PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL COMMITTEE, ODISHA HELD ON 23RD DECEMBER, 2022

The SEAC met on 23rd December, 2022 at 10:30 AM in the Conference Hall of Odisha State Pollution Control Board, Bhubaneswar under the Chairmanship of Sri Sashi Paul. The following members were present in the meeting.

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

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

ITEM NO. 01

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S RUNGTA MINES LTD. FOR THE JUMKA PATHIRIPOSHI PAHAR IRON ORE BLOCK FOR A TOTAL EXCAVATION OF 3.98 MTPA (ROM IRON ORE: 3.35 MTPA + WASTE: 0.63) BY OPENCAST MECHANIZED METHOD, OVER AN MINING LEASE AREA OF 158.509 HA.(CONSISTING OF GOVT. FOREST LAND - 156.978 HA AND PRIVATE LAND - 1.531 HA.) LOCATED IN BATAGAON, KENSARA OF LAHUNIPARA TAHASIL OF SUNDARGARH DISTRICT AND VILLAGE – KADAKALA, BANSPAL TAHASIL OF KEONJHAR DISTRICT, ODISHA OF SRI HIRAK MAZUMDER - EC

1. This proposal is for Environmental Clearance of M/s Rungta Mines Ltd. for the Jumka Pathiriposhi Pahar Iron Ore Block which has been allotted through auction. The total excavation will be 3.98 MTPA (ROM Iron Ore: 3.35 MTPA + waste: 0.63) by opencast mechanized method over a mining lease area of 158.509 ha. (Govt. forest land is 156.978ha. and Private land is 1.531ha.) located in villages - Batagaon ,Kensara Of Lahunipara Tahasil Of Sundargarh District And Village – Kadakala,Banspal Tahasil of Keonjhar district, Odisha of Sri Hirak Mazumder.
2. The project falls under category “B” or activity 1 (a) - Mining of Minerals projects under EIA Notification dated 14th September 2006 as amended from time to time.
3. **Project Details:** M/s Rungta Mines Ltd. was declared as the “Preferred Bidder” for Jumka Pathiriposhi Pahar Iron Ore Block, as per auction conducted by Government of Odisha.

The block covers 158.509 ha of land falling in villages Batagaon, Kensara (also known as Kedeshala) in Sundargarh District & village Kadakala in Keonjhar District of Odisha. The Project area comprises of 156.978 Ha. forest land and 1.531 ha non forest government land. The project area is presently a virgin land.

4. **TOR details:** Jumka Pathiriposhi Pahar Iron Ore Block has been awarded Terms of Reference (TOR) for preparation of EIA/EMP Report vide MOEF&CC's letter no. IA-J11015/2/2022-IA-II(NCM) dated 18 February 2022.

5. **Public hearing details**: Public hearing was held in two districts in respect of M/s Rungta Mines Ltd. for proposed Jumka Pathriposhi Pahar Iron Ore Block. Public Hearing in Keonjhar district, was held on 09.09.2022 at 11:00 am at Kadakala playground, Khata No. 42 (Rakhita), Plot No. 51/314/1, District Keonjhar and in Sundargarh district, it was held on 03.09.2022 at 10:30 am at Football playground, Kensara village, Bhutuda G.P., District Sundargarh. During public hearing, most of the people welcomed the project and raised few points related to generation of employment opportunity, provision of good school & education, water supply facility, establishment of healthcare unit, skill development, etc. Expenditure towards meeting the public hearing cost will come to Rs.264.7 lakhs (capital cost) and Rs. 172.7 lakhs (recurring cost).

6. **Location and Connectivity:** The proposed Jumka Pathiriposhi Pahar Iron Ore Block is located in villages of Batagaon, Kensara (also known as Kedeshala) in Sundargarh district & village Kadakala in Keonjhar District of Odisha. The mining lease area falls in the Survey of India Toposheet no. 73 G/1 (open series map F45N1). The area is bound by Latitude 21°47'32.62280" N to 21°48'54.81396" N and Longitude 85°12'13.87352" E to 85°13'25.32167" E. The block is connected by all-weather forest road currently and at a distance of 9.7km from Koida Town and 125.2km from District Sundergarh. Nearest railway station is Barsuan, 10.6 km WNW aerially. The nearest civilian airports are situated at Rourkela (64 km, NNW), Ranchi (166 km, N) and Jharsuguda (120 km, W). Nearest Highway is NH – 520, Rajamunda to Rimuli Road - 10.3km, N. There are no National parks, Wildlife Sanctuary, Biospheres reserves within 10 km radius. The nearest sanctuary is Simlipal Wildlife sanctuary at a distance of 89.03 km in E direction from the proposed project and elephant Reserve is Mayurbhanj at 58.78 km. There are five reserve forests (Sarkanda R.F. (2.9 km, NW), R.F. Near Anandapur (Bhabari Pahar) (7.8 km, NNE), Khajurdihi R.F. (0.8 km, NE), Khandadhar RF (6.4 km, SW), Torha R.F.(6.0 km, WNW) present within 10 km radius of the project. There is presence of Schedule-I species like Elephant, Indian Monitor Lizard and Sloth bear in buffer zone of study area.

7. **Topography:** The iron ore block is located on a hill area with undulating topography. Elevation of core zone ranges from 914 m to 1042 m above mean sea level. General gradient of the mine lease area is towards the west with an occasional mound in the northern portion. Jumka Pathiriposhi Pahar Iron Ore Block is free from any mining activity since it is a new mine. However, within the 10 km radius of the project there are several working as well as non-working iron/ manganese mines.

8. No prominent drainage pattern is developed over the lease hold area. There is no perennial nallah passes through the lease area. The Phulamanali nallah which is 2.6 KM

SSW to the lease. The topography of the mine is such that no run off from the lease will meet the Nallah.

9. **Seismicity:** The project is under very feeble to slight intensity Seismic zone II. The project area is not prone to floods, landslides or cloudburst etc.

10. **Status of Statutory Clearances** –

- Mining plan is approved from IBM vide letter no. IBM MP/A/18-ORI/BHU/2021-22 dated 24.11.2021.
- Forest Clearance for 156.978ha. has been applied online vide proposal number FP/OR/MIN/150048/2021 on 10/12/2021 for diversion of 156.978 ha of forest land.
- Surface Water withdrawal permission has been applied to Water Resources department vide application no. 2022040841000367on dt. 08.04.2022.
- Site Specific Wildlife Conservation Plan is under preparation by Forest Department. Request letter was submitted to DFO Bonai Forest Division, Bonai, vide letter no. RSPL/BBL/GEO/2022-23/ dated 30.05.2022 for preparation and Approval of Site Specific Wildlife Conservation Plan of Jumka Pathiriposhi Pahar Iron Ore Block.

11. **Total Reserves** - The iron ore block is a virgin/ new area. The entire mine lease area is mineralized. The entire resources estimated falls in 331, 332 & 333 category as G2 level. The area has been explored by GSI and MECL through 85 (29 by GSI and 56 by MECL) number of drill holes (5363.1 m) at a spacing of 200 X 200 m. The exploration confirms to G-2 category under UNFC guidelines. The Geological Reserve is 155.864 million tonnes and Mineable Reserves is 140.278 million tonnes while. The production table for 5 year is as follows:

Year	Production proposal (MTPA)
1st year 2024-25	0
2nd year 2025-26	0
3rd year 2026-27 (From 27.10.2026 to 31.03.2027)	1.432 (for 156 days/five months only)
4th year 2027-28	3.35
5th year 2028-29	3.35

12. **Mining method:** Opencast mechanised mining method has been chosen for the proposed Jumka Pathiriposhi Pahar Iron Ore Block. Fully mechanized opencast mining method shall be adopted with excavator, loader, dumpers etc. for excavation work. Height & width of individual benches is proposed to be kept as 10 m and 18 m in ore and 10 m and 12 m in OB respectively. The conventional opencast method with utilization of excavator of capacity up to 4.2 m^3, dumpers of capacity up to 30/40 MT, rock-breakers, deep-hole drilling and blasting will be adopted. The overall pit slope would be kept 45°.

13. **Waste Generation and Management** - During the five year of mining plan period, 481073 cum of waste will be generated. The alluvial soil capping the rock bed is the loosen OB that exists in some part of the block. This will be removed separately and simultaneously

used for plantation. Only temporary storage for top soil is proposed. It will be stored on 7.301 ha of land. The maximum height of the OB dump during plan period will be 50 m (wrt 948 mRL on south side) and 20 m (wrt 978 mRL wrt the adjoining areas). The top of the OB dump will be at 998 mRL compared to 948 mRL of the adjoining area. The height of the OB dump will be enhanced due to dumping of more and more waste, which will be generated during proposed period of mining after plan period. Although, backfilling is not proposed during initial 5 year plan period, as reserve of iron ore in the proposed quarry will not be exhausted, but after OB dumping on 7.301 ha, the balance waste generated till end of the mine will be used for backfilling.

14. Life of Mines is 50 years from execution of mine lease.
15. **Water requirement:** Total requirement of water is estimated at 464 KLD. Out of which, for Drinking purposes, ground water will be used is 94 KLD and surface water will be used for Mining purposes, either from Phulamanali Nala or harvested rain water is 370 KLD. Water will be utilized for green belt development (30KLD), sprinkling on haul roads/dust suppression (24KLD), drinking & domestic purpose in mine, camp outside lease and periphery, High Pressure water jet in Crushing and screening (95KLD) and Miscellaneous (5KLD).
16. **Wastewater management:** No wastewater is anticipated from mining activities. Domestic sewage will be treated to the norms prescribed by regulatory agencies prior to reuse. The mine will be zero discharge except during monsoons. The domestic wastewater from facilities in the mines will be treated in septic tanks with soak pits. There shall be a rainwater harvesting pond in the mine lease area.
17. **Power Requirement:** The total power requirement for the mine will be about 200 KVA which shall be sourced from the nearby line of TP Western Odisha Distribution Limited. In case of power failure, generators of total capacity 200 KVA will be used.
18. **Flora/Fauna:** Within core zone 20 species of trees, 4 species of shrubs,3 species of climbers and 2 species of grasses are present. Common native species such as Arjun, Bel, Char, Kendu, Jamun, Neem, Palas, etc. are also present in the core area. 4 species of mammals, 2 species of reptiles, 5 species of birds were recorded from the core zone. Avifaunal species found are House Crow, House Sparrow, Pigeon etc. Mammals found are squirrel, cat, mongoose and rat. Reptiles reported are krait and rat snake. Three Schedule I animal namely, Elephant, Sloth bear and Indian Monitor Lizard has been reported in the buffer area.
19. **Green belt:** Till the end of life of mine, greenbelt having width 7.5 m on 5.77 ha land shall be developed with. A budget of Rs. 5.85 lakhs (capital cost) and Rs. 8.52 lakhs/ annum (recurring) is proposed towards green plant & plantation. Plantation around various facilities, on dump, mined out areas, dismantled facility area and along periphery shall be undertaken in a phased manner. Plantation shall be started from third year of mining and continued till conceptual period. An estimated 2500 trees per ha shall be planted. Plantation will attract small fauna and birds and serve as micro habitats.
20. **Baseline study** of the study area was conducted during previous winter season i.e. from 01.12.2021 to 28.02.2022. Following results were obtained:

- **Ambient Air Quality** - Monitoring made in 8 locations & results shows the values of PM_{10} 28.4 to 44.8 µg/m^3, $PM_{2.5}$ was found to vary from 16.3 to 20.9 µg/m^3, SO_2 from 1.1 to 6.6 µg/m^3 and NO_2 from 2.0 to 6.6 µg/m^3. The CO level were ranged from Below Detectable Limit to 0.987 mg/m^3, Nickel, Arsenic and Lead was found Below Detectable Limit (BDL) of <0.6 ng/m3; <0.4 ng/m3; <0.07µg/m3 respectively. The maximum incremental values due to mining, in absence of any control measures, have been estimated as 1.806 µg/m3 for PM10 and 1.038 µg/m3 for PM2.5 within ML at the air quality monitoring location. Incremental has been estimated as 1.337 µg/m3 for SO2 and 22.410 µg/m3 for NO2 at the ML boundary. The ore will be transported by road through trucks. The maximum incremental values due to transportation have been estimated as 5.60 µg/m3 for PM10, 1.36 µg/m3 for PM2.5, 0.05 µg/m3 for SO2 and 2.35 µg/m3 for NOx at a distance of 20 m from the road. When these incremental GLC are added to the baseline air quality level, the resultant 24 hours average air quality has been found well within the limits specified in the National Ambient Air Quality Standards.
- **Noise Quality** - The noise levels were measured at eight stations in core and buffer zone located in residential areas. The noise levels observed during day time varies from 45.31 to 51.66 dB (A) and at night time varies from 36.30 to 40.34 dB (A). All the noise values observed are well within the limits prescribed by National Ambient Air Quality Standards for Noise.
- **Surface water quality** - monitored in 8 locations and pH range from 6.8 to 7.4., total dissolved solids – 30mg/L to 76mg/L, Iron content is BDL – 0.40mg/L, Chloride content ranges from 4mg/L to 14mg/L, sulphate content ranges from 1mg/L to 6mg/L, Fluroide content is BDL, Magnesium content ranges from 2mg/L to 7mg/L All other parameters were also found to be within the permissible limits.
- **Ground water quality** - monitored in 8 locations and pH ranges from 6.7 to 7.8., total dissolved solids ranges from 30mg/L to 268mg/L, total Hardness as $CaCO_3$ ranges from 16mg/L to 48mg/L, total alkalinity ranges from 20mg/L to 243mg/L .Iron content is BDL – 0.88mg/l, Chloride content ranges from 4mg/L to 14mg/L, sulphate content is BDL – 3mg/l, Fluroide content is BDL – 0.24mg/l, Magnesium content ranges from 1mg/L to 22mg/L. All other parameters were also found to be within the permissible limits.
- **Soil quality** - Top soil samples were collected from core & buffer zone, from four locations. Samples were collected from North and South side of core zone and in buffer zone from Kedeshala and Batagaon villages. Particle size analysis shows that the texture of the soil is fine to medium grained sand with reddish colour. pH has been observed to be acidic with low electrical conductivity. Organic carbon is high at all locations. The phosphorus and nitrogen content at all locations is low to high.

21. Traffic density survey was conducted at three locations namely, near Jaldihi village (3.1 km, NE), near Batagaon village (1.3 km, SW) and Shilgurha village (8.7 km, W). Traffic volume recorded was 24, 32 and 3596 passenger car units per day, respectively. Based on observed traffic data and existing road width, current utilisation of maximum capacity of the road is 1.41 % at Jaldihi, 1.88% at Batagaon and17.98% at Shilgurha.

22. Land Use/ Land cover – The land utilization plan as per the table:

Land ownership	Area	**%**
A. **Forest**		
A. Revenue Forest	9.175	5.76
Proposed Reserve Forest	147.803	93.24
Grand Total	156.978	99.04
B. Non-Forest Land	1.531	0.96
Total	158.509	100

PRE-MINING LAND USE

Land Use	Area in Ha.
Forest	156.978
Agricultural Land	0
Surface water Bodies	0
Settlements	0
Road	0
Grazing land	0
Barren land	0
Waste Land	1.531
Total	**158.509**

Sl. No.	**Particulars**	**Area in ha. (in conceptual period)**
1.	Mined out area	120.796
2.	Overburden/Waste dumping	7.301
3.	Ore stock yard	9.29
4.	Temporary Office, weigh bridge etc.	3.0
5.	Mine Road	8.012
6.	Rain water harvesting pond	0.52
7.	Mobile Crushing & Screening plants	3.82
8.	Others (Plantation etc.)	5.77
Total		**158.509**

23. **Manpower**: The manpower required for the mine in unskilled, semi-skilled, skilled & other categories will be 258 persons.

24. **Project Cost:** The expected cost of the project is Rs. 380 crores. The investment on only environmental monitoring has been envisaged as Rs. 60.73 lakhs and recurring expenditure is envisaged as Rs. 32.91 lakhs per year.

25. **Environment Consultant:** The proponent along consultant **M/s Centre for Envotech and Management Consultancy Pvt. Ltd., Bhubaneswar**, along with the proponent made a presentation on the proposal before the Committee.

Considering the information furnished and the presentation made by the consultant, **Centre for Envotech and Management Consultancy Pvt. Ltd., Bhubaneswar** along with the project proponent, the SEAC decided to take decision on the proposal after receipt of the following from the proponent:

i) A primary school is situated 500 meters from the lease area. The proponent shall submit a detailed action plan to adopt additional Pollution Control Measures to protect the school children from pollution as well as safety point of view. A proposal for dust barrier towards school shall also be submitted.

ii) Follow SOTM guidelines for material transfer through conveyor belts as per NEERI guidelines. A detailed proposal to be submitted.

iii) Detailed layout for proposed alternative road from mines to NH need to be furnished and the forest road should not be used.

iv) Submit a layout plan showing parking plaza, distance of primary school and nearest habitation from mine lease boundary.

v) Detailed report on pollution control measures and safety measures due to blasting and proposed road plan for movement of passers-by.

vi) Submit details of truck movements.

vii) Submit Traffic Study Report vetted by reputed institute.

viii) Relook into the matter of loss of forest products issue taken up during Public Hearing.

ix) Provide the timeline for commitments made by project proponent during Public Hearing.

x) Submit the documents regarding status of Forest Clearance.

xi) Submit compliance to NEERI recommendations.

xii) Detailed report on Rain water Harvesting proposed along with drainage plan.

ITEM NO. 02

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/s RUNGTA MINES LIMITED FOR PROPOSED (S+9) STORIED KANTHER-KOIDA RESIDENTIAL COLONY OVER AN BUILT-UP AREA 57963.68 SQM LOCATED IN VILLAGE KANTHER-KOIRA IN DISTRICT, SUNDERGARH OF SRI HIRAK MAZUMDER - EC

1. This proposal is for Environmental Clearance of proposed (S+9) storied Kanther-Koida Residential Colony of Rungta Mines Limited over an built-up area 57963.68 sqm located in village Kanther-Koira in District, Sundergarh of Sri Hirak Mazumder.

2. This project falls under category “B” or activity 8(a) – Building and construction projects under EIA Notification dated 14th September 2006 as amended from time to time.

3. Kamanda steel Plant had obtained Environmental Clearance from MoEF&CC vide letter no. J-11011/434/2009-IA.II (I), dated 08.05.2021. M/s Rungta Mines Limited (Kamanda Steel Plant) has proposed a Kanther-Koira Residential colony near Kamanda steel plant to accommodate the non-native employees.

4. **Location and connectivity**: The proposed residential project site is located in Plot No: 1173, 1175/2362, 1175/2363, 1175/2364, 1446, 1446/2495 of Khata No.: 149/224 in village Kanther-Koira, Mouza - Koira in District Sundergarh, Odisha. The location of the project area can be seen in Survey of India Open Series No. F45N1 & F45N5. The co-ordinates of the site Latitude is 21° 53’ 51.16’’ N and Longitude: 85° 15’ 15.80” E. The site is accessible by all weather road from the district collector Keonjhar (51 km) and town Koida (1.3 km). The site is located near Koira-Barsuan Road which is 0.8 km from project site and National Highway-520 is 1.2 km from project site, which connects Parsora to Rajamunda. The nearest railway station is Barsuan at a distance of 15.2 km. The nearest airport Birsa Munda Airport is at Ranchi, which is approximately 157 km from the site.

5. **Area details**: There are few existing buildings in the proposed site which will be untouched. There will be total 476 numbers of flats to be constructed and total population will be 2452.

Particular	**Existing**	**Proposed**	**Total**
Plot Area	8.20 Ac. (33,196.28 sqm)		
Ground Coverage	4946.84 sqm	4845.73 sqm	9792.57 sqm (29.49%)
FAR Area	14644.71 sqm	34623.99 sqm	49268.70 sqm
FAR (Floor Area Ratio)	--	--	1.48
Built up Area (construction)	18804.88 sqm	39158.80 sqm	57963.68 sqm
Maximum Height	14.40 mt.	35.67 mt.	
Road Area			9,412.33 sqm
Stilt Parking	3,706.45 sqm	4534.81 sqm	8241.26 sqm
Open Surface Parking	2232.20 sqm	1860.81 sqm	4093.01 sqm
Total Parking Area	**5938.65 sqm**	**6395.62 sqm**	**12334.27 sqm**
Green Belt Area			6650.23 sqm (20.03%)
No. of Tower	28	5	33
No. of Unit	152	324	476

6. **Water requirements and Wastewater generation** - Total freshwater requirement will be 229.0 KLD. It will be taken from Surface Water. It is expected that the project will

generate approx. 324.1 m^3 /day of wastewater. The wastewater will be treated in the STP of capacity of 400 m^3 /day provided within the complex. Out of which 307.9 m^3 /day will be recycled within the project for flushing (118.0 m^3 /day), landscaping (34.5 m^3 /day), Dust Suppression (25.0 m^3 /day), STP loss (16.2 m^3 /day) & 130.4 m^3 /day will be discharged to drain in case of non-monsoon period and 189.9 m^3 /day. The storm water & treated water will be discharge to nearby drain.

7. **Rainwater harvesting pits:** Total number of Rainwater Harvesting Pit provided is 35.
8. **Power requirement** - The total consolidated electrical load estimate for proposed project is about 1817 KW. To meet emergency power requirements during the grid failure, there is provision of 1 no. of DG set of 550 KVA capacity. The stack height of the DG set will be 40.36m. DG set installed will be Silent DG Set as per BS 6 & Latest CPCB Norms with Electronic Governor and Synchronization Compatibility. Solar Energy proposed is 5.15% of total power through 40 Nos. of Solar Street Light poles of 2.88 KW capacities will be directly connected with Solar Panel and 90.85 KW Solar energy generated from 75 nos. of PV Panel is directly connected with electric grid.
9. **Firefighting:** Firefighting system will be installed as per recommendation of the Firefighting Officer, Odisha and as per the guideline of NBC (part-4). The firefighting system comprises of Hose Reel, Down Comer, Manual operated electric fire alarm system, Terrace Tank, Extinguisher and Terrace pump. Safe evacuation rout for building residents should be cleared marked to ensure safety of residents during any emergency.
10. **Traffic study**: For transportation of construction materials expected traffic volumes will be average 6 tippers per day. During the operation period there will be increase in traffic density due to the movement of residential people and guests.
11. **Green belt** - An adequate greenbelt 6650.23sqm (20.03% of the plot area) or plantation around the project will be developed by using the local species like Radhachuda, Nageswar, Akash Neem, Ashok, Polanga, Karang, Bela, Pijilu, Kaniara, Tagar, Hena, etc. The plantation matrix adopted for the green belt development includes pit of 0.3 m x 0.3 m size with a spacing of 2 m x 2 m. Multi-layered plantation comprising of medium height trees (7 m to 10 m) and shrubs (5 m height) are proposed for the green belt.
12. **Solid waste Generation**: From the residential complex solid waste in form of food waste from kitchen and miscellaneous waste will be generated @ 0.45 kg/person/day, which will be about 1105.2 kg/day. The generated solid waste from the residential complex will be segregated as biodegradable and non-biodegradable. This will be collected in separate colored bins. Proper waste management practices will be adopted during the collection, storage and disposal of the generated solid waste and construction and demolition waste. Solid waste from sweeping and Dry Garbage containing non bio degradable wastes like polythene bags, metal, ceramic Waste, glass etc. shall be stored in separate garbage bin and send to approved recyclers.

S. No.	Category	Counts (heads)	Waste generated (kg/day)
1.	Residential Population	2456 @ 0.45 kg/day	1105.2

2.	Floating Population	123 @ 0.15 kg/day	18.45
3.	STP Sludge	--	45.0
	Total		**1168.65**

13. **Parking details:** Total Parking Area provided is greater than Parking Area required (as per Odisha Bye-laws) and Parking Area needed as per NBC 2005 norms

Parking Area Provided			
Open Parking			4093.01 sqm
Stilt Parking			8241.26 sqm
Total Parking	--	--	**12334.27 sqm**
Equivalent Car Space Provided			
	Area (sqm)	**Area/ECS**	
Open Parking	4093.01	25	164 ECS
Stilt Parking	8241.26	28	294 ECS
Total Parking Provided			**458 ECS**

14. **Project cost** - The estimated project cost is around Rs 73.0 Crores while Environment Management Capital Cost is 90 Lakhs and recurring Cost is 17.2 Lakhs.

15. The Environment consultant Centre for **M/s Centre for Envotech and Management Consultancy Pvt. Ltd., Bhubaneswar,** along with the proponent made a presentation on the proposal before the Committee.

Considering the information furnished and the presentation made by the consultant, **Centre for Envotech and Management Consultancy Pvt. Ltd, Bhubaneswar** along with the project proponent, the SEAC decided to take decision on the proposal after receipt of the following from the proponent:

i) NOC from concerned authority for discharge of treated water into the nearby Nallah.

ii) Supporting documents for laydown of pipeline connection in private/govt. land for drainage.

iii) A comparative statement w.r.t project features, water consumption, waste water generation and management, Solid waste generation and management and other environmental parameters for existing and proposed project.

ITEM NO. 03

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/s MY HOME INDUSTRIES PVT. LTD FOR GREENFIELD PROJECT FOR INSTALLATION OF CEMENT GRINDING UNIT OF CAPACITY 3.0 MTPA (1.5 MTPA IN PHASE - 1 & 1.5 MTPA IN PHASE - 2) AT VILLAGE – BYREE, TAHASIL – DARPAN, DISTRICT – JAJPUR, ODISHA OF SRI SURESH B - EC

1. This proposal is for Environmental Clearance of M/s. My Home Industries Pvt. Ltd for Greenfield Project for installation of Cement Grinding Unit of capacity 3.0 MTPA (1.5 MTPA in Phase-1 & 1.5 MTPA in Phase-2) at Village – Byree, Tahasil – Darpan, District – Jajpur, Odisha of Sri Suresh B.

2. **Category**: As per EIA Notification dated 14th Sep.2006, this project falls under Category "B" of Activity 3(b)- Cement Plants (EIA Notification dated 14th Sep.2006 as amended on time to time.

3. Terms of Reference was issued by SEIAA vide Letter No. 3701/SEIAA, dated 27.12.2021.

4. Public Hearing was conducted on 05.08.2022 at venue Jagannath Temple Field (Khata No. 1298, Plot No. 4228) in Byree Village, Jajpur, Odisha. Major issues were Environment protection, local area development and local employment and budget allocated towards public hearing issues is Rs. 15 crores.

5. **Location and connectivity**: The proposed site is located at Village – Byree, Tahasil – Darpan, Jajpur District of Odisha. The site falls under Survey of India toposheet no. F45U2 with Latitude: 20°36'43.97"N to 20°37'32.71"N & Longitude: 86°01'20.00"E to 86°01'34.55"E. The general terrain in the area proposed for the cement grinding unit is non-forest barren land. The topography of the project site is mostly levelled with scattered undulations. The site is well connected by road and rail. Nearest National Highway is NH -16 at 3.68km. Byree Railway Station is at 1.10km from site. Nearest Airport is Biju Patnaik International Airport, Bhubaneswar – 45.65 km. Nearest habitation is Village Byree located at distance of 1.55km. Nearest city – Cuttack at 21.55km and Jajpur at 40.34km. Nearest River is Mendhakhai Nadi – 4.48 km and Birupa River at 7.33km. Nearest Reserve forest is Dalijora RF at 0.77km. No national park or sanctuary is present within 10km radius from project site.

6. **Land use pattern**: The project area will be setup over an area of 63.23 Acres (25.59 Ha). The proposed land is Govt. land will be leased out from IDCO. About 21.29 Ha. of land has already been leased out from IDCO. The balance land acquisition is under process. There is no involvement of forest Land Greenbelt / Plantation will be developed over an area of 21 Acres of land.

Table: Land Use Break-Up

S.No.	Particulars	Area (in Acres)	Area (in Ha.)
1.	Plant & Machinery Area		
2.	Building area for plant & machinery	4.60	1.86
3.	Internal Concrete Road	6.00	2.43
4.	Internal Railway Siding	4.50	1.82
5.	Water Reservoir/Rainwater Harvesting	0.30	0.12
6.	Truck Parking	0.60	0.26
7.	Greenbelt Area	21.00	8.50
8.	Vacant Area	26.23	10.60
	TOTAL	**63.23**	**25.59**

7. **Process Technology:** The proposed cement grinding unit of 3.0 MTPA capacity is envisaged to make use of the latest technology of Vertical Roller Mill (VRM). It has become the standard for grinding raw materials in the cement manufacturing process. VRM is is a compact unit, making the footprint of the installation smaller and reducing civil engineering costs when compared to the ball mill system. Power consumption by VRM is also relatively low compared to other classic grinding technologies. The raw

material grinding capacity of VRM is also very high. Therefore, considering these enumerated benefits, the management decided to rope in the VRM Technology for this proposed Grinding Unit.

8. **Plant Configuration:** The table below details out the plant configuration and production capacity.

Table 2: Plant Configuration along with production capacity

Unit	Capacity (MTPA)		Product Mix
	Phase-1	Phase-2	
Cement Grinding Unit (Vertical Roller Mill)	1.5	1.5	PSC, CC, PPC & OPC

9. **Raw Material Requirement**

Sl. No.	Raw Material	Quantity (TPA)	Source	Mode of Transport
1.	Clinker	18,63,000	MHIPL, Telangana	Road/Rail
2.	Gypsum	1,50,000	Coromandel Fertilizer, Vizag / PPL, Paradeep	Road/Rail
3.	Fly Ash	3,72,000	TATA Steel Kalinga Nagar	Road/Rail
4.	BF Slag	6,15,000	TATA Steel Kalinga Nagar	Road/Rail
5.	Coal	1,32,000	MCL, Talcher	Road/Rail

10. The annual production of cement is targeted at 1.5 MTPA during phase-1 and total 3.0 MTPA after completion of phase-2.

11. **Green belt:** About 8.5 Ha of the total project area will be covered under green belt & plantation. A 5-year afforestation scheme has been planned to develop over an area of 8.50 Ha with 1500 saplings/ha. Native plant species will be planted in consultation with local horticulturist such as Neem, Gulmohar, Ashoka, Shisham, Jamun etc.

12. **Water requirement:** The total water requirement for the proposed plant is estimated at 90 KLD. The water requirement will be met from the ground water through bore well. The treated water will be used in greenbelt development.

Water Requirement Break-up

S.No.	Particulars	Requirement (KLD)
1.	Industrial	60
2.	Drinking & Sanitation	15
3.	Greenbelt & Dust suppresion	15
	TOTAL	90

13. **Wastewater generation:** As the proposed plant will be operated on the dry process and air is used as cooling media, no wastewater will be generated from the process. The domestic sewage to the tune of 12 KLD will be generated which will be treated in STP of 15 KLD capacity. The treated water will be reused in greenbelt development and road washing.

14. **STP:** Sewage Treatment Plant (STP) of capacity 15 KLD will be installed for treatment of domestic wastewater in Plant.

15. **Power requirement:** During construction phase, the power required will be 0.5 MW, which will be sourced from OPTCL/TPCODL. The grinding unit will require 12 MW

(Phase-1: 10 MW + Phase-2: 2 MW) during operation phase to run the entire unit smoothly, which shall be supplied by OPTCL / TPCODL. In case of emergency or power failure or maintenance shut down, MHIPL has proposed for 1 no. of D.G. Set of 320 KVA for power back-up.

16. The baseline data is generated within 10 km radius for air, water, soil, noise & ecological studies. The baseline environmental data were generated for summer season i.e., during March 2021 to May 2021.
17. **Meteorology -** The meteorological data recorded during the study period for proper interpretation of the baseline information as well as for input in modeling. During monitoring period, predominant wind direction was observed South (S). The following observations were made -

Ambient Air Quality Monitoring - Eight (8) AAQ monitoring stations were established covering the predominant (upwind and downwind) directions of the proposed plant in the study area of 10 km radius. It is evident from the monitored results that maximum values for PM_{10}, $PM_{2.5}$, SO_2, NO_X & CO are in conformity with the norms of CPCB.

❖ **Particulate Matter (PM_{10})**

- Maximum value of 93.9 µg/m^3 was observed at AQ-6 (Near OCL Plant) as there is an existing cement manufacturing plant in the vicinity.
- Minimum value of 32.4 µg/m^3 was observed at AQ-5 (Mania village).
- Average PM_{10} ranged between 41.0 - 81.3 µg/m^3.

❖ **Particulate Matter ($PM_{2.5}$)**

- Maximum value of 56.3 µg/m^3 was observed at AQ-6 (Near OCL Plant).
- Minimum value of 19.4 µg/m^3 was observed at AQ-5 (Mania village).
- Average $PM_{2.5}$ varied between 24.6 – 48.8 µg/m^3.

❖ **Sulphur Dioxide (SO_2)**

- Maximum value of 23.6 µg/m^3 was observed at AQ-6 (Near OCL Plant).
- Minimum value of 4.1 µg/m^3 was observed at AQ-5 (Mania village).
- Average SO_2 varied between 4.2 – 19.9 µg/m^3.

❖ **Oxides of Nitrogen (NO_x)**

- Maximum value of 27.6 µg/m^3 was observed at AQ-6 (Near OCL Plant).
- Minimum value of 6.1 µg/m^3 was observed at AQ-5 (Mania village).
- Average NO_x varied between 6.3 – 25.4 µg/m^3.

❖ **Carbon Monoxide (CO)**

- Maximum value of 0.8 mg/m^3 was observed at AQ-6 (Near OCL Plant).
- Minimum value of 0.1 mg/m^3 was observed at AQ-5 (Mania village).
- Average CO varied between 0.12 – 0.60 mg/m^3.

Ambient Noise Quality

- The day time and night time noise level in the study area was found to be under permissible limit.
- During day time, the maximum noise level was recorded at N1 (Project Site) and minimum noise level was recorded at N8 (Near Amiyajhari School).

- During night time, maximum noise level was recorded at N1(Project Site) and minimum noise level was recorded at N8 (Near Amiyajhari School).

18. **Surface Water Quality -** As per reported surface water quality, pH value varied from 7.22 to 7.81, turbidity was within 2.8 to 18.2 NTU, Total dissolved solids ranged from 112 – 164 mg/l, Dissolved Oxygen varied from 6.1 to 7.1 mg/l. Chloride varied between 7.8 to 20.4 mg/l, Sulphates varied from 8.4 to 15.1 mg/l, and Nitrates varied from 2.68 to 3.92 mg/l.

19. **Ground Water Quality -** As per reported ground water quality, pH varied from 7.28 to 7.81 while turbidity varied from 1.8 to 4.8 NTU. Total Dissolved Solids varied from 114 to 212 mg/l, Total Hardness varied from 88 to 154 mg/l, Chloride varied from 20.6 to 32.8 mg/l. Nitrates varied from 1.4 to 9.6 mg/l, while Sulphates varied from 2.8 to 8.94 mg/l.

20. **Soil Quality -** Mostly the soils collected from different location in the study area are sandy loam in texture and are low in productivity with low organic carbon, phosphorous but medium in potassium. Most of the soil samples are sandy loam in texture having modular bulk density and pore space. The water holding capacity is low. pH ranges from 6.28 to 7.12. Available Nitrogen also follows similar trend; available phosphorous and potassium content is very low.

21. **Manpower:** Direct and indirect employment will be generated due to the proposed project. During operational phase, 200 temporary and 100 permanent employments will be generated.

22. **Project Cost:** The total investment for the proposed project works out to approximately Rs. 600 Crores (Phase-1: Rs. 410 Crores + Phase-1: Rs. 190 Crores). Environment Management Protection Cost includes Capital Cost of Rs. 9 Crores and Recurring Cost of Rs. 0.45 Crores/annum.

23. **Environment Consultant**: The proponent along with the consultant **M/s Visiontek Consultancy Services Pvt. Ltd. Bhubaneshwar**, made a detailed presentation before the SEAC.

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

i) Land documents and kisam of land.

ii) Certificate from concerned DFO that no forest land involved in project area.

iii) Certificate from the concerned DFO that the location is not coming within the Notified ECO-sensitive Zone of Kapilash Wild life Sanctuary and exact distance of the project location from the boundary of Kapilash Wildlife Sanctuary and its Eco-Sensitive Zone in toposheet duly authenticated by concerned DFO.

iv) A copy of certificate from DFO indicating that no Schedule-1 species are present within the project area.

v) The documents of actual layout of the plant with earmarked greenbelt area.

vi) Traffic Study Report vetted by a reputed institute.

vii) Mitigation measures for air pollution ($PM_{2.5}$).

viii) Detailed proposal for control of emission of SO_x and NO_X from the Hot Air Generator (HAG).

ix) In KML file, it is observed that two roads are passing through the proposed project site. Out of two roads, one is black top road. Actual area of the project deducting the land passing black top road to be submitted along with revised layout map and revised land use breakup.

x) Detailed plan, layout with supporting documents for alternative road connectivity.

ITEM NO. 04

PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR GREENFIELD PROJECT FOR PRODUCTION OF 750,000 TPA ROLLED PRODUCTS AT KALINGANAGAR INDUSTRIAL COMPLEX, VILLAGE – JAKHAPURA, TEHSIL – DANAGADI, DISTRICT – JAJPUR, ODISHA BY M/S JATIA STEEL LIMITED OF SRI SIDDARTH SHARMA - 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. **Category**: As per EIA Notification dated 14th Sep.2006, this project falls under Category "B" of Activity 3 (a) - Metallurgical industries (ferrous & non-ferrous).
3. This proposal is for terms of reference for Greenfield project for Production of 750,000 TPA Rolled Products at Kalinganagar Industrial complex, Village – Jakhapura, Tehsil – Danagadi, District – Jajpur, Odisha by M/s Jatia Steel Limited of Sri Siddarth Sharma.
4. No alternate sites considered as the proposed land comes under Kalinga Nagar Industrial notified area (Jakhapura village) vide The Odisha Gazette No. 458 Cuttack, Monday, March 03, 2014, Industrial department Notification 24th February 2014, letter no 962-XIX-HI-22/2014-I.
5. **Baseline Study**: Baseline data collection has already been conducted during period - March 2022 to May 2022.
6. **Location and Connectivity**: The project site is located at Kalinga Nagar Industrial Complex, of Danagadi Tehsil, District- Jajpur, Odisha with Topo Sheet No. F45N16, F4504, F45T13 & F45U1 within Latitude(20°55'48.90"N to 20°56'5.68"N) and Longitude(86° 3'4.63"E to 86° 3'24.66"E). The plant well connected vide NH-200 near Dak Bangla Chhak at a distance of 3.95 km (SW direction) and connected to SH 20 near Danagadi chaak at a distance of 3.4 km. However, site is connected to Industrial Corridor Road of Kalinga Nagar Industrial Complex **(**adjacent to Project boundary), which is connected to the NH 200 (4.46 km, WSW). Jakhapura Junction is 1.74 km away, SE and Bhubaneswar Airport is 79.50km away, SSW from the project site. Nearest nalas are one seasonal nala at 0.66km and another Ganda Nala at 3.43km. Nearest protected forest is Danagadi PF at 4.50km. There is no National Parks, Wildlife sanctuaries and Biosphere

Reserves within 10 Km from the proposed site. The land falls under Seismic Zone – III (moderate damage risk zone) [as per IS 1893 (Part-I): 2002].

7. **Land use planning**: The total land acquired for the project is 44.00 Ac (17.806 Ha) of Non- Forest Land. The plant is located at village Kalinganagar in Jajpur district of Odisha, India. The plant site is located on a considerable high land. Total land is acquired from Odisha Industrial Infrastructure Development Corporation (IDCO) vide letter no 005/ALO/JRD, dated 23.09.2022.

Table: Land Break-up – Project Area

Sl. No.	Particulars		Total Area after Expansion		
			Acres	**Hectares**	**%**
1	Admin Block		0.074	0.03	0.166
2	Generator Area		0.03	0.012	0.066
3	H.T Power Supply Area		0.432	0.175	0.968
4	Temple		0.048	0.02	0.108
5	Fire Fighting Room		0.099	0.04	0.221
6	Water Reservoir		0.445	0.18	0.996
7	Rain Water Storage		0.198	0.08	0.443
8	Security Room 1		0.003	0.001	0.007
9	Security Room 2		0.003	0.001	0.007
10	**Plant Area**		**10.651**	**4.312**	24.207
	A	Stock yard & Dispatch bay	2.663	1.078	
	B	Cooling & Finish storage of TMT	2.663	1.078	
	C	TMT Rebar Mill	2.663	1.078	
	D	Billet Storage bay & Reheating Furnace	2.663	1.078	
11	**Utility Buildings**		**3.718**	**1.505**	8.450
	A	Guest House	0.473	0.191	
	B	Portable WTP	0.578	0.234	
	C	Cooling Tower & CA Station	0.777	0.314	
	D	Water Storage & Pimp House	0.473	0.191	
	E	Oil Storage Electric Control Room	0.473	0.191	
	F	Electrical Control Room	0.473	0.191	
	G	Transformer, DB & PCB	0.473	0.191	
12	Greenbelt Area		14.997	6.071	34.084
13	Truck Parking & Weighment Area		0.309	0.125	0.692
14	Admin Building		0.096	0.039	0.216
15	Car Parking Area		0.074	0.03	0.166
16	Roads		5.237	2.12	11.902
17	Assembly Point		0.022	0.009	0.050
18	Future Expansion Area		7.589	3.071	17.248
TOTAL AREA			**44.00**	**17.806**	**100**

8. **Details of project configuration and production capacities**:

Production	Units & Configuration	Final Capacity	Use of Product
Rolling Mill (TMT Rebar & Wired Rod)	1x0.75 MTPA	750,000 TPA	Will be sold in Open Market

Utilization of Billet of 774,200 TPA for Production of 750,000 TPA Rolled products (TMT Rebars & Wired Rod), 100% sold in market.

9. Material Balance for 750,000 TPA Rolling mills -

Input	Quantity (TPA)	Output	Specific Output	Quantity (TPA)
Billets	774,200	Hot rolled Products	0.97	750,000
-	-	Scrap (miss-roll and end-cuts)	0.02	16,200
		Mill scale	0.01	8000
Total	**774,200**	**Total**	1	**774,200**

10. **Raw Material**: The details of the raw material requirement for the Proposed project along with its source and mode of transportation is given as below:

Sl	Raw Material	Quantity (TPA)	Source (Near Plant)	Road Distance from Site in Km	Mode of Transport
1.	Billet	774,200	TATA Steel, Nilachal & Jindal	5-10 km	Road
2.	LSHS / LDO	14,500	Paradeep Port/ Local Market	96 km / 5 km	Road

11. **Water Requirement**: The total makeup water requirement is 355 KLD which will be sourced from Brahmani River through Pipeline (permission of same will be obtained).

Table: Break up of total water requirement

Plant Facilities	Proposed Makeup Water (KLD)	Blowdown (KLD)
Rolling Mill (204,800 TPA)	340	51
Drinking & Sanitisation	15	12.5
Greenbelt & Plantation	105	-
Dust suppression	45	-
Sprinkling on Road	50	-
Total Water Consumption	**555**	**63.5**
Rain Water Harvesting		140

12. **STP/ETP:** The domestic waste will be treated in STP. A total of 12.75 KLD sewage will be sent to the Sewage Treatment Plant of 15 KLD Capacity and will be recycled and reused. Effluent Treatment Plant (ETP) is the Central Treatment System for the Steel Plant. ETP system shall be design for a capacity of 60 KLD. The estimated requirement of make-up water is 355 KLD.

13. **Rainwater Harvesting**: Rainwater harvesting pond capacity area will be 1980 m^2 and depth of Reservoir is 8 m.

14. **Power requirement**: Total power requirement for plants is 14 MW per hour. MRSS & Associated transmission line shall be constructed for drawl of 14 MW of Power, however necessary bays & step-down transformer & Plant substation shall be constructed in a phase manner.

15. **Solid Waste Generation**:

Facility	Waste	Quantity (TPA)	Management
Rolling Mill	Scrap (End-Cuts)	16,200	Will be disposed through trucks & sold to SMS Plant.
	Mill Scale	8000	Will be disposed through trucks & sold to Sinter Plant.

16. **Hazardous Waste Generation**:

Waste	Category as per HWM Rules, 2016	Quantity (TPA)	Management
Hazardous Waste			
Oil Residue	Cat. 5.2	3.60	Storage in containers over impervious floor under well ventilated covered shed followed by disposal through actual users having valid authorization from SPCB, Odisha

17. **Manpower**: Direct Employment generation during operation phase will be 150, Period of employment 365 days. Indirect Employment generation will be around 250. Employment generation during Construction Phase will be around 60.

18. **Green belt:** Greenbelt/plantation will be done in 6.071 acres, 34.084% of the total plant area. A three-tier plantation is proposed comprising of an outermost belt of taller trees which will act as a barrier. Local plant species will be preferred as per the CPCB guidelines in consultation with the Local Forest Department. 2500 number of trees per Hectare will be planted for the greenbelt development.

19. **Project Cost:** The overall cost of the project is estimated at Rs. 220.00 Crores and capital cost for Environmental Protection Measures is proposed as Rs. 17.6 Crores, which will 8 % of total project cost. Recurring Cost/annum for Environmental Pollution Control Measures Rs. 1.14 crores.

20. **Environment Consultancy**: The proponent along with the consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar,** made a detailed presentation before the SEAC.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar**, the SEAC prescribed the following specific ToRs in addition to standard ToRs as per **Annexure – A** for conducting detailed EIA study.

i) Submit drainage map, rainwater harvesting and reduce the consumption of water and reuse the water in rainy season.

ii) Certificate from concerned DFO that no forest land involved in lease area.

iii) Submit a traffic study report vetted by a reputed institute.

iv) Use fuel according to the fuel policy of the state with low Sulphur content.

ITEM NO. 05

PROPOSAL OF ENVIRONMENTAL CLEARANCE FOR GRAIN AND MALT BASED DISTILLERY PLANT PROJECT OF 30 KLPD ALONG WITH 1.5 MW CO-GENERATION POWER PLANT LOCATED AT VILLAGE-BARAPADA, P.O. GARUDAGAON TANGI, DISTRICT –CUTTACK FOR M/S. AVIRA DISTILLERY PRIVATE LIMITED OF SRI KISHORE KUMAR MAHANTA - 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. **Category**: The project falls under Category 'B1' of Schedule 5 (g) - Grain Based Distilleries Producing Ethanol, as per the EIA Notification 2006, as amended from time to time.
3. This proposal is for terms of reference of M/s. Avira Distillery Private Limited for Grain and Malt Based Distillery Plant Project of 30 KLPD along with 1.5 MW Co-generation Power Plant located at Village-Barapada, P.O. Garudagaon Tangi, District –Cuttack for of Sri Kishore Kumar Mahanta.
4. **Project details**: This is an existing plant located at Village-Barapada, P.O. Garudagaon Tangi, District -Cuttack, Odisha.
5. Earlier Environment Clearance was obtained by M/s SR Distillery Private Limited, from MoEF&CC Vide File No – J- 11011/463/2010-IA II (I), dated: -20.04.2012 for Grain ENA distillery and Malt spirit plant along with 1.5 MW Coal Based Power Plant. CTE was obtained from SPCB, Odisha Vide letter no.-21803, dated-26.12.2011 and CTO (partly) was also obtained from SPCB Vide letter no.-4187 Dated- 17.03.2015 and same was valid till 31.03.2016.
6. M/s SR Distillery Private Limited started the construction but due to financial condition they couldn't complete the construction of the project. Approx. 75% of the work has been completed as per the earlier granted EC and the plant is shut down. However, the said company has defaulted in payment of Bank Loan and accordingly Bank had auctioned their factory for clearances of dues vide e- auction dated 27th July 2022. In response to the e-auction, M/s Avira Distillery (P) Ltd participated in the said e-auction and became the highest bidder.
7. In the above backdrop, M/s Avira Distillery Pvt. Ltd. deposited 25% of the auction amount and was issued "Sale Confirmation Letter" dated 28th July 2022 by the Punjab National Bank, being the consortium leader.
8. Therefore, the new promoter - M/s Avira Distillery Pvt. Ltd. has taken over the Unit and applied fresh EC Proposal of 30 KLPD Grain ENA Distillery and Malt Spirit Plant along with 1.5 MW Co-generation Power Plant as per Notification which is published vide Gazette of India Notification no. S.O 1247(E) dated 18th March 2021.

9. Approx. 75% of the work has been completed by previous Project proponent as per the earlier granted EC (during EC validity period) remaining work will be completed by Avira distillery Pvt. Ltd. once EC is obtained.

10. **Location & Connectivity**: M/s Avira Distillery (P) Limited is at Village-Barapada, P.O. Garudagaon Tangi, District - Cuttack, Odisha. with Khata no: 450, Plot no: 558, 451, 452,453. The project area features in Survey of India, toposheet No. F45T14 and bounded by the latitude - 20º35'57.21" & longitude - 85º 57' 42.28". Barapada Road is a connecting road which is abutting from Project site. NH-16 is at a distance of 5.7 km in ESE direction from the project site, NH-55 is at a distance of 10.1 km in SW direction from the project site, NH-11 is at a distance of 8.5 km in SSW direction from project site and SH-9A is at a distance of 11 km in South direction from project site. The nearest railway station is Ratan Kapilas Road Junction which is at a distance of 5.5 km in SE direction. The nearest airport is Biju Patnaik International Airport which is approximately 40.9 km in SSW from the project site.

11. **Topography**: The topography of Project site is generally characterized by an almost flat plain. Banara is a Village in Cuttack District of Odisha State, India. It is located approx.15 km towards East from District headquarters Cuttack. The ground elevation in the study area varies from approximately 1.56-8.17m bgl. Change in topography is envisaged due to construction of buildings, making raw material, and finished good yards.

12. Size or magnitude of operation:

Plant Configurations

S. No.	Units	Proposed Capacity
1	Installed Capacity	30 KLPD Grain ENA Distillery and Malt Spirit Plant
2	Major Raw Material	Grain (Broken rice, Maize, Bajra)
3	Final Product & By-Product	ENA - 30 KLD DDGS- 22 TPD CO2- 15 TPD
4	Co-Generation Power Plant (1 x 12 TPH-AFBC)	1.5 MW
5.	IMFL	186025 cases per month

13. Major Raw Material - Grain (Broken rice, Bajra, Maize,) and Malt

14. Final Product & By- Product - ENA -30 KLPD, DDGS- 22 TPD, CO2- 15 TPD, IMFL – 1,86,025 cases per month.

15. **Land use:** Total land is 2.83 Ha. This land is sufficient for the setup of the Grain ENA Distillery and Malt Spirit Plant 33.00% land has been earmarked for plantation and greenbelt as per standard norms. Table below gives the % area used in the plant. The tentative land area statement of proposed project is given as below: -

Table: Land Break-up

Land use	Area (Ha)	Percentage (%)
Parking	0.42	15.0
Green belt	0.93	33.0
Road & Paved area	0.36	12

Plant and machinery	1.12	40.0
Total land area	**2.83**	**100.0**

16. **Manpower requirement**: Total manpower required for the project is 110 people and indirect employment 50. Besides the production staff, some more manpower shall be needed for administrative purposes. The local untrained manpower also will be trained to slowly take up to the Semiskilled and Skilled tasks.

17. **Water requirement**: One Time Total water requirement for the project will be 1784 KLD which will be further reduced through recycling & reuse of 1252 KLD. Total freshwater demand for distillery operation is 169 KLD @5.6 KL of water/KL of ENA. Soft water required for preparing IMFL = 35 KLD to manufacture 186025 cases per month. Fresh water requirements of the project will be met by ground water.

18. Domestic sewage will be treated in STP and treated water will be used for horticulture and water sprinkling. The distillery will be based on **"**zero liquid discharge**".** Wastewater generated from plant premises will be treated in ETP/CPU.

19. **Power requirement**: Total power requirement will be 1.3 MW which will be met from in house co-generation power plant of 1.5 MW and rest will be supplied to state electricity board power grid, using rice husk/coal as fuel. For emergencies, 1 DG set of 500 KVA each will be installed within the plant area. Solar power panels will be installed within project premises with capacity equal to 10% of required power demand.

20. **Green Belt**: A greenbelt of 0.93 Ha (33.00%) will be developed in the plant premises. Approx. 10m wide greenbelt will be developed around the plant premises. Nursery raised saplings of 2–3 feet height of trees and shrubs will be purchased from local nursery and Forest Dept. Plantation will include digging pits with proper spacing, filling pits with prepared soil, plantation of seedlings and watering. The size of the pit will be 1m x 1m x 1 m for trees and 0.5 m x 0.5 m x 0.5 m x 0.5 m for shrubs.

21. **Baseline data collection** has been conducted during the period **1st October, 2022 to 31st December 2022.**

22. **Project cost**: The overall estimated project cost for the proposed unit is INR 63 Cr.

S.NO.	Description	Total Cost (In Crore)
1.	Land Cost	15.75
2.	Building (Factory +Office)	11.34
3.	Plant and Machinery	17.64
4.	Electrical Installation	12.6
5.	Misc. Fixed Assset	4
6.	EMP	1.67

23. The proponent along with the consultant **M/s Grass Roots Research & Creation India (P) Ltd., Noida,** made a detailed presentation before the SEAC.

24. The Consultant along with the proponent had requested during the presentation to issue Terms of Reference for EIA Study exempting public hearing as per MoEF&CC,

Govt. of India amended EIA Notification vide S.O.1247 (E), dated 18th March 2021 as they have already completed construction work more than 50% during validity period of Environmental Clearance. The proponent had also requested to allow them for use of baseline data collected during 1st October, 2022 to 31st December 2022 for EIA study.

25. The MoEF&CC, Govt. of India amended EIA Notification vide S.O.1247 (E), dated 18th March 2021 stipulates the following:

"Notwithstanding anything contained above, the projects where construction and commissioning of proposed activities have not been completed within the validity period of the Environmental Clearance (EC) and a fresh application for EC has been submitted due to expiry of the said period of the EC, the concerned Expert Appraisal Committee or State Level Expert Committee, as the case may be, may exempt the requirement of public hearing subject to the condition that the project has been implemented not less than fifty percentage in its physical form or construction"

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

a) The SEIAA may consider to exempt public hearing as per MoEF&CC, Govt. of India amended EIA Notification vide S.O.1247 (E), dated 18th March 2021 as they have already completed construction work more than 50% during validity period of Environmental Clearance.

b) The following specific ToRs along with standard ToRs as per **Annexure – B** may be prescribed for conducting EIA Study. The proponent may be allowed to use baseline data collected during 1st October, 2022 to 31st December 2022 for EIA study.

   i) Land document and kisam of land to be submitted.

   ii) Detail material balance and water balance to be submitted.

   iii) Flowchart showing the complete process to be submitted.

   iv) Submit the permission status of CGWA and Water Resources Department, Govt. of Odisha for ground water usage.

   v) Details of Solar Energy to be used.

   vi) Detail Mitigation Measures to control/prevent fungal growth during the process.

   vii) Compliance to issues raised by the public in previous public hearing proceedings.

ITEM NO. 06

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S RISHABH MINING PVT.LTD. FOR GANDHARGALA DECORATIVE STONE MINES OVER AN AREA OF 32.60 ACRES OR 13.193 HA. AT VILLAGE - GANDHARGALA, TAHASIL - TITLAGARH, DISTRICT - BOLANGIR, ODISHA OF SRI SUMAT CHAND JAIN (DIRECTOR) – EC UNDER VIOLATION CATEGORY.

1. This proposal is for environmental clearance of M/s Rishabh Mining Pvt.Ltd. for Gandhargala Decorative stone mines over an area of 32.60 acres or 13.193 Ha. at Village - Gandhargala, Tahasil - Titlagarh, Dist -Bolangir, Odisha of Sri Sumat Chand Jain.

2. This proposal falls under Category "B1", 1(a) - Mining of Minerals as per the EIA notification 2006 and its subsequent amendments**.**

3. **Status of Lease**: Gandhargala Decorative Stone Quarry over 32.60 acres or 13.193 hectares is located at Khata no: 54, Plot no: 1/P, 298/P, 299/P in village Gandhargala, P.S. Titlagarh, District Balangir, Odisha. The lease was originally executed on Dtd.16.12.1999 for a period of 10 years in favour of M/s Rishabh Mining Private Limited up to 15.12.2009 and presently is under the process of renewal. The lease is under subsistence vide letter no. M XIV (i) – 20/2009 5132 Dated 13.07.2021 issued by the Directorate of Mining Odisha, Bhubaneswar is attached for reference. As per Odisha Minor Mineral Concession Rule, 2016 the validity of lease is deemed to be extended up to Dtd.15.12.2029.

4. **Violation to EIA notification,2006**: Gandhargala Decorative stone Mines was in operation from 2010 to 2014 without obtaining prior Environment Clearance from SEIAA, Odisha, as per EIA Notification 2006, thereby attracting the Violation to Environment Protection Act 1986. The matter was deliberated by SEAC in terms of provisions of the MoEF and CC, Govt. of India Notification dated 14th March 2017 and amendments thereto and confirmed the case to a violation of EIA Notification 2006. Based on the Assessment carried out by Hon'ble State Expert Appraisal Committee,

5. The EIA/EMP report is prepared in compliance with the approved Violation ToR issued by SEIAA, Odisha as per recommendation of SEAC vide letter no. 3994/ SEIAA dated 07.02.2022.

6. Based on the violation committed by the project proponent a damage assessment report and community resource augmentation plan has been prepared. Budgetary allocation for violation activity including the penalty amount is Rs. 30,50,557.00 (i.e. Budget under Remediation plan based on the damage assessment due to violation – Rs. 11,55,000+ Natural Resource Augmentation Plan – Rs. 14,80,000+ Penalty due to violation – Rs.4,15,557.00)

7. Further, the EMP cost proposed for the project will be 21.0 Lakhs as capital investment and 6.0 Lakhs/ Annum as recurring cost.

8. **Mining plan approval**: Approval of mining plan and PMCP in respect to Gandhargala, Decorative stone mine over 32.60 acres or 13.193 hectares in village Gandhargala, under Titlagarh Tahasil of Balangir district of Rishabh Mining Private

Limited for the period of 5 year has been approved vide letter no. 6244/DM , dated 18.08.2021.

9. Another mine of Midley Minerals over an area of 29.77 Ha located within 500m of project site. (EC granted vide letter no. SEIAA/2128 dated 27.10.2016). Hence the mines has not taken into cluster consideration. Further the quarry lease under consideration is granted before 9th Sept. 2013 before the applicability of cluster condition as per MoEF& CC notification S.O. 2269(E) dated 01.07.2016.
10. The preparation of District Survey Report is under process by The Collector, Bolangir and will be submitted after the completion of the DSR.
11. There is no forest land within the mine area as certified by DFO, Balangir Forest Division.
12. **Public hearing details**: The Public Hearing for Gandhargala Decorative Stone Mine over an area of 13.193 Ha. was conducted on 14.09.2022 at 10.00 A.M Gandhagala village of Balangir District. Attended by: 60 persons; Issues raised by 8 persons. Public Hearing Issues Are: Protection of natural environment, Pollution control, Protection of grazing land, and agricultural land, protection of existing plantation. Based on the public hearing a time bound action plan for complying the public demand has been prepared. A total cost of 14.80 Lakhs of rupees has been allocated for peripheral developmental activities by the project proponent.
13. **Location and connectivity**: Mining lease over 32.60 acres or 13.193 hectares for decorative stone/Granite is located in village Gandhargala, PS Titlagarh, district Balangir, Odisha with Khata no: 54, Plot no: 1/P, 298/P, 299/P. The leasehold area features in Survey of India, toposheet No. 64P/4 and bounded by the latitudes of 20º13'53.5" & 20º14'13.7" N and longitudes of 83º02'28.4" & 83º02'51.4"E.Area of 13.193 hectares Government owned under the revenue head of "Abad Ajogya Anabadi The entire area of 13.193 hectares is a barren hilly terrain. Highest and lowest altitudes are at 285m (highest) and 200m (lowest) above mean sea level. The nearest railway line is Titlagarh(10.87kms) while the nearest National Highway is NH -201(18kms) and the nearest State Highway is SH 16(9kms). Nearest major habitation - Gandhargala at a distance of 2 Km.
14. The area is devoid of any stream. The drainage pattern of the area is dendrite. As the region shows an undulated hilly topography, there is neither any seasonal nor any perennial nalla flowing within the applied mining lease area.
15. **Reserves**: The geological and mineable reserve of Gandhargala Decorative stone Mines over an area of 13.193 Ha is 667227cu.m and 442008cu.m respectively.
16. **Mining method**: There will be excavation of decorative stone from the lease area through done by opencast and semi mechanized method. The project is proposed for Maximum production of decorative stone of 6006m^3/annum when the mine is fully developed. Total excavation will be 20020 m^3. Height and width of the benches will be kept at 6m each and overall slope angle will be 45º with the horizontal.

Year	Total Excavation (A)	Volume of Waste (70% of A)	Production of Decorative stone		
			Volume of presently non-saleable stone (5% of A)	Volume of usable / saleable decorative Stone (25% of A)	Total
	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)
1st Year	20,020	14,014	1,001	5,005	6,006
2nd Year	20,020	14,014	1,001	5,005	6,006
3rd Year	20,020	14,014	1,001	5,005	6,006
4th Year	20,020	14,014	1,001	5,005	6,006
5th Year	20,020	14,014	1,001	5,005	6,006
Total	**1,00,100**	**70,070**	**5,005**	**25,025**	**30,030**

17. **Land use:** The land use plan is as per the following table.

Sl. No.	Type of land use		At present (ha)	At the end of plan period (ha)	At the end of Conceptual period (ha)
1	Area under excavation		0.490	1.247	2.752
2	Waste Dump		1.289	1.712	2.300
3	Mineral storage	Usable/saleable	0.500	0.500	0.500
		Presently-non saleable	---	0.080	0.080
4	Road		0.836	1.072	1.072
5	Infrastructure		0.005	0.055	0.055
---	Sub-total		3.120	4.666	6.759
6	Safety zone under plantation		---	0.400	1.208
7	Area remains as such		10.073	8.127	5.226
---	Sub-total		10.073	8.527	6.434
Total	**---**		**13.193**	**13.193**	**13.193**

18. **Water requirement**: Total water requirement for the project will be 3.5KLD out of which 1KLD will be required for drinking and domestic purpose and 1KLD for dust suppression and 1.5KLD for plantation purpose. Source of water will be Tanker and Rain water harvesting.

19. **Power requirement:** No electricity connection within ML area. However solar lights will be employed for day to day living purposes. Diesel requirement will be 1000 litres / month.

20. **Baseline study** was conducted during December 2021 – February 2022. Following results were obtained :

PERIOD	DECEMBER '2021 TO FEBRUARY'2022
AAQ PARAMETERS AT 7 LOCATIONS	PM2.5 – 19.3 to 39.1 µg/cu.m PM10 – 38.0 to 77.3 µg/cu.m SO2 -4.2 to 10.5 µg/cu.m NO2 -10.2 to 17.3 µg/cu.m
AAQ Modeling (Incremental GLCs) AERMOD Cloud remote version	PM_{10} – 1.36 µg/m^3 in the lease area
Ground water Quality at 6 Location	pH- 6.5 to 7.2; Total Hardness – 52 - 196 mg/l , Chloride – 12- 90 mg/l , Fluorides – 0.05 – 0.15 mg/l, TDS – 90 - 380 mg/l, Heavy metals (Cd <0.001, Hg<0.0005, As<0.001)
Surface water at 4 locations	pH – 6.6 to 8.4, DO- 4.9 to 7.3 mg/l, BOD- <1.0 mg/l, COD <5.0 mg/l, Heavy metals (Cd <0.001, Hg<0.001, As<0.01)
Noise level at 7 locations	30.4 – 45.3 dBA for day time and 22.6 to 33.4 dBA during night time
Soil Quality at 5 locations	pH – 5.3 to 8.0, Potassium – 121-520 Kg/Ha, Phosphorous – 11.1 to 154.3 Kg/ Ha, Nitrogen – 163 – 251 Kg/Ha, Electrical Conductivity- 55 to 272 ms/cm

21. **Manpower:** The mining activity will generate employment for 40nos. of administrative staffs 04 nos, skilled worker 13 nos, and Semi-skilled 5 nos Employees.

22. **Solid waste management:** During the proposed plan period a total of 7329.00 m^2 of waste will generate due to course of mining. However about 40% of the generated waste will be utilized for maintenance and construction of the hual road, approach and existing roads in the surrounding area periodically.

23. **Greenbelt:** The program of afforestation is to plant 1200 saplings in the safety zone over an area of 4800sq.m. during the five-year plan period. Local species like Mango, Neem, Mahaneem, Chakunda, Gambhari & other related are proposed to be planted with 10m spacing between two consecutive saplings. Initially the plantation has been taken up in the safety zone. There was proposal to plant 500 numbers saplings over an area of 3250 m^2 Ha in the safety zone during the1^{s}t 2 year of plan period. Spacing of the saplings was proposed to be kept at 2.5m.

24. **Project cost**: The overall estimated project cost is INR 400 lakhs. The capital cost for EMP is proposed as 21.0 Lakhs and recurring cost is proposed as 6.0 Lakhs.

25. **Environment Consultancy**: The proponent along with the consultant **M/s Kalyani Laboratories Pvt. Ltd., Bhubaneswar**, made a detailed presentation before the SEAC.

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

1. Mitigation measures for the silt over flowing to nearby streams/water channels and de siltation management plan to prevent choking of Nalla.
2. Layout and design of settling tanks/pits according to rainfall and topography of the site.
3. Dedicated medical checkup for the employees of the mine.
4. Mitigation measures taken for pollution generated due to fine particles in the mining process should be addressed.
5. Supporting documents regarding utilization of waste and its management.
6. NOC of BDO or Panchayat for usage of haulage road/Panchayat Road and undertaking by the project proponent to maintain the road.
7. During the public hearing, all the people present in the public hearing had objected the project. Point-wise compliance to issues raised by the public in the public hearing proceedings to be submitted.
8. Clarification from concerned ADM about grazing land present in the lease area as raised by the public during public hearing.
9. Certificate from the concerned DFO that there is no DLC land involved in the lease area.

Member Secretary, SEAC

Chairman, SEAC

ANNEXURE – A

TERMS OF REFERENCE (ToR) FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT FOR GREENFIELD PROJECT FOR PRODUCTION OF 750,000 TPA ROLLED PRODUCTS AT KALINGANAGAR INDUSTRIAL COMPLEX, VILLAGE – JAKHAPURA, TEHSIL – DANAGADI, DISTRICT – JAJPUR, ODISHA BY M/S JATIA STEEL LIMITED OF SRI SIDDARTH SHARMA - TOR

STANDARD TERMS OF REFERENCE (TOR):

1. **Executive Summary.**
2. **Introduction**
    i. Details of the EIA Consultant including NABET accreditation.
    ii. Information about the project proponent.
    iii. Importance and benefits of the project.
3. **Project Description**
    i. Cost of project and time of completion.
    ii. Products with capacities for the proposed project.
    iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
    iv. List of raw materials required and their source along with mode of transportation.
    v. Other chemicals and materials required with quantities and storage capacities
    vi. Details of Emission, effluents, hazardous waste generation and their management.
    vii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract).
    viii. Process description along with major equipments and machineries, process flow sheet (quantative) from raw material to products to be provided.
    ix. Hazard identification and details of proposed safety systems.
    x. Expansion/modernization proposals:
        a) Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing existing operation of the project from

SPCB shall be attached with the EIA-EMP report.

b) In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.

4. **Site Details**

i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.

ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (Including all eco-sensitive areas and environmentally sensitive places).

iii. Details w.r.t. option analysis for selection of site.

iv. Co-ordinates (lat-long) of all four corners of the site.

v. Google map-Earth downloaded of the project site.

vi. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.

vii. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.

viii. Land use break-up of total land of the project site (identified and acquired), government/ private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)

ix. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area.

x. Geological features and Geo-hydrological status of the study area shall be included.

xi. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects).

xii. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.

xiii. R&R details in respect of land in line with state Government policy.

5. **Forest and wildlife related issues (if applicable):**

i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable).

ii. Land use map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (in case of projects involving forest land more than 40 ha).

iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.

iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon.

v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area.

vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife.

6. **Environmental Status**

i. Determination of atmospheric inversion level at the project site and site-specific micro- meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.

ii. AAQ data (except monsoon) at 8 locations for PM10, PM2.5, SO2, NOX, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.

iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with - min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.

iv. Surface water quality of nearby River (100m upstream and downstream of discharge point) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.

v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC, if yes give details.

vi. Ground water monitoring at minimum at 8 locations shall be included.

vii. Noise levels monitoring at 8 locations within the study area.

viii. Soil Characteristic as per CPCB guidelines.

ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.

x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule- I fauna are found within the study area, a

Wildlife Conservation Plan shall be prepared and furnished.

xi. Socio-economic status of the study area.

7. **Impact and Environment Management Plan**

i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.

ii. Water Quality modelling - in case of discharge in water body

iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor- cum-rail transport shall be examined.

iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.

v. Details of stack emission and action plan for control of emissions to meet standards. vi. Measures for fugitive emission control

vi. Details of hazardous waste generation and their storage, utilization and management. Copies of MOU regarding utilization of solid and hazardous waste in cement plant shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.

vii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.

viii. Action plan for the green belt development plan in 33 % area i.e. land with not less than

ix. 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.

x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.

xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.

xii. Action plan for post-project environmental monitoring shall be submitted.

xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

8. **Occupational health**

i. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.

ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre-placement and periodical examinations give the details of the same. Details regarding last month analysed data of above mentioned parameters as per age, sex, duration of exposure and department wise.

iii. Details of existing Occupational & Safety Hazards. What are the exposure levels of hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,

iv. Annual report of health status of workers with special reference to Occupational Health and Safety.

9. **Corporate Environment Policy**

i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.

ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.

iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.

iv. Does the company have system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report.

10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.

11. Enterprise Social Commitment (ESC)

    i. Adequate funds (at least 2.5 % of the project cost) shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be included. Socio-economic development activities need to be elaborated upon.

12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.

13. 'A tabular chart with index for point wise compliance of above TOR.

Environmental Scientist, SEAC

ANNEXURE – B

STANDARD TERMS OF REFERENCE FOR CONDUCTINGENVIRONMENT IMPACT ASSESSMENT STUDY FOR DISTILLERIES AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT

A. SPECIFIC TERMS OF REFERENCE FOR EIA STUDIES FOR DISTILLERIES

1) List of existing distillery units in the study area along with their capacity and sourcing of raw material.
2) Number of working days of the distillery unit.
3) Details of raw materials such as molasses/grains, their source with availability.
4) Details of the use of steam from the boiler.
5) Surface and Ground water quality around proposed spent wash storage lagoon, and compost yard.
6) Plan to reduce spent wash generation within 6-8 KL/KL of alcohol produced.
7) Proposed effluent treatment system for molasses / grain-based distillery (spent wash, spent lees, condensate and utilities) as well as domestic sewage and scheme for achieving zero effluent discharge (ZLD).
8) Proposed action to restrict fresh water consumption within 10 KL/KL of alcohol production.
9) Details about capacity of spent wash holding tank, material used, design consideration. No. of peizometers to be proposed around spent wash holding tank.
10) Action plan to control ground water pollution.
11) Details of solid waste management including management of boiler ash, yeast, etc. Details of incinerated spent wash ash generation and its disposal.
12) Details of bio-composting yard (if applicable).
13) Action plan to control odour pollution.
14) Arrangements for installation of continuous online monitoring system (24x7 monitoring device)

B. STANDARD TERMS OF REFERENCE

1) Executive Summary
2) Introduction
   i. Details of the EIA Consultant including NABET accreditation
   ii. Information about the project proponent
   iii. Importance and benefits of the project
3) Project Description
   i. Cost of project and time of completion.

ii. Products with capacities for the proposed project.

iii. If expansion project, details of existing products with capacities and whether adequate landis available for expansion, reference of earlier EC if any.

iv. List of raw materials required and their source along with mode of transportation.

v. Other chemicals and materials required with quantities and storage capacities

vi. Details of Emission, effluents, hazardous waste generation and their management.

vii. Requirement of water, power, with source of supply, status of approval, water balance diagram,man-power requirement (regular and contract)

viii. Process description along with major equipments and machineries, process flow sheet (quantative) from raw material to products to be provided

ix. Hazard identification and details of proposed safety systems.

x. Expansion/modernization proposals:

a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forestsas per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing Iexisting operationof the project from SPCB shall be attached with the EIA-EMP report.

b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.

4) Site Details

i. Location of the project site covering village, Taluka/Tehsil, District and State, Justificationfor selecting the site, whether other sites were considered.

ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places)

iii. Details w.r.t. option analysis for selection of site

iv. Co-ordinates (lat-long) of all four corners of the site.

v. Google map-Earth downloaded of the project site.

vi. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of

unit within the Industrial area/Estate.

vii. Photographs of the proposed and existing (if applicable) plant site. If existing, showphotographs of plantation/greenbelt, in particular.

viii. Landuse break-up of total land of the project site (identified and acquired), government/ private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (notrequired for industrial area)

ix. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area

x. Geological features and Geo-hydrological status of the study area shall be included.

xi. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green fieldprojects)

xii. Status of acquisition of land. If acquisition is not complete, stage of the acquisition processand expected time of complete possession of the land.

xiii. R&R details in respect of land in line with state Government policy

5) Forest and wildlife related issues (if applicable):

i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable)

ii. Land use map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (in case of projects involving forest land more than 40 ha)

iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.

iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon

v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area

vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife

6) Environmental Status

i. Determination of atmospheric inversion level at the project site and site-specific micro- meteorological data using temperature, relative humidity,

hourly wind speed and direction and rainfall.

ii. AAQ data (except monsoon) at 8 locations for PM10, PM2.5, SO2, NOX, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.

iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with - min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.

iv. Surface water quality of nearby River (100m upstream and downstream of discharge point) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.

v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC, if yes give details.

vi. Ground water monitoring at minimum at 8 locations shall be included.

vii. Noise levels monitoring at 8 locations within the study area.

viii. Soil Characteristic as per CPCB guidelines.

ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.

x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.

xi. Socio-economic status of the study area.

7) Impact and Environment Management Plan

i. Assessment of ground level concentration of pollutants from the stack emission based on site- specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.

ii. Water Quality modelling - in case of discharge in water body

iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large

quantities) by rail or rail-cum road transport or conveyor- cum-rail transport shall be examined.

iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.

v. Details of stack emission and action plan for control of emissions to meet standards.

vi. Measures for fugitive emission control

vii. Details of hazardous waste generation and their storage, utilization and management. Copies of MOU regarding utilization of solid and hazardous waste in cement plant shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.

viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.

ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.

x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.

xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.

xii. Action plan for post-project environmental monitoring shall be submitted.

xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

8) Occupational health

i. Plan and fund allocation to ensure the occupational health & safety of all contract and casualworkers

ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give

the details of the same. Details regarding last month analyzed data of above mentioned parameters as per age, sex, duration of exposure and department wise.

iii. Details of existing Occupational & Safety Hazards. What are the exposure levels of hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,

iv. Annual report of heath status of workers with special reference to Occupational Health and Safety.

9) Corporate Environment Policy

i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.

ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.

iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.

iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report

10) Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.

11) Enterprise Social Commitment (ESC)

i. Adequate funds (at least 2.5 % of the project cost) shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be included. Socio-economic development activities need to be elaborated upon.

12) Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.

13) A tabular chart with index for points wise compliance of above TOR.

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Environmental Scientist, SEAC