

**Ministry of Environment, Forest and Climate Change**  
**Impact Assessment Division**  
**(Industry-1 Sector)**

**Summary record of the eighteenth (18<sup>th</sup>) meeting of Re-Constituted Expert Appraisal Committee (REAC) held during 29-30<sup>th</sup> April, 2020 for environment appraisal of Industry-1 sector projects constituted under the provisions of Environment Impact Assessment (EIA) notification, 2006.**

The eighteenth meeting of the Expert Appraisal Committee (EAC) for Industry-1 Sector constituted as per the provisions of the EIA Notification, 2006 for Environment Appraisal of Industry-1 Sector Projects was held during 29-30<sup>th</sup> April, 2020 in the Ministry of Environment, Forest and Climate Change (MoEF&CC) through **video conferencing** in view of the Corona Virus Disease (Covid-19). The list of participants is furnished as below.

<b>S.No.</b>	<b>Name</b>	<b>Position</b>
1.	Dr. Chhavi Nath Pandey	Chairman
2.	Dr. Bipin Prakash Thapliyal, Director, Central Pulp and Paper Research Institute (CPPRI)	Member
3.	Dr. Siddharth Singh, Scientist 'E' Indian Meteorological Department (IMD)	Member
5.	Dr. Jagdish Kishwan	Member
6.	Dr. G.V. Subramanyam	Member
7.	Shri. Ashok Upadhyaya	Member
8.	Shri. Rajendra Prasad Sharma	Member
9.	Dr. Sanjay Deshmukh	Member
10.	Prof. S.K. Singh	Member
11.	Dr. R. Gopichandran	Member
12.	Shri Jagannadha Rao Avasarala	Member
13.	Shri. J.S.Kamyotra	Member
14.	Shri. A.K. Agrawal	Member-Secretary

After welcoming the Committee Members, discussion on each of the agenda items was taken up. The minutes of 17<sup>th</sup> meeting held during 9<sup>th</sup> April, 2020 were confirmed by the EAC as already uploaded on PARIVESH.

**29<sup>th</sup> April, 2020**

- 18.1 Greenfield integrated Clinker / cement manufacturing unit and captive power plant including waste heat recovery plant and Power generation thorough WHRB and a township of **M/s Jaykaycem (central) Limited** located at Village Devra, Hardua, Puraina, Sotipura & Madaiyan, tehsil- Amanganj (old Pawai), Dist. Panna, **Madhya Pradesh** [Online proposal No. IA/MP/IND/127881/2016; MoEF&CC File No. J-11011/224/2016-IA.II(I)] - **Environment Clearance** – regarding.
- 18.1.1 M/s Jaykaycem (central) Ltd made online application vide proposal no. IA/MP/IND/127881/2016 on 31.03.2020 in the prescribed Form 2, EIA Report and other documents for seeking Environmental Clearance (EC) for the project mentioned in the subject. The proposed project activity is listed at Sl. No. 3(b) Cement Plants in the schedule under Category “A” in the EIA Notification, 2006 and the proposal is appraised at Central Level.

- 18.1.2 The project proposal of greenfield integrated cement plant for production of Clinker (5.28 MTPA) and Cement (6.0 MTPA) along with Captive Power Plant (80 MW) and Waste Heat Recovery System (30 MW) of M/s Jaykaycem (Central) Limited is located at villages Harduaken, Puraina, Sotipura & Madayyan, Tehsil Amanganj, District Panna (M.P.) was initially received in the Ministry on 10<sup>th</sup> September 2016 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006.
- 18.1.3 The project was appraised by the Expert Appraisal Committee (Industry-I) during its 11<sup>th</sup> meeting held on 26 to 27<sup>th</sup> September 2016 and prescribed ToRs to the project for undertaking detailed EIA study. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToR to the project on 18<sup>th</sup> April 2017 vide letter No. J-11011/224/2016-IA.II (I) .
- 18.1.4 Based on the ToR prescribed to the project, the project proponent made an application for EC through online application vide proposal no. IA/MP/IND/127881/2016 dated 31.03.2020.

**Details submitted by the project proponent**

- 18.1.5 The proposed project of integrated cement plant by M/s Jaykaycem (Central) Limited will be implemented in two equal phases. The proposed configuration and capacity of integrated cement plant are as given below:

Name of Unit	No of Unit	Capacity of each Unit	Production Capacity
Clinker Production Unit	02	2.64 MTPA	5.28 MTPA
Cement Production Unit	02	3.00 MTPA	6.00 MTPA
Captive Thermal Power Generation Unit	02	40 MW	80 MW
WHRS	02	15 MW	30 MW
DG Set	01	500 kVA	500 kVA

- 18.1.6 The total land required for the project is 199.84 ha. out of which 191.90 ha. is Private Land, and 7.94 ha. is Government Land. No forestland is involved.
- 18.1.7 Total area of ~155 ha. land has been acquired till date for the project. Ken River passes 900 mtrs. away from the project area. It has been reported that water bodies viz Ken River, Sonar River, Devra Nala, Jonaro Nadi, Karhawani Nala exist around the project. Modification/ diversion in the existing natural drainage pattern around the project at any stage has not been proposed.
- 18.1.8 The topography of the area is flat and reported to lies between latitude 24°19'2.99"N - 24°20'2.02"N and Longitude 79°57'30.02"E - 79°58'42.25"E in Survey of India topo sheet No. 54 P/15 & 63D at an elevation of 308-318m AMSL. The ground water table reported to ranges between 12 meters below the land surface during the post-monsoon season and 24 below the land surface during the pre-monsoon season. Based on the hydro-geological study the stage of groundwater development is reported to be 27 % and thereby these are designated as safe areas.
- 18.1.9 No National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Tiger Reserve etc. are reported to be located in the study area of the project. Schedule-I species of fauna in

Amanganj Range are found in the study area, viz., Black Buck, Indian Gazelle, Sloth Bear, Panther or Leopard, Jungle Cat & Indian Pangolin for which Wildlife Conservation Plan was prepared and was also approved by Chief Wildlife Warden of the Govt. of MP. (Annexure C of EIA report)

- 18.1.10 Proposed plant will be sustained on Kakra-Panna limestone mining lease admeasuring 1,594.34 ha. (Production Capacity 4.08 MTPA). The northern boundary of proposed site of the plant adjoins the southern boundary of granted Limestone mining lease. The required fuel Coal/ Pet Coke (0.7/0.3 MTPA) will be procured from Linkage/e-auction/ purchase. It is dry process which involve crushing of limestone, pre-blending, drying-cum-grinding of raw materials, homogenization, clinkerisation in a rotary kiln with pre-heater and pre-calciner, clinker grinding, cement storage and packing.
- 18.1.11 Targeted production capacity of cement is 6.0 MTPA in two phases. The limestone for the cement plant would be procured from the Kakra - Panna limestone mining lease and ore transportation will be done through OLBS system
- 18.1.12 Water requirement of the project is estimated as 5826 KLD for both phases. The water requirement for phase-I is 2875 KLD out of which domestic water requirement of 195 KLD will be met through ground water abstraction, whereas the industrial water requirement of 2680 KLD will be met from Mine Water Storage Tanks (MWST). The permission for drawl of groundwater water is obtained from CGWA vide Letter. No. CGWA/NOC/IND/ORIG/2020/7350 issued by CGWA, New Delhi.
- 18.1.13 The power requirement of the project is estimated as 86 MW, out of which will be obtained from the captive power plant (CPP) of 80 MW and Waste Heat Recovery System (WHRS) of 30 MW.
- 18.1.14 Baseline environmental studies were conducted during summer season i.e. from March 2017 to May 2017. Ambient air quality monitoring has been carried out at sixteen locations and the data submitted indicated as: PM<sub>10</sub> (98<sup>th</sup> percentile) concentrations are reported in the range of 44.3 to 60.0 µg/m<sup>3</sup>; that of PM<sub>2.5</sub> (98<sup>th</sup> percentile) in the range of 20.4 to 35.7 µg/m<sup>3</sup>; that of SO<sub>2</sub> (98<sup>th</sup> percentile) in the range of 10.0 to 19.9 µg/m<sup>3</sup> and that of NO<sub>x</sub> (98<sup>th</sup> percentile) in the range of 15.1 to 32.1 µg/m<sup>3</sup>. Results of the prediction modeling study indicates that the maximum incremental concentrations of GLC for the proposed project is 19.74 µg/m<sup>3</sup> with respect to the PM<sub>10</sub>, 1.97 µg/m<sup>3</sup> with respect to the PM<sub>2.5</sub>, 14 µg/m<sup>3</sup> with respect to the SO<sub>2</sub> and 34.7 µg/m<sup>3</sup> with respect to the NO<sub>x</sub>.
- 18.1.15 Ground water quality has been monitored in sixteen locations in the study area and analysed as pH: 6.9 to 7.7 pH, Total Hardness: 72.0 to 688 mg/l, Chlorides: 6.0 to 91.3 mg/l, Fluoride 0.3 to 0.7 mg/l, Heavy metals are within the limits. Surface water samples were analyzed from eleven locations for pH: 7.0 to 8.1 pH; DO: 5.4 to 6.8 mg/l and BOD: 2.0 to 10 mg/l. COD: 4 to 30 mg/l.
- 18.1.16 Noise levels are in the range of 41.8 to 49.4 dBA in daytime and 39.4 to 42.8 dBA in nighttime.
- 18.1.17 No habitations are in the project area. Thus, R&R is not applicable for the project. However, project proponent made provision for compensation and other benefits for 898 project affected families in terms of land losers {(764 (mines) + 134 (Plant))} in line with LARR 2013 which cost around Rs. 470.92 Cr.
- 18.1.18 It has been reported that a total of 240 TPD of fly ash in each phase will be generated which will be recycled within the process. Other solid waste will be stored in scrap

yard and will be disposed of to a scrap vendor. The Hazardous waste shall be disposed of at TSDF or to authorized recyclers. It has been proposed that an area of 66 ha. will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

- 18.1.19 Consent to Establish/Consent to Operate shall be obtained from State Pollution Control Board / Pollution Control Committee after obtaining EC for the project.
- 18.1.20 Public hearing of the project was held on 17.07.2019 at village Devra, Tehsil Amanganj, Dist. Panna (MP) under the Chairmanship of Shri JP Dhurve (ADM-Panna) for production of 5.28 MTPA Clinker and 6 MTPA Cement along with 80 MW Captive Power Plant and 30 MW Waste Heat Recovery System. The issues raised during public hearing are employment, drinking water facility, land compensation and land rate issues, development aspects of the area, development of green belt, pollution control, displacement of people and compensation package, hospital and medical assistance and health related issues. An amount of Rs 30.80 Cr has been earmarked for Corporate Environment Responsibility (CER) based on public hearing issues.
- 18.1.21 The capital cost of the project is Rs. 5586.95 Cr (for Phase-I Rs. 2774.34 Cr & Phase-II Rs. 2812.61 Cr) and the capital cost for environmental protection measures for Cement, TPP & WHRB is proposed as Rs. 199.56 Cr for both phases. The annual recurring cost towards the environmental protection measures is proposed as Rs. 11.92 Cr for both phases. Detailed CER plan has been provided in the EMP in its page No. 10.58. Direct employment generation from the proposed project is envisaged as 820 during operation stage.
- 18.1.22 Greenbelt will be developed in 66 ha. which is about 33% of the total acquired area. A 10 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt as per CPCB/ MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 1500 trees per ha. Total Nos. of 99,000 saplings will be planted and developed in 66 ha in 4 years.
- 18.1.23 Litigation is pending towards the proposed project and land at Lok Adalat, Panna (MP) in notice dated 09.08.2019, through Public Court, Panna (MP) from local person, challenging the Public hearing dated 17.07.2019, conducted by RO – MPPCB, Sagar and ADM, Panna. Notice served to MPPCB, DM-Panna & PP. Copies of replies by MPPCB, DM & PP available for ready reference.

#### **Observations of the Committee**

- 18.1.24 The committee made the following observations during discussions.
- i. A trial case is pending in Lok Adalat of Panna regarding compensation paid to landowners that is hindering further land acquisition.
  - ii. Required land for the project is 199.84 ha. Project proponent has been procured 155 ha (77.5%) so far.
  - iii. Water is proposed to be abstracted from groundwater, while Ken river is flowing only 900 m away from project site.
  - iv. Total project cost is Rs 6160 Cr. CER expenditure is not in accordance with the Ministry's OM dated 1<sup>st</sup> May 2018, i.e., Rs. 38.8 Cr. The activities suggested are not based on the SIA recommendations (Page 130/131 of SIA Report) and public hearing proceedings. Activities envisaged under the CER are mostly related to CSR/

Philanthropy. Project proponent should have included the activities related to COVID-19 also on priority.

- v. Specific energy consumption in the proposed plant (725 Kcal/kg of Clinker; OPC - 95 kwh/t and PPC- 70 kwh/t ) is very high compared to other cement plants in India (670 kcal/kg; OPC- 85 kwh/t and PPC- 65 kwh/t).
- vi. Only 99000 Nos of trees have been considered for plantation in 66 ha land.
- vii. Project proponent did not furnish the information related to SO<sub>x</sub> and NO<sub>x</sub> generation and their control in the process description.
- viii. There is no commitment to use alternate fuels in the proposed Plant.

#### **Recommendations of the committee**

18.1.25 In view of the foregoing, and after detailed deliberations, the Committee sought the following additional information for further consideration of the proposal.

- i. Current status of the pending case at Lok Adalat, Panna shall be furnished.
- ii. Project proponent should submit documents in support of 100% land acquisition, i.e, for 199.84 ha, in accordance with this Ministry's Office Memorandum vide F.No. 22-76/2014 –IAIII dated 07.10.2014.
- iii. Project proponent should submit action plan to draw water from Ken River which is 900 m away from project site.
- iv. CER shall be revised in accordance with the observations and its implementation mechanism also be furnished.
- v. Project proponent shall furnish action plan for optimization of specific energy consumption for production of both clinker and cement. Process plant design parameters shall be revisited, and energy balance shall be furnished.
- vi. Recharge water calculations indicate that the amount of rainwater harvested is less than 100 % of the annual consumption. The recharge shall be minimum 100 % of the annual consumption.
- vii. Use of Alternate Fuel and Raw Materials (AFR) and corresponding project design and provisions shall be included in the EIA report.
- viii. AAQ modelling for accidental releases shall also be carried out. Based on the results, emergency response shall be furnished.
- ix. Details of process to control SO<sub>2</sub> and NO<sub>x</sub> and corresponding APCD to meet latest emission standards for cement and power plants shall be furnished. .
- x. CEMS shall be included in the Environment Management Plan (EMP) to integrate with main plant control center for process as well as emission control as per CPCB Norms.
- xi. Scheme for railway siding and the status of the same shall be furnished.
- xii. For greenbelt development, 2500 trees per ha shall be taken into consideration in accordance with CPCB guidelines.

18.2 Expansion of Integrated Cement Plant - Clinker (3.2 to 5.5 MTPA), Cement (3.0 to 5.0 MTPA), CPP (30 to 45 MW) & WHRB (15 to 27 MW) along with Proposed Standby Boiler (100 TPH) & D.G. Set (2180 KW) by M/s. **Emami Cement Limited** located at Villages: Risda & Dhandhani, Tehsil: Balodabazar, **District: Balodabazar** –

**Bhatapara, Chhattisgarh** [Online proposal No. IA/CG/IND/89610/2018; MoEF&CC File No. J-11011/309/2013-IA.II(I)] - **Environment Clearance – regarding.**

18.2.1 M/s. Emami Cement Limited has made online application vide proposal no. IA/CG/IND/89610/2018 dated 21/02/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) Cement Plants under Category “A” EIA Notification, 2006 and the project is appraised at the Central level.

**Details submitted by the project proponent**

18.2.2 The expansion of Integrated Cement Plant- Clinker (3.2 to 5.5 MTPA), Cement (3.0 to 5.0 MTPA), CPP (30 to 45 MW) & WHRB (15 to 27 MW) along with proposed Standby Boiler (100 TPH) & D.G. Set (2180 KW) at Villages: Risda & Dhandhani, Tehsil: Balodabazar, District: Balodabazar – Bhatapara, Chhattisgarh by M/s. Emami Cement Limited was initially received in the Ministry on 2/05/2019 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry -1) during its 07<sup>th</sup> meeting held on dated 30/05/2019 and prescribed ToRs to the project on 28/06/2019 vide letter no. J-11011/309/2013-IA II (I) for undertaking detailed EIA study for obtaining Environment Clearance.

18.2.3 The details of the existing Environment Clearances obtained by the unit from MoEF&CC are furnished as below:

- i. J-11011/372/2007-IA.II(I) dated 31/10/2011 and subsequent amendment dated 30/12/2013 and 1/02/2016.
- ii. J-11011/309/2013-IA.II(I) dated 8/9/2016 and subsequent amendment dated 6/11/2017.
- iii. J-11011/309/2013-IA (II) dated 07/02/2019.

18.2.4 The existing and proposed capacity for different units and products are as given below:

S. No.	Particulars	Unit	Capacity (Line - I) as per the existing ECs	Additional Capacity		Total Capacity after expansion
				Through Optimization & Modification in Existing Line - I	New Line - II	
1.	Clinker	MTPA	3.2	0.3	2.0	5.5
2.	Cement	MTPA	3.0	Nil	2.0	5.0
3.	CPP	MW	30	Nil	15	45
4.	WHRB	MW	15	Nil	12	27
5.	Standby Boiler	TPH	Nil	Nil	100	100
6.	D.G. Set	KW	Nil	Nil	2180 {=1000 +480+ 350+350}	2180

- 18.2.5 The certified compliance report for all existing ECs was issued by the Regional Office (RO) Nagpur vide letter no. 5-62/2011/(ENV)/5772 dated 30/09/2019 wherein partial compliance was reported with respect to the house keeping. Subsequently, PP has submitted Action Taken Report (ATR) to the Regional Office on 03/12/2019 which was forwarded by the RO on 26/12/2019. As per the ATR, the entire kiln area is reportedly concreted and dedicated sweeping machine have been deployed for maintaining better housekeeping at the site. Further, it was noted that as per Annexure - H of the RO certified compliance report pertaining to the annual production, the unit has manufactured 2.7 MTPA cement during 2018-19 against the permitted capacity of 2.5 MTPA. The month wise production of cement during 2018-19 is reproduced as below:

S.No.	Month	Cement production (TPA)	Remarks
i.	April, 2018	222240	Unit has manufactured 2.76 MTPA cement during 2018-19 against the permitted capacity of 2.5 MTPA.  The CTO for the enhancement in cement production i.e., from 2.5 to 3.0 MTPA was accorded by CECB only on 28/03/2019.
ii.	May, 2018	247183	
iii.	June, 2018	259108	
iv.	July, 2018	258543	
v.	August, 2018	132652	
vi.	September, 2018	250085	
vii.	October, 2018	278729	
viii.	November, 2018	215474	
ix.	December, 2018	253395	
x.	January, 2019	207490	
xi.	February, 2019	173396	
xii.	March, 2019	267836	
Total		2765931	

The Committee noted that the unit has exceeded the cement manufacturing beyond the sanctioned capacity during 2018-19.

- 18.2.6 The total land already under the possession of M/s. Emami Cement Limited is 188.35 ha (137.532 ha + 50.818 ha Colony). The proposed expansion will be carried out within the existing plant premises by process optimization & modification in existing Line - I and installation of new Line - II. No forest land is involved. No River passes through the project area. It has been reported that Kukurdih - Dharsharma Canal is passing through the plant site and diversion in the canal is proposed to the parallel of the plant boundary. Application for diversion of the same has been submitted to Irrigation dept. on 26<sup>th</sup> March, 2015. However, permission from irrigation department has not been obtained till date.
- 18.2.7 The reserved forest/protected forest exist in the study area are Dhabadih Reserve Forest (Adjacent in SW direction), Latwa RF (6.0 km in NNE direction), Sonbarsa RF (7.5 km in NNE direction) and Mohtara RF (9.0 km in NE direction). The water bodies exist in the study area are Kukurdih - Dharsharma Canal (passing through the plant site), Kukurdih Talav (0.5 km in NNW direction), Mahanadi Canal (3.5 km in NW direction), Khosri Nala (3.5 km in SE direction), Kauwa Nala (5.0 km in SE direction), Tengna Nala (5.0 km in SSE direction) and Banjari Nala (8.0 Km in WNW direction).
- 18.2.8 The topography of the area is almost flat and reported to lies between 21<sup>0</sup> 37' 37.03" N to 21<sup>0</sup> 38' 19.59" N Latitude and 82<sup>0</sup> 06' 9.94" E to 82<sup>0</sup> 07' 22.89" E Longitude. The

ground water table reported to ranges between 4m bgl to 9 m bgl below the land surface during the post-monsoon season and 6 m bgl to 17m bgl below the land surface during the pre-monsoon season.

- 18.2.9 No National Park / Wildlife Sanctuary / Biosphere Reserve / Tiger reserve / Elephant reserve etc. are located in the core and buffer zone of the project. The authenticated list of flora and fauna provided through the Primary survey and Secondary data reporting the presence of Two Schedule-I species i.e. Indian Python and Indian Monitor Lizard within 10 km radius of the study area. Wildlife Conservation Plan for three Schedule - I species has been prepared and duly authenticated by Principal Chief Wildlife Warden. The budget allocation for conservation of Schedule- I species is 69.50 Lakhs.
- 18.2.10 The total raw materials required for the existing and proposed expansion of Integrated Cement Plant are Limestone – 8.57 MTPA; Gypsum (Chemical / Phospho / treated / Mineral) – 0.25 MTPA; Iron ore (Ore / fines / red mud / tailent / laterite) – 0.1 MTPA; Bauxite – 0.10 MTPA, Slag – 2.5 MTPA, Fly ash, Bed ash – 1.65 MTPA & Sand – 0.12 MTPA. Limestone will be sourced from the Captive Mines and transported through covered conveyer belt; Gypsum will be procured through Indigenous/ Imported from Paradip port by rail / road; Fly ash will be sourced from own CPP and nearby area (GMR/KSK/DB) by road; Slag will be sourced from nearby area (BSP/Tata) by rail / road; Iron ore will be sourced from CMDC & nearby areas by rail / road; Bauxite will be sourced from Balco & nearby area by rail / road; Sand will be sourced from nearby area (Mahanadi/Shivnath) by road and Bed ash will be sourced from Own CPP & nearby area by Road/rail.
- 18.2.11 Water requirement for the project is estimated as 7041 KLD (including Plant/, captive mines and Colony); out of which 4041 KLD will be sourced from Ground Water and remaining 3000 KLD will be sourced from recycled water and Mine Pit Water. Permission for withdrawal of 4041 KLD Ground Water has been obtained from CGWA *vide* letter no. CGWA/NOC/MIN/ORIG/2018/3350 dated 20<sup>th</sup> March, 2018 and corrigendum dated 26<sup>th</sup> April, 2018. Renewal of water withdrawal permission from CGWA is yet to be obtained.
- 18.2.12 Total power requirement after expansion is estimated as 73.2 MW; which will be sourced from CPP, WHRB & CSEB grid and D.G Set (for emergency).
- 18.2.13 Baseline Environmental Studies were conducted during Summer Season i.e. from March, to May, 2019. Ambient air quality monitoring (Composite for Cement Plant and Captive Mine) was carried out at 12 locations during 01<sup>st</sup> March, 2019 to 31<sup>st</sup> May, 2019 and the data submitted indicated: PM<sub>10</sub> (52.3 to 89.7 µg/m<sup>3</sup>), PM<sub>2.5</sub> (23.7 to 45.2 µg/m<sup>3</sup>), SO<sub>2</sub> (6.2 to 18.5 µg/m<sup>3</sup>) and NO<sub>2</sub> (10.5 to 30.5 µg/m<sup>3</sup>). The results of the modeling study indicates that the maximum increase of GLC for the proposed expansion project is 4.60 µg/m<sup>3</sup> with respect to the PM<sub>10</sub>, 3.43 µg/m<sup>3</sup> with respect to the SO<sub>2</sub>, 6.24 µg/m<sup>3</sup> with respect to the NO<sub>x</sub>.
- 18.2.14 Ground water quality has been monitored at 9 locations in the study area and analyzed pH: 7.12 to 7.82, Total Hardness: 199.28 to 424.0 mg/l, Chlorides: 42.43 to 150.23 mg/l, Fluoride: 0.37 to 0.69 mg/l. Heavy metals are within the limits. Surface water quality has been monitored at 8 locations in the study area and analyzed pH: 7.23 to 7.86, DO: 4.3 to 7.2 mg/l, BOD: 2.6 to 8.2 mg/l, COD: 10.52 to 32.60 mg/l.
- 18.2.15 Noise levels are in the range of 48.5 to 64.5 Leq dB (A) for day time and 43.2 to 57.4 Leq dB(A) for night time.



- 18.2.16 It has been reported that there is no population / habitation in the core zone of the project. No R&R is involved. It has been envisaged that none of families to be rehabilitated, which will be provided compensation and preference in the employment.
- 18.2.17 No solid waste will be generated in the cement manufacturing process. Dust collected from various air pollution control equipment will be totally circulated into the process. STP Sludge will be utilized as manure for greenbelt development within the plant premises. Fly ash generated from captive power plant will be utilized in cement manufacturing process. No hazardous waste will be generated except the used oil which will be sold to the authorized CPCB recyclers. It has been envisaged that an area of 62.16 ha will be developed as greenbelt within the project site to attenuate the noise levels and trap the dust generated due to the project development activities.
- 18.2.18 It has been reported that the Consent to operate for the Existing capacities from the Chhattisgarh Environment Conservation Board obtained *vide* CECB letter no. 9962/TS/CECB/2020, dated 07<sup>th</sup> Feb., 2020 under Air Act & Water Act which is valid up to 31<sup>st</sup> Jan., 2021.
- 18.2.19 Public hearing of the project was held on 18<sup>th</sup> Oct., 2019 at 11:00 am at Open Govt. Land, in front of Govt. Secondary School, Dhandhani (Gram Panchayat Dhandhani), Tehsil: Balodabazar, District: Balodabazar - Bhatapara (Chhattisgarh) under the chairmanship of Shri Jogendra Nayak, (Upper Collector) and Shri S.K. Upadhyay (RO, CECB). The issues raised during public hearing are employment, Environment & Pollution, Education CSR activities related and other Issues. An amount of Rs. 7.7 Crores has been earmarked for Corporate Environmental Responsibility based on public hearing issues.
- 18.2.20 The capital cost of the project is INR 1500 Crores and the capital cost for environmental protection measures is proposed as INR 150 Crores. The annual recurring cost towards the environmental protection measures is proposed as INR 15 Crores/annum. The employment generation from the proposed expansion project is 1460 persons.
- 18.2.21 Greenbelt has been developed in 62.16 ha; which is about 45% of the total plant area. Greenbelt has already been developed along the plant boundary as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species has been planted with a density of 1500 trees per hectare. Total no. of 95243 saplings has been planted.
- 18.2.22 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.
- 18.2.23 Name of the EIA consultant: J. M. Environet Pvt. Ltd. [ S.No. 97. List of Accredited Consultant Organizations (Alphabetically) Rev. 86, April 07, 2020].

**Observations of the Committee:**

- 18.2.24 The Committee noted several inadequacies in the expansion proposal such as unit has exceeded the cement manufacturing beyond the sanctioned capacity during 2018-19, permission not obtained for diversion of Kukurdih Canal passing through the site, inadequate tree density in green belt development, permission from CGWA for ground water withdrawal, absence of traffic analysis studies in the EIA report, and CER action plan in accordance with the Ministry's O.M .dated 1/05/2018 has not been furnished.

### **Recommendation of the Committee**

18.2.25 In view of the foregoing and after detailed deliberations, the Committee deferred the consideration of the proposal cited above and sought following additional information for further consideration of the proposal:

- i. PP shall explain the reasons for achieving higher cement production during FY 2018- 2019 i.e., 2.76 MTPA beyond sanctioned capacity of 2.5 MTPA as per the EC accorded.
- ii. In 62.16 ha land of green belt development, PP has planted only 95243 Nos of Trees. Time bound action plan for planting trees @ 2500 Nos per ha shall be furnished.
- iii. Kukurdih Canal is passing through plant site. PP has proposed for GW abstraction. PP shall submit detailed plan to draw water from this canal. Also, the diversion plan for the canal shall be furnished including land acquisition involved in it and permission to divert the same from the Competent Authority in the State Government shall be furnished.
- iv. Renewal permission obtained from CGWA for withdrawal of 4041 KLD ground water and CGWA permission for usage of mine pit water resulting from intersection of ground water table due to the mining activity shall be furnished.
- v. Reasons for increase in PM emission from stacks of 2 MTPA kiln is more than that of 3.2 MTPA Kiln. (PM -16.30 Kg/hour Vs 18.7 Kg/Hour) shall be furnished.
- vi. Rain Water Harvesting (RWH) calculations indicate harvesting equivalent to 210 days of consumption. It should be for minimum 365 days. Please furnish revised plan for rain water harvesting including monitoring mechanism for GW recharge.
- vii. CER activities indicated are mostly CSR activities. CER activities have not been drawn from SIA and Public Consultation. PP shall submit revised CER action plan in accordance with the Ministry's O.M. dated 1/05/2018 with a time frame of three years.
- viii. Time frame for establishment of railway siding shall be furnished.
- ix. Energy consumption data for Thermal energy, Sp. energy consumption for OPC and PPC shall be furnished.
- x. TOR Compliance for ToR#9 i.e., Corporate Environment Policy shall be furnished point wise.
- xi. Commitment on use of Alternate Fuel shall be furnished
- xii. Waste Heat Recovery in Line number one is low. It could be up to 18-20 MW. Detailed calculations in this regard shall be furnished.
- xiii. AAQ modelling for accidental releases shall be carried out and submitted.
- xiv. PP shall furnish the details of process proposed for SO<sub>2</sub> and NO<sub>x</sub> control to meet latest emission standards for cement and power plants.
- xv. CEMS shall be integrated with Main Plant Control Center for process as well as emission control as per CPCB Norms.
- xvi. Existing traffic load and traffic management studies for peak production scenario shall be furnished.

- xvii. Status of Environment Clearance obtained for the lime stone mines shall be furnished.
  - xviii. Measures taken to improve the house keeping in the premises along with the supporting photographs shall be submitted.
- 18.3 Modernization of SAIL Rourkela Steel Plant by adding new 125 TPD Sulphuric Acid Plant in place of old 60 TPD plant by **M/s. Steel Authority of India Limited** within the premises of Rourkela Steel Plant located at village Rourkela, **District Sundargarh, Odisha** [Online Proposal No. IA/OR/IND/63491/2017; File No. 23-104/2018-IA.III(V)] – **Environmental Clearance** – regarding.
- 18.3.1 The aforesaid proposal was considered in the 16<sup>th</sup> EAC meeting held during 24-25<sup>th</sup> February, 2020 and the relevant portion of the minutes of the meeting is reproduced as below:

**Proceedings of the 16<sup>th</sup> EAC meeting held on 24-25<sup>th</sup> February, 2020**

The proposal cited above was considered during the 7<sup>th</sup> meeting of **Expert Appraisal Committee [EAC] (Violation Sector) held on 17-18<sup>th</sup> May, 2018**. After detailed deliberations, EAC recommended the project for grant of Environmental Clearance subject to the following specific conditions in addition to all generic conditions applicable for such projects:

- i. The PP shall submit a bank guarantee equivalent to the amount of rupees 50 lakhs towards remediation plan and natural and community resource augmentation plan with State Pollution Control Board and submit the proof for the same to the Ministry.
- ii. The PP shall submit the proof of credible action taken by the concerned state government/ state pollution control board under the provisions of the section 19 of the Environment Protection Act 1986 to the MoEF&CC.
- iii. The PP shall submit the certified compliance report of the existing EC conditions from the Ministry's regional office to the MoEF&CC.

Proposal was processed on file based on EAC recommendations and Ministry vide letter dated 30/07/2018 sought documents from M/s. SAIL on aforesaid point no. ii and iii. SAIL submitted its response on 8/11/2018 which was examined in the Ministry and thereafter Ministry vide letter dated 11/12/2018 again sought for the proof for credible action taken by the concerned State Government/SPCB under the provisions of section 19 of the Environment (Protection) Act, 1986.

M/s. SAIL vide e-mail dated 23/09/2019 submitted the credible action taken report of District Collector wherein the District Collector has filed a case in the District court of Rourkela [Case No. 2 (c) CC case no. 110/2019] against the SAIL Officials under section 19 of the Environment (Protection) Act, 1986 for establishment of 125 TPD Sulphuric Acid Plant at Rourkela Steel Plant, Rourkela, Orissa.

Based on the reply furnished by RSP and EAC recommendations, the file was processed for grant of Environment Clearance.

Meanwhile, in one of the proposal, Industry 2 sector vide letter dated 30/05/2018 issued a letter to M/s. Green Star Fertilizers stating that production of raw material/intermediate product is not covered under the ambit of the EIA Notification, 2006. Based on this, SAIL vide letter dated 11/11/2019 submitted a letter to the Ministry requesting for the following:

- a. Issue a clarification stating that 125 TPD sulfuric acid plant is not coming under the purview of EIA Notification, 2006.
- b. Waiver off Bank Guarantee of INR 50 Lakhs.
- c. Withdrawal of case filed against the SAIL Officials.

Subsequently, the matter was referred to the EAC – Violation sector for their views on the letter dated 11/11/2019 of M/s. SAIL. The proposal was considered by the EAC (Violation) in its 30<sup>th</sup> meeting held on 04/02/2020 wherein the EAC (Violation) opined that since the proposal under consideration was originally appraised by the Sectoral EAC (Industry-1) in its 10<sup>th</sup> and 18<sup>th</sup> meetings held on 28-31<sup>st</sup> August 2016 and 5<sup>th</sup> May 2017 respectively and recommended the TORs under the provisions of the Ministry's Notification S.O.804 (E) dated 14.3.2017, it would be appropriate to obtain the comments of EAC (Industry-I) on the representation of PP vide letter dated 11.11.2019 under reference.

#### **Recommendations of the 16<sup>th</sup> EAC meeting held on 24-25<sup>th</sup> February, 2020**

Accordingly, the proposal was placed before the EAC – Industry 1 for the comments wherein the Committee deferred the proposal and recommended to consider the same in the forthcoming EAC Meeting. The Committee requested the Ministry to inform the project proponent to circulate the EIA/EMP document and present the same during the next EAC meeting for consideration of the Committee.

#### **Proceedings of the 18<sup>th</sup> EAC meeting held on 29<sup>th</sup> April, 2020**

- 18.3.2 The project proponent circulated the EIA/EMP document to the EAC members Accordingly, the proposal is placed for consideration before the EAC. The project proponent along with their EIA consultant (M/s. Mecon Limited, Ranchi) made a presentation before the Committee.

#### **Observations of the Committee**

- 18.3.3 The Committee noted the following points from the records, presentation submitted by the project proponent and the minutes of the EAC meetings held from time to time.
- A. M/s. SAIL was operating a sulfuric acid plant of 60 TPD since August, 1990 within the premises of Rourkela Steel Plant (RSP) with prior consent from Odisha Pollution Control Board and also prior to the enactment of EIA Notification, 1994 and 2006. The sulfuric acid is used in the steel plant for the following purpose:
    - i. Ammonia from coke oven gas is removed in the Spray Saturators where sulphuric acid is sprayed over coke oven gas to produce ammonium sulphate which is sold as fertilizer under the brand name "RAJA KHAD". The bulk requirement of sulphuric acid is in the Ammonium Sulphate Plant for the removal of ammonia from coke oven gas.
    - ii. Pickling of Hot Rolled Coils for producing Cold Rolled Coils/sheets and also used for water treatment in the steel plant's captive Power Plant.
  - B. The details of Environment Clearances (ECs) obtained from MoEF&CC by M/s. SAIL from time to time
    - i. 1.9 MTPA crude steel plant vide letter no. J-11011/40/88-IA.II(I) dated 24/04/1992.

- ii. Expansion cum modernization of their Integrated Steel Plant from 1.9 MTPA to 4.2 MTPA vide letter no. J-11011/757/2007- IA.II (I) dated 29/01/2008.
  - iii. Modernization of steel Plant (4.2 MTPA) by addition of 3 MTPA Hot Strip Mill, 3.3MTPA Beneficiation and 2 MT Pellet Plant and Special Plate Plant (3,000 TPA to 15,000 TPA) vide letter no. J-11011/66/2014-IA. II(I) dated 15/12/2016. As part of further modernization MoEF&CC accorded EC for installation of 1 MTPA Caster#4 in SMS#2 vide letter no. J-11011/66/2014-IA.II(I) dated 06/11/2019.
- C. As per the aforementioned ECs accorded by MoEF&CC from time to time, neither the existence of sulfuric acid Plant of 60 TPD capacity nor the existence of fertilizer brand name “RAJA KHAD” was reflected in the product slate as a manufacturing unit.
- D. Over a period of time, to meet the increase in demand of Sulphuric Acid for the new facilities installed during the “1.9 MTPA to 4.2 MPTA Expansion phase” and degradation of existing Sulphuric Acid plant, it was proposed to install a new 125 TPD Sulphuric Acid plant with State-of-the-Art technology. Thereafter, M/s. SAIL obtained Consent to Establish (CTE) from the Odisha Pollution Control Board (OSPCB) on 7/05/2013 for the establishment of new 125 TPD Sulphuric Acid plant. Accordingly, the plant was established and subsequently M/s. SAIL approached OSPCB for obtaining Consent To Operate (CTO). However, OSPCB had asked SAIL - RSP to get clarification about applicability of EC for the Sulphuric Acid Plant from MoEF&CC.
- E. Meanwhile, M/s. SAIL-RSP has shut down the operations of 60 TPD Sulphuric acid plant during July, 2015 due to safety issues and the Sulphuric acid requirement is being met from local market.
- F. In this regard, M/s. SAIL – RSP has approached MoEF&CC and their proposal was considered in the 10<sup>th</sup> meeting of the EAC (Industry - 1) held during 29-31<sup>st</sup> August, 2016 wherein EAC sought data indicating there will not be any increase in the pollution load and the details of the clean technology to be adopted for reducing the overall pollution load from the steel plant for taking considered view in the matter. Project proponent submitted their response on 3/1/2017.
- G. Meanwhile, MoEF&CC issued a Gazette Notification regarding consideration of violation cases vide S.O. 804 (E) dated 14/03/2017.
- H. **M/s. SAIL – RSP on suo-motto basis submitted a fresh application to the Ministry through PARIVESH (No: IA/OR/IND/63491/2017) on 27/03/2017 for considering their instant proposal under violation category in accordance with the notification issued vide S.O. 804 (E) dated 14/03/2017.** The said application was placed before the EAC (Industry 1) sector in its 18<sup>th</sup> meeting held during 3-5<sup>th</sup> May, 2017. Since, the project proponent has not made available the records indicating overall reduction in pollution load of the steel plant and also requested the Ministry to consider their proposal under violation category, EAC (Industry-1) took a considered view that proposal involves violation and accordingly prescribed ToRs for undertaking EIA study.
- I. **Thereafter, M/s. SAIL-RSP made online application vide proposal no. IA/CG/IND/68723/2017 dated 31/08/2017 again under violation category along with the EIA/EMP report seeking EC under the provisions of the EIA**

**Notification, 2006 for the project mentioned above. M/s.SAIL-RSP also submitted the damage assessment report by admitting themselves that they have committed violation.**

- J. The proposal cited above was considered during the 7<sup>th</sup> meeting of Expert Appraisal Committee [EAC] (Violation Sector) held on 17-18<sup>th</sup> May, 2018. After detailed deliberations, EAC recommended the project for grant of EC subject to certain additional conditions inter-alia including credible action under section 19 of the Environment (Protection) Act, 1986 which was submitted by the project proponent on 23/09/2019. Based on the EAC recommendations and credible action taken report submitted by PP, the proposal was processed for grant of EC.
- K. Meanwhile, in one of the proposals, Industry 2 sector vide letter dated 30/05/2018 issued a letter to M/s. Green Star Fertilizers stating that production of raw material/intermediate product is not covered under the ambit of the EIA Notification, 2006. Based on this communication, M/s. SAIL-RSP vide letter dated 11/11/2019 addressed a letter to the Ministry requesting for the following:
- i. Issue a clarification stating that 125 TPD sulfuric acid plant is not coming under the purview of EIA Notification, 2006.
  - ii. Waiver off Bank Guarantee of INR 50 Lakhs.
  - iii. Withdrawal of case filed against the SAIL Officials.
- L. MoEF&CC has referred the matter to EAC – Violation for their views on the letter dated 11/11/2019 of M/s. SAIL -RSP as the grant of EC was originally recommended by them.
- M. The proposal was considered by the EAC – Violation in its 30<sup>th</sup> meeting held on 3-4<sup>th</sup> February, 2020 wherein EAC – Violation deferred the consideration of the proposal with the following observations and referred the matter back to EAC – Industry-1 for the comments.
- i. Project proponent has been asked to submit the proof of evidence that they have informed to Ministry about establishment of sulfuric acid plant (60TPD) at the time of grant of first EC to the proposed project by Ministry.
  - ii. Justification for establishing that there will not be any increase in the pollution load with technical details
- N. According to the proof of evidence and presentation submitted by the PP to EAC – Industry 1, the information regarding the existence of 60 TPD sulfuric acid plant and ammonium sulfate plant was given in the EIA report prepared during the expansion of steel plant from 1.9 MTPA to 4.2 MTPA which was submitted to the Ministry for grant of EC at that time. However, sulfuric acid unit was not incorporated in the product slate for which EC was accorded by the Ministry from time to time.
- O. According to the EIA/EMP report submitted by the PP for instant proposal, there will be a reduction in pollution load vis-à-vis with existing 60 TPD sulphuric acid plant.
- P. As per the provisions laid down in the EIA Notification 2006, the sulfuric acid plant is not covered under any of the schedule.

Q. The stand taken by the Industry 2 sector of MoEF&CC in similar cases are reproduced as below:

S.No.	Statements in letters from MoEF&CC with letter no. and date	
i.	J-11012/22/1996-IA.II(I) dated 5/11/2019 to Rajasthan State Pollution Control Board	<i>No separate Environment Clearance (or) amendment in EC is required for setting up of activities which do not attract the provisions of the EIA Notification, 2006, in the premises of project/activities which are operating with prior EC. However, such activities shall be required to obtain consent under Air and Water Act, if applicable.</i>
ii.	22-9/2019-IA.III dated 22/08/2019 to M/s PCPL, Pune	<i>Standalone ammonia plant/ project may not be considered to be covered under the extant provisions of the EIA Notification, 2006, read with subsequent amendments, and thus not requiring prior environment clearance for the present.</i>

R. As per the MoEF&CC gazette notification no. S.O.236 (E) dated 16/01/2020, “any change in raw material-mix or product-mix, change in quantities within products or number of products in the same category for which prior environmental clearance has been granted, shall be exempted from the requirement of prior environmental clearance provided there is no increase in pollution load and the resultant increase in production is not more than 50 percent of the production capacity permitted in the earlier environmental clearance and the project proponent shall follow the procedure for obtaining ‘No Increase in Pollution Load’ certificate from the concerned State Pollution Control Board or Union Territory Pollution Control Committee, as the case may be, as per the provisions given in Appendix –XIII of EIA Notification, 2006”.

### Recommendations of the Committee

18.3.4 In view of the foregoing observations, the Comments/ views of EAC - Industry 1 is as follows which may be forwarded to EAC – Violation sector for taking appropriate view on their recommendations:

- i. Sulphuric acid plant of 60 TPD and Ammonium sulphate plant was in existence since August, 1990 and operating with prior consent from Odisha State Pollution Control Board (OSPCB) and also prior to the enactment of EIA Notification, 1994 and 2006. The 60 TPD Sulphuric acid plant was shut down during July, 2015 due to the safety concerns and since then the requirement of Sulphuric acid is being met from local market.
- ii. The Project Proponent has now informed, and it was verified, that the existence of Sulphuric Acid plant of 60 TPD and Ammonium sulphate plant was mentioned in the EIA report submitted to the Ministry during 2008 for expansion of steel plant from 1.9 MTPA to 4.2 MTPA. However, the Project Proponent did not incorporate the existence of these units in the product slate for which EC was accorded by the Ministry from time to time.

- iii. PP has obtained Consent to Establish (CTE) from OSPCB on 7/05/2013 prior to the establishment of new 125 TPD sulfuric acid plant and till date the said unit has not commenced the production for want of CTO from OSPCB and clarification from MoEF&CC regarding applicability of EC.
- iv. M/s. SAIL-RSP on *suo-motto* basis submitted a fresh application to the Ministry through PARIVESH (No: IA/OR/IND/63491/2017) for considering their instant proposal under violation category in accordance with the notification issued vide S.O. 804 (E) dated 14/03/2017.
- v. Hence, EAC -Industry -1 was left only with an option of recommending the proposal for grant of ToR.
- vi. The Sulphuric Acid plant and the Ammonium sulphate plant are located within the premises of the integrated steel plant for which EC was accorded by the Ministry on 29/01/2008, 15/12/2016 and 6/11/2019.
- vii. According to the EIA/EMP report submitted by the PP for the instant proposal, there will be a reduction in pollution load vis-à-vis with existing 60 TPD sulphuric acid plant due to the proposed use of the state of the art technology.
- viii. *According to the stand of MoEF&CC (order 22-9/2019-IA.III dated 22/08/2019 to M/s PCPL, Pune) stated in point no. Q above, Standalone ammonia plant/project may not be considered to be covered under the extant provisions of the EIA Notification, 2006, read with subsequent amendments, and thus not requiring prior environment clearance for the present.*
- ix. The aforesaid order dated 22.8.2019 has a mention of standalone Units/ Plants. However, subsequent consideration of such a matter by MoEF&CC has resulted in its order dated 5.11.2019. According to the stand of MoEF&CC order dated 5.11.2019 stated in point no. Q above, *“The matter has further been deliberated in the Ministry and based on the same, the undersigned is directed to say that no separate EC is required for setting up an activity which does not attract the provisions of EIA Notification 2006 in the premises of project/activities which are operating with prior EC. However, such activities shall be required to obtain consent under Air and Water Act, if applicable.”* Hence, if a unit does not require EC on its own as per EIA notification, a separate EC for setting up such a unit does not appear to be necessary as per MoEF&CC order dated 5.11.2019. The Committee has already noted that the 60 TPD Sulphuric acid plant was shut down during July, 2015 and since then the requirement of Sulphuric acid is being met from local market. Now the PP has proposed to set up a new 125 TPD Sulfuric Acid plant for which CTE has been given by the OSPCB and the question of requirement of EC is under consideration. Since, on its own, this does not require EC as per EIA notification, MoEF&CC order dated 5.11. 2019 says that a separate EC for the instant proposal may not be required.
- x. In view of above and in view of the Gazette notification no. S.O.236 (E) dated 16/01/2020 pertaining to change of product mix with no increase in pollution load, the EAC – Violation Sector may like to revisit their recommendations made during 17-18<sup>th</sup> May, 2018 and appropriate view may be taken.



- 18.4 Proposed Expansion of the Steel Plant by installation of Pellet Plant with Grinding Facility (2x0.85 MTPA), Sponge Iron Plant (1x350 TPD Kiln), Induction Furnaces (3x25T), Capacity revision from 600 TPD to 1000 TPD of Rolling Mill along with 7 MW capacity Captive Power Plant (WHRB based, utilizing waste heat from the proposed sponge plant) and Producer Gas Plant (12x4000 Nm<sup>3</sup>/hr) by **M/s. Bravo Sponge Iron Pvt. Ltd.**, located at Village Mahuda, P.O. Rukni, P.S. Para, **District Purulia, West Bengal – Environment Clearance Regarding**. [Online Proposal No. IA/WB/IND/125425/2015; File No. J-11011/758/2009-IAII(I)] - **Reconsideration for Environment Clearance based on ADS reply – regarding.**
- 18.4.1 **M/s. Bravo Sponge Iron Pvt. Ltd** has made online application vide proposal no. IA/WB/IND/125425/2015 dated 7/12/2019 along with copy of EIA/EMP report and Form – 2 seeking Environmental Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the project is appraised at the Central level.
- 18.4.2 The aforesaid proposal was considered in the 14<sup>th</sup> meeting of the EAC (Industry -1) held on 23-24<sup>th</sup> December, 2019 and the proceedings are furnished as below.

**Proceedings of the EAC (Industry1) held on 23-24<sup>th</sup> December, 2019**

The proposed expansion of Steel Plant for ultimate production of 1.7 MTPA Pellets, 745 TPD Sponge Iron, 1350 TPD Billets, 1000 TPD Rolled products, 25 MW Captive Power Plant (15 MW WHRB + 10 MW AFBC) & 48,000 Nm<sup>3</sup>/hr producer gas is located at Village Mahuda, P.O. Rukni, P.S: Para, District: Purulia in West Bengal by M/s Bravo Sponge Iron Pvt. Limited. Application was made on the MoEF&CC portal on 16/11/2018 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The proposal was considered in the second meeting of the Re-constituted Expert Appraisal Committee (EAC), Industry-1 held during 10-12<sup>th</sup> December, 2018 to determine the Terms of Reference (TOR) for undertaking detailed EIA study for obtaining Environmental Clearance in accordance with the provisions of the EIA Notification 2006. Terms of Reference (ToR) was received vide letter No. J-11011/758/2009-IA. II(I) dated 18/12/2018. Public Hearing was conducted on 22/07/2019.

Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 7/12/2019 vide online proposal No. IA/WB/IND/125425/2015.

The project of M/s Bravo Sponge Iron Pvt. Ltd. is located in Village Mahuda, P.O. Rukni, P.S: Para, District: Purulia, West Bengal State is for expansion of Steel Plant for ultimate production of 1.7 MTPA Pellets, 745 TPD Sponge Iron, 1350 TPD Billets, 1000 TPD Rolled products, 25 MW Captive Power Plant (15 MW WHRB + 10 MW AFBC) & 48,000 Nm<sup>3</sup>/hr producer gas.

The existing and proposed capacity for different units and products is as below:

S.No	Unit	Units as per State Clearance	Units as per MoEF&C EC dated 18.04.17	Total	Units under operation	Balance units		Proposed expansion	Final configuration
						Under implementation	To be implemented		
1	Pellet Plant with Grinding Facility	-	-	-	-	-	-	2 X 0.85 MTPA	1.7 MTPA
2	Sponge Iron Plant	1X100 TPD (as per NOC dated 5.12.2002) + 1x95 TPD (as per State EC dated 24.03.2008)	2X100 TPD	1X100 TPD + 1x95 TPD + 2X100 TPD	1X100 TPD + 1x95 TPD + 2X100 TPD	-	-	1 X 350 TPD	745 TPD (1X100 TPD + 1x95 TPD + 2X100 TPD + 1X350 TPD)
3	SMS (Induction Furnace with CCM)	-	600 TPD (4 x 15 T)	600 TPD (4 x 15 T)	300 TPD (2 x 15 T)	150 TPD (1 x 15 T)	150 TPD (1 X 15T)	750 TPD (3 x 25T)	1350 TPD (4 x 15 T + 3 x 25T)
4	Rolling Mill	-	600 TPD	600 TPD	-	-	600 TPD*	Capacity revision from approved 600 TPD* to 1000 TPD	1000 TPD
5	Captive Power Plant	-	18 MW (8 MW WHRB + 10 MW AFBC)	18 MW (8 MW WHRB + 10 MW AFBC)	10 MW (4x10 TPH WHRB + 1X20 TPH AFBC*)	-	8 MW (1X20 TPH Proposed AFBC + *Balance 12 TPH Steam from existing AFBC)	7 MW WHRB	25 MW (15 MW WHRB + 10 MW AFBC)
6	Producer Gas Plant	-	-	-	-	-	-	12 x 4000 Nm <sup>3</sup> /hr	48,000 Nm <sup>3</sup> /hr

The Status of compliance of existing EC was obtained from Regional Office Bhubaneswar vide File No. 102-577/16/EPE/2389 dated 28/10/2019 wherein several non-compliances have been reported. Subsequently, PP has submitted Action Taken

Report to the Regional Office on 20/11/2019 which have been examined and the report was furnished on 5/12/2019. As per the report, following non-compliances have been reported.

- i. Project proponent is yet to install the Effluent Treatment Plant and zero liquid discharge is not maintained.
- ii. Concreting of internal roads within the plant site is yet to be completed.
- iii. Green belt development all along the plant boundary covering 33% of the plant area is not satisfactory.
- iv. Noise monitoring report is not being submitted along with the six-monthly compliance report.

The proposed project will be installed on the available land of total 78.37 acres (31.73 hectares) within the existing plant premises. Land is already in possession of the Company. The river Damodar passes at a distance of 9 km towards North, from the project site. Modification / diversion in the existing natural drainage pattern at any stage has not been proposed.

The topography of the area is flat and reported to lie between Latitude - 23°32'48.67"N to 23°33'9.42"N and Longitude - 86°32'32.55"E to 86°32'59.22"E and at an elevation of 190 m AMSL.

No national park / wildlife sanctuary / biosphere reserve/tiger reserve / elephant reserve, etc. is reported to be located in the core and buffer zones of the project. The area also does not report to form corridor for Schedule-I fauna.

The raw material requirement for the existing and the proposed expansion are furnished as below:

Raw Material	Existing Units + Units under Implementation	Proposed Plant	Total	Mode of Transport	Source
<b>Sponge Iron Plant:</b>					
Pellet	223680	198198	421879	Internal	
Coal	140778	124740	265518	Rail / Road	<b>Imported / West Bengal &amp; through e-auction</b>
Dolomite	76646	67914	144560	Rail / Road	
<b>SMS (IF route) :</b>					
Pig Iron	37915	47394	85309	Rail / Road	
Sponge Iron	173250	216563	389813	Internal Road	
Ferro Alloys	387	484	872	Road	
Scrap	25011	31263	56274	Internal Road	
<b>Rolling Mill :</b>					
Billets	207900	138600	346500	Internal	
<b>Power Plant-AFBC :</b>					
Coal	<b>44355</b>		<b>44355</b>	Rail	<b>West Bengal &amp; through e-auction</b>
Dolochar	<b>53104</b>		<b>53104</b>	Internal	
<b>Pellet Plant :</b>					
Iron Ore Fines	-	1793400	1793400	Rail	<b>Orissa/Jharkh and</b>
Bentonite	-	11956	11956	Rail / Road	<b>Kutch, Gujarat</b>

Raw Material	Existing Units + Units under Implementation	Proposed Plant	Total	Mode of Transport	Source
Limestone	-	17080	17080	Rail / Road	<b>Birmitrapur, Orissa</b>
Coal	-	68320	68320	Rail / Road	<b>West Bengal &amp; through e-auction.</b>
<b>Producer Gas Plant :</b>					
Coal	-	118800	118800	Rail / Road	<b>West Bengal &amp; through e-auction.</b>

The targeted production capacity of the Steel Plant after expansion is 1.7 MTPA Pellets, 745 TPD Sponge Iron, 1350 TPD Billets, 1000 TPD Rolled products, 25 MW Captive Power Plant (15 MW WHRB + 10 MW AFBC) & 48,000 Nm<sup>3</sup>/hr producer gas. The major raw materials, which will be handled, consist of Iron Ore, Coal, Dolomite, Limestone, Ferro Alloys, Scrap, etc. The raw materials will be purchased from mines located in Orissa, West Bengal, Jharkhand, Gujarat (depending upon availability). Coal will be imported. Raw materials will be received through railways / roadways.

The daily make up water requirement for the entire project is estimated as 2284 m<sup>3</sup>/day (Existing Units: 400 m<sup>3</sup>/day, Units under implementation / to be implemented: 277 m<sup>3</sup>/day, Proposed Units: 1607 m<sup>3</sup>/day). The raw water will be sourced from DVC supply and project proponent has already made an agreement with Damodar Valley Corporation on 11/04/2018.

The power requirement of the project is estimated as 67.5 MW (Existing: 12.5 MW + Unit under implementation / to be implemented: 11.3 MW + Proposed: 43.7 MW), which will be sourced from existing and proposed 25 MW capacity Captive Power Plant and the remaining power will be obtained from DVC.

Baseline Environmental Studies were conducted during post-monsoon season, i.e. from 1<sup>st</sup> Oct, 2018 to 31<sup>st</sup> Dec, 2018. Ambient air quality monitoring has been carried out at 8 locations and the data submitted indicated: PM<sub>10</sub> (50µg/m<sup>3</sup> to 95 µg/m<sup>3</sup>), PM<sub>2.5</sub> (18µg/m<sup>3</sup> to 45µg/m<sup>3</sup>), SO<sub>2</sub> (4µg/m<sup>3</sup> to 18 µg/m<sup>3</sup>) and NO<sub>x</sub> (10 µg/m<sup>3</sup> to 38 µg/m<sup>3</sup>). The results of the modeling study indicate that the maximum increase of GLC for the proposed & existing units is 5.808µg/m<sup>3</sup> (ESE direction), 5.808 µg/m<sup>3</sup> (ESE direction) and 6.061 µg/m<sup>3</sup> (ENE direction), with respect to the SO<sub>2</sub>, NO<sub>x</sub> and PM respectively.

Ground water quality has been monitored at 9 locations in the study area and analyzed. pH: 6.7 to 7.4, Total Hardness: 108 to 176 mg/l, Chloride: 68 to 140 mg/l, Sulphate: 22 to 52 mg/l, Nitrate: 3.6 to 12.5 mg/l. Heavy metals are within the limits.

Surface water samples were analysed from 10 locations – 1 Damodar river water sample, 1 canal water and 8 pond water samples. For flowing water body, pH: 6.8 and 6.9; DO: 6.8 mg/l and 7.1 mg/l and BOD: 3 and 5 mg/l. For 8 pond water samples, pH: 6.4 to 7.4; DO: 5.7 to 6.3 mg/l and BOD: 4 and 8 mg/l.

Noise levels are in the range of 55.7 - 69.9 dBA for day time and 45.2 – 55.1 dBA for night time.

The solid waste generation and its utilization details are furnished as below:

Sl. No.	Type	Quantity in Tons/Year	Utilization
1.	Dolochar from 1x350 TPD DRI Kiln	25,000	To be used in FBC Boiler.
2.	Slag & Dust from IFs	33,500	Slag to be used for Land filling / Road Construction purpose.
3.	End Cuts, Scale & Scrap from CCM	5,000	To be used as raw materials in IFs.
4.	End cuts and missed rolls from Rolling Mill	16,500	To be used as raw materials in IFs.
5.	Tar generated from Producer Gas Plant	3,564	To be disposed as per MoEF&CC Guideline.

The Public hearing for the project was held on 22/07/2019 at Para Community Hall, Para Block, District Purulia in West Bengal under the chairmanship of Shri. Mufti Samim Sawkat, Additional District Magistrate (Gen.), Purulia. The issues raised during the public consultation are skill development to the unemployed youth, safety measures for labors, CSR programme for women, pollution control measures and utilization of ground water which have been addressed in the EIA report.

The company proposes to invest Rs. 381 Lakhs on Corporate Environment Responsibility (CER). This fund shall be utilized over a period of 3 years. The Company has identified certain areas, to be considered for implementing the CER activities in the context of the local scenario of the area:

Sl. No.	PROPOSED CER ACTIVITIES	INVESTMENT (IN LAKHS)			Total (in Lakhs)
		Year 1	Year 2	Year 3	
<b>A)</b>	<b>PUBLIC HEARING RELATED ACTIVITIES</b>				
1.	Skill development to unemployed local youth through National Skill Development Corporation, Govt. of India Scheme. Construction of a building along with the necessary infrastructures for this purpose like different machineries for industries.	5	5	5	15
2.	Development of Road (2 Km) in surrounding villages (@ Rs. 12 Lakhs per Km)	8	8	8	24
3.	Purchase of Mobile Water Tanker	-	26	-	26
4.	Construction of 5 Set Toilets at nearby villages (@ Rs. 3.00 Lakhs per set of 2 Toilets, separately for Ladies & Gents)	6	6	3	15
5.	Drinking Water Infrastructure facility at nearby villages (Tubewell: 15 nos. @ Rs. 2.0 Lakhs per tubewell)	10	10	10	30
6.	Street Lighting (Solar) provision at suitable public places – 20 nos. (@ Rs. 0.50 Lakhs per Solar Light).	4	4	2	10
7.	Construction of school building in the nearby village	60	50	50	160
8.	Construction of a building for providing training classes for local women.	5	3	3	11
<b>B)</b>	<b>NEED BASED ACTIVITIES</b>				
9.	Construction of a health check-up centre along with necessary facilities in nearby village.	7	6	6	19
10.	Rain Water Harvesting ponds in nearby villages (3 nos. @ Rs. 5 Lakhs per pond).	5	5	5	15

Sl. No.	PROPOSED CER ACTIVITIES	INVESTMENT (IN LAKHS)			Total (in Lakhs)
		Year 1	Year 2	Year 3	
11.	Construction of 14 nos. of ground water Recharging system for rainwater in nearby villages (@2.5 lakhs per system)	15	10	10	35
12.	Development of parks, plantation of trees in the nearby areas.	5	4	4	13
13.	Development of Community Hall	4	2	2	8
<b>Sub-Total</b>		<b>134</b>	<b>139</b>	<b>108</b>	<b>381</b>
<b>GRAND TOTAL</b>					

The capital cost of the project is Rs 475.0 Crores and the capital cost for environmental protection measures is proposed as Rs 27.0 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 2.70 Crores. Additional 1000 persons apart from the existing 670 persons (total 1670 persons) will get employment during operational phase. The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

Item	Cost (in Crores)	Cost (in Crores)
Cost of Air Pollution Control Systems	17.00	1.70
Cost of Water conservation & Pollution Control	2.00	0.20
Cost of Solid Waste Management System	0.50	0.05
Green belt development	1.50	0.15
Noise Reduction Systems	0.50	0.05
Occupational Health Management	0.50	0.05
Risk Mitigation & Safety Plan	2.50	0.25
Environmental Management Department	2.50	0.25
<b>GRAND TOTAL</b>	<b>27.00</b>	<b>2.70</b>

Greenbelt will be developed in 10.47 Ha which is about 33% of the total plant area. Local and native species will be planted with a density of 1500 trees per hectare. Total no. of 15,700 saplings will be planted and nurtured in 10.47 Hectares.

There is no court case or violation under EIA Notification to the project or related activity.

Name of the Consultant: M/s. Envirotech East Pvt. Ltd. (Sl. No. 55 in the List of Accredited Consultant Organizations (Alphabetically) Rev. 82, Dec. 05, 2019).

### **Observations of the Committee held on 23-24<sup>th</sup> December, 2019**

The Committee noted the following deficiencies in the EIA report submitted to the Ministry.

- i. Closure report from Regional Office on the observed non-compliances have not been furnished.
- ii. High level of Particulate matter in the Ambient Air has been reported and NOx in the source and the reasons for such high level reporting has not been mentioned.

- iii. COD parameter in the surface water sample has not been monitored. Hence, fresh assessment of surface water quality for all the parameters is required.
- iv. Hazard Identification and Risk Assessment (HIRA) report submitted is not satisfactory. Rules and Regulations pertaining to the HIRA has been wrongly mentioned in the report.
- v. Traffic assessment study has not been carried out.

**Recommendations of the Committee held on 23-24<sup>th</sup> December, 2019**

In view of the foregoing and after detailed deliberations, the committee deferred the consideration of the proposal cited above and sought following additional information for further consideration of the proposal:

- i. Closure report from Regional Office on the observed non-compliances regarding Effluent Treatment Plant, concreting of internal roads, green belt development and noise quality monitoring shall be furnished.
- ii. Fresh assessment of surface water quality for all the parameters shall be carried out and report submitted.
- iii. Hazard Identification and Risk Assessment (HIRA) report specific to the project activity shall be prepared and submitted.
- iv. Traffic assessment study report shall be carried out and submitted.
- v. Existing road conditions to be used for transportation of raw materials and finished products inter-alia including its dimensions along with photographs shall be submitted.
- vi. Quantity of raw materials and products to be transported by different modes such as road and rail respectively shall be furnished.
- vii. Line source modelling shall be carried out based on the quantity of raw materials and products to be transported different modes such as road and rail respectively and report shall be furnished.
- viii. Reasons for higher level of presence of Particulate matter in the Ambient Air and NOx in the source shall be furnished.
- ix. Corporate Environmental Policy envisaging sharing of responsibility in case of accident/failures shall be furnished.
- x. Time bound action plan for green belt development covering 33% of the plant with a tree density of 2500/ha shall be prepared and submitted.
- xi. Details of the producer gas plant along with the pollution control systems envisaged shall be furnished.

18.4.3 Meanwhile, Ministry was in receipt of a public representation dated 21/12/2019 of Shri Subhasish Bose, Advocate alleging that the project proponent has commenced the civil/foundation works of 2 Nos. pellet plant before obtaining Environment Clearance from MoEF&CC. The said public representation was forwarded to the Regional Office by the Ministry on 20/01/2020 with a request to submit the factual status. In response to this, Regional Office has inspected the project site on 15/02/2020 and submitted the factual report to the Ministry on 26/02/2020.

18.4.4 Meanwhile, PP has submitted their reply to the additional information sought by the EAC on 16/04/2020.

18.4.5 The response submitted by the PP have been deliberated upon by the EAC and the same is summarized as below.

S.No.	Additional information sought by the EAC	Reply submitted by the PP
i.	Closure report from Regional Office on the observed non-compliances regarding Effluent Treatment Plant, concreting of internal roads, green belt development and noise quality monitoring shall be furnished.	As per the RO report dated 26.02.2020, the ETP plant is under operation, concreting of internal road have been undertaken, 90% of the green belt development has been carried out in and around the plant premises and noise quality monitoring is being carried out.
ii.	Fresh assessment of surface water quality for all the parameters shall be carried out and report submitted.	<p>Surface water samples were collected and analyzed from total ten (10) locations, including two (2) different locations from flowing water bodies viz., Damodar River (SW1) and Canal near Chak Kamakuri (SW2) and from eight (8) different ponds of different locations (SW3 to SW10) to assess the baseline status of the surface water quality in the study area.</p> <p><b><u>RESULTS OF SURFACE WATER QUALITY</u></b></p> <p>The surface water quality was compared with CPCB water quality criteria for surface water, for total 8 parameters for surface water.</p> <p><b><u>River Water Quality:</u></b></p> <p>The river water quality (SW1) parameters are within the standard for Class C i.e., Drinking water source after conventional treatment and after disinfection.</p> <p><b><u>Canal Water Quality:</u></b></p> <p>The Canal Water Near Chak Kamakuri (SW2) parameters are within the standard for Class C except for BOD level, which is more than the standard (3 mg/l). Hence, this water is suitable for only “Propagation of Wildlife &amp; Fisheries” (i.e., Class D) and “Irrigation, Industrial Cooling, and Controlled Waste Disposal” (i.e., Class E).</p> <p><b><u>Pond Water Quality:</u></b></p> <p>The Pond water quality (SW3 to SW10) parameters are within the standard for Class C except for BOD level, which is more than the standard (3 mg/l).</p>



S.No.	Additional information sought by the EAC	Reply submitted by the PP
		Hence, this water is suitable for only “Propagation of Wildlife & Fisheries” (i.e., Class D) and “Irrigation, Industrial Cooling, and Controlled Waste Disposal” (i.e., Class E).
iii.	Hazard Identification and Risk Assessment (HIRA) report specific to the project activity shall be prepared and submitted.	<p>The detailed Hazard Identification and Risk Assessment (HIRA) report, specific to the project activity is submitted and the findings of the report is given as below:</p> <ul style="list-style-type: none"> <li>• The Plant has lower risk potential than those industries dealing with toxic and flammable chemicals. Off-site people are not exposed to any dangers; hence the societal risk is insignificant.</li> <li>• The safety interlocks and concerned instruments will be essential part of process equipment during engineering and procurement of facilities.</li> <li>• The plant structures shall be designed for cyclone floods and seismic events to prevent structural collapse and integrity of weather (water) proofing for storage of dangerous goods.</li> <li>• With proper Standard Operating Practice (SOP) and Standard Maintenance Procedure (SMP) along with use of adequate PPEs will mitigate almost all the risk. However the most severe consequences will be due to Hot metal splashing in SMS and bursting of pressure parts in power plant, their chances of occurrences are low due to implementation of better safety features in the installations and constant monitoring of vessel/pipework with regular repair and maintenance, and hence proposed project facilities have low levels of risk.</li> <li>• Portable gas detectors shall be provided within the site in order to facilitate manual gas leak monitoring and regular leakage checks. Monitoring of gas leak shall be ensured for immediate identification of leaks and subsequent implementation of action plan to prevent development of any hazardous situation.</li> <li>• Further, all major units / equipment shall be provided with the following safety facilities: <ul style="list-style-type: none"> <li>– Smoke /fire detection and alarm system</li> <li>– Fire hydrant system</li> <li>– Fire extinguisher - Foam/DCP/ABC/CO2</li> <li>– Water fog and sprinkler system</li> <li>– Mobile fire-fighting equipment</li> <li>– First-aid appliances</li> </ul> </li> </ul>

S.No.	Additional information sought by the EAC	Reply submitted by the PP
		<ul style="list-style-type: none"> <li>• Personal Protective Equipment (PPEs) shall be provided for additional protection to workers exposed to workplace hazards in conjunction with other facility controls and safety systems.</li> <li>• Restricted access to unauthorized person to those area which is prone to hazard such as Switch yard, Electrical control rooms, Turbine Generator building etc. Isolate people from load carrying/mechanical handling systems, vehicle traffic and storage and stacking locations.</li> <li>• The onsite Emergency Plan will be integrated with the district's Offsite Emergency Plan for comprehensive management of emergencies in minimum response time and maximum rescue results in an event of a disaster /emergency.</li> <li>• Co-ordination with nearby industries will also be maintained for creating unified Disaster management resource pool to be utilized in case of any disaster occurrence.</li> <li>• Security of facility to prevent unauthorized access to plant, entry of prohibited items and control of onsite traffic; and Development of emergency response management systems commensurate with site specific hazards and risks (fire, explosion, rescue and first aid).</li> <li>• Regular safety audits shall be undertaken to ensure that hazards are clearly identified and risk-control measures are maintained.</li> <li>• On the basis of the preliminary assessment, INR 479 lacs have been foreseen for disaster management plan at project stage.</li> </ul>
iv.	Traffic assessment study report shall be carried out and submitted.	<p>Traffic density was monitored on following two locations:</p> <ul style="list-style-type: none"> <li>• Chandankiyari-Dubra-Raghunathpur Road at Rukni More</li> <li>• Mahuda-Dendua-Chelyama Road near Bravo plant gate.</li> </ul> <p>As per IRC: 64-1990 code, a Two Lane road in Plain terrain can accommodate vehicular traffic load of 15000 PCU per day.</p> <p>The additional traffic load due to material as well as manpower movement during operation of overall project of M/s Bravo Sponge Iron Private Limited after expansion has been added to the existing traffic load at both the above-mentioned points.</p>

S.No.	Additional information sought by the EAC	Reply submitted by the PP																							
		<p>The findings of the survey has been compared with Indian Roads Congress code for Guidelines for Capacity of Roads in Rural Areas (IRC: 64 – 1990).</p> <ul style="list-style-type: none"> <li>• CHANDANKIYARI-DUBRA-RAGHUNATHPUR ROAD is two lane road with approx. 7 m width and can well accommodate existing traffic load along with the additional load due to M/s Bravo project (total PCU per day will be 1697).</li> <li>• MAHUDA-DENDUA-CHELYAMA ROAD is two lane road with approx. 6 m width and can well accommodate existing traffic load along with the additional load due to M/s Bravo project (total PCU per day will be 1140).</li> </ul>																							
v.	Existing road conditions to be used for transportation of raw materials and finished products inter-alia including its dimensions along with photographs shall be submitted.	<p><b>Rukni more</b> is 12 km from State Highway (SH-05) and 13 km from State highway (SH-12). At Rukni more, width of road is 22 feet (Two Lane) black topped along with 6 feet footpath on either side of the road. There is moderate traffic density on this stretch of the road.</p> <p>Bravo Plant gate is situated on Mahuda-Dendua-Chelyama Road having 20 feet width with black topped. Bravo Plant gate is approx.500 m from Rukni more. Traffic movement on this road is very low. Plant gate is designed with double gate system separately for inward and outward traffic movement to facilitate smooth movement of traffic for the plant.</p>																							
vi.	Quantity of raw materials and products to be transported by different modes such as road and rail respectively shall be furnished.																								
	<table border="1"> <thead> <tr> <th data-bbox="363 1413 491 1487">Mode</th> <th data-bbox="491 1413 746 1487">Product Quantity</th> <th data-bbox="746 1413 1043 1487">Raw material Quantity</th> <th data-bbox="1043 1413 1257 1487">Total Quantity</th> <th data-bbox="1257 1413 1414 1487">%age</th> </tr> </thead> <tbody> <tr> <td data-bbox="363 1487 491 1561">Road</td> <td data-bbox="491 1487 746 1561">8,57,550 TPA</td> <td data-bbox="746 1487 1043 1561">2,56,366 TPA</td> <td data-bbox="1043 1487 1257 1561">11,13,916 TPA</td> <td data-bbox="1257 1487 1414 1561">26.50%</td> </tr> <tr> <td data-bbox="363 1561 491 1603">Rail</td> <td data-bbox="491 1561 746 1603">8,57,550 TPA</td> <td data-bbox="746 1561 1043 1603">22,31,498 TPA</td> <td data-bbox="1043 1561 1257 1603">3089048 TPA</td> <td data-bbox="1257 1561 1414 1603">73.50%</td> </tr> <tr> <td data-bbox="363 1603 491 1675"><b>Total</b></td> <td data-bbox="491 1603 746 1675"><b>17,15,100 TPA</b></td> <td data-bbox="746 1603 1043 1675"><b>24,87,864 TPA</b></td> <td data-bbox="1043 1603 1257 1675"><b>4202964 TPA</b></td> <td data-bbox="1257 1603 1414 1675"><b>100%</b></td> </tr> </tbody> </table>					Mode	Product Quantity	Raw material Quantity	Total Quantity	%age	Road	8,57,550 TPA	2,56,366 TPA	11,13,916 TPA	26.50%	Rail	8,57,550 TPA	22,31,498 TPA	3089048 TPA	73.50%	<b>Total</b>	<b>17,15,100 TPA</b>	<b>24,87,864 TPA</b>	<b>4202964 TPA</b>	<b>100%</b>
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vii.	Line source modelling shall be carried out based on the quantity of raw materials and products to be transported different modes such as road and rail respectively and report shall be furnished.	<p>PM concentrations at the respective AAQM locations due to the vehicular emissions during transportation of raw materials and products are calculated in the range of 0.1 to 0.2 <math>\mu\text{g}/\text{m}^3</math>. The corresponding NOx concentrations are calculated in the range of 0.01 to 0.03 <math>\mu\text{g}/\text{m}^3</math>.</p> <p>Hence, it can be concluded that the contribution of the vehicular traffic due to the transportation of raw materials and products for the overall project after</p>																							

S.No.	Additional information sought by the EAC	Reply submitted by the PP
		<p>expansion is negligible.</p> <p>The overall scenario of the air quality at the respective monitoring locations in the area after adding the expected contributions due to overall plant operation after expansion to the maximum baseline data represents the maximum concentration in the range of 77.92 to 98.19 <math>\mu\text{g}/\text{m}^3</math> for PM, considering the background level as monitored during the period of Oct'18 to Dec'18. The values for NOx are in the range of 22.46 to 38.51 <math>\mu\text{g}/\text{m}^3</math>.</p> <p>Considering the background level as monitored during the period of 1<sup>st</sup> Feb'20 to 14<sup>th</sup> Feb'20, the corresponding overall maximum values of PM &amp; NOx are in the ranges of 68.82 to 88.19 <math>\mu\text{g}/\text{m}^3</math> and 22.18 to 32.51 <math>\mu\text{g}/\text{m}^3</math> respectively.</p> <p>All these values are within the stipulated norms of 100 <math>\mu\text{g}/\text{m}^3</math> and 80 <math>\mu\text{g}/\text{m}^3</math> respectively.</p>
viii.	Reasons for higher level of presence of Particulate matter in the Ambient Air and NOx in the source shall be furnished.	<p><b>Reasons for High value of PM in Ambient Air</b></p> <ul style="list-style-type: none"> <li>• Out of the total 196 values, only 3 values have exceeded the level of 90 <math>\mu\text{g}/\text{m}^3</math>, which is only 1.5% of the total monitored values. Around 15% values are obtained in the range of 81 to 90. But, most of the values (around 84%) are below 80 <math>\mu\text{g}/\text{m}^3</math>.</li> <li>• The values above 90 <math>\mu\text{g}/\text{m}^3</math> observed on two instances <b>near the project site (AQ1) (92 <math>\mu\text{g}/\text{m}^3</math> &amp; 93 <math>\mu\text{g}/\text{m}^3</math>)</b> may be attributed to the additional vehicular traffic around the Rukni railway siding area due to simultaneously lifting of two rakes materials which is a rare occurrence. This railway siding has only one unpaved platform to unload the material. Besides, wind blown dust due to the unpaved Road is another significant reason</li> <li>• The value of 95 <math>\mu\text{g}/\text{m}^3</math> was obtained on 07.12.2018 <b>at Ketlapur Nutandi (AQ5)</b>. It was observed that there were local community celebrations leading to significant vehicular movement on this particular day in the area. However, the overall mean value for 3 months period is calculated as 72 <math>\mu\text{g}/\text{m}^3</math>. It is relevant to note that this location was in the upwind direction of the project site of M/s Bravo Sponge Iron Pvt. Ltd. during the monitoring period. Hence, there is</li> </ul>

S.No.	Additional information sought by the EAC	Reply submitted by the PP
		<p>insignificant impact on the air quality of this location due to air emissions from the existing plant of Bravo.</p> <ul style="list-style-type: none"> <li>• Taking serious note of the concern raised by the Honorable EAC members, a two weeks' monitoring (1<sup>st</sup> February, 2020 to 14<sup>th</sup> February, 2020) was further conducted to study the air quality at all 8 locations with an emphases to assess the impact on the available sensitive receptors around the same 8 locations. While going through the statistical analysis for PM<sub>10</sub> for the respective locations, all the values are below 80 µg/m<sup>3</sup> except at one occasion at AQ1 (83 µg/m<sup>3</sup>). Hence, all the values are well within the stipulated limit of 100 µg/m<sup>3</sup>.</li> <li>• All the values of PM<sub>2.5</sub> (the maximum value being 45 µg/m<sup>3</sup>) are well within the stipulated limit of 60 µg/m<sup>3</sup>.</li> </ul> <p><b>Reason for High value of NOx in Source</b></p> <ul style="list-style-type: none"> <li>• There is NOx emission from five units (Existing-3, under Implementation-1, Proposed -1). The NOx emission from all these five units shall be maintained within the level of 100 mg/Nm<sup>3</sup>.Based on the stack emission data and NOx emissions, the Ground Level Concentrations (GLCs) were calculated using ISCST3 (Air Quality Dispersion Model) and the predicted maximum GLC of NOx was obtained as 5.808 µg/m<sup>3</sup> in ESE direction at a distance of 0.8 km.</li> </ul>
ix.	Corporate Environmental Policy envisaging sharing of responsibility in case of accident/failures shall be furnished.	Corporate Environmental Policy has been formulated and submitted.
x.	Time bound action plan for green belt development covering 33% of the plant with a tree density of 2500/ha shall be prepared and submitted.	<ul style="list-style-type: none"> <li>• M/s Bravo Sponge Iron Pvt. Ltd. has earmarked 10.47 Hectares (25.87 acres) for Green Belt Development, which is 33% of the total plant area of 31.73 hectares (78.37 acres) of land (Existing &amp; Proposed Project). Around 26,175 numbers of trees (@2500 nos. of tree per hectare) has been considered under plantation programme for greenbelt development.</li> <li>• Out of this 10.47 Hectares of land for greenery, 5.38 Hectares of land is already having green belt for existing project area.</li> </ul>

S.No.	Additional information sought by the EAC	Reply submitted by the PP
		<ul style="list-style-type: none"> <li>• Remaining 5.09 hectares will be utilized for green belt development in the plant area for proposed project where around 12725 numbers of trees (@2500 trees per hectare) will be planted.</li> <li>• Hence, there will be total 26225 trees (Existing (13500) + Proposed (12725)) on 10.47 hectares of land after implementation of the proposed project.</li> </ul> <p>Time Schedule</p> <ul style="list-style-type: none"> <li>• Development of greenbelt on 5.09 hectares (12.57 acres) of land for the proposed project will be completed in a phased manner within a span of three (3) years with continuous and intensive maintenance.</li> </ul> <p>Total Cost</p> <ul style="list-style-type: none"> <li>• Total cost, to be spent in three years for development of greenbelt on 5.09 hectares (12.57 acres) of land for the proposed project: Rs. 1,14,45,000</li> <li>• Expenditure for yearly maintenance of green belt on total 10.47 Hectares (25.87 acres) of land after completion of project implementation period of 3 years: Rs. 14,67,300/-.</li> </ul>
xi.	Details of the producer gas plant along with the pollution control systems envisaged shall be furnished.	<p>Coal Gas, produced in Producer Gas Plant (PGP) using coal gas technology, will be used as fuel in the pellet plant. This is a clean fuel. There will be 12 nos. coal gasifiers to produce 4000 Nm<sup>3</sup>/hour of producer gas. In a fixed bed gasifier, the coal passes downward in counter current direction to gas flow, through various phases (devolatilisation, gasification and combustion zones). Mixture of air and steam is introduced in lower part of gasifier through rotating grate. Coal Tar generated from PGP shall be collected using “<b>Centrifugal Tar Separator</b>” and used as Fuel in DRI Kiln / alternately sold to authorized re-processors. No waste water will be generated from the process.</p> <p><b>Pollutant and Pollution Control Systems</b></p> <ul style="list-style-type: none"> <li>• Wastewater generated during the stage of gas cooling shall be charged in the ABC of DRI plant.</li> <li>• In Indirect Type “Centrifugal Tar Separator” Tar is removed by centrifugal action without any washing with water. Therefore, phenolic water is not generated in this method of tar separation and the associated water pollution issues are completely eliminated</li> </ul>

S.No.	Additional information sought by the EAC	Reply submitted by the PP
		<ul style="list-style-type: none"> <li>• Generated Tar from the proposed producer gas will be used as Fuel in DRI Kiln / alternately sold to authorized re-processors approved by SPCB / CPCB.</li> <li>• Dust emission during conveying and feeding of coal to producer gas plant will be mitigated by Using covered ground hopper with fogging system mixed with air and water to settle down dust and also by installing bag filter to control the fugitive emission from different transfer points.</li> </ul>

18.4.6 With respect to the RO factual report regarding the points raised in the public representation, the Committee noted that as per the RO report:

- **Civil and foundation works for the pellet plant along with entrance gate, boundary wall, stores, administrative building, 132 KV substation and concreting of roads have been initiated at the project premises.** It has also been stated that steel and few components of the pellet plant have been imported and stored in the storage yard. However, no pellet plant equipment/components of the steel structures were constructed/ established at the project site. Further, it is stated that water reservoir with a capacity of 25,000 m<sup>3</sup> is constructed for the existing and expansion plant and is in operation.
- As per the photographs furnished in the report, it is noted that PP has already commenced the construction activity before obtaining EC from MoEF&CC.

18.4.7 As per the MoEF&CC O.M. dated 19/08/2010, no activity relating to the project covered under this notification including civil construction can be undertaken at site without obtaining prior Environment Clearance except fencing of the site to protect it from getting encroached and construction of temporary shed for the guard.

18.4.8 In this regard, PP requested to provide an opportunity for submitting their clarification to the findings of the RO factual report.

#### **Observations of the Committee**

18.4.9 The committee satisfied with the ADS reply of the project proponent. However, as per the RO factual report, civil and foundation works for the pellet plant has already been commenced by the PP before obtaining EC.

#### **Recommendations of the Committee**

18.4.10 In view of the foregoing and after detailed deliberations, the Committee deferred the consideration of the proposal till the requisite actions as per extant provisions of rules are completed for commencing the civil and foundation works for the pellet plant without obtaining EC by the project proponent. Committee requested Ministry to issue Show Cause notice as per Ministry Office Memorandum dated 05<sup>th</sup> February 2020, in view of commencement of work by PP.

18.5 Expansion of existing pellet plant [1.32 (2 x 0.66) Million TPA to 1.92 Million TPA & 1.2 (2 x 0.6) Million TPA to 1.92 Million TPA] by augmentation, process optimization & increasing number of working days/annum and setting up new pellet plant 3.0

Million TPA (2 x 1.5 Million TPA) with producer gas plant 75,000 Nm<sup>3</sup>/hr to reach total capacity of 6.84 Million TPA (4 x 0.96 Million TPA + 2 x 1.5 Million TPA) pellet plant with producer gas plant 2,25,000 Nm<sup>3</sup>/hr (30 x 7,500 Nm<sup>3</sup>/hr) **by M/s. Orissa Metaliks Private Limited (OMPL)** located at village – Gokulpur, P.O – Shyamraipur, P.S – Kharagpur (L), **District Paschim Medinipur, West Bengal – Prescribing of Terms of Reference based on site visit report of sub-committee – regarding**

18.5.1 The proposal cited above was considered during the 10<sup>th</sup> meeting of Re-Constituted Expert Appraisal Committee [EAC] (Industry-I) held on 22-23<sup>rd</sup> August, 2019. The relevant portion of the minutes of the meeting is reproduced as below:

**Proceedings of the EAC meeting held on 22-23<sup>rd</sup> August, 2019**

M/s. Orissa Metaliks Private Limited has proposed for expansion of existing pellet plant [1.32 (2 x 0.66) Million TPA to 1.92 Million TPA & 1.2 (2 x 0.6) Million TPA to 1.92 Million TPA] by augmentation, process optimization & increasing number of working days/annum and setting up new pellet plant 3.0 Million TPA (2 x 1.5 Million TPA) with producer gas plant 75,000 Nm<sup>3</sup>/hr to reach total capacity of 6.84 Million TPA (4 x 0.96 Million TPA + 2 x 1.5 Million TPA) pellet plant with producer gas plant 2,25,000 Nm<sup>3</sup>/hr (30 x 7,500 Nm<sup>3</sup>/hr), 3.0 Million TPA (2 x 1.5 Million TPA) I/O Beneficiation plant and 0.225 Million TPA coke oven plant along with 15 MW WHRB based CPP based on Grate-Kiln-Cooler technology the most energy efficient system for producing Indurated Pellets.

The existing project was accorded environmental clearance vide letter no. J-11011/ 604/2010-IA II(I) dated 01.06.2012, 04.01.2017 & 02.06.2017 and letter no. J-11011 /182/2012- IA II (I) dated 24.02.2015.

Consent to Establish from West Bengal Pollution Control Board for 1.32 MTPA (0.66 MTPA X 2) Pellet Plant, 1.5 MTPA I/O Beneficiation Plant & Producer Gas Plant - 75000 Nm<sup>3</sup>/hr vide NOC No-145461 vide memo No-624-2N-76/2015(E) dated 23.09.2016 & 25.07.2017. Consent to Establish for 1.2 MTPA (0.66 MTPA X 2) Pellet Plant & Producer Gas Plant -75000 Nm<sup>3</sup>/hr vide NOC No-147039 memo No-403-2N-76/2015(E); dated 09.07.2017 & 12.10.2018. Consent to Operate for pellet plant and producer gas plant with I/O Beneficiation plant vide CO No- 106556 dated 27.12.2017 & CO No-113741 dated 19.03.2019. Validity of CTO is up to 31/10/2021.

The proposed unit will be located at Village – Gokulpur, P.O – Shyamraipur, P.S – Kharagpur (L), Dist. Paschim Medinipur in the state of West Bengal.

The land area acquired for the proposed plant “new 3.0 MTPA (2 x 1.5 MTPA) Pellet plant with Producer Gas Plant 75000 Nm<sup>3</sup>/hr is 11 acres (4.45 hectare) and expansion of existing pellet plant will be done in existing plant premises of 70 acres (28.328 hectare). The in- principal approval for additional 11 acres land is being obtained from WBIDCL. No/forestland involved. Of the total additional area of 4.45 hectare, 1.46 hectare (33%) land will be used for green belt development and out of the total existing 28.328 plant area 9.348 hectare (33%) land is being/ will be developed under green belt and plantation.

No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.

Total project cost is approx. 300 Crores rupees. The existing manpower for the operational plant is 343 (133 regular & 210 contractual). Proposed employment



generation from proposed project will be 150 direct employment and 240 indirect employment.

The targeted production capacity of the steel plant is as mentioned in table below. The Iron ore, Coal, Limestone and other raw materials are being/will be transported through rail and/or through road.

The proposed capacity for different products for the area is as below:

Name of the Units	Existing Production Detail		Proposed Additional Production		Total (Existing + Proposed)
	EC dated 01.06.2012, 04.01.2017 & 02.06.2017	EC dated 24.02.2015	By Modernization, Argumentation & increasing annual working days	New Installation	
Iron Ore Beneficiation Plant	1.5 Million TPA	1.5 Million TPA	-	-	3.0 Million TPA (2 x 1.5 Million TPA)
Pellet Plant	1.32 Million TPA (2 x 0.66 Million TPA)	1.2 Million TPA (2 x 0.6 Million TPA)	1.32 Million TPA (1.32 to 1.92 Million TPA & 1.2 to 1.92 Million TPA)	3.0 Million TPA (2 x 1.5 Million TPA)	6.84 Million TPA (4 x 0.96 Million TPA + 2 x 1.5 Million TPA)
Producer Gas Plant	75,000 Nm <sup>3</sup> /hr (10 X 7,500 Nm <sup>3</sup> /hr)	75,000 Nm <sup>3</sup> /hr (10 X 7,500 Nm <sup>3</sup> /hr)	-	75,000 Nm <sup>3</sup> /hr (10 X 7,500 Nm <sup>3</sup> /hr)	2,25,000 Nm <sup>3</sup> /hr (30 X 7,500 Nm <sup>3</sup> /hr)
Coke oven plant	-	2,25,000 TPA	-	-	2,25,000 TPA
CPP-WHRB based	-	15 MW	-	-	15 W

The existing connected power demand for EC awarded project is 34.71 MW and the additional electricity load of 22.09 MW will be required for proposed project. Total connected power requirement will be 56.80 MW and is being/ will be procured from Captive Power Plant and WBSEDCL (West Bengal State Electricity Transmission Company Limited).

Proposed raw material and fuel requirement for the project are given below:

Sr. No.	Description	Source	Mode of Transport	Distance from Project Site (Km)	Total Quantity (TPA)		
					Existing	Proposed	Total
1	Iron Ore Fines	Barbil, Joda, Orissa	Road/Rail	201	35,29,400	---	35,29,400
2	High graded Iron Ore	Barbil, Joda, Orissa	Road/Rail	201	--	44,24,000	44,24,000
3	Bentonite	Rajasthan/Gujarat	Road/Rail	1500/1800	50,400	(+) 86,400	1,36,800
4	Non Coking Coal	E Auction, Imported	Road/Rail/Ship	---	75,600	(+) 1,29,600	2,05,200
5	Coking Coal	Purchased from BCCL, Dhanbad Alternate source: Imported	Road/Rail/Ship	177	3,00,000	--	3,00,000
6	Limestone	Birimtrapur, Orissa / Bilaspur, Raipur MP	Road/Rail	264/541	50,400	(+) 86,400	1,36,800

Water Consumption after the proposed expansion will be 53.6 m<sup>3</sup>/hr and no waste water will be generation. Domestic waste water will be treated in STP and Company is/ will follow “the zero wastewater discharge concept” and the entire wastewater is/will be recycled to the plant for greenbelt development & plantation, dust suppression.

The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

Name of the consultant: Visiontek Consultancy Services Pvt. Ltd. [S.No. 155, List of Accredited Consultant Organizations (Alphabetically) Rev. 78, July 10, 2019].

**Observations of the EAC meeting held on 22-23<sup>rd</sup> August, 2019:**

The committee observed the following.

- i. The proposal lacks clarity on the modifications and capacity enhancement required.
- ii. More than 1300 m<sup>3</sup>/day of groundwater is being abstracted and no details on exploring the possibility of withdrawal of surface water adjacent perennial Kasai River.
- iii. The satellite image does not corroborate the stated 29% greenbelt as furnished.
- iv. Existing layout is congested. The proponent could not justify the facts reported in their application.

**Recommendations of the EAC meeting held on 22-23<sup>rd</sup> August, 2019:**

Therefore, the committee after detailed deliberations, decided to conduct site visit to verify the ground situation by a sub-committee comprising of Shri.R.P.Sharma, Shri.J.S.Kamyotra along with a representative of MoEF&CC.

18.5.2 The site visit to OMPL was undertaken by the Sub-Committee on 6/01/2020. The observations of the Sub-Committee made during the site visit are summarized as below:

- i. The details of the Environment Clearances (ECs) accorded by MoEF&CC/SEIAA – West Bengal, implementation status with product slate and water consumption for the different companies of Rashmi Group located at village Gokulpur, P.O – Shyamraipur, P.S – Kharagpur (L), District Paschim Medinipur, West Bengal is given as below:

<b>A. M/s. Rashmi Metaliks Limited</b>						
<b>(Location: Nandarchalk, Khidipur &amp; Sujatpur Village-Gokulpur)</b>						
<b>Name of the Units</b>	<b>Permission as Per EC</b>	<b>Consolidated Environment Clearance for existing Facility</b>	<b>Operational Unit as per valid CTO</b>	<b>Consent to Operate (CTO) detail</b>	<b>Product</b>	<b>Water Consumption</b>
Mini Blast Furnace	1 x 215 m <sup>3</sup> (180000 TPA)	(i) File no. J-11011 /237 / 2016-IA- II (I), from MoEFCC, New Delhi dated 17.05.2019  (ii) F.No. EN/2567/T-11-1/047/2009 dated 9/10/2009 from SEIAA  (iii) J-11011 /372 / 2014-IA- II (I), from MoEFCC, New Delhi dated 6/12/2016	180000 TPA	Co-102836 dated 16.03.2017 & 16.08.2018; Co-113721 dated 12.11.2018; Co-113720 dated 12.11.2018; Co-106590 dated 11.06.2018; Co-106572 dated 12.03.2018 AND Co-113797 dated 02.12.2019	Molten Iron	1955 KLD
Sinter Plant	2x25 m <sup>2</sup> + 1 x 70 m <sup>2</sup> (14,40,000 TPA)		600000 TPA		Iron Ore Sinter	
Pig Casting Machine	600 TPD		120000 TPA		Pig Iron	
SMS	7 x 20 T I.F /AOD (5,00,000 TPA)		4,44,000 TPA		M.S. Billets	
Pellet Plant	9,00,000 TPA		900000 TPA		I/O Pellets	
Oxygen Plant	60 TPD		60 TPD		Oxygen	
Ductile Iron Pipe Plant	5,50,000 TPA		2,00,000 TPA		Di Pipe	
Rolling Mill	3,65,200 TPA		3,65,200 TPA		TMT Bars 8-32 mm & Wire Rod 5.5-12 mm	
Coal Gasifier	1 x 6000 Nm <sup>3</sup> /hr		1 x 6000 Nm <sup>3</sup> /hr		Coal Gas	
Private Railway Siding	88,50,000 TPA		88,50,000 TPA		Material Handling	
<b>B. M/s. Orissa Metaliks Private Limited</b>						
<b>(Location-Amba &amp; Mathurakismat, Village-Gokulpur)</b>						
<b>Name of the Units</b>	<b>Production Capacity</b>	<b>Environment Clearance for</b>	<b>Operational Unit as per</b>	<b>Consent to operate</b>	<b>Product</b>	<b>Water Consumption</b>

		<b>existing Facility</b>	<b>valid CTO</b>	<b>detail</b>		
Induction Furnace with matching LRF & CCM	(15 x20 T) I.F. with matching LRF & CCM 9,00,000 TPA	(iv). File no. 2707/EN/T-II-I/074/2015 dated 07.12.2016 & 689/EN/T-II-I/074/2015 dated 03.04.2017 from SEIAA & (v). F.No.3311/EN/T-II-I/016/2018 dated 03.10.2018 from SEIAA.	(10 x 20 T) I.F. with matching LRF & CCM 6,00,000 TPA	Co-106519; dated 11.07.2017; Co-113796 dated 02.12.2019; Co-113724 dated 29.11.2018 and Co-113725 dated 29.11.2018	Billet	214 KLD
Rolling Mill	8,50,000 TPA		1,90,000 TPA		Wire/Coil & Nail	
CFBC (Coal & Dolochar) based CPP	45 MW		***	***	***	
<b>C. Orissa Metaliks Private Limited (Unit-I) (Location-Amba &amp; Mathurakismat, Village-Gokulpur)</b>						
<b>Name of the Units</b>	<b>Production Capacity</b>	<b>Environment Clearance for existing Facility</b>	<b>Operational Unit as per valid CTO</b>	<b>Consent to operate detail</b>	<b>Product</b>	<b>Water Consumption</b>
Sponge Iron Plant (DRI Kiln)	(6 x 100 + 1 x 350 + 1 x 600 + 1 x 500) 7,80,000 TPA	(vi) & (vii). File no. J-11011 /227 / 2007-IA- II (I), from MoEFCC, New Delhi dated 12.06.2008 as amended on 10.12.2008, 12.02.2015, 06.01.2017, 30.08.2018 & expansion under clause 7(II) on 26.12.2019 <b>[DRI plant only]</b>	(6 x 100 + 1 x 350 + 1 x 600 + 1 x 500) 6,00,000 TPA	Co-174191; dated 17.11.2016; Co-113784; dated 19.9.2019 and Co-113740; dated 19.03.2019;	Sponge Iron	2470 KLD
WHRB Based CPP	52 MW		52 MW		Power	
AFBC Based CPP	6 MW		6 MW			
CFBC Based CPP	25 MW		25 MW			
<b>D. Orissa Metaliks Private Limited (Unit-II) (Location-Dhekia, Khidipur &amp; Sujatpur Village-Gokulpur)</b>						
<b>Name of the Units</b>	<b>Production Capacity</b>	<b>Environment Clearance for existing Facility</b>	<b>Operational Unit as per valid CTO</b>	<b>Consent to operate detail</b>	<b>Product</b>	<b>Water Consumption</b>
Iron Ore Beneficiation Plant	15,00,000 TPA	(viii). EC No- J-11011/604/2010-IA II(I), dt-01.06.2012, 04.01.2017 & 02.06.2017	15,00,000 TPA	Co-106556; dated 27.12.2017	Con. Iron Ore	1603 KLD
Pellet Plant	13,20,000 TPA (2 x 6,60,000 TPA)		13,20,000 TPA (2 x 6,60,000 TPA)	-do-	Iron Ore Pellet	

Producer Gas Plant	75,000 Nm <sup>3</sup> /hr (10 X 7,500 Nm <sup>3</sup> /hr)		75,000 Nm <sup>3</sup> /hr (10 X 7,500 Nm <sup>3</sup> /hr)	-do-	P. Gas
Iron Ore Beneficiation Plant	15,00,000 TPA	(ix). EC No- J-11011/182/2012-IA II (I) dt-24.02.2015	**	-	***
Pellet Plant	12,00,000 TPA (2 x 6,00,000 TPA)		12,00,000 TPA (2 x 6,00,000 TPA)	Co-113741; dated 19.03.2019 & Co-113779; dated 04.09.2019	Iron Ore Pellet
Producer Gas Plant	75,000 Nm <sup>3</sup> /hr (10 X 7,500 Nm <sup>3</sup> /hr)		**	-	***
Coke Oven Plant	2,25,000 TPA		**	-	***
CPP-WHRB	15 MW		**	-	***
Railway Siding	--		---	--	Co-113741; dated 19.03.2019
MBF with 200 TPD Oxygen plant	1 x 320 m <sup>3</sup> (3,00,000 TPA)	File no. J-11011 /227 / 2007-IA-II (I), from MoEFCC, New Delhi dated 12.06.2008 as amended on 10.12.2008, 12.02.2015 , 06.01.2017 , 30.08.2018 & expansion under clause 7(II) on 26.12.2019 <b>[Mini Blast furnace only]</b>	1 x 320 m <sup>3</sup> (3,00,000 TPA)	Co-106579; dated 03.05.2018 & Co-113741; dated 19.03.2019	Pig Iron/ Hot Liquid Metal & Oxygen

**E. Orissa Metaliks Private Limited (1.2 MTPA with 225 MW CPP)**

**(Location-Nandarchalk, Bargai, Kanjarichak, Village-Gokulpur)**

Sl. No	Particulars of Facilities	Configuration	Capacity	Product	EC details	Present status & Water usage
1.	Blast Furnace	2 x 550 m <sup>3</sup>	1.0 Million T.P.A	Hot Metal / Pig Iron	(x).File no-IA-J-11011/169/2017 -IA-II(I); dated 03.04.2019	Project is under construction phase after obtaining NOC from WBPCB
2.	Sinter	1 x 175 m <sup>2</sup>	1.0 Million T.P.A	Sinter		
3.	DRI	2 X 500 TPD + 2 x 350 TPD	0.5 Million T.P.A	Sponge Iron		
4.	Steel Making Facilities with	20 T EIF X 10 + 50T EAF X	1.0 Million	Billets		
						22248

	LRF and oxygen optimized furnace	2	T.P.A		KLD
5.	Ferro Alloy Plant	10 x 9 MVA	0.12 Million T.P.A	Ferro Alloys (FeMn, FeSi, SiMn, FeCr)	
6.	Fe-Cr Briquette Manufacturing plant	1 x 40 TPH	40 ton/hr	Fe-Cr Briquette	
7.	Non-recovery type Coke Oven Plant	2 x 0.25 MTPA	0.5 Million T.P.A	Coke	
8.	Lime Dolomite Plant	1 x 200 TPD	200 TPD	Lime & Dolomite	
9.	Oxygen Plant	1 x 200 TPD	200 TPD	Oxygen	
10.	Hot Rolling Mill	**	0.6 Million T.P.A	H.R. Coils, Plates (Checkered or Flat)/ TMT Bar, Wire Rod & Wire/ Structural long product like- Angel, Channel & Beam	
11.	Cold Rolling Plant with Pickling Line & Continuous Galvanizing	***	0.35 Million T.P.A	Galvanized Sheet/ Plate / Coils, Flat Sheet/ Checkered Sheet, Strip & Nail	
12.	Ductile Iron Pipe Unit	**	0.2 Million T.P.A	DI Pipe	
13.	Captive Power Plant	[ WHRB Based 90 MW (54 MW from DRI Plant+ 34 MW from Coke Oven Plant + 2 MW from EAF + CFBC (Coal & Dolochar Mix based) 3 x 45 MW ]	225 MW	Power	
14.	Pellet Plant	2 x 1.2 MTPA	2.4 MTPA	Iron ore Pellet	

15.	I/O Beneficiation Plant	2 x 1.2 MTPA	2.4 MTPA	Iron Ore Concentrate		
16.	Producer Gas Plant	20 x 7,500 Nm <sup>3</sup> /hr	1,50,000	Producer Gas		
<b>F. Orissa Metaliks Pvt. Ltd (1.0 MTPA with 225 MW CPP)</b>						
<b>(Location-Mathurakismat, Radhanagar ,Srirampurjia ,Village-Gokulpur)</b>						
Sl. No	Particulars of Facilities	Capacity	Product	Environment Clearance for existing Facility	Present status & Water usage	
1.	Blast Furnace (2 x 450 m <sup>3</sup> )	0.7 Million T.P.A	Hot Metal / Pig Iron	(xi). ToR accorded on J-11011/56/2017-IA.II(I) dated 9/08/2017	EC yet to be obtained. 1163 KLD	
2.	Sinter (1 x 105 m <sup>2</sup> )	0.6 Million T.P.A	Sinter			
3.	DRI (2 X 500 TPD + 2 x 350 TPD)	0.5 Million T.P.A	Sponge Iron			
4.	Steel Making Facilities [(20 T EIF X 10) + (20T EAF X 2)] with LRF and oxygen optimized furnace	0.8 Million T.P.A	Billets			
5.	Ferro Alloy (FeMn, FeSi, SiMn, FeCr) Plant (10 x 9 MVA)	0.12 Million T.P.A	Ferro Alloys			
6.	Fe-Cr Briquette Manufacturing plant	40 ton/hr	Fe-Cr Briquette			
7.	Non-recovery type Coke Oven Plant ( 2 x 0.25 MTPA)	0.5 Million T.P.A	Coke			
8.	Lime Dolomite Plant	200 TPD	Lime & Dolomite			
9.	Oxygen Plant	200 TPD	Oxygen			
10.	Hot Rolling Mill	0.35 Million T.P.A	H.R. Coils, Plates (Checkered or Flat)/ TMT Bar, Wire Rod & Wire/ Structural long product like- Angel, Channel & Beam			
11.	Cold Rolling Plant with Pickling Line & Continuous Galvanizing	0.35 Million T.P.A	Galvanized Sheet/ Plate / Coils, Flat Sheet/ Checkered Sheet, Strip & Nail			
12.	Ductile Iron Pipe Unit	0.3 Million T.P.A	DI Pipe			
13.	Captive Power Plant	225 MW [WHRB Based 90 (56 MW from DRI Plant+ 34	Power			

		MW from Coke Oven Plant + CFBC (Coal & Dolochar Mix based) 3 x 45 MW]			
14.	Pellet Plant	3.6 MTPA(4 X 0.9 MTPA)	Iron ore Pellet		
15.	I/O Beneficiation Plant	3.6 MTPA (2 x 1.8 MTPA)	Iron Ore Concentrate		
16.	Producer Gas Plant	1,50,000 (20 x 7,500 Nm <sup>3</sup> /hr)	Producer Gas		

**G. Bansal Cement Limited**

**(Location-Mathurakismat, Radhanagar ,Srirampurjia ,Village-Gokulpur)**

Name of the Units	Permission as Per EC	Environment Clearance for existing Facility	Operational Unit as per valid CTO	Consent to operate detail	Product	Water Consumption
Ball Mill (1 X100 TPD)	13,78,000 TPA	(xii). 3310/EN/T-II- I/045/2017 from SEIAA West Bengal dated 03.10.2018	66,000 TPA	Co-113764 dated 30.07.2019 &	OPC/PPC/PSC/ Composite cement	23 KLD
Ball Mill (1 X100 TPD)			66,000 TPA	Co-102844 dated 12.04.2017		
Ball Mill (1 X200 TPD)			66000 TPA			
Ball Mill (1 X1800 TPD)			***			
VRM (1 X2000 TPD)			**			

**TOTAL WATER CONSUMPTION (A+B+C+D+E+F+G) = 29676 KLD**

- ii. It is inferred from above that there are 11 Environment Clearances and one Terms of Reference have been accorded by MoEF&CC and SEIAA, West Bengal for the different units of Rashmi Group at village Gokulpur, P.O – Shyamraipur, P.S – Kharagpur (L), District Paschim Medinipur, West Bengal.
- iii. The instant site visit by Sub-Committee is pertaining to the Orissa Metaliks Private Limited (Unit-II) [S.No. D] located at Dhekia, Khidipur & Sujatpur Village-Gokulpur P.O – Shyamraipur, P.S – Kharagpur (L), District Paschim Medinipur, West Bengal for expansion of existing pellet plant [1.32 (2 x 0.66) Million TPA to 1.92 Million TPA & 1.2 (2 x 0.6) Million TPA to 1.92 Million TPA] by augmentation, process optimization & increasing number of working days/annum and setting up new pellet plant 3.0 Million TPA (2 x 1.5 Million TPA) with producer gas plant 75,000 Nm<sup>3</sup>/hr to reach total capacity of 6.84 Million TPA (4 x 0.96 Million TPA + 2 x 1.5 Million TPA) pellet plant with producer gas plant 2,25,000 Nm<sup>3</sup>/hr (30 x 7,500 Nm<sup>3</sup>/hr), 3.0 Million TPA (



2 x 1.5 Million TPA) I/O Beneficiation plant and 0.225 Million TPA coke oven plant along with 15 MW WHRB based CPP.

- iv. The Committee noted that there are two companies of Rashmi Group namely, M/s. Rashmi Metaliks Limited [**S.No. A**] and M/s. Orissa Metaliks Private Limited (Unit II) [**S.No. D**] are operating their Units in the same premises located at Gokulpur village for which EC was accorded by MoEF&CC from time to time. However, there is no existence of physical demarcation between the two companies at the site.
- v. It was noted that under the EC dated 2008, M/s. Rashmi Metaliks Limited is operating the Blast furnace in the premises of M/s. Orissa Metaliks Private Limited (Unit –II) inspected and the DRI plant is being operated 2.5km away from this Unit as a separate entity for which prior permission has been obtained from MoEF&CC vide letter no. J-11011/365/2007-IA.II(I) dated 10/12/2008.
- vi. Overall housekeeping is bad inter-alia including internal plant roads, choked drainage system, hap hazard dumping of wastes and scraps and no road cleaning.
- vii. Display board regarding AAQ, stack emission level and solid & hazardous waste data at the entrance of the site has no provision for digital display and the values are recorded manually. In the present case, the values for many parameters was found missing.
- viii. Raw materials are kept haphazardly without any provision for run off control and water spraying which is resulting carryover of materials with storm water.
- ix. Provision for dedicated parking facility for the inbound/outbound trucks is not in place as trucks were seen parked outside along the high way.
- x. Project proponent has provided a dedicated railway siding facility which is not being used effectively in the absence of wagon tippler and berth for loading/unloading.
- xi. No Provisions for tar separation and its collection and also treatment of phenolic wastewater is not in place. Tar and phenolic wastewater were found to be flowing in open drain.
- xii. As per the EC condition, the unit was supposed to install three numbers of Continuous Ambient Air Quality Monitoring Station (CAAQMS). In this regard, it was informed that order of one CAAQMS have been placed during the month of December, 2019 and is likely to be installed by March 2020.
- xiii. Project proponent has provided Continuous Emission Monitoring System (CEMS) for the pellet plant stacks. On perusal of the stack emission data, it is observed that the values as reported in the CEMS are low vis-à-vis with control and abatement technologies adopted for particulate matter.
- xiv. It was informed that Green belt has been developed in 29% of the total plant area. However, it is noted that green belt development has been initiated recently and not all along the boundary of the plant site with uniform width the density. In this context, the project proponent has agreed to develop green belt with 20 m width and density of 2500 per hectare along boundary of the site commencing from M/s. Rashmi Metaliks to M/s. OMPL towards the highway.
- xv. Total land for the existing unit is 70 acres and additional 11 acres of land has been acquired for the proposed 2x1.5 MTPA pellet plant unit and producer gas plant of 75000 Nm<sup>3</sup>/hr capacity.

- xvi. The side of way between highway and the plant site shall be developed by the project proponent as green belt.
- xvii. Domestic wastewater is presently being disposed of in septic tank/soak pit. Project proponent has agreed to treat the domestic waste in the Sewage Treatment Plant proposed to be installed for the treatment of 3500 KLD of drain water for reusing in the process. PP was informed that in-principle approval of using 3500 KLD of drain water has been obtained from Kharagpur Municipal Corporation.
- xviii. PP is still using the ground water for the operation of existing unit. In future, they are intending to use surface water from Kasai river. Once the 3500 KLD STP is commissioned, only treated drain water will be used for the proposed project activity.

**Summary / Recommendations: -**

Considering the aforesaid observations, the Sub-Committee recommended the expansion proposal of M/s. Orissa Metaliks Private Limited (Unit –II) for grant of ToR can be considered only after complying with the following:

**A. With respect to existing plant operations**

- i. Physical demarcation of M/s. Rashmi Metaliks Limited [S.No. A] and M/s. Orissa Metaliks Private Limited (Unit II) [S.No. D] at the site shall be provided.
- ii. Green belt shall be developed of 20 m width and density of 2500 per hectare all along boundary of the site commencing from M/s. Rashmi Metaliks Limited to till the boundary limit of M/s. OMPL towards the highway covering 33% of the plot area.
- iii. Project proponent shall provide wagon tippler and berth for loading/unloading of raw materials and products in the existing railway siding facility.
- iv. Internal roads shall be made pucca with proper drainage system.
- v. Improvement in housekeeping, treatment of phenolic wastewater, dedicated raw materials storage yard with provision of run-off control, provision of digital display board at the entrance gate for stack emission/AAQ and provision of dedicated parking facility shall be provided.
- vi. The unit shall install three numbers of Continuous Ambient Air Quality Monitoring Station (CAAQMS).
- vii. PP shall establish Sewage Treatment Plant for the treatment of domestic sewage for reusing in the process.

**B. With respect to proposed expansion**

- i. M/s. Orissa Metaliks Private Limited (Unit II) shall submit an integrated proposal by incorporating all the existing units at the site in order to take holistic view on the expansion proposal.
- ii. Integrated water distribution network for all the units of Rashmi Group with respect to water drawl from Kasai river considering zero ground water abstraction shall be submitted.
- iii. Project proponent shall install one unit of 3MTPA pellet plant in place 2x1.5 MTPA pellet plant.
- iv. PP shall develop area between highway and the plant site as green belt.
- v. The new gasifier shall be closed circuit design.
- vi. Traffic management plan shall be submitted.

- 18.5.3 The observations and recommendations of the site visit report of the Sub-Committee was discussed in detail by the EAC.

### **Observations of the Committee**

18.5.4 The Committee noted the following.

- i. The project proponent has haphazardly established the different units with different company names and failed to integrate the units.
- ii. The compliance status of the existing unit operations is also not satisfactory.

### **Recommendations of the Committee**

18.5.5 After detailed deliberations, the Committee recommended for issuance of ToRS with following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at Annexure-1 read with additional ToRs at Annexure-2:

- i. There are 11 Environment Clearances and one Terms of Reference accorded by MoEF&CC and SEIAA, West Bengal for the different units of Rashmi Group at village Gokulpur, P.O – Shyamraipur, P.S – Kharagpur (L), District Paschim Medinipur, West Bengal. PP shall prepare cumulative Impact Assessment Report covering all units under these ECs and ToR by geo referencing of all the stacks.
- ii. There are two companies of Rashmi Group namely, M/s. Rashmi Metaliks Limited and M/s. Orissa Metaliks Private Limited (Unit II) operating in the same premises for which EC was accorded by MoEF&CC from time to time. However, there is no existence of physical demarcation between the two companies at the site. PP shall provide physical partition between these two units.
- iii. It was noted that under the EC dated 2008, M/s. Rashmi Metaliks Limited is operating the Blast furnace in the premises of M/s. Orissa Metaliks Private Limited (Unit –II) and DRI plant at 2.5km away from this Unit. The existing Blast furnace shall be included in the proposed proposal and a separate application shall be submitted to delete the BF from EC letter no. J-11011/365/2007-IA.II(I) dated 10/12/2008.
- iv. Overall housekeeping is bad inter-alia including internal plant roads, choked drainage system, hap hazard dumping of wastes and scraps and no road cleaning. The house keeping shall be improved before approaching EAC for EC under this project.
- v. Display board regarding AAQ, stack emission level and solid & hazardous waste data at the entrance of the site shall have the provision for digital display and the values shall be entered digitally.
- vi. Raw materials are kept haphazardly without any provision for run off control and water spraying which is resulting in the carryover of materials with storm water. EMP for run off control from Raw Material yards shall be prepared and presented in the EIA report.
- vii. Provision for dedicated parking facility with concrete floors and rest rooms for the drivers of inbound/outbound carriers shall be made.
- viii. The dedicated railway siding facility shall be provided with wagon tippler and a berth for loading/unloading of raw materials and products.
- ix. Tar and phenolic wastewater were found to be flowing in open drain during site visit. The Tar collection, separation facility along with the treatment facility of phenolic wastewater shall be included.

- x. Three numbers of Continuous Ambient Air Quality Monitoring Station (CAAQMS). shall be installed by Sept 2020.
  - xi. Project proponent shall provide Continuous Emission Monitoring System (CEMS) for all the stacks. CEMS shall be integrated with Main Plant Control Center for process as well as emission control as per CPCB Norms.
  - xii. Traffic management studies shall be furnished for peak production scenario
  - xiii. The project proponent shall develop green belt with 20 m width and density of 2500 per ha along the boundary of the site commencing from M/s. Rashmi Metaliks to M/s. Orissa Metaliks towards the highway.
  - xiv. The side of way between highway and the Orissa Metaliks Plant, shall be developed by the project proponent as green belt.
  - xv. Domestic wastewater is presently being disposed in the septic tanks/soak pits. Project Proponent shall treat the domestic waste water in the Sewage Treatment Plant proposed to be installed for the treatment of 3500 KLD of drain water for reusing in the process by Municipal Corporation of Kharagpur. PP shall use 3500 KLD of drain water from Kharagpur Municipal Corporation for use in process.
  - xvi. PP is still using the ground water for the operation of existing unit. In next three years PP shall switch over to use of surface water from Kasai river. Once the 3500 KLD STP is commissioned, only treated drain water will be used for the proposed project activity.
  - xvii. All internal roads shall be concreted.
  - xviii. Scheme for Integrated water distribution network for all the units of Rashmi Group with respect to 29676 KLD water drawl from Kasai river considering zero ground water abstraction shall be submitted.
  - xix. Permission for withdrawal of 29676 KLD of water from Kasai river shall be submitted.
  - xx. Project proponent shall install one unit of 3 MTPA pellet plant in place 2x1.5 MTPA pellet plant.
  - xxi. The new coal gasifier plant shall be closed circuit design with Tar recovery and treatment of phenolic water.
  - xxii. Certified compliance report Regional Office for all the existing 11 Environment Clearances shall be submitted.
  - xxiii. ECs wise production figures for all the units for the last three years duly authenticated by the Competent Authority shall be furnished.
  - xxiv. Certified copy of the conditions stipulated in the CTO by the Regional Office of the West Bengal Pollution Control Board shall be submitted.
- 18.6 Enhancement of production 1.0 to 2.0 MTPA in Portland Pozzolana Cement grinding unit by **M/s. Emami Cement Limited** located at Kulhariya village, Durgawati Tahasil, Bhabua Kaimur **District, Bihar** [Online Proposal No. IA/BR/IND/139498/2020, File No. J-11011/45/2020-IAII(I)] – **Reconsideration for grant of Terms of Reference (ToR) based on ADS reply**– regarding.
- 18.6.1 The proposal was placed before 16<sup>th</sup> EAC meeting held during 24-25<sup>th</sup> February 2020. The relevant portion of minutes are given as below.

M/s Emami Cement Ltd submitted online application vide proposal no. J-11011/45/2020-IAII(I) dated 29.01. 2020 in the prescribed format along with Form I, pre-feasibility report to propose TOR's for undertaking detailed EIA study as per the EIA Notification, 2006. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "B" EIA Notification, 2006. However, due to the applicability of general condition i.e., interstate boundary of Bihar and Uttar Pradesh, the project was appraised at the Central level as Category 'A'.

#### **Details Submitted by the Project Proponent**

M/s Emami Cement Ltd. proposes to install an expansion of existing unit i.e. Enhancement of production of 1 MTPA to 2 MTPA in Portland Pozzolana Cement grinding unit. It is proposed to set up the plant for manufacturing of Cement based on grinding technology.

Earlier, environmental clearance was accorded to M/s Eco Cement Limited vide no. J-11011/287/2010-IA.II(I) dated 31.10.2011. After that environmental clearance has been transferred to M/s Emami Cement Ltd. vide letter No. J-11011/287/2010-IA.II(I) dated 04.11.2019. Consent to Operate was accorded by Bihar State pollution Control Board vide lr. no. T-7001-7002 dated 27.12.2017 validity of CTO is up to 31.03.2020.

The proposed unit will be located at Village: Kulhariya, Taluka: Bhabua, District: Kaimur, State- Bihar.

The land area acquired for the proposed plant is 7.87 ha. No forestland involved. The entire land has already been acquired for the project. Of the total area, 2.83 ha. (35.99%) land will be developed as green belt.

No National Park/WL etc. are located at a distance of 15 km from the site. No national park/wildlife sanctuary/biosphere reserve/tiger reserve etc. are reported to be located in the study area of the project. The area is not reported to form corridor for Schedule-I fauna.

Total project cost is approx. ₹ 343 Cr. Employment will be generated from proposed project for 51nos. of people through direct employment and 310 nos. of people through indirect employment.

The targeted production capacity of the cement is 2 MTPA. The raw material for the plant would be procured from by road & rail. Details as below:-

Clinker	Transported by road	From Rishda plant in West Bengal
Fly Ash	Transported by road	From Hindalco Thermal Power Plant, Renusagar
Gypsum	Transported by rail	From West Bengal/ Odisha Port to Mughalsarai Railway Yard and from Mughalsarai to plant by road

The proposed capacity for cement production for expansion is as below:

Name of unit	No. of units	Capacity of each Unit	Production Capacity
Cement Grinding	01	180TPH	2 MTPA Portland Pozzolana Cement
Packer	02	240 TPH	
Truck loaders	08	90 TPH	

The electricity load of 11MVA will be procured from Bihar State Electricity Board (BSEB). Company has also proposed to install 01X500 + 01X125 kVA DG Set.

The raw material and fuel requirement for proposed project are Clinker, Fly Ash & Gypsum & fuel (HSD). These materials shall be transported by road and rail.

Water Consumption for the proposed project will be 14.5 KLD and wastewater generation will be 5.6 KLD. Domestic wastewater will be sent to septic tank and disposed via soak pit and no industrial wastewater will be generated from the process.

No court case or violation under EIA Notification to the project or related activity was reported by the Project Proponent.

### **Observations and Recommendations of the Committee (16<sup>th</sup> EAC meeting held during 24-25<sup>th</sup> February 2020)**

After detailed deliberations, the Committee deferred the proposal and sought the following additional information.

- i. Form-1 is to be revised with all project details.
- ii. Layout drawing is not to scale. Proper engineering drawing of the project is required to be furnished.
- iii. Justification for no increase in the raw material storage capacity and retaining the same at the existing capacity of 1.0 MTPA.

18.6.2 In response to additional information sought, project proponent submitted reply on 04.04.2020. The reply found to be satisfactory and the proposal was placed before EAC for further consideration.

### **Observations and Recommendations of the Committee**

18.6.3 In view of the foregoing, and after detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA/EMP study in addition to the generic ToRs enclosed at **Annexure-1 read with additional ToRs at Annexure-2:**

- i. Action plan for phasing out the use of ground water abstraction and switch over to surface water in next two years.
- ii. Provision of industrial vacuum cleaner in EMP for roads and floor sweeping and recycling of collected dust in the plant.
- iii. Project design to achieve particulate emission less than 30 mg/Nm<sup>3</sup>.
- iv. Rainwater water harvesting plan and ground water recharge plan for equivalent to annual water consumption level of water.
- v. CER shall be based on Strategic Impact Assessment (SIA) and issues raised during Public Hearing including action plan to implement CER activities in two years.
- vi. Raw material storage yards shall be covered and shall have concrete flooring.

18.7 Expansion of tannery unit capacity of 60 hides/day (raw hide to wetblue leather) to 1000 hides/day (raw hide to finished leather) by **M/s A.K.I India Pvt. Ltd** at Tehsil & **Dist. Unnao, Uttar Pradesh** – [Proposal No. IA/UP/IND/150588/2020, MoEF&CC File No.J-11011/128/2013-IAII(I)] – **Amendment in EC condition for disposal of treated wastewater - regarding.**

- 18.7.1 M/s AKI India Pvt Ltd made online application vide proposal no. IA/UP/IND/150588/2020 dated 03.04.2020 in prescribed Form -4 along with other documents for seeking amendment in Environmental Clearance (EC). The proposal is listed in at Sl.No.4(f) Leather/skin/hide processing industry under category A in schedule of EIA Notification 2006.
- 18.7.2 The project has been granted Environmental Clearance vide F.No. 11011/128/2013-IA.II(I) dated 12.04.2018 for the expansion of tannery unit from capacity 60 hides/skins per day (raw to wet blue leather) to 1000 hides/skin per day (raw to finished leather). An amendment to EC was issued vide F.No. J-11011/128/2013-IA.II(I) dated 16.11.2018.

#### **Details submitted by the project proponent**

- 18.7.3 It has been reported that the Consent to Establish/Consent Operate from the Uttar Pradesh State Pollution Control Board / Pollution Control Committee obtained vide Lr. No. 75542 /UPPCB/Unnao (UPPCBRO)/ CTO/water/ UNNAO/2019 dated 03/02/2020 and consent is valid up to 31/12/2024 and 75241/UPPCB/ Unnao (UPPCBRO) /CTO/air/ UNNAO/2019 dated 03/02/2020 and the consent is valid upto 31/12/2024.
- 18.7.4 The total water requirement of the project will be 820 KLD. Out of which, 511 KLD fresh water will be supplied from 2 tube well/ borewell. Rest of the water requirement will be fulfilled using 309 KLD in-house ETP treated water. 8 KLD domestic sewage will be discharged to septic tanks that will be cleaned regularly. The chrome wastewater from the tannery unit will be collected in a separate collection tank of ETP and then will be treated for chrome recovery in Chrome Recovery Unit. 562 KLD wastewater will be treated in ETP of total capacity 600 KLD. Out of total treated water i.e 534 KLD, 309 KLD will be reused within the unit. Excess treated water will be sent to City Jail Drain.
- 18.7.5 Total Ground water recharge has been implemented to a tune of 271314 m<sup>3</sup>/annum for the project. Ground water recharge has been implemented through constructing recharge shafts in ponds and natural recharge through adopting ponds in villages. The proponent has adopted ponds having an area of 1.341 ha. in Akrampur town area by construction recharge shafts in the ponds. Thus, recharge ;has been implemented to the tune of 72414 m<sup>3</sup>/annum. The ponds adopted an area of 13.00 ha. in Rauakarana village. Natural recharge has been implemented to a tune of 198900 m<sup>3</sup>/annum. Thus, total recharge in the ponds have been recharged through a tune of 271314 m<sup>3</sup>/annum.
- 18.7.6 Greenbelt will be developed in 0.533247 ha which is about 33% of the total acquired area.
- 18.7.7 Amendment is sought for discharging excess treated water of 225 KLD (devoid of High TDS content) bearing all norms as per CPCB Charter as applicable for CETP or Standalone tanneries, into the City Jail Drain. This 225 KLD of excess treated water may be discharged into the nearby jail drain which carries wastewater of many tanneries, industries & domestic sewage of the city and treated water will comply with the discharge norms of CETP. Since, the city jain drain is not a tributary of River Ganga, it does not violate the Gazette Notification vide 5.0.3187 (E) dated 7.10.2016, Ministry of Water Resources, River Development and Ganga Rejuvenation.

#### **Observations of the committee**

- 18.7.8 UPPCB issued consent order on 03.02.2020 to project proponent subject to the orders

passed by Hon'ble NGT in OA no. 200/2014 MC Mehta Vs Union of India & Ors. The consented discharge of the industrial effluent is 24.0 KLD with defined parameters, viz., Total suspended solids, BOD, COD, Oil & grease. Thus, UPPCB permitted the industry to discharge treated effluent for the existing production, i.e., for production capacity of 60 hides /day.

18.7.9 Now, project proponent made application for amending the specific condition related to discharge of effluent in city jail drain for expansion project (1000 hides/day), i.e., for 225 KLD of treated effluent.

18.7.10 The Committee discussed the issue of effluent discharge in river Ganga and Its tributaries in view of Notification SO (E) 3187 dated 7<sup>th</sup> October 2016 and the orders passed by Hon'ble NGT in OA no. 200/2014 MC Mehta Vs Union of India & Ors. The committee also noted there are number of directives are mentioned in the order for discharge of effluents in city jail drain which are meant for implementation and monitoring by the local authorities, i.e., UPPCB.

#### Recommendations of the Committee

18.7.11 In view of foregoing, after detailed deliberations, the committee recommended the following amendment in the EC issued for expansion projected vide letter F.No.J-11011/128/2013-IAII(I) dated 12.04.2018.

S.No.	For	Read as
1	A. Specific Condition i. The Project Proponent shall not discharge, directly or indirectly any untreated or treated sewage sludge into River Ganga or its tributaries or its banks as per the Gazette Notification vide S.O.(E) 3187 dated 7 <sup>th</sup> October 2016 from the Ministry of Water Resources, River Development and Ganga Rejuvenation.	The Project Proponent shall abide by the Gazette Notification vide S.O.(E) 3187 dated 7 <sup>th</sup> October 2016 issued by NMCG, Orders of NGT dated 30.07.2017 in OA No. 200/2014, CPCB Guidelines and UPSPC directions, as applicable
2	A. Specific Condition v. The total water requirement shall not exceed 820 KLD and permission for water drawl shall be obtained from Competent Authority. All the wastewater generated shall be properly treated in ETP and after meeting the norms shall be sent to CETP for further treatment. The treated wastewater shall be made colour free to the extent feasible.	The total water requirement shall not exceed 820 KLD and permission for water drawl shall be obtained from Competent Authority. All the wastewater generated shall be properly treated as per prevailing norms/ rules. The treated wastewater shall be made colour free to the extent feasible. Further PP shall abide by Gazette Notification vide S.O.(E) 3187 dated 7 <sup>th</sup> October 2016 issued by NMCG, Orders of NGT dated 30.07.2017 in OA No. 200/2014, CPCB Guidelines and UPPCB directions, as applicable The treated wastewater shall be made colour free to the extent feasible.



**30<sup>th</sup> April, 2020**

18.8 Proposed expansion of Asbestos Cement Sheet plant (1,20,000 TPA to 3,20,000 TPA) (Phase 1- 40, 000 TPA & Phase 2 – 1,60,000 TPA) project of **M/s. Visaka Industries Ltd.**, Located at Village Kannawan, Gram panchayat Bacchranwan, Tehsil Maharajgan, **District Raebareli, Uttar Pradesh-** [Online Proposal No. IA/UP/IND/80541/2015; File No. J-11011/157/2005-IAII(I)] - **Reconsideration for Environment Clearance based on ADS reply – regarding.**

18.8.1 The proposal was considered in the EAC meeting held during 23-24<sup>th</sup> December 20219. The relevant portion of minutes are given as below.

**M/s Visaka Industries Ltd** has made online application vide proposal no. IA/UP/IND/80541/2015 dated 8<sup>th</sup> April 2019 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 4(c) Asbestos Milling and Asbestos based Products under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

**Details submitted by the project proponent**

The expansion project of M/s Visaka Industries Limited (VIL) located in Village Kannawan, Pargana Bacchranwan, Taluk Maharajganj, District Raebareli, State Uttar Pradesh was initially received in the Ministry on 14 Dec.’2015 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 6<sup>th</sup> meeting held on 3-4<sup>th</sup> May 2016 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on 21<sup>st</sup> June 2016 vide Lr. F. No. J-11011/157/2005-IA.II (I).

Based on the ToRs prescribed to the project, the project proponent submitted an application for Environmental Clearance to the Ministry online on 11/3/19, 11/6/19, 26/10/19 & 23/11/19. EDS was generated on 13/3/2019, 18/6/2019 & 19/11/2019. Accordingly, EIA report & base line data was revalidated by M/s Ecomen Laboratories Pvt. Ltd (QCI accredited consultant).

The project of M/s VIL is for enhancement of production of Asbestos Cement Sheets by 2,00,000 TPA from 1,20,000 TPA to 3,20,000 TPA. The existing project was accorded environmental clearance vide Lr .no. J-11011/157/2005-IA II (I) dated 21/9/2005.

The Status of compliance of earlier EC was obtained from Regional Office, Lucknow vide Lr. F.No. IV/ENV/UP/IND-69/182/2005/14, dated 02.05.2019. There is no non-compliance reported by Regional officer.

The proposed expansion will be carried out within the existing plant premises. The above increase in production shall be achieved in the existing factory premises. No /forestland is involved.

The entire land (private) has been acquired for the project. No water body exists around the project and modification/diversion in the existing natural drainage pattern at any stage is not proposed.

Nearest State Highway-36 is less than 1 km, Nearest Railway Station is

Bacchranwan- 3.5km, Nearest Airport is Lucknow 55 km, Nearest Town is Raebareli 27 km, Nearest Village is Kannawan 1.0km, Sai river is 9 km away.

Other Industries within 10 km are M/s. Reliance Industries Ltd (Cement grinding Plant) and one Food processing plant.

The topography of the area is flat and lies between 26°25'45.2"N Latitude and 81°07'47.5"E Longitude in Survey of India toposheet No. G44J3 at an elevation of 381 m AMSL. The ground water table ranges between 1.7 m to 3.8 m below the land surface during the post-monsoon season and 2 m to 4 m below the land surface during the pre-monsoon season.

No National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc., are located in the core and buffer zone of the project. The area also does not form a corridor for Schedule-I fauna.

Requirement of Raw Materials at full proposed capacity: Cement (10652 tonnes per month), Asbestos fibre (2259 tonnes per month), Fly ash (7284 tonnes per month), Pulp (217 tonnes per month)

The Manufacturing of asbestos cement corrugated and plain sheets is done by wet process known as Hatschek process.

#### **Air pollution sources & control measures:**

##### *Fibre Bag Opening and Milling*

The fibre bags shall be slit open in a closed automatic bag opening device. The empty bags shall be lifted by a hooking device attached within the bag opening device and carried to the attached bag shredder unit and the fibre after passing through the lump breaker shall be collected in the attached blender where some water shall be added to maintain the process in wet condition. When all the bags in one charge empty the fibre on to the blender, the fibre in wet form shall be taken to the Edge Runner Mill via a screw conveyor and elevator which is also joined by the shredded bag pieces from the shredder unit. Here at ERM some more water is further added to the fibre for milling operation. The bag opening device & the edge runner mill shall be kept under negative pressure by tapping it on to a Bag Filter Type Dust Collector with pulse jet, connected to a blower (capacity 6000 m<sup>3</sup>/hr) driven by a 15 Hp motor.

##### *Cement and Fly ash Feeding*

- The cement feeding point shall be tapped on to bag filter type dust collector with pulse jet and with a blower (capacity - 4000 m<sup>3</sup>/hr) driven by a 5HP MOTOR. The let out shall be through a stack of 18 m height.
- The Fly ash feeding point shall be tapped on to bag filter type dust collector with pulse jet and with a blower (capacity - 4000 m<sup>3</sup>/hr) driven by a 5HP MOTOR. The let out shall be through a stack of 18 m height.

##### *Fibre handling and storage*

The bags are handled at site by means of forklifts. Spillages if any, and container after unloading at site is cleaned using portable vacuum cleaner. Where this is not practicable, wet mopping, collection & recycling method is adopted. Wet mopping shall be carried out with the help of Rubber mat stick. Torn bags received if any, is sealed with suitable adhesive tapes. Such cleaning operation is undertaken by the operatives wearing protective clothing and respiratory masks. The fibre bags are

stacked in godowns. Trucks after unloading are subjected to thorough cleaning by vacuum cleaner.

#### *Sheet cutting operation*

Sheet cutting operation is carried out with the cutters operating under a steady stream of water jet which shall be kept water recycled. The washing is collected and periodically recycled to the process. This technique of dust suppression has been proven to be very effective.

#### *Product finishing*

The filing and finishing operation of asbestos cement goods is carried out in wet stage. The washing is collected and periodically recycled to the process. Green stage trimmings is immediately recycled to the process through waste dissolver.

#### *General good house-keeping*

Portable vacuum cleaner is used for the cleaning of go downs and raw material section. Wet mopping /collection/Recycling method wherever applicable is adopted for the spillage cleaning at raw material section. Wet mopping shall be carried out by the Rubber mat sticks without using any clothing material.

**Noise control measures:** The VIL is procuring Compressors and Generators with Noise protection systems like acoustic enclosures as per CPCB norms.

#### **Solid waste generation& management is as below:**

- i. Empty Fibre Bags – From Bag Opening Device (BOD)
- ii. Shredded in the Shredder unit attached to the Bag Opening Device and recycled along with the opened fibre
- iii. Fibre Dust – From Dust Collector at ER Mill &BOD Periodically recycled by adding in E R Mill.
- iv. Process Sludge – From Week-End Tank Continuously recycled by processing in Ball Mills.
- v. Hard Broken Pieces – From Damages/Rejects Continuously recycled after pulverising in Dry waste grinding system
- vi. Cement Dust – From Dust Collector at Cement Feeding Periodically recycled back in the system through hydration tanks.
- vii. Fly Ash Dust – From Dust Collector at FA Feeding Periodically recycled back in the system through hydration tanks.

#### **Wastewater management:**

Process Wastewater is collected in back water trench and is pumped into process wastewater cone tanks to be reused back into the process.

During maintenance, the cone tanks are emptied into settling pit and the process water is kept under agitation. After completion of the maintenance, the collected process water is pumped back into the cone tank to be used back into the manufacturing process. Thus, the process water is completely recycled back.

The targeted production capacity of the project is 0.32 Million TPA. The raw material for the plant would be procured from Cement-Prism cement, Satna, Birla gold cement, Mahihar, MP(By Road- Closed containers), Asbestos fibre-Imported (Russia)

- By Ship up to the port then by Road in Closed containers, Fly ash-nearby power plant (Feroz Gandhi Unchahar Thermal Power Plant) By Rail & Road (in Closed containers), Pulp -Kanpur- UP & Namakkahl- TN By Road (Covered Trucks).

The water requirement at full capacity of the project is estimated as 400m<sup>3</sup> /day. Max Make up water is 400 KLD & Recycled water which will remain continuously in circuit is 50 KLD. Fresh water requirement will be obtained from the underground water. The permission for drawl of groundwater is obtained from CGWA vide Lr. No. CGWA/IND/Proj/2016-166-R dated 02/08/2016. Renewal is under process. Online application submitted on 1/7/2019. Plant visit by CGWA held on 13/9/2019.

Existing power requirement for the plant is 1000 KVA. This is sufficient for Phase -1 expansion. The additional power requirement for the plant is 1000 KVA for Phase -2 expansion, which will be obtained from UPSEB. DG sets of 1 X 600 KVA, 1 X 380 KVA are also installed. No additional DG Sets are required. It is also proposed to use Solar power for regular plant operation at RBL for Phase-II. It is proposed to install Min 100 KWp (by using Approx 315 nos of Panels with each capacity of 320 Wp) roof top solar system at Loading Shed and Ball Mill Shed with net metering system which will be utilized for regular plant operation in Phase-II.

Fuel (Diesel) consumption (for DG) is 10500 ltr/year. Additional requirement for expansion in Phase-II will be approx. 9500 Ltr/year. Total requirement 20000Ltr/year.

Baseline Environmental Studies were conducted from April' 2016 to June' 2016. The data was validated for one month during 20/5/2019 to 15/6/2019. Ambient air quality monitoring has been carried out at 8 locations during 20/5/2019 to 15/6/2019 and the data submitted indicated: PM<sub>10</sub> (54.9µg/m<sup>3</sup> to 82.2µg/m<sup>3</sup>), PM<sub>2.5</sub> (20.3 to 45.2µg/m<sup>3</sup>), SO<sub>2</sub> (8.2 to 15.2 µg/m<sup>3</sup>) and NO<sub>2</sub> (16.3 to 33.6 µg/m<sup>3</sup>). The results of the modeling study done earlier indicate that the maximum increase of GLC for the proposed project is 2.88 µg/m<sup>3</sup> with respect to the PM<sub>10</sub>.

Groundwater quality has been monitored in 3 locations in the study area during 20/5/2019 to 15/6/2019 and analyzed. pH: 7.31 to 7.61, Total Hardness: 180 to 260 mg/l, Chlorides: 34 to 66 mg/l, Fluoride: 0.27 to 0.35 mg/l. Heavy metals are within the limits. Surface water sample was analyzed for one location for data validation. pH: 7.68; DO: 5.6 mg/l and BOD: BDL mg/l.

Soil characteristics-Soil is silty loam. The pH ranges from 7.39 to 7.67. Phosphate & Potassium values range from 11 to 17 & 25 to 36 Kg/ha.

Noise levels are analysed for 4 locations for validation & are in the range of 52.9 to 68 dB(A) for day time and 43.7 to 59.8 dB(A) for night time.

There are no people in the core zone of the project. No R&R is involved.

An area of 4.6 ha (46 %) will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project activities.

For the existing unit, the Consent to Establish/Consent to Operate from the Uttar Pradesh State Pollution Control Board obtained vide Lr. No. 1097/UPPCB/Raebareli (UPPCBRO)/CTO/air/Raebareli /2017 dated 23/01/2018 for air (valid up to 31/12/2019) & for water vide Lr. No. 1805/UPPCB/Raebareli (UPPCBRO)/CTO/water/Raebareli /2017 dated 23/01/2018 (valid up to 31/12/2019).

The Public hearing of the project was held on 28/6/2018 at 10 AM under the

chairmanship of Additional District Magistrate at the site for the expansion of plant production capacity (Asbestos Cement sheets) from the existing 1,20,000 TPA to 3,20,000 TPA. The issues raised during public hearing are disposal of waste, green belt development, dust control, medical camps, surveillance audit of safety measures etc.

An amount of Rs 6.98 lakhs has been earmarked in the current year has been earmarked for Corporate Environment Responsibility based on public hearing issues. The capital cost of the project is Rs.39Crores and the capital cost for environmental protection measures is proposed as Rs.126.95 lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs.70.5Lakhs. Proposed schedule for approval and implementation is 18 months from zero date.

Greenbelt will be developed in 4.6 Ha which is about 46 % of the total acquired area. Local and native species will be planted with a density of 2500 trees per hectare.

There is no court case or violation under EIA Notification to the project or related activity.

Consultant: Ecomen Laboratories Pvt. Ltd. (Sl. No.44, List of Accredited Consultant Organizations (Alphabetically) Rev. 82, Dec. 05, 2019).

**Observations of the Committee (EAC meeting held during 23-24<sup>th</sup> December 2019)**

18.8.2 The Committee noted following deficiencies in the EIA report.

- i. Rain water harvesting details have not been furnished.
- ii. Green belt development in the existing unit is not satisfactory.
- iii. Dedicated Environment Management Cell has not been established.
- iv. Permission for the ground water withdrawal for the existing and the proposed expansion has not been obtained.
- v. Action plan for Corporate Environment Responsibility shall be furnished based on the concerns expressed during the public hearing and findings of social impact assessment study as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018.

**Recommendations of the Committee (EAC meeting held during 23-24<sup>th</sup> December 2019)**

18.8.3 In view of the foregoing and after detailed deliberations, the committee deferred the consideration of the proposal cited above and sought following additional information for further consideration of the proposal:

- i. Rain water harvesting details shall be furnished.
- ii. Action plan for green belt development covering 46% of the total plant area shall be prepared and submitted.
- iii. Action plan for storm water management shall be furnished.
- iv. Dedicated Environment Management Cell shall be established and the details shall be furnished.
- v. Permission for the ground water withdrawal for the existing and the proposed expansion shall be submitted.
- vi. Action plan for Corporate Environment Responsibility shall be furnished based on the concerns expressed during the public hearing and findings of social

impact assessment study as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018.

- 18.8.4 In accordance with recommendation of EAC, additional information was sought on 9<sup>th</sup> January 2020. In response, the information was provided online on 14<sup>th</sup> March 2020.

#### **Observations of the Committee**

- 18.8.5 The committee discussed the additional information submitted by project proponent and found that it was in order.

#### **Recommendations of the Committee**

- 18.8.6 After detailed deliberations, the Committee recommended for grant of EC subject to following specific conditions in addition to the applicable general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 pertaining to asbestos units.

- i. PP shall carry out rain water harvesting and recharge more than 100 % of the annual consumption. Necessary monitoring facilities for ground water recharge from RWH shall be provide.
- ii. 20000 Trees shall be planted outside the factory premises in addition to 46% Green belt already committed inside the plant.
- iii. Storm water collected from the plant shall be treated and recharged.
- iv. Dedicated Environment cell shall be created to address environmental issues. Environment shall report to MD.
- v. GW abstraction shall be phased out by July 2024 or earlier and PP shall switch over to surface water usage.
- vi. CER activities shall be implemented within 18 months as given in the table below.

<b>S.No.</b>	<b>Details of activities</b>	<b>Amount proposed (Rs.in lakhs)</b>
1	Infrastructure creation for drinking water supply- Construction of 20 hand tube wells at villages(Kannawan5, Kaharhni 4, Bachhrawan 3, Thulendi 3, Pahurawan 2, Kundanganj 3)	8.0
2	Sanitation -Construction of 20 toilets at villages (Kannawan 4, Kaharhni4, Bachhrawan 4, Thulendi 4, Pahurawan 2, Kundanganj 2)	5.0
3	Construction of one Room each in Primary, Secondary School & Intermediate college in Kannawan, Thulendi & Bachhrawan.	9.0
4	Construction of one Pond at village Kannawan, size 15MX15MX3M, in which rainwater will be collected and used for other& domestic work as well as recharging.	3.4
5	Electrification of villages	12.4
6	Avenue plantation (total plantation 7800 @ Rs50/plant)	3.9
7	Plantation in community area (total plantation 6000 @ Rs50/plant) (villages Kannawan 1600, Kaharhni 1000, Bachhrawan 1200,Thulendi 1100, Pahurawan 800 ,	3.0

S.No.	Details of activities	Amount proposed (Rs.in lakhs)
	Kundanganj 300)	
	<b>Total cost</b>	<b>44.7</b>

18.9 Manufacturing of 1200 TPM manganese oxide by **M/s Shree Hanuman Minerals** at survey No. 7/2, village Bahmani, Post Bokhedi, Dist. Nagpur, **Maharashtra** [Proposal No. IA/MH/IND/89190/2018; MoEF&CC File No. IA-J-11011/374/2018-IA-II(I)]-**Environment Clearance** – regarding.

18.9.1 **M/s. Shree Hanuman Minerals** has made online application vide proposal no. IA/MH/IND/89190/2018 dated 22.04.2020 along with copy of EIA/EMP report and Form – 2 seeking Environmental Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” in the EIA Notification, 2006 and the project is appraised at the Central level.

18.9.2 Proposed project of M/s Hanuman Minerals located in Survey No. 7/2, Bahmani (P H No. 80) At Post Borkhedi Distt. Nagpur, Maharashtra was initially received in the Ministry on 20<sup>th</sup> December 2018 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its 3<sup>rd</sup> meeting of EAC (Industry-1) held on 9<sup>th</sup> to 11<sup>th</sup> January, 2019 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on 22<sup>nd</sup> April 2019 vide Lr. No. J-1101/374/2018-IA.II(I).

18.9.3 Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 30<sup>th</sup> March 2020 vide Online Application No. IA-J-11011/374/2018IA-II(I)].

**Details submitted by the project proponent**

18.9.4 At present grinding of Manganese ore is being carried out at Survey No. 7/2, P.H.No.80, Village Bahmani, Post Borkhedi, District Nagpur, Maharashtra and the proposed project is for setting up of a new unit for production of 14,440 TPA Manganese oxide

18.9.5 The proposed capacity for different products for new site area as below:

Name of Unit	No. of Unit	Capacity of each unit	Production Capacity
Furnace/Bhatti	3	20 T, 7 T and 3T	14,400 TPA

18.9.6 The total land in possession is 1.42 Ha which is in industrial use. Forestland is not involved. It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage is not proposed.

18.9.7 The topography of the area is flat and reported to lies between 20°50'7.14"N to 20°50'11.48"N Latitude and 78°57'35.69"E to 78°57'41.54"E Longitude in Survey of India topo sheet No. 55 L/13 & 55 P/1, at an elevation of 270 m AMSL.

18.9.8 No National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. are reported to be located in the core and buffer zone of the project. The

- area also does not report for Schedule-I fauna. The list of flora and fauna provided in Chapter 3 reporting presence of no schedule-I fauna in the study area.
- 18.9.9 The process of project showing the basic raw material used and the various processes involved to produce the final output, waste generated in process given in the EIA report.
- 18.9.10 The targeted production capacity of Manganese Oxide is 14,400 TPA. The Manganese ore for the plant would be procured from MOIL and Private Mines. The ore transportation will be done through Road.
- 18.9.11 The water requirement of the project is estimated as 3 m<sup>3</sup>/day, will be source from the Ground Water. Permission from CGWA will be obtained before commissioning of unit as per OM No. F.No.21-103/2015-IA.III dated 2<sup>nd</sup> November 2018 issued by Ministry of Environment, Forest & Climate Change.
- 18.9.12 The power requirement for the proposed project will be 80 KW. The required Electricity shall be sourced from State Electricity Board.
- 18.9.13 Baseline Environmental Studies were conducted during summer season i.e. from 01<sup>st</sup> February 2019 to 03<sup>rd</sup> May 2019. Ambient air quality monitoring has been carried out at 8 locations during 01<sup>st</sup> February 2019 to 03<sup>rd</sup> May 2019 and the data submitted indicated: PM<sub>10</sub> (35.0 µg/m<sup>3</sup> to 62.6 µg/m<sup>3</sup>), PM<sub>2.5</sub> (12.5 to 32.2 µg/m<sup>3</sup>), SO<sub>2</sub> (7.3 to 20.3 µg/m<sup>3</sup>) and NO<sub>x</sub> (9.3 to 24.4 µg/m<sup>3</sup>). The results of the modeling study indicates that the maximum increase of GLC for the proposed project is 1.015 µg/m<sup>3</sup> with respect to the PM<sub>10</sub>, 1.68 µg/m<sup>3</sup> with respect to the SO<sub>2</sub>, 1.32 µg/m<sup>3</sup> with respect to the NO<sub>x</sub>.
- 18.9.14 Ground water quality has been monitored in 8 locations in the study area and analyzed. pH: 7.1 to 7.6, Total Hardness: 136 to 344 mg/l, Chlorides: 25.8 to 184.5 mg/l, Fluoride: 0.3 to 0.5 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 5 locations. pH: 7.1 to 7.6; DO: 4.9 to 5.8 mg/l and BOD: <3 to 3.5 mg/l. COD from 6.8 to 11.6 mg/l.
- 18.9.15 Noise levels are in the range of 38.2 to 53.5 dB(A) for daytime and 35.4 to 43.5 dB(A) for nighttime.
- 18.9.16 No/ R&R is involved.
- 18.9.17 It has been reported that a total of 1080 TPA of Ash will be generated due to the proposed project which will be sold to brick manufacturers. It has been envisaged that an area of 0.4686 ha will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.
- 18.9.18 It has been reported that Consent to Operate from the Maharashtra State Pollution Control Board obtained vide Lr. No MPCB/UAN No. 57945/1810000756 dated 16/10/2018 and consent is valid up to 31/03/2020.
- 18.9.19 The Public hearing of the project was held on 13/09/2019 at Grampanchayat Office, village Brahmani, tahsil Borkhedi, district Nagpur under the chairmanship of Additional District Magistrate for production of 14,400 TPA Manganese Oxide. The issues raised during public hearing are employment, pollution control & green belt development. An amount of Rs.6.0 Lakhs (2% of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues/CER.



- 18.9.20 The capital cost of the project is Rs.3.0 Cr and the capital cost for environmental protection measures is proposed as Rs. 43 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs. 8 Lakhs. The CER plan has been provided in the EMP in its page No. 142 to 143. The employment generation from the proposed project is 10 – 20.
- 18.9.21 Greenbelt will be developed in 0.4686 Ha which is about 33% of the total acquired area. A 100 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 800 saplings will be planted.
- 18.9.22 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

**Observations of the committee**

- 18.9.23 The process involves pyro metallurgical process by heat treatment of MnO<sub>2</sub> to extract MnO. The operations generate air emissions from the process and handling of the material. Solid waste will be generated by the magnetic separation of gangue material from ore.
- 18.9.24 A separate storm network is proposed designed to collect the rainwater from the plant area. Total ground water withdrawal will be 1650 m<sup>3</sup> /annum. Considering 20% more it will be 1980 m<sup>3</sup>/annum. Potential of ground water recharge is 3333 m<sup>3</sup>/annum.

**Recommendations of the committee**

- 18.9.25 Committee after detailed deliberations on the proposal recommended the EC with following specific conditions in addition to the applicable general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018.
- i. Project proponent shall provide 10m wide green belt to contain dust and odor pollution. Boundary wall of the factory shall be 4m high.
  - ii. Project proponent shall switch over from ground water abstraction to Surface water in next three years.
  - iii. Project proponent shall dispose of the magnetic rejects from the plant for use in construction industry.
  - iv. No jigging is permitted in the plant. Project proponent shall procure clean Mn Ore from the market.
  - v. CER activities shall be completed in one year.
  - vi. Bag filters shall be used for dust control dust from furnace
  - vii. Particulate matter emission shall be less than 30mg/Nm<sup>3</sup>. Dust collected from bag filters shall be recycled in the plant.
  - viii. No dumping of solid waste shall be carried out inside plant.
  - ix. Concrete roads shall be provided inside the plant. Industrial vacuum cleaner and regular water sprinkling shall be used to control fugitive dust.
  - x. Trucks and dumpers carrying raw materials and products shall be covered with tarpaulins.

- xi. Rainwater harvesting to recharge more than 100 % of the annual water consumption shall be practiced.

18.10 Expansion of Integrated Steel Plant from 2.85 MTPA to 3.0 MTPA by **M/s. Rungta Mines Limited** located at Villages Jharbandh, Galpada and Tarkabeda, District Dhenkanal, Odisha [Proposal No. IA/OR/IND/151574/2020 ; MoEF&CC File No. IA-J-11011/309/2018-IA-II(I)]- **Environment Clearance under para 7(ii) of EIA Notification, 2006 – regarding.**

18.10.1 M/s. Rungta Mines Limited has made an online application vide proposal no. IA/OR/IND/151574/2020 dated 22/04/2020 along with Form – 2, pre-feasibility report and Addendum to the EIA report seeking Environment Clearance (EC) under para 7(ii) of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the project is appraised at the Central level.

**Details submitted by the project proponent**

18.10.2 MoEF&CC has originally accorded Environment Clearance (EC) to M/s. Rungta Mines Limited vide letter no. J-11011/241/2009-IA.II(I) dated 2/8/2010 for setting up of 1.9 MTPA Integrated Steel Plant along with auxiliary facilities at Villages Jharbandh, Galpada and Tarkabeda, District Dhenkanal, Odisha. Subsequently, Ministry vide letter dated 20/9/2018 extended the validity of the EC till 1/08/2020. Since the facilities envisaged under the EC dated 2/8/2010 could not be implemented within the validity period and further the project proponent intended to add certain additional units, PP obtained fresh EC from MoEF&CC for setting up of 2.85 MTPA Integrated Steel Plant vide letter no. J-11011 /309/2018.IA-II.(I) dated 11/09/2019 followed by amendment in EC on 13/04/2020 pertaining to the configuration of the pellet plant.

18.10.3 The units sanctioned as per EC dated 11/09/2019 and its subsequent amendment dated 13/04/2020 are as follows:

Sl. No.	Plant facilities	Configuration	Capacity as per the EC dated 11/09/2019 & 13/04/2020
1	Beneficiation Plant	2X2.69 MTPA	5.4 MTPA
	Pelletisation Plant	1X2.948 MTPA	2.948 MTPA
3	Coal Washery	1X400 TPH + 1X235 TPH	4.141 MTPA
4	DRI Plant	2X500 +4X600 TPD	1.547 MTPA
5	Mini Blast Furnace	1X600 + 1X1050 CUM	1.559 MTPA
6	Sinter Plant	1X64 + 1X110 sq.m.	1.663 MTPA
7	Coke Oven Plant	16 batteriesX 70,000 TPA	1.12 MTPA
8	Steel Melting Shop		2.464 MTPA
8.1	Steel Melting via Induction Furnace Route	7X 20 T IF + 4X20 T LRF	0.539 MTPA
8.2	Steel Melting via Electric Arc Furnace-Vacuum Degassing-Argon Oxygen	1X90 T + 1X160 T EAF and 1X90 T + 1X160 T LRF	1.925 MTPA

Sl. No.	Plant facilities	Configuration	Capacity as per the EC dated 11/09/2019 & 13/04/2020
	Decarburization Route		
8.3	Continuous Casting Machine (Billets/ Bloom Caster/ Slab)	3 nos. X 3 strands	2.415 MTPA
9	Finished Product Facilities		2.850 MTPA
9.1	Rolling Mill (TMT/ Flat/ Round/ Wire Rod/ Structural Mill/ others)	5X0.2 + 2X0.3 MTPA	1.600 MTPA
9.2	Strip Mill/ Sheet/ Coil/ Wire & Bar Mill/ Wire Rope	1X0.45 + 1X0.4 MTPA	0.85 MTPA
9.3	Ductile Pipe Plant	2X0.2 MTPA	0.400 MTPA
10	Producer Gas Plant	20X3000 Nm <sup>3</sup> /h	480 Million Nm <sup>3</sup> / Annum
11	Oxygen Plant	1 X 100 + 1 X 180 TPD	0.098 MTPA
12	Lime Plant	1 X 300 + 1 X 570 TPD	0.3045 MTPA
13	Cement Plant	1X2600 + 1X2300 TPD	1.686 MTPA
14	Captive Power Plant		385 MW
14.1	Waste Heat Recovery Boiler (WHRB) based Captive Power Plant (CPP)		135 MW
a	DRI Kiln exit gas based	2X50 + 2X60 TPH	68 MW
b	MBF Gas based	1X50 + 1 X 90 TPH	31
c	Coke Oven Gas based	1X 60 + 1X100 TPH	36
14.2	(AFBC/CFBC) based CPP	2X125 + 4X250 TPH	250

18.10.4 Presently, the following facilities are under construction as on 24<sup>th</sup> April, 2020 after obtaining EC from MoEF&CC followed by the CTE from Odisha Pollution Control Board.

Sl.	Facilities	Sanctioned production capacity
1	Sponge Iron plant (2 X 500 TPD)	0.455 MTPA
2	Steel Melting Shop IF 4x20 T	0.308 MTPA
3	Captive power plant	50 MW
	WHRB	25 MW
	AFBC/CFBC	25 MW

18.10.5 The Status of compliance of original EC was obtained from Regional Office, Bhubaneswar vide Lr. No. 101-639/EPE dated 25.02.2019. It is stated in the report that compliance status of the stipulated EC conditions could not be ascertained as the major project work is yet to be started. However, observations made by the Regional

Office and the corrective action taken by the project proponent as per the Action Taken Report submitted to RO are summarized as below:

S.No	Observations of Regional Office of MoEF&CC	Corrective action taken by the Project Proponent (PP)
i.	It has been found that PAs are in process to construct one water storage pond, which will also be using for the storage of surface runoff / rain water coming out from the reserved forest (RF) hillock, which is situated near North west side of the project. Therefore, it is requested to construct one or more rain water collection pond near the existing hillock, for easily collection and storage of rain water /surface water coming out from the existing hillock during rainy time, which will be used for various activities including development of green belt etc.	One water storage pond (30 acres, 5 m depth) has been constructed and has full brim water for use in the construction work and development of green belt etc. in the project. The additional pond desired will be constructed inside the project area to collect the rain water from the hillock prior to operation.
ii.	It is requested to take consultation/ approval from various competent authorities (including CGWA etc) for the collection and utilization of the huge quantity of the rain water coming out from the RF hillocks, which is situated near west north side of the project.	Hydro geological survey report has been prepared by Skylark, Bangalore to assess total rainwater availability and approval will be obtained from the competent authority.
iii.	It is also requested to provide significant quantity of rainwater to local farmers for cultivation of paddy.	PP is creating passes for rainwater to pass from plant side to villagers for cultivation of paddy, hence, there will be no decline in rain water availability to farmers. Additionally, ponds will be constructed as part of CER & CSR in the agricultural fields, if desired by the respective Gram Panchayats.
iv.	It has been found that PAs have not yet started plantation work on the project side, therefore, it is requested to conduct massive plantation drive during coming monsoon period, details information on development of green belt should also submitted to this regional office	PP has carried out plantation in 40 acres land covering 40,000 plants.
v.	It is required to constitute Environment Management cell (EMC) at project level.	Environment management cell has been constituted at project level to take up the responsibility of day to day environment related activities.

S.No	Observations of Regional Office of MoEF&CC	Corrective action taken by the Project Proponent (PP)
vi.	It is required to conserve top soil of the project and use it for the development of green belt.	During construction, PP is removing top soil & keeping in separate pile for use in plantation purpose.

18.10.6 The present proposal of M/s. Rungta Mines Limited for seeking Environment Clearance under the provisions of para 7(ii) of EIA Notification, 2006 for the following:

- i. Change in configuration of Ladle Refining Furnace, Continuous Casting Machine and Rolling Mill.
- ii. Capacity enhancement of DRI, SMS Via IF Route, Billets/Slab/Bloom Caster and TMT/Round/Wire Rod/Flat/ Structural/ others due to change in configuration followed by the usage of superior coal quality with better Fixed Carbon content and increase in feed of iron ore/pellet.

18.10.7 The details of the proposed change in configuration and enhancement in production quantities are furnished as below:

Sl. No. as per EC	Plant facilities	Capacity as per the EC dated 11/09/2019 & 13/04/2020	Proposed Enhanced Capacity & Configuration	Increment Quantity	% increase
4	DRI Plant	1.547 MTPA	1.613 MTPA	0.066 MTPA	4.27
	Configuration:	2X500 +4X600 TPD	2X500 +4X600 TPD	(No change)	
8	Steel Melting Shop	2.464 MTPA	2.618 MTPA	0.154 MTPA	6.25
8.1	Steel Melting via Induction Furnace Route	0.539 MTPA	0.693 MTPA	0.154 MTPA	28.57
	Configuration	7X 20 T IF + 4X <u>20 T</u> LRF	7X 20 T IF + 4X <u>25 T</u> LRF	(Config change)	
8.3	Continuous Casting Machine (Billets/ Bloom Caster/ Slab)	2.415 MTPA	2.566 MTPA	0.151 MTPA	6.25
	Configuration	3 nos. X <u>3</u> strands	3 nos. X <u>4</u> strands	(Config change)	
9	Finished Product Facilities	2.850 MTPA	3.0 MTPA	0.15 MTPA	5.26

Sl. No. as per EC	Plant facilities	Capacity as per the EC dated 11/09/2019 & 13/04/2020	Proposed Enhanced Capacity & Configuration	Increment Quantity	% increase
9.1	Rolling Mill (TMT/ Flat/ Round/ Wire Rod/ Structural Mill/ others)	1.60 MTPA	1.75 MTPA	0.15 MTPA	9.38
	Configuration	5X0.2 + <u>2X0.3</u> MTPA	5X0.2 + <u>1X0.3</u> + <u>1X0.45</u> MTPA	(Config change)	

18.10.8 The consolidated product slate after change in configuration and enhancement in production quantities are furnished as below:

S.No.	Plant facilities	Capacity as per the EC dated 11/09/2019 & 13/04/2020	Proposed Capacity & Configuration	Increment Quantity	increase
	<b>Overall finished steel capacity</b>	<b>2.85 MTPA</b>	<b>3.0 MTPA</b>	<b>0.15 MTPA</b>	<b>5.26%</b>
1	Beneficiation Plant	5.4 MTPA (2X2.69 MTPA)	5.4 MTPA (2X2.69 MTPA)	Nil	0%
2	Pelletisation Plant	2.948 MTPA (1X2.948 MTPA)	2.948 MTPA (1X2.948 MTPA)	Nil	0%
3	Coal Washery	4.141 MTPA (1X400 TPH + 1X235 TPH)	4.141 MTPA (1X400 TPH + 1X235 TPH)	Nil	0%
4	DRI Plant	1.547 MTPA (2X500 +4X600 TPD)	1.547 MTPA (2X500 +4X600 TPD)	0.066 MTPA (No change)	4.27%
5	Mini Blast Furnace	1.559 MTPA (1X600 + 1X1050 CUM)	1.559 MTPA (1X600 + 1X1050 CUM)	Nil	0%
6	Sinter Plant	1.663 MTPA (1X64 + 1X110 sq.m.)	1.663 MTPA (1X64 + 1X110 sq.m.)	Nil	0%
7	Coke Oven Plant	1.12 MTPA (16 batteriesX 70,000 TPA)	1.12 MTPA (16 batteriesX 70,000 TPA)	Nil	0%
8	Steel Melting Shop	2.464 MTPA	2.618 MTPA	0.154 MTPA	6.25%
8.1	Steel Melting via Induction Furnace Route	0.539 MTPA (7X 20 T IF + <b>4X20</b> T LRF)	0.693 MTPA (7X 20 T IF + <b>4X25</b> T LRF)	0.154 MTPA (Configuration change)	28.57%
8.2	Steel Melting via Electric Arc Furnace-Vacuum Degassing-Argon Oxygen Decarburization Route	1.925 MTPA (1X90 T + 1X160 T EAF and 1X90 T + 1X160 T LRF)	1.925 MTPA (1X90 T + 1X160 T EAF and 1X90 T + 1X160 T LRF)	Nil	0%

S.No.	Plant facilities	Capacity as per the EC dated 11/09/2019 & 13/04/2020	Proposed Capacity & Configuration	Increment Quantity	increase
8.3	Continuous Casting Machine (Billets/ Bloom Caster/ Slab)	2.415 MTPA (3 nos. X 3 strands)	2.566 MTPA (3 nos. X 4 strands)	0.151 MTPA (Configuration change)	6.25%
9	Finished Product Facilities	2.850 MTPA	3.0 MTPA	0.15 MTPA	5.26%
9.1	Rolling Mill (TMT/ Flat/ Round/ Wire Rod/ Structural Mill/ others)	1.60 MTPA (5X0.2 + 2X0.3 MTPA)	1.75 MTPA (5X0.2 + 1X0.3 + 1X0.45 MTPA)	0.15 MTPA (Configuration change)	9.38%
9.2	Strip Mill/ Sheet/ Coil/ Wire & Bar Mill/ Wire Rope	0.85 MTPA (1X0.45 + 1X0.4 MTPA)	0.85 MTPA (1X0.45 + 1X0.4 MTPA)	Nil	0%
9.3	Ductile Pipe Plant	0.400 MTPA (2X0.2 MTPA)	0.400 MTPA (2X0.2 MTPA)	Nil	0%
10	Producer Gas Plant	480 Million Nm <sup>3</sup> / Annum (20X3000 Nm <sup>3</sup> /h)	480 Million Nm <sup>3</sup> / Annum (20X3000 Nm <sup>3</sup> /h)	Nil	0%
11	Oxygen Plant	0.098 MTPA (1 X 100 + 1 X 180 TPD)	0.098 MTPA (1 X 100 + 1 X 180 TPD)	Nil	0%
12	Lime Plant	0.3045 MTPA (1 X 300 + 1 X 570 TPD)	0.3045 MTPA (1 X 300 + 1 X 570 TPD)	Nil	0%
13	Cement Plant	1.686 MTPA (1X2600 + 1X2300 TPD)	1.686 MTPA (1X2600 + 1X2300 TPD)	Nil	0%
14	Captive Power Plant	385 MW	385 MW	Nil	0%
14.1	Waste Heat Recovery Boiler (WHRB) based Captive Power Plant (CPP)	135 MW	135 MW	Nil	0%
a	DRI Kiln exit gas based	68 MW (2X50 + 2X60 TPH)	68 MW (2X50 + 2X60 TPH)	Nil	0%
b	MBF Gas based	31 MW (1X50 + 1 X 90 TPH)	31 MW (1X50 + 1 X 90 TPH)	Nil	0%
c	Coke Oven Gas based	36 MW (1X 60 + 1X100 TPH)	36 MW (1X 60 + 1X100 TPH)	Nil	0%
14.2	(AFBC/CFBC) based CPP	250 MW (2X125 + 4X250 TPH)	250 MW (2X125 + 4X250 TPH)	Nil	0%

18.10.9 The justification furnished for the proposed enhancement in production capacities due of various units is furnished as below:

#### A. DRI Unit

- i. Detailed engineering has led to minor changes leading to increase in capacity with same configuration of DRI kilns.
- ii. In EC dated 11.09.2019, kiln operation days were 350 which are proposed to be increased to 355 days.
- iii. Superior quality of coal with better Fixed Carbon of 51% is proposed to be used.
- iv. Company will purchase 1 no. Brokk machine for accretion cutting to minimize the accretion cutting days.
- v. Constant quality of feed raw material will be maintained with engineering features finalised.
- vi. Better control in the operational parameters possible after detailed engineering and by deploying additional manpower.

#### **B. Induction furnace**

- i. Replacement of the presently used silica based acidic lining (life- 20 heats) by Alumina based neutral lining (life-100 heats) in induction furnaces.
- ii. Furthermore, 100 heat life of neutral lining can be further increased to 350 heat by hot patching.
- iii. Therefore, as compared to present utilisation of 50% (every pair of 2X20T working , 2X20 T standby undergoing re-lining), in future we can utilise 75% (3X20T working , 1X20 T standby undergoing re-lining) due to increased life of lining.

#### **C. Ladle refining furnace**

- i. Based on experience better leverage (higher freeboard volume for slag accommodation) for refining of the liquid metal.
- ii. As the average quantity of liquid metal per heat varies extra refining capacity will be advantageous.
- iii. Sequence matching of the furnaces for the effective and optimum production planning.

#### **D. Rolling mill**

- i. Increase in number of hours of operation every day from 20 hours to 22 hours.

18.10.10 The land required for the plant is 273.07 ha, out of which 218.82 ha is private agricultural land and 54.25 ha is Government land comprising of 22.53 ha leasable, 13.95 ha gochar, 14.61 communal and 3.16 ha forest land. Forest land is involved. Stage II forest clearance has been obtained from MOEF&CC vide letter no. 5-ORB207/2014-BHU dated 02.07.2015. 90% of land (246.255 ha) is in possession of company and balance of 26.819 ha is pending with Tehisldar, Hindol. No river passes through the project area.

18.10.11 The topography of the project is flat and reported to lie between 22°45'14'' to 22°46'24''N Latitude and 85°17'12'' to 85°18'45''E Longitude in Survey of India Open Series Maps No. F45T5. The average ground elevation of the project area is 75-95 m AMSL. The ground water table is reported to range 1.42 m to 8.61 below the land surface during the pre-monsoon season and 2.01 m to 8.52 m below the land surface during the post-monsoon season.

18.10.12 No national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. are reported to be located in the core and buffer zone of the project. The Satkosia Gorge WLS is located at a distance of 40 km from the site. Site specific wildlife



conservation plan has been prepared and approved by PCCF (WL) Government of Odisha vide letter no. 3188/1WL-ssp-10/2015 dated 09.04.2015.

18.10.13 The existing baseline status based on the data collected during the post project monitoring for the existing EC is given as below:

- ii. Ambient air quality monitoring: PM<sub>10</sub> (49.8 to 70.09 µg/m<sup>3</sup>), PM<sub>2.5</sub> (28.8 to 39.6 µg/m<sup>3</sup>), SO<sub>2</sub> (7.0 to 9.5 µg/m<sup>3</sup>) and NO<sub>x</sub> (10.2 to 12.6 to µg/m<sup>3</sup>).
- iii. Ground water quality has been monitored in 4 locations in the study area and results indicate pH in range of 6.4.-7.1, TSS between 4-14 mg/l, TDS between 364-712 mg/l, total hardness between 276-480 mg/l, Chloride between 19-185 mg/l, Fluoride between 0.18-0.40 mg/l and iron is below detection limit.
- iv. Noise level are in the range of 49.06 to 51.48 dBA for day time and 40.18 to 41.84 dBA for night time

18.10.14 The resource requirement and the pollution load assessment for the enhancement in ISP capacity from 2.85 MTPA to 3.0 MTPA is furnished as below:

Sl. No	Item	As per EC dated 11.09.2019	Proposed Increase	Total	% change
	<b>Production of finished steel</b>	<b>2.85 MTPA</b>	<b>0.15 MTPA</b>	<b>3.0 MTPA</b>	+5.3%
1	Raw Material (in house & out house), TPA	37,055,587	342,272	37,397,859	+1%
1.1	Coal, TPA	4,844,956	-69301	4,775,655 (1.4% decrease)	-1.4%
1.2	Iron Ore & fines, TPA	12,523,824	0	12,523,824 (no change)	No change
1.3	Dolomite, TPA	537,581	less 13486	524,095	-2.5%
1.4	Steel Scrap, TPA	29,294	45222	74,516	+154%
<b>2</b>	<b>Finished Product</b>				
2.1	Pellets	627,500	-99200	5,28,300	-15% (pellets sold will be utilized inhouse in DRI)
2.4	RM Finished Product	1,600,000	150000	1,750,000	+9.4%
<b>3</b>	<b>Manpower</b>	<b>2600</b>	<b>50</b>	<b>2650</b>	<b>+1.9%</b>
<b>4</b>	<b>Power, MW</b>	<b>376</b>	<b>18</b>	<b>394</b>	<b>+4.7%</b>
<b>5</b>	<b>Water &amp; waste water</b>				
5.1	Fresh water consumption (cum/hr)	2950	31	2981	+1%
5.2	Waste water generation (cum/hr)	545	3	548	+0.5%

Sl. No	Item		As per EC dated 11.09.2019	Proposed Increase	Total	% change
5.3	Utilization of waste water (%)		100% in Ash quenching, dust suppression, brick plant, horticulture			
6	Common monitoring basin		40x30x8m	Nil	40x30x8m	
7	Transport, trucks per hour		107	2	109	+1.9%
8	Air Quality	Terrain based AAQ modelling carried out using ISCST3	Stack emissions	Revised for expansion	Stack emissions	
	GLC, mg/m <sup>3</sup>	PM <sub>10</sub>	16.13	16.24	0.11	0.7%
		SO <sub>2</sub>	43.87	40.43	-3.44	-7.8%*
		NO <sub>2</sub>	17.90	17.33	-0.57	-3%

- 18.10.15 There will be increase in solid waste generation by 130,296 TPA. The solid waste generation is increase in Char from DRI Kiln (4,511 TPA), ESP dust from DRI Kiln (102,624 TPA), Kiln Accretion from DRI Kiln (37,052 TPA), Bag filter dust from Induction furnace (10,386 TPA), Mill scale from SMS caster (3,080 TPA) and Mill Scale from Rolling Mill (2,818 TPA). While the solid waste generation will reduce in Slag in Induction furnace (29,909 TPA) and Reject from RMS/SM/DPP of Rolling Mill (266 TPA).
- 18.10.16 The capital cost of the proposed amendment and enhancement is Rs 50 crores and the capital cost for environmental management is proposed as Rs. 50 lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs. 2 lakhs per annum. The funds allocated towards CER is Rs. 50 lakhs.
- 18.10.17 The total green area will be 90.11 ha, which is about 33% of the total area. A 10 m wide green belt, consisting of at least 3 tiers around boundary will be developed as green belt and green cover as per CPCB/ MOEF&CC, New Delhi guidelines. Total 2.25 lakh trees will be planted and total funds allocated is Rs. 2.26 crore.
- 18.10.18 Public hearing for the existing EC held on 07.03.2019 as per the provisions laid down in the EIA Notification, 2006.
- 18.10.19 The proponent has mentioned that there is no court case or violation under EIAs Notification to the project or related activity.
- 18.10.20 Name of consultant: Min Mec Consultancy Private Limited, New Delhi. The consultant is preparing and presenting reports as per the High Court of Delhi orders in LPA 110/2014 and CM No.2175/2014 (stay) and W.P.(C) 3665/2016

### **Observations of the Committee**

18.10.21 The Committee noted the following:

- i. As per the records made available by the project proponent, the capacity of Integrated Steel Plant is increasing from 2.85 MTPA to 3.0 MTPA by change in configuration of the units followed by the usage of superior coal quality with better Fixed Carbon content and increase in feed of iron ore/pellet. There will be no change in land requirement and reduction in anticipated emission level due to the adoption of higher configuration units. Therefore, the Committee consider the instant proposal under para 7(ii) (a) of the EIA Notification, 2006 and dispense with the requirement of conducting fresh public consultation. Further, noted that PP has taken corrective action to the observations made in the inspection report of RO.
- ii. The committee also taken note of the issues stated in the public representation dated 28/04/2020 of Shri.V.P.Upadhyay against the instant project under consideration and was of the view that any change in configuration of the plant during execution of the project after detailed engineering is permitted under clause 7(ii) of the EIA Notification, 2006.

### **Recommendations of the Committee**

18.10.22 In view of the foregoing and after detailed deliberations, the committee recommended the project for grant of Environment Clearance under para 7(ii) of EIA Notification, 2006 in supersession of the existing EC dated 11/09/2019 subject to the following specific conditions in addition to the applicable general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 pertaining to integrated steel plants.

- i. An affidavit shall be submitted to the Ministry stating that observations made in the inspection report of Regional Office has been compiled within three months from date of issue of the Environment Clearance.
- ii. Use of high grade coal with maximum ash content of 28% in DRI shall be ensured.
- iii. Increase in green belt and plantation within and outside the plant area by 2 ha over and above stipulated 33 % shall be carried out with a minimum 10-meter-wide by using local broadleaved tree species.
- iv. ESP and bag filters shall be designed to reduce PM below 30 mg/Nm<sup>3</sup> compared to earlier proposal of 50 mg/Nm<sup>3</sup>.
- v. Advanced controllers to improve efficiency of bag filters shall be installed.
- vi. PP shall control the fugitive emissions by installing fixed water sprinklers and operation of mobile industrial vacuum cleaner.
- vii. No additional water shall be abstracted for the instant project.
- viii. No Tailing ponds for iron ore fines and coal washery rejects shall be permitted. Instead the clarifiers and belt filers shall be installed to make slimes and rejects useful for sale.
- ix. Only one year storage is permitted for accretion material storage.
- x. Project proponent shall ensure that 80% Sulphur is removed from the coke oven waste gases from the heat recovery boiler. PP shall also prepare an SOP for monitoring the removal and reduction of Sulphur in coke oven.

- xi. Project proponent shall ensure that the railway siding is established within a period of 5 years or before commissioning of the full capacity of the plant, whichever is earlier.
- xii. Project proponent shall ensure that the proportion of hot charging in rolling mill is not be less than 80 %.
- xiii. CER activities shall be completed within a timeframe of 3 years as per the action plan submitted by the project proponent.

- 18.11 Proposed Standalone Cement Grinding Unit by installation of 2x300 TPD Ball Mill with production capacity of 0.183 MTPA by **M/s. Devanadan Banarasi Private Limited** located at Village- Belsipah, Pargana- Garwar, Tehsil & **District- Ballia, Uttar Pradesh** [Online proposal No. IA/UP/IND/121374/2019; MoEF&CC File No. J-11011/63/2020-IA.II (I)] – **Prescribing of Terms of Reference (ToR) – regarding.**

Consideration of the proposal was deferred as the project proponent did not participate in the VC consequently for the two times. The Committee deferred the consideration of the proposal and decided to consider the same as and when requested by the PP.

- 18.12 Proposed Modernization and Expansion Plan (MEP) of Existing Paper/Board Manufacturing Plant by **M/s JK Paper Limited** located at JKPL Unit: CPM, Fort Songadh, P.O Central Pulp Mills, **District Tapi, Gujarat** – [Proposal No. IA/GJ/IND/138412/2020, MoEF&CC File No. J-11011/416/2008-IAII(I)] – **Amendment in EC conditions pertaining to water consumption, energy consumption and coal consumption - regarding.**

Consideration of the proposal was deferred as the project proponent did not participate in the VC consequently for the two times. The Committee deferred the consideration of the proposal and decided to consider the same as and when requested by the PP.

- 18.13 Proposed expansion of existing Sponge Iron Plant by installation of 1 x 350 TPD DRI kilns along with expansion of CPP (WHRB) from 4 MW to 12 MW by **M/s Agrawal Structure Mills Pvt Ltd** located at Silpahari, Sirgitti Industrial Area, Bilaspur (C.G.) [Online proposal No. IA/CG/IND/138674/2020; MoEF&CC File No. J-11011/44/2020-IA.II(I)] – **Prescribing of Terms of Reference (ToR) – regarding.**

Consideration of the proposal was deferred as the project proponent did not participate in the VC consequently for the two times. The Committee deferred the consideration of the proposal and decided to consider the same as and when requested by the PP.

- 18.14 Expansion of MS Billet from 2,37,600 MTPA to 5,74,200 MTPA, TMT bars from 2,00,000 MTPA to 4,20,000 MTPA, MS structures from 37,600 MTPA to 1,80,000 MTPA and wire rod of 4,20,000 MTPA of **M/s. Galwalia Ispat Udyog Private Limited** located at village Narain Nagar Industrial Estate, Bazpur Road, Tehsil Kashipur, **District Udham Singh Nagar, Uttarakhand** [Online Proposal No. IA/UK/IND/112895/2019, File No. IA-J-11011/277/2019-IA-II(I)] – **Amendment in Terms of Reference (ToR) with respect to envisaged production capacities – regarding.**

- 18.14.1 M/s Galwalia Ispat Udyog Private Limited (GIUPL) made online application vide proposal no. IA/UK/IND/112895/2019 dated 30.03.2020 in prescribed Form -3 alongwith other documents for seeking amendment in the prescribed ToR. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-

ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

- 18.14.2 Project proponent proposed to expand existing manufacturing unit for MS Billet from 2,37,600 MTPA to 5,74,200 MTPA, TMT Bars from 2,00,000 MTPA to 4,20,000 MTPA, MS Structure from 37,600 MTPA to 1,80,000 MTPA and Wire Rod 4,20,000 MTPA. It is proposed to set up the plant for nontoxic secondary metallurgical processing based on natural gas as fuel under the cleaner technology.
- 18.14.3 Consent to Operate was accorded by Uttarakhand Environment Protection and Pollution Control Board vide Ir. No. UEPPCB/ HO/C/G-17/2018/1556 dated 04.12.2018, validity of CTO is up to 31.03.2019.
- 18.14.4 The proposed expansion will be in the existing plant premises, located at Plot No 27, 28, 48, 49, Village: Narain Nagar Industrial Area Nainital Road, Taluka: Kashipur District: Udham Singh Nagar., State: Uttarakhand.

#### **Details Submitted by the Project Proponent**

- 18.14.5 The expansion proposal was prescribed ToR for undertaking detailed EIA study vide letter J-11011/277/2019 –IAII(I) dated 08.11.2019 wherein one of the specific ToRs mentions that project proponent is not permitted to abstract ground water for the expansion project. Therefore, project proponent made application for seeking amendment of ToR, i.e requested to allow abstract ground water of quantity 635 KLD for both existing and proposed project (existing- 170 KLD; proposed- 465 KLD).
- 18.14.6 It is mentioned that Udham Singh Nagar district lies in the tarai region which is safe zone having sufficient ground water level as per Central Ground Water Board.
- 18.14.7 Name of EIA Consultant - Enviro Infra Solutions Pvt. Ltd. (S. No.:52 in QCI list as on April, 2020)

#### **Observations and Recommendations of the Committee**

- 18.14.8 After detailed deliberations, the committee recommended to amend the specific ToR as below.

‘Project proponent shall be permitted to abstract ground water for three years. During this period alternate arrangement for surface water availability shall be made. Action plan shall be detailed in the EIA report.’

- 18.15 Proposed 0.3 MTPA Integrated Steel Plant (1x1.8 MTPA Throughput Iron Ore Beneficiation Plant, 2x1.2 MTPA Iron Ore Pellet Plant, 0.3 MTPA Integrated Steel Plant - 0.3 MTPA High Grade Pure Iron Nuggets [HGPIN], 0.3 MTPA M S Billets, 0.2 MTPA TMT Rods/Structurals, 9 Nos. of Producer Gas Plant of capacity 4500 Nm<sup>3</sup>/hr each [total 40500 Nm<sup>3</sup>/hr]) **by M/s Arya Integrated Steel Private Limited** at Villages Malda & Dhanurjayapur, Tehsil Barbil, **District Keonjhar, Odisha** - [Online Proposal No. IA/OR/IND/149208/2020, File No. J-11011/100/2011-IA-II(I)] – **Validity extension of Environment Clearance – reg.**

Consideration of the proposal was deferred as the project proponent did not participate in the VC consequently for the two times. The Committee deferred the consideration of the proposal and decided to consider the same as and when requested by the PP.

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**ANNEXURE -1**

**GENERIC TERMS OF REFERENCE (ToR) IN RESPECT OF INDUSTRY SECTOR**

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. The project proponent shall furnish the requisite documents from the competent authority in support of drawl of ground water and surface water and supply of electricity.
  - ix. Process description along with major equipment and machineries, process flow sheet (Quantitative) from raw material to products to be provided
  - x. Hazard identification and details of proposed safety systems.
  - xi. Expansion/modernization proposals:
    - a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MoEF&CC/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment, Forest and Climate Change as per circular dated 30<sup>th</sup> 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/PCC 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. Co-ordinates (lat-long) of all four corners of the site.
- iv. Google map-Earth downloaded of the project site.
- v. 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.
- vi. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.
- vii. 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. (not required for industrial area)
- viii. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area
- ix. Geological features and Geo-hydrological status of the study area shall be included.
- x. 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)
- xi. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.
- xii. 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 PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, 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 NAQPM 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 (60m upstream and downstream) 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.
- 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 Assessment 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 well 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, if the effluent is proposed to be discharged in to the local drain, then Water Quality Modelling study should be conducted for the drain water taking into consideration the upstream and downstream quality of water of the drain.
- 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 disposal. Copies of MOU regarding utilization of solid and hazardous waste 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. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned 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,
- 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 abovementioned parameters as per age, sex, duration of exposure and department wise.
- iii. Annual report of health status of workers with special reference to Occupational Health and Safety.
- iv. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.

#### 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. Corporate Environment Responsibility (CER)
    - i. To address the Public Hearing issues, an amount as specified under Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1st May 2018 amounting to Rs. ....crores, shall be earmarked by the project proponent, towards Corporate Environment Responsibility (CER). Distinct CER projects shall be carved out based on the local public hearing issues. Project estimate shall be prepared based on PWD schedule of rates for each distinct Item and schedule for time bound action plan shall be prepared. These CER projects as indicated by the project proponent shall be implemented along with the main project. Implementation of such program shall be ensured by constituting a Committee comprising of the project proponent, representatives of village Panchayat & District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office. No free distribution/donations and or free camps shall be included in the above CER budget
  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 ToRs.
  14. The ToRs prescribed shall be valid for a period of three years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material in Regional languages shall be provided.
- iv. The letter/application for environmental clearance shall quote the MOEF&CC file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report

- vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MOEF&CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 4<sup>th</sup> August, 2009, which are available on the website of this Ministry shall also be followed.
- viii. The consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. Name of the Consultant and the Accreditation details shall be posted on the EIA-EMP Report as well as on the cover of the Hard Copy of the Presentation material for EC presentation.
- ix. ToRs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The Public Hearing shall be chaired by an Officer not below the rank of Additional District Magistrate. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in a separate chapter and summarised in a tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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**ANNEXURE-2**

**ADDITIONAL ToRS FOR INTEGRATED STEEL PLANT**

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
3. For Large ISPs, a 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. MRL details of project site and RL of nearby sources of water shall be indicated.
4. Recent land-use map based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
5. PM (PM<sub>10</sub> and P<sub>2.5</sub>) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM<sub>10</sub> to be carried over.
6. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
7. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
8. Plan for slag utilization
9. Plan for utilization of energy in off gases (coke oven, blast furnace)
10. System of coke quenching adopted with justification.
11. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
12. Trace metals in waste material especially slag.
13. Trace metals in water
14. Details of proposed layout clearly demarcating various units within the plant.
15. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs and outputs (material and energy balance).
16. Details on design and manufacturing process for all the units.
17. Details on environmentally sound technologies for recycling of hazardous materials, as per CPCB Guidelines, may be mentioned in case of handling scrap and other recycled materials.
18. Details on requirement of energy and water along with its source and authorization from the concerned department. Location of water intake and outfall points (with coordinates).
19. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
20. Details on toxic content (TCLP), composition and end use of slag.

### **ADDITIONAL ToRS FOR PELLET PLANT**

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
3. Recent land-use map based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
4. PM(PM<sub>10</sub> and P<sub>2.5</sub>) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM<sub>10</sub> to be carried over.
5. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
6. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
7. Plan for slag utilization
8. Plan for utilization of energy in off gases (coke oven, blast furnace)
9. System of coke quenching adopted with justification.
10. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
11. Trace metals in waste material especially slag.
12. Trace metals in water

### **ADDITIONAL ToRs FOR CEMENT INDUSTRY**

1. Limestone and coal linkage documents along with the status of environmental clearance of limestone and coal mines
2. Quantum of production of coal and limestone from coal & limestone mines and the projects they cater to;
3. Present land use shall be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
4. If the raw materials used have trace elements, an environment management plan shall also be included.
5. Plan for the implementation of the recommendations made for the cement plants in the CREP guidelines must be prepared.
6. Energy consumption per ton of clinker and cement grinding
7. Provision of waste heat recovery boiler
8. Arrangement for co-processing of hazardous waste in cement plant.
9. Trace metals in waste material especially slag.

**ADDITIONAL ToRs FOR PULP AND PAPER INDUSTRY**

- i. A note on pulp washing system capable of handling wood pulp shall be included.
- ii. Manufacturing process details for the existing and proposed plant shall be included. Chapter on Pulping & Bleaching shall include: no black liquor spillage in the area of pulp mill; no use of elemental chlorine for bleaching in mill; installation of hypo preparation plant; no use of potcher washing and use of counter current or horizontal belt washers. Chapter on Chemical Recovery shall include: no spillage of foam in chemical recovery plant, no discharge of foul condensate generated from MEE directly to ETP; control of suspended particulate matter emissions from the stack of fluidized bed recovery boiler and ESP in lime kiln
- iii. Studies shall be conducted and a chapter shall be included to show that Soda pulping process can be employed for *Eucalyptus/Casuarina* to produce low kappa (bleachable) grade of pulp.
- iv. Commitment that only elemental Chlorine-free technology will be used for the manufacture of paper and existing plant without chemical recovery plant will be closed within 2 years of issue of environment clearance.
- v. A commitment that no extra chlorine base bleaching chemicals (more than being used now) will be employed and AOx will remain within limits as per CREP for used based mills. Plan for reduction of water consumption.

**ADDITIONAL ToRs FOR LEATHER/SKIN/HIDE PROCESSING INDUSTRY**

1. Justification for engaging a particular type of process (raw hide/skin into semi finishing or finished leather, semi-finished leather to finished leather, dry finishing operations, chrome/vegetable tanning, *etc.*).
2. Details regarding complete leather/ skin/ hide processing including the usage of sulphides, nitrogen compounds, chromium or other tanning agents, post-tanning chemicals, biocides, *etc.*, along with the material balance shall be provided.
3. In case of chrome tanning, details of the chrome recovery plant, management of shavings/solid waste including safe disposal.
4. Details on reuse of soak liquor / saline stream from membrane system, if applicable, to the extent possible in pickling activity after required treatment. Also, mention the salt recovery measures.

**ADDITIONAL ToRs FOR COKE OVEN PLANT**

1. Justification for selecting recovery/non-recovery (beehive) type batteries with the proposed unit size.
2. Details of proposed layout clearly demarcating various facilities such as coal storages, coke making, by-product recovery area, *etc* within the plant.
3. Details of coke oven plant (recovery/non-recovery type) including coal handling, coke oven battery operations, coke handling and preparation.
4. Scheme for coal changing, charging emission centre, Coke quenching technology, pushing emission control.
5. Scheme for coke oven effluent treatment plant details including scheme for meeting cyanide standard.

**ADDITIONAL ToRs FOR ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS**

1. Type of the project – new/expansion/modernization
2. Type of fibres used (Asbestos and others) and preference of selection from techno-environmental angle should be furnished
3. As asbestos is used in several products and as the level of precautions differ from milling to usage in cement products, friction products gasketing, textiles and also differ with the process used, it is necessary to give process description and reasons for the choice for selection of process
4. Technology adopted, flow chart, process description and layout marking areas of potential environmental impacts
5. National standards and codes of practice in the use of asbestos particular to the industry should be furnished
6. In case of newly introduced technology, it should include the consequences of any failure of equipment/ technology and the product on environmental status.
7. In case of expansion project asbestos fibre to be measured at slack emission and work zone area, besides base line air quality.
8. In case of green field project asbestos fibre to be measured at ambient air.

**ADDITIONAL ToRs FOR METALLURGICAL INDUSTRY (FERROUS AND NON-FERROUS)**

1. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs & outputs (material and energy balance).
2. Emission from sulphuric acid plant and sulphur muck management.
3. Details on installation of Continuous Emission Monitoring System with recording with proper calibration system
4. Details on toxic metals including fluoride emissions
5. Details on stack height.
6. Details on ash disposal and management
7. Complete process flow diagram describing process of lead/zinc/copper/ aluminium, *etc.*
8. Details on smelting, thermal refining, melting, slag fuming, and Waelz kiln operation
9. Details on Holding and de-gassing of molten metal from primary and secondary aluminium, materials pre-treatment, and from melting and smelting of secondary aluminium
10. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
11. Trace metals in waste material especially slag.
12. Plan for trace metal recovery
13. Trace metals in water

## **Executive Summary**

Executive summary of the report in about 8-10 pages incorporating the following:

- i. Project name and location (Village, Dist, State, Industrial Estate (if applicable))
- ii. Products and capacities. If expansion proposal, then existing products with capacities and reference to earlier EC.
- iii. Requirement of land, raw material, water, power, fuel, with source of supply (Quantitative)
- iv. Process description in brief, specifically indicating the gaseous emission, liquid effluent and solid and hazardous wastes. Materials balance shall be presented.
- v. Measures for mitigating the impact on the environment and mode of discharge or disposal.
- vi. Capital cost of the project, estimated time of completion
- vii. Site selected for the project – Nature of land – Agricultural (single/double crop), barren, Govt/private land, status of its acquisition, nearby (in 2-3 km.) water body, population, with in 10km other industries, forest, eco-sensitive zones, accessibility, (note – in case of industrial estate this information may not be necessary)
- viii. Baseline environmental data – air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population
- ix. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.
- x. Likely impact of the project on air, water, land, flora-fauna and nearby population
- xi. Emergency preparedness plan in case of natural or in plant emergencies
- xii. Issues raised during public hearing (if applicable) and response given
- xiii. CSR plan with proposed expenditure.
- xiv. Occupational Health Measures
- xv. Post project monitoring plan

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