CC, Govt. of India.

(X) Corporate Environment Responsibility (CER)

(i) The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 or as proposed by SEAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual report of implementation of the same along with documentary proof viz. photographs, purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement.

(ii) Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purposes. The Year wise expenditure of such funds should be reported to the MoEF&CC and its concerned Regional Office / SEIAA, Odisha.

(XI) Miscellaneous

(i) The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC.

(ii) The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.

(iii) The project proponent shall establish a solar power plant with 30KVA capacity within the lease area as proposed.

(iv) The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MoEF&CC & its concerned Regional Office, SEIAA, Odisha, Central Pollution Control Board and State Pollution Control Board.

(v) A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEF&CC.

(vi) The proponent shall comply all the specific conditions as recommended by

Jnayak
Environmental Scientist, SEAC

CSIR-NEERI on carrying capacity study (as applicable) in time bound manner as proposed.

(vii) The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.

(viii) The project proponent shall augment infrastructure on drinking water, health care and education in nearby villages as per time bound action plan submitted.

(ix) The project proponent shall obtain permission from DGMS under 106(2b) to carry out blasting operation within the lease area.

(x) Fe grade -55 and +45 to be attempted to use by blending with higher grade.

(xi) The concerned Regional Office of the MoEF&CC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEF&CC officer(s) by furnishing the requisite data / information / monitoring reports.

(xii) Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Jnayak
Environmental Scientist, SEAC