

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

SUMMARY RECORD OF THE TWENTY- SIXTH (26TH) MEETING OF EXPERT APPRAISAL COMMITTEE HELD ON 11TH-13TH DECEMBER 2017 FOR ENVIRONMENTAL APPRAISAL OF INDUSTRY-I SECTOR PROJECTS CONSTITUTED UNDER EIA NOTIFICATION, 2006.

The Twenty-sixth meeting of the Expert Appraisal Committee (EAC) for Industry-I Sector as per the provisions of the EIA Notification, 2006 for Environmental Appraisal of Industry-I Sector Projects was held on 11th – 13th December 2017 in the Ministry of Environment, Forest and Climate Change. The list of participants is annexed.

26.1 After welcoming the Committee Members, discussion on each of the agenda items was taken up ad-seriatim.

26.2 Confirmation of the minutes of the correction in the 24th meeting and minutes of the 25th Meeting

The minutes of the following correction in the 24th meeting and minutes of the 25th Meeting, as circulated were confirmed.

24.10 Integrated Aluminium Smelter Complex (3.25 LTPA & Primary Aluminium) along with coal based Captive Power Plant (750 MW) at village Orgari, Bargawan, District Sidhi, Madhya Pradesh by M/s Hindalco Industries Ltd. [Online Proposal No. IA/MP/IND/3428/2008 File No. J-11011/217/2007.-IA.II(I)] – Amendment in Environmental.

Serial Number 3 of Table of para 13 reads as follows:

Recommended for road transportation as follows:			
Year	% allowed through road	% allowed by road Via Bina – Anpara – Singruali – Mahan	% allowed via Baikuntpur – Baidan- Mahan / Shadol – Siddhi - Mahan
2017-18	27%	75%	25%
2018-19	21%	95%	5%
2019-20	21%	95%	5%
2020-21	16%	95%	5%

Serial Number 3 of Table of para 13 to be read as follows:

Recommended for road transportation as follows:			
Year	% allowed through road	% allowed by road Via Bina – Anpara – Singruali – Mahan	% allowed via Baikuntpur – Baidan- Mahan / Shadol – Siddhi - Mahan
2017-18	27%	75%	25%
2018-19	21%	95%	5%
2019-20	21%	95%	5%
2020-21	21%	95%	5%
2021-22	16%	95%	5%

DATE: 11th December 2017

26.3. Expansion by installation of 1.0 MTPA Steel Plant, 40 MW (2x20 MW) waste heat Recovery, 40 MW coal based captive power plant & 500 TPD Air Separation Plant in the existing ferro alloy plant of **M/s The Sandur Manganese & Iron Ores Ltd.**, at Hanumanhalli village, Danapur Mandal, Hospet Taluk, Bellary District, Karnataka - [Online Proposal No: IA/KA/IND/23395/2014; MoEFCC File No: J-11011/205/2014-IA-II(I)] – **Environmental Clearance based on ToRs.**

1.0 **M/s The Sandur Manganese & Iron Ores Ltd** has made online application vide proposal no. IA/KA/IND/23395/2014 dated 31st October 2017 along with the copies of EIA/EMP seeking Environmental Clearance under the provisions of the EIA Notification, 2006 for the above mentioned proposed project. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

2.0 The proposal for expansion of existing Ferro Alloys Plant to 1.0 MTPA Integrated Steel Plant of M/s Sandur Manganese & Iron Ores Limited comprising of Sinter Plant, Blast Furnace, Coke Oven Plant, SMS, Rebar Mill, Oxygen Plant & WHRB located at villages- Danapur, Danayakankere & Hanumanhalli Tehsil- Hospet, District- Bellary, State- Karnataka was initially received in the Ministry on 14.05.2014 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 21st meeting held during 30th July -1st August 2014 and prescribed ToR to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToR to the project on 07.04.2015 vide Lr. No J-11011/205/2014-IA.II(I). Amendment in ToR recommended by EAC (Industry -I) in its 14th Meeting on 23.12.2016.

2.0 The project of M/s Sandur Manganese & Iron Ores Limited is for expansion of existing Plant to 1.0 MTPA integrated Steel Plant comprising of Sinter Plant, Blast Furnace, Coke Oven Plant, SMS, Rebar Mill, Oxygen Plant & WHRB. Environment Clearance for Existing CPP granted by MoEF & CC, vide letter no-SEIAA:39: IND:2007, dated 3rd Sept 2009. The Status of compliance of earlier EC was obtained from Regional Office, MoEF, Bangalore vide Lr. no. EP/12.1/SEIAA/228/KAR dated 09.10.2017. There are no non-compliances reported by Regional Officer. The proposed capacity for different products for new site is as below:

Sl. No.	Plant/Unit Name	Configuration			Final Annual Production	Final Capacity in MTPA
		Phase-I	Phase-II	Phase III		
1	Blast Furnace	1x 0.4 MTPA BF (Size 400 m ³)	-	1x 0.4MTPA BF (Size 400 m ³)	2 x 400000 TPA	0.800
	Pig Casting Machine	1x0.4MTPA	-	-	1 x 400,000 TPA	0.400
2		1 x 0.4 MTPA &	-	-	1 x 400,000 TPA & WHRBs 130TPH	0.400

	Coke Oven Plant and WHRB	2 WHRBs (2x65TPH Steam Generation)			Steam Generation	
3	Sinter Plant	1 x 50 m ² ~1600 TPD	-	1 x 50 m ² ~1600 TPD	2 x 528,000 TPA	1.056
4	Energy Optimization Furnace (EOF)	-	1 X 50 T 1602 TPD	1 X 50 T ~1602 TPD	2 x 528,710 TPA	1.057
5	Ladle Refining Furnace (LRF) & Vacuum Degasser (VD)	-	1 X 50 T 1602 TPD	1 X 50 T ~1602 TPD	2 x 528,710 TPA	1.057
6	Continuous Casting m/c (CCM)	-	1 x 4 Strand 9/16 m radius ~1570 TPD	1 x 4 Strand 9/16 m radius ~1570 TPD	2 x 518,135 TPA	1.036
7	Rolling (Rebar Mill)	-	1 x 100 TPH ~1515 TPD	1 x 100 TPH ~1515 TPD	2 x 500,000 TPA	1.0
8	Oxygen Plant	1 x 70 TPD	1 x 200 TPD	-	1 x 23100 TPA + 1 x 66000 TPA	-

3.0 The total land required for the project is 129.82 ha. There is no agricultural land or grazing land, govt. land 11.45 ha is proposed in the site. Also, no forestland involved in the project. Most of the land has been acquired for the project. There is no river passing through the project site. Major water body – Tungabhadra Reservoir back waters exist near the project site. No modification/ diversion in the existing natural drainage pattern is envisaged.

4.0 The topography of the area is mostly flat and sloping lies between to 15°11'01.97"N to 15°12'10.98"N Latitude and 76° 22'39.45"E to 76° 23'32.53"E Longitude in Survey of India toposheet No. 57 A/8 at an elevation of 517 m AMSL. The ground water table ranges between 7m to 15m below the land surface during the post- monsoon season and 25m to 50m below the land surface during the pre-monsoon season. No ground water will be used for the project.

5.0 There is no National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Elephant Reserve etc. either in the core area or within 10 Km of the project site. The area also does not form any corridor for Schedule-I fauna as per Wildlife (Protection) Act, 1972.

6.0 The process of project showing the basic raw material used and the various processes involved to produce the final output is given in the EMP.

7.0 Management Plan for Waste generated from the proposed expansion is given in following table:

Sl. No.	Items	Description	Quantity	Pollution control
1	Coke Oven Plant			
	Coke fines/dust	After Screening from coke & quenching	3-4% of Coke	Charged back as blend mix for sinter production
2	Sinter Plant			
	Sinter fines (< 5mm)	After Screening from Blast furnace	10% of Sinter	Charged back as blend mix for sinter production
	Fine Dust	Dust from Bag Filter/ESP	0.5 Kg/t of Sinter	
3	Blast Furnace (BF)			
	Slag	From the Process	320 Kg/t of HM	Sale to local end users/ Cement Plants
	Flue Dust	Dust from Primary dust catcher	10 Kg/t of HM	Charged back as blend mix for sinter production
	Dust	From Gas Cleaning plant (GCP)	0.5 Kg/t of HM	Charged back as blend mix for sinter production
4	Steel Melting Shop (SMS)			
	Slag	From the Process	120kg/t of LS	Construction Filling through outside vendors
	CCM Scales	From the CCM	10 Kg/t of Billets	Charged back to sinter production
	Fine Dust	From the furnace & LF	13-21 Kg/t of Billet	Charged back to Sinter Plant
		From the top of SMS Shed	0.5 Kg/t of Billet	
		From the Ladles & CCM	0.25 Kg/t of Billet	
		From Raw material & handling units	0.5 Kg/t of Billet	
5	Rolling Mills			
	Mill Scales	From the Process	15 kg/t	Charged back as blend mix for sinter production
Hazardous Waste like used oil, Chemical Containers, Spent Resin will be disposed to Authorized re processors.				

8.0 The targeted production capacity of the expansion plant 1 MTPA. Copy of Coal Linkage for sourcing coal from Singareni Collieries Company Limited, Telangana in form of E-Fuel Supply Agreement is attached as Annexure-12. Iron Ore for the proposed Integrated Steel Plant will be sourced from Captive Mines of SMIORE at district Bellary. The copy of Consent to Operate and Environmental Clearance for both the mines are enclosed as Annexure-10(a),10(b),11(a) &11 (b). The ore transportation will be done through road and rail.

9.0 Fresh water requirement of the project at final stage is estimated at 16440 m³/day, which will be sourced from Tungabhadra Dam. Agreement executed on 29th January 2015 with Government of Karnataka for supply of water.

10.0 Power requirement for the project is 92 MW. 32 MW will be sourced from existing Coal based CPP and 32 MW from WHRB Steam based power and balance will be sourced from Karnataka Power Transmission Corporation Limited.

11.0 Baseline Environmental Studies were conducted during winter season i.e. from December 2016 to February 2017. Ambient air quality monitoring has been carried out at 8 locations during December 2016 to February 2017 and the data indicates PM₁₀ (54.6 µg/m³ to 102.6 µg/m³), PM_{2.5} (21.6 to 66.9 µg/m³), SO₂ (18.8 to 42.8 µg/m³), NO_x (19.4 to 44.0 µg/m³) and CO (0.2 to 0.61 mg/m³). The result of the modelling study indicates that the maximum increase of GLC for the proposed project is 0.76282 µg/m³ with respect to the PM₁₀, 1.65458 µg/m³ with respect to the SO₂ & 3.86284 µg/m³ with respect to the NO_x.

12.0 Ground Water Quality has been monitored in 8 locations in the study area and analysed pH 6.94 to 7.26, Total Hardness: 94.0 to 268.0 mg/l, Chlorides 21.99 to 129.95 mg/l, Fluoride: 0.11 to 0.20 mg/l. heavy metals are within the limits. Surface water Quality has been monitored in 8 locations in the study area and analysed pH:7.36 to 7.41; DO 4.6 to 5.22mg/l and BOD: 1.8 to 2.8mg/l, COD 8 to 12.2 mg/l.

13.0 Noise levels are in the range of 41.35 to 58.18 dB(A) for daytime and 24.7 to 41.45 dB(A) for night time.

14.0 There are no people residing in the core zone of the project. No R&R is involved. It has been envisaged that no families are to be rehabilitated for the project.

15.0 Solid waste @ 562Kg/T of steel will be generated due to the project out of 179Kg/T will be used in SMIORE Plant and balance will be supplied to outside vendors for utilization in Cement & construction industries. However, 2.5 Ha is earmarked inside the plant premises for interim solid waste storage & handling. It has been envisaged that an area of 33.92 Ha will be developed as green belt inside the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

16.0 Consent to Establish for Existing Coal based CPP from SPCB, Karnataka vide letter No. PCB/CEO/SEO/17-Cat/Thermal/Star Metallic 2009-10 on 16.01.2010. Combined Consent to Operate obtained for the existing Ferro Alloys and Power Plant from SPCB, Karnataka vide letter NoAWH-302081 on 15.02.2017 and valid up to 30.06.2021.

17.0 The Public Hearing of the project was held on 25.07.2017 at PU collage Ground, Vyasapuri Colony, (Near existing plant), Vyasanakere, Hanumanahalli post, Hospet Taluk, Ballari under the chairmanship of Sri Vijay Mahantesh Danammanavar, KAS, Additional Deputy Commissioner and Additional District Magistrate, Ballari District for expansion of existing plant to 1.0 Million TPA Integrated Steel Plant. A budget of Rs. 70 Crore (approx. 3% of project cost) has been earmarked for implementing Enterprise Social Commitment. This amount includes expenditures to be incurred for addressing Public Hearing issues described in the Public Hearing Action Plan enclosed in Annexure-15.

18.0 The Capital Cost of the Project is Rs.2300 Crores and the capital cost for environmental protection measures is proposed as Rs.40 Crores. The annual recurring cost toward the environmental protection measures is proposed as Rs.8 Crores. The detailed CSR Plan has been provided in Chapter-8, Section-8.2.4 page no.4 to 6. The employment generation from the proposed expansion project is 898.

19.0 Green belt will be developed in 33.92 Ha which is about 38% of the acquired area. A 50-m wide green belt, consisting of at least 3 tiers along the plant boundary will be developed as green belt and green cover as per CPCB/ MoEF and CC, New Delhi guidelines. Local and native species will be planted. Total number of 84775 saplings will be planted and nurtured in 5 years.

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

21.0 After detailed deliberation, the committee observed following:

- The EIA/EMP submitted was not as per the generic structure envisaged in the EIA Notification and also as per the guidelines of the QCI/NABET.
- Declaration of consultant and declaration of the project proponent was not enclosed in the EIA/EMP report.
- Details of EIA Coordinator and all Functional Area Experts (FAEs) involved in the preparation of EIA/EMP was not provided in the prescribed format.
- Scanned signatures of the EC and FAEs were provided in the EIA/EMP report.
- Details of the existing project, reason for operating the existing project on the consent to operate and not obtaining the EC was not explained in the EIA/EMP Report.
- The details provided against ToR Point 1, 3(ii), 3(iii), 3(iv), 3(viii), 3(ix), 6(vii), 6(x), 9(i), 9(ii), 9(iii) and 11 are not satisfactory.
- The proponent has reported presence of schedule-I fauna in the core and buffer zone.
- The DO reported at page 111 i.e. DO more than 5 mg/L wherein the *E.coli* reported as 800 MPN/L at village pond is unrealistic.
- Wet quenching was proposed for coke oven plant.
- No details were provided regarding brick manufacturing plant.

22.0 Therefore, the committee desired following information / clarification for further consideration of the proposal:

- i. Revised information on configuration in the tabular form *inter alia* include existing facilities; proposed expansion and total capacity after expansion.
- ii. Details of year wise production (actual vis a vis consent) since inception.
- iii. Revised information for ToR Point 1, 3(ii), 3(iii), 3(iv), 3(viii), 3(ix), 6(vii), 6(x), 9(i), 9(ii), 9(iii) and 11.
- iv. Mist spray / dry fog arrangement at hoppers of the receiving bunkers of coal / raw material,
- v. Action plan for 100% utilization of fly ash and BF slag

- vi. Brief note on wet quenching vis a vis dry quenching w.r.t. environmental impacts and cost benefit analysis
- vii. Soil analysis shall be carried based on land use classification, soil samples would be collected from various category of land use.
- viii. Interpretation of the baseline data
- ix. Revised study on flora and fauna with clear focus on the flora and fauna of the core area and of an area which fall within 10 Kms of the project site.
- x. Revised process flow sheet *inter alia* including the mass balance
- xi. Revised corporate environmental policy including a mechanism for reporting of non-compliances/infringements to the Board of Directors at regular intervals and hierarchical system for the same.
- xii. Environmental cell with qualified personal and headed by the person directly reporting to the head of the plant.
- xiii. Declaration of consultant and declaration of the project proponent shall be enclosed in the EIA/EMP report.
- xiv. Details of EIA Coordinator and all Functional Area Experts (FAEs) involved in the preparation of EIA/EMP shall be provided in the prescribed format.
- xv. Original signatures of the EC and FAEs shall be provided in the EIA/EMP report.
- xvi. Revised action plan including fund provision on the issues raised during the Public hearing
- xvii. Revised details of ESC based on the issues raised in the public hearing and need based assessment.
- xviii. Detailed Environmental Management Plan *inter alia* including time bound action plan and fund provision.
- xix. Greenbelt on 112 Acres out of 321 Acres with local broad-leaved tree species shall be included in the green belt plan.
- xx. Permission from the competent authority for additional quantity of water requirement for the proposed project.

23.0 All the information shall be included in the EIA/EMP report and revised EMP shall be submitted. Therefore, the proposal is deferred till the information is submitted by project proponent.

26.4. Expansion of Integrated Cement Plant [Clinker (2.8 MTPA to 5.0 MTPA); Cement (3.6 MTPA to 6.5 MTPA); CPP (22 MW to 47 MW); and WHRB (13.2 MW to 15 MW) located at Kailash Nagar, Tehasil Nimbahera, District Chittorgarh, Rajasthan by **M/s JK Cement Limited Kanpur** - [Online Proposal No: IA/RJ/IND/60653/2016; MoEFCC File No: J-11011/243/2016-IA-II(I)]– **Environmental Clearance based on ToRs.**

Consideration of the proposal was deferred as the Project Proponent did not attend the meeting. The proposal may be considered subject to satisfactory explanation of the reasons of absence by the applicant

26.5. Expansion of Metallurgical unit at MIDC, Ph-I, Aurangabad, Daregoan, Jalana Maharashtra by M/s Om Sairam Steel and Alloys Pvt Ltd [Online proposal No. IA/MH/IND/62864/2015; MoEF&CC File No. J-11011/57/2015-IA II (I)] – Environmental Clearance – Further Consideration based on reply to ADS.

1.0 The proponent has made online application vide proposal no. IA/MH/IND/62864/2015, dated 1st March 2017 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The ToRs to the project were prescribed by the Ministry vide letter number J-11011/57/2015-IA.II (I) dated 01.01.2016. The proposed project activity is listed at Sl. No. 3(a) in Metallurgical industries (ferrous and non-ferrous) and 1(d) Thermal Power Plants under Category "A" EIA Notification 2006.

2.0 The proposed project of M/s Om Sairam Steel and Alloys Pvt. Ltd. at Plot No. F-1, 2, 3, 8, 9, 10, ADD. MIDC Phase – II and adjacent Gut No. 46 & 63, Daregaon, Tehsil and District Jalna, Maharashtra State was initially received in the Ministry in February 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 37th meeting held between 30th April – 1st May 2015 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 dated 01.01.2016. Based on the ToRs prescribed to the project, the project proponent applied for environmental clearance to the Ministry online on 01.03.2017 along with EIA/MP report.

3.0 The existing plant of M/s Om Sairam Steel and Alloys Pvt. Ltd. is currently manufacturing 528 TPD Billet and/ or 1000 TPD TMT Bars/angles/channels. Now the company proposes to expand the capacity and add new product, Sponge Iron, using iron ore/pellets and coal and generate its own power from waste heat as well as coal fired boiler. The existing project was accorded Environmental Clearance vide Letter SEAC-2009/CR-200/TC-2 dated 29th December 2010. The Status of compliance of earlier EC was obtained from Regional Office, Nagpur vide Lr. No. 5-22/2009(Env)/1333, dated 08.12. 2015. The Regional officer inspected and issued the certificate vide 5-22/2009(ENV)/1333 dated 08.12.2015. The details of proposed expansion as follows:

Sl. No	Particulars	Capacity		Total
		Existing	Proposed	
1	Sponge Iron (TPD)	0	1000	1000
2	Billets/ Ingots (TPD)	528	472	1000
3	TMT bars (TPD)	1000	0	1000
4	Power generation (MW)	0	50	50

4.0 The total land required for the project is 6.09 ha, out of total 2.6 ha is for green belt development. No /forestland involved. The entire land has been acquired for the project. The Kundalika River passes through the study area. It has been reported that no other water body/ water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

5.0 The topography of the area is flat terrain and reported to lies between 19° 50' 52.39" N Latitude to 75° 50' 41.51" E Longitude in Survey of India topo sheet No. 47M-9 & 47 M13, at an elevation of 552 m AMSL. The northern part forms the highly dissected basaltic plateau; the

ground water potential is expected to be poor. The depth to water levels in the district during May 2011 ranges between 3.84 and 16.20 m bgl. The depth to water levels during post monsoon (Nov.) ranges between 1.05 and 14.65 m.

6.0 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. The authenticated list of flora and fauna provided and no schedule-I fauna in the study area.

7.0 The process of project showing the basic raw material used and the various processes involved to produce the final output, waste generated in process.

Sl. No.	Product	Raw Material	Quantity TPD	Transport & Linkage
1	DRI Plant Sponge Iron	Iron Ore and Pellet	1450	By road from Raipur, Bellari, Bhilwara and Raigarh
		Coal B Grade	1200	
		Dolomite	50	
2	Billets and/or TMT bars	Sponge Iron	1000	By Road from Captive Mumbai & Local Raipur, Bellari
		Scrap	100	
		Pig Iron	80	
		Silico manganese	10	
3	Power Plant (FBC Boiler 24 MW & WHR 26 MW)	Dolochar + char	312	By road from Chandrapur
		Coal	420	

8.0 The only solid waste produced by the induction furnace is about 170 MT slag per day. It will be used for road making and land levelling. In addition, office waste generated shall be disposed to local authority.

9.0 The targeted production capacity of the 1000 TPD. The ore for the plant would be procured from (linkage attached to EIA Report). The ore transportation will be done through road.

10.0 The water requirement of the project is estimated at 11,682 m³/day, out of which 752 m³/day of fresh water requirement will be obtained from the MIDC and the remaining requirement of 10945m³/day will be met from the recycled water. No drawl of groundwater / surface water.

11.0 The power requirement of the project is estimated as 5 8 MW, out of which 50MW will be obtained from the self and 8 MW from MSEDCL.

12.0 Baseline Environmental Studies were conducted during winter season (i.e. October 2014 - December 2014) Ambient air quality monitoring has been carried out at 14 locations during October 2014 - December 2014 and the data submitted indicated: PM10 (69.74 µg/m³ to 64.04 µg/m³), PM_{2.5}(26.7 to 20.06 µg/m³), SO₂ (18.9 to 12.5 µg/m³) and NOx (24.05 to 19.22 µg/m³). The results of the modelling study indicates that the maximum increase of GLC for the proposed project is 72.79 µg/m³ with respect to the PM10, 35.13 µg/m³ with respect to the SO₂ 25.93 µg/m³ with respect to the NOx.

13.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 7.10 to 7.81, Total Hardness: 99 to 235 mg/l, Chlorides: 42 to 78 mg/l, Fluoride: 0.2 to 0.4 mg/l.

Heavy metals are within the limits. Surface water samples were analysed from 8 locations. pH: 7.1 to 7.5; DO: 2.1 to 4.6 mg/l and BOD: <2 to 5.2 mg/l. COD from 7.08 to 11.68 mg/l.

14.0 Noise levels are in the range of 53.7 to 47.6 dB(A) for daytime and 48.9 to 42.3 dB(A) for night time.

15.0 It has been reported that no R&R is involved.

16.0 It has been reported that a total of 170 TPD of waste will be generated due to the project, which will be resale and used for Building construction material, road making. It has been envisaged that an area of 2.6 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.

17.0 It has been reported that the Consent to Operate from the Maharashtra State Pollution Control Board obtained vide Lr. No. BO/JD(APC)/EIC No. AD-18272-16/R/CC- 10758 dated 02.12.2016 and consent is valid up to 31.05.2021.

18.0 The Public hearing of the project was held on 28.10.2015. for production of Sponge Iron 1000 TPD, Billets and /or TMT Bar 1000 TPD and Power 50 MW on Waste-heat setting up of plant. The issues raised during public hearing are on Air Pollution Control; Health of workers; discharge of waste water; employment; infrastructure development for village; efficiency of ESP; rain water harvesting; etc. An amount of 1307 Lakhs (2.5 % of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues.

19.0 The capital cost of the project is Rs 523 Crores and the capital cost for environmental protection measures is proposed as Rs. 1300 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs. 504 Lakhs. The detailed CSR plan has been provided in the EMP in its page No.97 to 98. The total employment generation from the proposed expansion is 610 nos. (existing 400 + proposed 210)

20.0 It was reported that Greenbelt will be developed in 2.6 Ha which is about 33% of the total acquired area. Greenbelt, consisting of at least 2 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. It is proposed that total 4000 no. of saplings will be planted and nurtured in next 3-4 years.

21.0 The proponent has mentioned that there is no court case to the project or related activity.

22.0 The proposal was considered in the 17th meeting of Expert Appraisal Committee [EAC(industry-I)] held during 6th – 7th April, 2017. After detailed presentation by PP along with their consultant M/s Ultra Tech Environmental Consultancy & Laboratory, the committee had noted the following:

- i. The baseline data was collected i.e. during October 2014 - December 2014 before submission of application to this Ministry i.e. February 2015.
- ii. The proponent has mentioned in the presentation made before 37th EAC that the Baseline was collected earlier. However, the same was not reflected in the ToR letter.

- iii. The public hearing was conducted (on 28.10.2015) before issue of the ToR (1.1.2016). The PP informed that the district authorities have conducted based on the minutes of the 37th EAC.
- iv. Whether draft EIA/EMP was prepared as per the prescribed ToR or not could not be ascertained due to non-availability of Draft EIA/EMP copy submitted to SPCB.
- v. The certified compliance report submitted is also of more than one year old. It is also noted that there are several non-compliances to the conditions of the existing EC such as development of green belt and other issues. The PP has uploaded copy of analysis report on the MoEF&CC web-portal while making application in place of compliance report from the RO.
- vi. The issues raised during the public hearing is also not properly presented.

23.0 After detailed deliberation, the committee had sought following information for further consideration of the proposal:

- i) A certified copy of draft EIA/EMP submitted to SPCB for conducting the public hearing
- ii) Latest status of compliance on the earlier EC conditions from the Regional office of MoEF&CC
- iii) The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto.
- iv) Environment Policy prescribing standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions.
- v) Skill development plan prepared for implementation and implemented in consultation with skill development council of India.
- vi) The project proponent shall give detailed justifications for why it should not apply for a change in EC condition for changing the plantation site.

24.0 The project proponent had submitted reply to above additional details sought on 17th July 2017. The project proponent along with EIA consultant had made presentation on the reply to ADS. The committee was satisfied with the details submitted except for point No. (ii). It was observed that several non-compliances were reported by the Regional officer and PP explanation on the non-compliances were not satisfactory. The committee had desired that the PP would obtain certificate from the regional office to the effect that the action plan for closure of non-compliances is acceptable. Therefore, the proposal deferred till the certificate submitted to the ministry.

25.0 In response to above, the project proponent had submitted certificate of closure of non-compliance reported by regional office vide Lr. No. EC-409/RON/2017-NGP dated 06th November 2017.

26.0 After detailed deliberations, the committee recommended for issue of the environmental clearance with following specific conditions in addition to the general conditions.

Specific Conditions:

- i. Continuous Emission Monitoring Stations shall be installed within 3 months from the date of issue of EC.
- ii. A dedicated environmental cell with qualified personnel shall be established within 3 months from the date of issue of EC and shall report the compliance to the ministry. The head of the environment cell shall report directly to the head of the organization
- iii. An amount of Rs 1307 Lakhs proposed towards Enterprise Social Commitment (ESC) shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates.
- iv. Green belt shall be developed in 2.6 Ha equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.
- v. The Capital cost Rs. 1300 Lakhs and annual recurring cost Rs. 504 Lakhs towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted for any other purpose.
- vi. Kitchen waste shall be composted or converted to biogas for further use

General Conditions:

1. The project proponent shall:
 - a. install 24x7 continuous emission monitoring system at all the stacks to monitor stack emission with respect to parameters prescribed in G.S.R 414 (E) dated 30th May 2008; S.O. 3305 (E) dated 7th December 2015 for thermal power plant as amended from time to time and connected to CPCB online;
 - b. monitor fugitive emissions in the plant premises;
 - c. carryout Continuous Ambient Air Quality monitoring as per National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 (as amended from time to time) within and outside the plant area at least at four locations covering upwind and downwind directions at an angle of 120° each; and
 - d. submit monitoring report to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
2. The project proponent shall
 - a) install 24x7 continuous effluents monitoring system at all the discharge points to monitor treated effluents with respect to parameters prescribed in G.S.R 414 (E) dated 30th May 2008; S.O. 3305 (E) dated 7th December 2015 for thermal power plant as amended from time to time;
 - b) monitor regularly ground water through sufficient numbers of piezometers in the plant and adjacent areas; and
 - c) submit monitoring report to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

3. The project proponent shall
 - a) provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources;
 - b) design suitable capacity of bag filters to handle gas/air shall be 150% of the normal flow from process/ from suction hoods to achieve particulate emission to less than 30 mg/Nm³;
 - c) provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags;
 - d) provide pollution control system in the steel plant as per the CREP Guidelines of CPCB;
 - e) provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly;
 - f) recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration;
 - g) use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin; and
 - h) provide wind shelter fence around raw material stock piles and chemical spraying on the raw material stock piles.
4. The project proponent shall:
 - a) adhere to 'zero liquid discharge';
 - b) provide Sewage Treatment Plant for domestic wastewater; and
 - c) provide garland drains and collection pits for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
5. The project proponent shall
 - a) practice rainwater harvesting to maximum possible extent; and
 - b) make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.
6. The PP shall:
 - a) provide waste heat recovery system on the DRI Klins;
 - b) use dolochar generated for power generation;
 - c) provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly; and
 - d) provide the project proponent for LED lights in their offices and residential areas;
7. Used refractories shall be recycled as far as possible.

8. SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway track ballast and other applications. PP shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. PP shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.
9. Sufficient number of colour coded waste collection bins shall be constructed at t shop floors in each shop to systematically segregate and store waste materials generated at the shop floors (other than Process waste) in designated coloured bins for value addition by promoting reuse of such wastes and for good housekeeping.
10. The PP shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.
11. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
12. The PP shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
13. The PP shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.
14. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the steel plants shall be implemented.
15. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
16. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
17. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
18. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.
19. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dB(A) during day time and 70 dB(A) during night time.
20. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
21. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.

22. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding shall be submitted to the Ministry's Regional Office.
23. The project proponent shall:
- send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;
 - put on the clearance letter on the web site of the company for access to the public.
 - inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at <http://envfor.nic.in>.
 - upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;
 - monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company;
 - submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;
 - submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company;
 - inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

26.6. Expansion of Steel Plant at Village Jamuria, P.O. Bahadurpur, District Burdwan, West Bengal by **M/s Shyam SEL & Power Ltd.** [Online Proposal No. IA/WB/IND/6700/2008; MoEFCC File No. J-11011/887/2007-IA.II(I)]- **Amendment in Environmental Clearance.**

1.0 **M/s Shyam SEL & Power Ltd.** has made application vide Online Proposal No. IA/WB/IND/6700/2008 dated 30th October, 2017 seeking amendment in Environmental Clearance granted vide File No. J-11011/887/2007-IA.II(I) dated 18th March, 2009.

2.0 **M/s Shyam SEL & Power Limited.** had obtained Environmental Clearance for project vide File No. J-11011/887/2007-IA.II(I) dated 18th March, 2009. The validity of the EC has been extended for further five years i.e., up to 17th March, 2019. The EC was granted for the following units -

Sl. No.	Existing Units	Capacity
1.	Mini Blast Furnace	2x250 m ³ & 1x450 m ³

2.	Sinter Plant	8,00,000 TPA
3.	DRI Klins	6X100 TPD & 1X500 TPD
4.	Induction Furnace	4X18 T
5.	Electrical Arc Furnace	2X45 T
6.	Power Plant	2X250 MW, WHRB-75 MW, AFBC-425 MW
7.	Pelletization and Beneficiation Plant	6,00,000 TPA
8.	Coke Oven Plant	0.25 MTPA
9.	Coal Washery	1.0 MTPA
10.	Structural and Long Product	0.3 MTPA
11.	Ductile Iron Plant	0.1 MTPA
12.	ERW Tubes Plant	0.1 MTPA
13.	Seamless Tube Plant	0.1 MTPA
14.	Ferro Chrome & Silico Manganese Plant	0.1 MTPA
15.	Stainless/Alloy Steel	0.5 MTPA

3.0 It has been reported that the Company is not able to install/commission all the above units for which Environmental Clearance (EC) was granted. Even, the Company had to change the modules of some of the units (DRI Plant & Captive Power Plant) while implementing the project to make it viable. Moreover, the Company has decided to surrender some of the units as the steel industry in the country has been passing through difficult times and bankers are not ready to finance any steel expansion.

4.0 The units/capacities for which Environmental clearance has been accorded, the existing units in operation after valid Consent to Operate from SPCB, the units which are under implementation along with the remaining units being surrendered are presented below:

S. No	Product / Unit	Units (E.C. obtained vide letter No. J-11011/887/2007-IA II (I), dated 18 th March, 2009)	Existing Units under Operation with valid Consent to Operate (CTO) from WBPCB	Units under implementation	Balance units, not to be installed	Remarks
1	Mini Blast Furnace	2x250 m ³ & 1x450 m ³	-	1x450 m ³	2x250 m³	-
2	Sinter Plant	8,00,000 TPA	-	4,00,000 TPA	4,00,000 TPA	-
3	DRI Kilns	6x100 TPD & 1x500 TPD	2x300 TPD & 2x100 TPD	1x300 TPD	-	Change in configuration from 6x100 TPD + 1x500 TPD to 3x300 TPD & 2x100 TPD. So, no. of units is reduced from 7 to 5. This will improve overall pollution load.
4	Induction Furnace	4x18 T (Continuous Billet cum Bloom Caster)	2x18 T	2x18 T	-	-

5	Electrical Arc Furnace	2x 45 T (Continuous Billet cum Bloom Caster)	-	1x 45 T	1x 45 T	-
6	Power Plant	2x250 MW (75 MW WHRB Based + 425 MW AFBC Based)	61 MW (18 MW WHRB Based + 43 MW (CFBC Based)	189 MW (30 MW from WHRB utilizing waste gases from DRI Plant & Coke Oven Plant, MBF Gas fired Boiler + 4x30 MW CFBC + 1x39 MW CFBC)	1X250 MW	Out of 2x250 MW, for which EC was obtained, 1x250 MW is being surrendered. Smaller modules are planned based on actual power demand due to phase wise implementation. Instead of AFBC boiler, CFBC boilers are chosen for better technology.
7	Pelletization & Beneficiation Plant	6,00,000 TPA	6,00,000 TPA	-	-	-
8	Coke oven plant	0.25 MTPA	-	0.25 MTPA	-	-
9	Coal washery	1.0 MTPA	-	-	1.0 MTPA	-
10	Structurals and Long product	0.3 MTPA	0.0855 MTPA	0.2145 MTPA	-	Phase wise implementation.
11	Ductile iron plant	0.1 MTPA	-	0.1 MTPA	-	-
12	ERW Tubes plant	0.1 MTPA	-	0.1 MTPA	-	-
13	Seamless Tube Plant	0.1 MTPA	-	-	0.1 MTPA	-
14	Ferro Chrome & Silico Manganese plant	0.1 MTPA	0.03528 MTPA	0.06472 MTPA	-	Phase wise implementation.
15	Stainless/Alloy steel	0.5 MTPA	-	-	0.5 MTPA	-

5.0 Certified Compliance Report dated 9-8-2017 from the Regional Office of the Ministry has already been obtained.

6.0 The project proponent has made detailed presentation on the above proposed changes in configuration.

7.0 During the course of meeting, schedule of completion has been submitted by PP which is as follows:

Sl. No	Product/Unit	Units under implementation	Status as on 11.12.2017	Planned Completion Date
1.	Mini Blast Furnace	1x450 m ²	Engineering Completed & Quotation under process – 30% progress achieved.	January, 2019
2.	Sinter Plant	4,00,000 TPA	Engineering Started – 10% progress achieved	November, 2018
3.	DRI Kiln	1x300 TPD	Engineering Completed & Quotation finalized – 40% progress achieved	October, 2018
4.	Induction Furnace	2x18 T	Engineering Completed & Quotation under process – 35% progress achieved.	August, 2018
5	Electrical Arc Furnace	1x45 T	Engineering Completed & Quotation invited – 25% progress achieved.	September, 2018
6.	Power Plant	189 MW (30 MW from WHRB utilizing waste gases from DRI Plant & Coke Oven Plant, MBF Gas fired Boiler + 4x30 MW CFBC + 1x39 MW CFBC	Engineering Completed & Quotation under process – 30% progress achieved.	November, 2018 to January, 2018
7.	Coke oven plant	0.25 MTPA	Engineering Completed & Quotation under process – 30% progress achieved.	December, 2018
8.	Structurals and Long product	0.2145 MTPA	Engineering Completed & Quotation finalised – 40% progress achieved.	September, 2018
9.	Ductile iron plant	0.1 MTPA	Engineering under progress & Quotation invited – 15% progress achieved.	January, 2019
10.	ERW Tubes plant	0.1 MTPA	Engineering Completed & Quotation invited – 25% progress achieved.	September, 2018
11	Ferro Chrome & Silico Manganese plant	0.06472 MTPA	Engineering Completed & Quotation invited – 30% progress achieved	August 2018 to January 2019

7.0 After detailed deliberations, the committee recommended for amendment in the Environmental Clearance as requested by the Project Proponent.

26.7. Ferro Alloys Plant (2x9.0 MVA and 31,320 MTPA) at sy nos. 12 to 16, 18, 20, 33, 34, 49, Pedabantupalli village, Gurla Mandal, Vizianagaram District, Andhra Pradesh by **M/s Sri Jayalakshmi Ferro Alloys Pvt. Ltd.**, [Online Proposal No. IA/AP/IND/70666/2009; MoEFCC File No. J-11011/331/2008-IA.II(I)] – **Amendment in Environmental Clearance.**

1.0 The proponent has made online application vide proposal no. **IA/AP/IND/70666/2009** dated **30th October 2017** seeking amendment in Environmental Clearance granted vide letter No. J-11011/331/2008-IA.II(I) dated 29.04.2009.

2.0 It was informed that the Company had change of ownership after the founder promoters exited this business in March 2017 and the new promoters Mr. B.K. Agarwalla and Amit Agarwalla acquired the earlier company in April 2017.

3.0 Products details as per the existing EC are as follows:

S. No.	Products	Phase-I	Phase-II	Quantity (TPA)
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1.	Ferro Manganese	---	4,000	4,000
2.	Ferro Chrome	15,660	8,000	23,600
3.	Silico Manganese	---	2,660	2,660
4.	Ferro Silicon	---	1,000	1,000
Total				31,320

4.0 Total area for the plant is 34.44 acres. The topography of the area is flat and the co-ordinates of the plant location is 18°19'08.65" N Latitude and 83°29'47 03" E Longitude and Survey of India Topo sheet Nos. are E44L7, E44L8, E44L11 & E44L12.

5.0 Total requirement for the water as per the existing EC is 90m³/day. The power requirement for the production as per the existing EC is approx. 15 MW and is being source from Eastern Power Distribution Company of Andhra Pradesh Limited (APEPDCL).

6.0 2 nos. of 9 MVA furnaces have been installed for the above production. 2 nos. of Pulse Jet Bag Filters have been provided with each furnace connected with individual stack. Except Cooling water there is no use of water in the process at present. As Ferro Chrome has not been produced till date, no Metal Recovery (Jigging Plant) has been installed.

7.0 High Mno Ferro-manganese slag, generated during production of Ferro-manganese is reused as raw material for production of Silico-manganese and Silico-manganese slag which is a low value slag is sold at nominal value for construction, layering of highways, roads etc. Ferro-silicon production is slag less and Ferro-chrome has not been produced till date.

6.0 It has been requested for change in the product mix (within the total production capacity of 31,320 TPA Ferro Alloys given in the existing EC) since the present product mix is not economically viable and also, flexibility in production of products are required based on the market demand. The changes proposed in the product mix (within the total production capacity of 31,320 TPA Ferro Alloys given in the existing EC) are as Ferro Manganese – 31320 TPA (OR) Silico Manganese – 31320 TPA, (OR) Production of Ferro Manganese + Silico Manganese – 31320 TPA (In the proposed product-mix, production of Ferro-chrome and Ferro-silicon have not been considered).

7.0 During the course of meeting, the project proponent has submitted NOC from the previous owner and undertaking of the present owner for compliance of EC conditions in non-judicial bond paper.

8.0 After detailed deliberations, the committee recommended for amendment in the Environmental Clearance as per para 6.

26.8. Expansion of DRI Plant (300 TPD to 1700 TPD), SMS Plant (0.1 MTPA to 0.5 MTPA), Captive Power Plant (1x12 MW to 52 MW), Coal Washery (100 TPH to 300 TPH), MBF (0.15 MTPA), Rolling Mill (0.35 MTPA), Pellet Plant with Beneficiation (2600 TPD) in addition to pellet plant (1800 TPD) & Ferro Alloys Plant (2x18 MVA) located at Jiabahal, Kalunga Industrial Estate, Kalunga, Dist- Sundargarh, Odisha by **M/s Shri Mahavir Ferro Alloys Private Limited** – [Online Proposal No. IA/OR/IND/5857/2007; MOEFCC File No. J-11011/606/2007-IA.II(I)] – **Terms of Reference.**

1.0 **M/s Shri Mahavir Ferro Alloys Private Limited** has made online application vide proposal no. **IA/OR/IND/5857/2007** dated **3rd November 2017** along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) Metallurgical industries (ferrous & nonferrous); 1(d) Power Plants; 2(a) coal washeries under category 'A' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

2.0 M/s. Shri Mahavir Ferro Alloys Pvt. Ltd. proposes to install an expansion of existing manufacturing unit for 0.1 MTPA Steel Plant to 0.5 MTPA Steel Plant. It is proposed to set up the plant for Expansion of Coal Washery (100 TPH to 300 TPH), Pellet Plant (with Beneficiation) (1800 TPD to 4900 TPD), DRI Plant (300 TPD to 1700 TPD), MBF (0.15 MTPA), SMS Plant (0.1 MTPA to 0.5 MTPA), Rolling Mill (0.35 MTPA), Ferro Alloys Plant (2x18 MVA) & Captive Power Plant (1x12 MW to 52 MW).

3.0 The existing project was accorded environmental clearance vide Ir. No. J-11011/606/2007-IA II (I) dated 29.01.2008. Consent to Operate was accorded by Odisha State pollution Control Board vide Ir. No. 4870/IND-I-CON-3294, dated 31.03.2017 validity of CtO is up to 31.03.2019.

4.0 The proposed unit will be located at Kalunga Industrial Estate, Village: Jiabahal, Taluka: Lathikata, District: Sundargarh, State: Odisha.

5.0 The land area acquired for the proposed plant is 44.66 Ha. No forest land involved. The entire land has been acquired for the project. Of the total area 15.21 ha (34 %) land will be used for green belt development.

6.0 The National Park/WL etc are located at a distance of 175 KM from the site/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.

7.0 Total project cost is approx. 610 Crore rupees. Proposed employment generation from proposed project will be 1250 direct employment and indirect employment.

8.0 The targeted production capacity of the Proposed Plant is 0.5 million TPA. The ore for the plant would be procured. The ore transportation will be done through Rail (Rail/Road/Conveyor/Slurry Pipeline). The proposed capacity for different products for new site area as below:

Sl. No.	Unit/Plant	Existing Capacity	Proposed Capacity	Final Capacity after Expansion
1	DRI Plant	300 TPD (3x100 TPD)	1400 TPD (4x350 TPD)	1700 TPD
2	SMS Plant	0.1 MTPA	0.40 MTPA	0.50 MTPA
3	Captive Power Plant	12 MW	40 MW (AFBC - 12 MW, WHRB - 4x7 MW - 28 MW)	52 MW
4	Mini Blast Furnace	--	0.15 MTPA	0.15 MTPA
5	Coal Washery	100 TPH	200 TPH	300 TPH

6	Pellet Plant (with Beneficiation)	1800 TPD	In two Phase Phase-1 - 2300 TPD Phase-2 - 2600 TPD	4900 TPD
7	Rolling Mill	--	0.35 MTPA	0.35 MTPA
8	Ferro Alloys Plant	--	2 x 18 MVA	2 x 18 MVA

9.0 The electricity load of 113 MW will be procured from (52 MW power will be of captive generation and will be for in-house use and balance will be purchased from State Electricity Board) Company has also proposed to install DG Set.

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

Raw Materials	Quantity
DRI plant (1400 TPD)	
Coal	630000 TPA
Iron Ore	610000 TPA
Dolomite/	25200 TPA
SMS Plant (0.40 MTPA)	
Sponge Iron	410000 TPA
Pig Iron	34800 TPA
Ferro Alloys & Non Ferro Alloys	5500 TPA
MS Scrap	20200 TPA
MBF (0.15 MTPA)	
Iron ore Pellet	125000 TPA
Coke	80000 TPA
Sinter	125000 TPA
Ferro Alloys Plant (2X18 MVA)	
Manganese Ore	1650 TPA
Non Manganese Ore	39800 TPA
Coke	7960 TPA
Coal	23880 TPA
Dolomite	3980 TPA
Rolling Mill (0.35 MTPA)	
Steel Billets	357000 TPA
Captive Power Plant (40 MW = AFBC- 12 MW + WHRB- 28 MW)	
Dolochar	60000 TPA
Coal	30000 TPA
Washery Rejects	45000
Pellet Plant with Beneficiation (2600 TPD)	
Iron Ore Fines	1120000 TPA
Bentonite	13200 TPA
Dolomite / limestone	13200 TPA
Coke	30000 TPA

11.0 Water Consumption for the proposed project will be 380 m3/day and Domestic waste water will be treated in STP and industrial waste water generated will be treated ETP.

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

13.0 The project Proponent has made detailed presentation along with EIA Consultant M/s Centre for Envotech and Management Consultancy Pvt. Ltd. (Sl. No. in QCI list – 22).

14.0 After detailed deliberations, the committee observed that as per the proposed layout plan, the plant area appears to be highly congested due to the expansion of several proposed facilities, viz., DRI Plant (300 TPD to 1700 TPD), SMS Plant (0.1 MTPA to 0.5 MTPA), CPP (1X12 MW to 52 MW), Coal Washery (100 TPH to 200TPH), MBF (0.15 MTPA), Rolling Mill (0.35 MTPA), Pellet Plant with beneficiation (2600 TPD), pellet plant 1800 TPD and Ferro alloys (2x18 MVA). Accordingly, the Committee suggested to revise the layout proposal addressing the issue of decongestion to eliminate the risk by either acquiring additional land or by increasing the scale production units or both and submit the revised proposal to the Ministry for reconsideration.

26.9. Expansion of Aluminium Smelter (from 16 LTPA to 18 LTPA); CPP (1215 MW) by adding 2 LTPA smelter plant at Bhurkamunda, Jharsuguda distric, Orissa by **M/s Vedanta Limited** – [Online Proposal No. IA/OR/IND/70259/2017; MoEFCC File No. J-11011/29/2007-IA.II(I)] – **Terms of Reference.**

1.0 **M/s Vedanta Ltd. (VL)** has made online application vide proposal no. **IA/OR/IND/70259/2017** dated **3rd November 2017** along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) Metallurgical industries (ferrous & nonferrous) under category ‘A’ of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

2.0 **M/s Vedanta Limited - Smelter & CPP** (formerly Vedanta Aluminium Limited) is promoted by Vedanta Resources (PLC) UK which is a non-ferrous metals Conglomerate having mining/metal processing in India & abroad. Vedanta Jharsuguda Plant has presently capacity of 16 LTPA corresponding to GP-320 KA prebaked technology from GAMI, China.

3.0 Vedanta group now, proposed to expand Aluminium Smelter of Vedanta Limited at Jharsuguda. The Aluminium smelter plant proposed to increase the capacity by 2 LTPA (2,00,000 TPA) i.e. from 16 LTPA smelter & 1215 MW CPP to 18 LTPA smelter & 1215 MW CPP.

4.0 The earlier project expansions were accorded environmental clearance as per details below:

Sl. No.	Name of Unit	Details of EC	CTE Details	CTO Validity	Remarks
I	M/s Vedanta Limited - Smelter & CPP (formerly Vedanta Aluminium Limited)				
1	Aluminium Smelter Plant (2,50,000 TPA) at Village Bhurkamunda / Brundamal District Jharsuguda, Odisha	vide J-11011 / 144 / 2006-IA.II (I) dated 07.03.2007	No. 8064/IIInd-II-NOC-3633 dated 31.03.2006	31.03.2018	

2	5x135 MW Captive Power Plant at Jharsuguda, Odisha	J-13011 / 10 / 2006-IA.II(T) dated 14.03.2007			Combined CTE
3	Expansion of Aluminium Smelter (2.5 LTPA to 16 LTPA) and Captive Power Plant (675 MW to 1350 MW) at Bhurkamunda / Brundamal Jharsuguda, Odisha	J-11011 / 29 / 2007-IA.II (I) dated 11.06.2008	No. 7723/Ind-II-NOC-4870 dated 18.05.2009	31.03.2018	Combined CTO
II Vedanta Limited-2400 MW TPP (formerly Sterlite Energy Limited)					
1	2400 MW Coal based power project at Brundamal, Jharsuguda, Odisha	J-13011 / 3 / 2007 - IA. II (T) dated 07.12.2007	No.23227/Ind-II-NOC-3249 dated 21.09.2006	31.03.2018	Through separate EC

4.0 The proposed unit will be located at existing complex, village: Bhurkamunda, Jharsuguda tehsil and district: Jharsuguda, state: Odisha.

5.0 The existing Vedanta Aluminium smelter & CPP area is 834.236 ha (2061.41 acres), land required for the proposed smelter expansion is about 6.07 ha (15 acres) and is part of Aluminium Smelter & CPP. The expansion will be brought out in the existing premises. Acquisition of land for ash ponds will be as per previous clearances. The greenbelt / green cover in township, ash dyke and other areas is 213.26 ha (527 acres). There will not be any additional land acquisition for this expansion. The break-up of land for the entire complex is given below:

Sl. No	Plant Unit	Area (acres)	Area (ha)
1	Total smelter and other areas	1234.81	499.72
2	Captive power plant incl. main power plant, green belt and ash pond area	621.48	251.51
3	Railway sidings	48.93	19.80
4	Township existing	65.19	26.38
5	Township proposed (Vedanta's own existing land)	91.00	36.826
Total		2061.41	834.236

6.0 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.

7.0 Total estimated project cost is Rs.1240 Crores. Proposed employment generation from proposed project will be 800 persons (direct employment and indirect employment).

8.0 The targeted production capacity of the Aluminium after expansion is 18 LTPA (1.8 million TPA). Under normal conditions, the main raw material alumina and coke transportation will be done through rail except during any emergencies/break-downs. The other raw materials will be transported through rail or road. The proposed capacity for different products for new site area as below:

Name of unit	Existing Capacity	Proposed Capacity	Total Capacity
Smelter	16 LTPA	2.0 LTPA	18 LTPA
Total	16.0 LTPA	2.0 LTPA	18.0 LTPA

9.0 The electricity load of proposed expansion project 300-400 MW will be procured from existing power plants. Details of power plant capacities available with Vedanta are as given below:

Sl. No	Power Plant	Existing Capacity (MW)	Proposed Capacity (MW)	Total Capacity (MW)
1	CPP	1215	0	1215
3	TPP	2400	0	2400
	Total	3615	0	3615

10.0 Proposed raw material and fuel requirement and fuel consumption details:

Sl. No.	Description	Quantity
1	Alumina	1.93 T/Tonne of metal or 386,000 TPA additional
2	Cryolite	2 kg/T or 400 TPA
3	Calcined Petroleum Coke	0.37 T/T (gross anode consumption is around 545 kg/T) or 74000 TPA additional
4	Coal Tar Pitch	0.08 T/T or 16000 TPA additional
5	Aluminium Fluoride	20 Kg/T or 4000 TPA additional
6	Heavy Diesel Oil (HDO)	100 T/day

11.0 Water consumption for the proposed project will be 576 m³/day. Out of this, the fresh water requirement is around 20% and balance quantity will be recycled after treatment in Effluent Treatment Plant (ETP). The quantity of make-up water requirement shall be catered from our existing water allocation.

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

13.0 The Project proponent has made detailed presentation along with EIA Consultant M/s. Vimta Labs Limited, Hyderabad [QCI. Sr.No. 143].

14.0 The committee observed that the proposal involved additional green anode plant, Rodding plant, cast house, Utilities, expansion of township (covered under entry 8(b) of schedule of EIA Notification, 2006 as amended), addition of 66 pots in smelter-II.

15.0 After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at **Annexure I read with additional ToRs at Annexure-2.**

- i. Public Hearing to be conducted by the concerned State Pollution Control Board.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA. I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and Enterprise Social Commitment (ESC) related issues. The social impact assessment study so carried out should form part of EIA and EMP report.

- iv. Certificate compliance of earlier EC from the Regional office of MoEFCC shall be submitted along with EIA/EMP.
- v. Management plan for solid waste shall be submitted in the EIA/EMP report
- vi. The details of the power sourcing shall be provided.
- vii. The standard ToR for Sl. No. 8(b) of schedule of EIA Notification, 2006 “Township and development projects” shall be complied.

26.10. Expansion of the existing 0.052 MTPA Sponge Iron to 0.16 MTPA Sponge Iron with 20 MW Power Plant located at PO Bonra, PS Neturia in Purulia District of West Bengal by **M/s Maithan Steel & Power Limited** [Online Proposal No. IA/WB/IND/70780/2017; MoEFCC File No. IA-J-11011/554/2017-IA.II(I)] - **Terms of Reference.**

1.0 **M/s Maithan Steel & Power Limited** has made online application vide proposal no. IA/WB/IND/70780/2017 dated **4th November, 2017** along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under category ‘A’ of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

2.0 M/s. Maithan Steel & Power Limited, At/PO- Bonra, PS- Neturia in Purulia district of WB proposes expansion of existing 64,000 TPA Sponge Iron manufacturing unit to 1,60,000 TPA Sponge Iron & 40,000 TPA Ferroalloys. It is proposed to set up DRI Kilns based on SL/RN DRI process Technology and Ferroalloy production through Electric Arc melting technology.

3.0 The existing project was accorded CTE, Memo No-787/2N-2383/2001, dated, 27.9.2001 & Consent to Operate was accorded by WB State Pollution Control Board vide letter No-C 081367, bearing memo No-1348-WPBA/Red (Prl)/ Cont (82)/02 dated 27.8.2015 and validity of CtO is up to 30.11.2017.

4.0 The proposed unit will be located at-Bonra,PS-Neturia, District: Purulia, State: WB.

5.0 The land area acquired for the proposed plant is 9.33 ha on which existing plant is running and expansion will be accommodated in the available vacant space. No agricultural land, No grazing land and No Government Land Nor forestland involved. The entire land has been acquired for the project. Of the total area 3.08 ha (33 %) land will be used for green belt development.

6.0 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.

7.0 Total project cost is approx. 165 Crore rupees. Proposed employment generation from proposed project will be 450 direct employment inclusive of existing and more indirect employment.

8.0 The targeted production capacity of the project after expansion is 0.16 million TPA sponge Iron & 0.04 MTPA Ferroalloys and Pig Iron taken together. The Iron ore for the plant would be procured from Barbil mines of Odisha through e-auction and Manganese Ore to be imported. The

ore transportation will be done through Ship/Rail/Road through Environment compatible fully covered vehicles. The proposed capacity for different products after expansion are as follows:

Sl.No	Name of unit	No.of units	Capacity of each unit	Production capacity
1	100 TPD DRI Kilns	5	32,000 TPA	1,60,000 TPA
2	9 MVA Arc Furnace	2	20,000 TPA (Fe-Mn, Si-Mn, Fe-Si & Pig Iron)	40,000 TPA
3	20 TPH Iron Ore Washery	2	1,20,000 TPH	2,40,000 TPA
4	250 TPD I/o Sinter Plant	1	80,000 TPA	80,000 TPA

9.0 The electricity load is about 21 MW on full load running and captive power generation from WHRB & FBC will be 20 MW. Hence no additional power will be required to be procured from outside Company has also proposed to install 750 KVA DG Set.

10.0 Proposed raw material and fuel requirement for project are 0.288 MTPA Iron ore 0.276 MTPA Coal. The requirement would be fulfilled by indigenous as well as import. Fuel consumption will be mainly for Sponge Iron production.

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

12.0 Project proponent has made detailed presentation along with EIA Consultant M/s Global Tech Enviro Experts Private Limited, Bhubaneshwar.

13.0 The committee observed that plant is very congested for the proposed facilities. Therefore, the committee suggested to explore the possibility of optimization of the configuration to re-design the plant layout and procurement of additional land.

14.0 After detailed deliberation, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at **Annexure I read with additional ToRs at Annexure-2.**

- i. Public Hearing to be conducted by the concerned State Pollution Control Board.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA. I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and Enterprise Social Commitment (ESC) related issues. The social impact assessment study so carried out should form part of EIA and EMP report.
- iv. Certificate compliance of earlier EC from the Regional office of SPCB shall be submitted along with EIA/EMP.
- v. The PP shall consider for single 40 T capacity ore washing plan in place of 2 X 20 T.
- vi. Action plan for 100% utilization of fly ash, dolochar and slag from SAF
- vii. Details of granulation of slag generated from SAF.

viii. Explore the possibility of optimization of the configuration to re-design the plant layout and procurement of additional land

26.11. Expansion cum change in product mix from Clinker: 540000 TPA, Portland Slag Cement: 937500 TPA, Portland Pozzolana Cement: 180000 TPA to Clinker Grinding Unit of capacity 4.0 Million TPA cement along with proposed Power Plant: 20 MW and captive railway siding near village Hansda, PO Burudih, Dist. Saraikela-Kharsawan, Jharkhand by **M/s Shree Cement Ltd.**, [Online Proposal No. IA/JH/IND/71216/2017 dated 24th November, 2017; MoEFCC File No. J-11011/692/2008-IA.II(I)] – **ToR**.

The project proponent made request for withdrawal of application which was agreed to.

12th December, 2017 (Brahmaputra)

26.12. Proposed Karakhendra Steel Plant (0.10 MTPA) at village Karakhendra, Keonjhar district, Odisha by **M/s Rungta Mines Limited** [Online Proposal No. IA/OR/IND/59265/2016; MoEFCC File No.: J-11011/230/2016-IA-II(I)] – **Environmental Clearance based on ToRs**

1.0 The proponent has made online application vide proposal no. IA/OR/IND/59265/2016, dated 6th November 2017 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. 3(a) in Metallurgical industries (ferrous and non-ferrous) under Category “A” EIA Notification 2006 and subsequent amendments. Therefore, the project is appraised at central level.

2.0 The proposed Karakhendra Steel Plant (0.10 MTPA) of M/s Rungta Mines Limited located in Village Karakhendra of District Keonjhar, Odisha, was initially received in the Ministry on 28th September 2016 for obtaining Terms of Reference (TOR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry-1) [EAC(I)] during its meeting held on 27th October 2016 to 28th October 2016 and prescribed ToRs to the project for undertaking detailed EIA study for the purpose of obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project vide letter no. J-11011/230/2016-IA.II(I) dated 18.01.2017.

3.0 The project of M/s Rungta Mines Limited (Karakhendra Steel Plant) located in Village Karakhendra, Tehsil Barbil, District Keonjhar, Odisha is for setting up a new steel plant for production of 0.10 million tones per annum. The proposed capacity for different products for new site area as below:

Sl. No.	Facilities	Production Capacity (TPA)
1	Steel Melting Shop comprising: Induction Furnace (2X15 T) with CCM (2 strand)	105,600
	Billet / Bloom/ Slab caster	103,488
2	TMT/ Flat/Round/Wire Rod/ Structural Mill	101,418

4.0 The total land required for the project is 5.34 ha. No forestland involved. The entire land has been acquired for the project and has been converted into industrial use. No River passes through the project area. It has been reported that natural water body exist around the project. As

the sheet flow runoff from plant site is going into natural drain at present, there will be marginal change in the volume of flow as some of the water from the plant area will get captured and harvested in surface water reservoir or recharged to ground.

5.0 The topography of the area is flat but with low lying area towards north west and reported to lie between 22° 8' 17" to 22° 8' 28" N Latitude and 85° 24' 45" to 85° 24' 58" E Longitude in Survey of India topo sheet No. 73-F/7, 8 & 12. The average ground elevation of the project area is about 448 m to 454 m AMSL. The depth to water level in the district ranges from 1.07 to 12.99 m below ground level during pre-monsoon period and from 0.21 to 6.56 m below ground level during post monsoon period. The seasonal fluctuation of water table pre and post monsoon period (2011) varies from Nil to 7.80 m. No ground water will be extracted for industrial use. Further, the present stage of groundwater development has been worked out to be 25.55% only with the highest in Joda (62.68%) and the least in Banspal (11.10%). and thereby this is designated as safe area.

6.0 The nearest National Park is Simlipal at a distance of 77 km in ESE direction. The nearest sanctuary is Simlipal sanctuary is present at a distance of 109 km in ESE direction from the plant. No national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ etc. are reported to be located in the core and buffer zone of the project. The entire Singhbhum district has been declared as the habitat of Elephant/ Elephant reserve, part of which falls in 10 km radius at a distance of 2 km from the project. The schedule I species found in the study area is *Melursus ursinus* (sloth bear), *Elephas Maximus* (Elephant) and *Python molurus* (Indian rock python). A "Site Specific Conservation Plan" has been prepared and submitted to Divisional Forest Officer, Keonjhar vide letter no RML/SID-486/204/17-18 dated 24.10.2017.

7.0 The process of manufacturing will be steel through induction furnace-caster-rolling mill route. There will be installation of Induction Furnace (15 T X 2 Nos.), two streams of rolling mill for finished steel to be rolled from captive available caster. The ore is required for the plant. The major raw materials for the proposed plant will be 99388 TPA sponge iron, 11478 TPA scrap, 11478 TPA pig iron and 4563 KL Furnace oil.

8.0 The targeted production capacity of the crude steel from SMS is 0.10 million TPA. The sponge iron for the plant would be procured from Own DRI plant, scrap from open market/imported, pig iron from open market and furnace oil from Rourkela Depot. Mode of transport for raw materials will be by rail followed by road for imported material. For local materials and open market, it will be through road.

9.0 The water requirement for the proposed project is estimated to be 758 m³/day, out of which 726 m³/day is fresh water and will be obtained from Karo river. Remaining water requirement shall be recycled water. Industrial water shall be sourced first from harvested rain water and deficit from Karo River, if required. Ground water will be sourced for domestic. Water received from various sources will be stored in a raw water reservoir proposed over 3 acres in the north-western portion of the plant.

10.0 The power requirement for the proposed plant shall be 15 MW which shall be sourced from proposed power plant proposed at a distance of 0.5 km (aerial) located inside the premises of the existing sponge iron plant of the company at village Karakolha.

11.0 Base line environmental monitoring has been carried from December 2016 to February 2017. Ambient Air quality monitoring was carried out at 8 locations and the data submitted indicated that average PM₁₀ level was found to range from 39.6 to 67.8 µg/m³, PM 2.5 was found to vary from 22.7 to 38.9 µg/m³, SO₂ from BDL to 19.0 µg/m³ and NO₂ from 7.1 to 23.7 to µg/m³. The results of the air quality prediction modeling study indicate that the maximum increase of GLC for the proposed project for stack emission 2.46 µg/m³ for PM₁₀, 1.41 µg/m³ for PM_{2.5}, 0.10 µg/m³ for SO₂ and 0.02 µg/m³ for NO₂. The results for fugitive dust modelling for stock yards showed ground level concentrations of 1.63 µg/m³ for PM₁₀ and 0.89 µg/m³ for PM_{2.5}. The transportation route vehicular exhaust air pollutant emission estimation gave ground level concentrations of 0.063 µg/m³ for PM₁₀, 0.036 µg/m³ for PM_{2.5}, 0.834 µg/m³ for SO₂ and 8.38 µg/m³ for NO₂.

12.0 Ground water & supply water quality has been monitored in 8 locations in the study area and results indicate pH in range of 6.8-7.7, total hardness between 128-240 mg/l, Chloride between 13-56 mg/l, Fluoride between 0.13-0.48 mg/l and Heavy metal are well within the limits. Surface water samples have been monitored in 10 locations in the study area. pH was in range of 6.9-7.9, DO between 6.7-7.5 mg/l, BOD between 5-20 mg/l and COD between 13-37 mg/l.

13.0 Noise level are in the range of day time varies from 48.64 to 57.16 dB (A) and at night time varies from 38.18 to 46.70 dB (A).

14.0 It has been reported that there are no people in the core zone of the project. No R&R plan is involved. Land losers will be given preference in employment. The entire area of core zone i.e. 13.20 acres has been converted into industrial use.

15.0 It has been reported that solid waste generated from the plant are IF Slag (2112 TPY) shall be given for metal recovery, converted to aggregates (special balls) and used in road making, Mill scale (1138 TPA) shall be sent to Kamanda Steel Plant for reuse in Ferro Alloys plant and scrap (931 TPA) shall be reused in inhouse IF-LRF with scrap. It has been envisaged that that an area of 4.356 acres 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.

16.0 It has been reported that Consent to Operate from the Odisha State Pollution Control Board shall be obtained after the construction of proposed plant.

17.0 The Public hearing of the project was held on 13.10.2017 in front of Tarini Temple of village Karakhendra, Dist. Keonjhar, Odisha under the Chairmanship of Shri Dr. Bhakta Charan Pradhan, Additional District Magistrate, Keonjhar, for production of 0.10 MTPA steel plant. The main issues raised during public hearing are employment opportunity, provision of health care & drinking water supply, pollution control measures, etc.

18.0 An amount of 2.08 crores (2.5% of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues. The details of ESC proposed are as follows:

Sl. No.	Enterprise Social Commitment Activities (Expenditure in Lakhs)	Year 1	Year 2	Year 3	Year 4	Year 5	Total
1.	Schools- repair/ renovation, provision of toilets in Villages Belkundi, Mahakud	7.5	10	10	10	10	47.5

Sl. No.	Enterprise Social Commitment Activities (Expenditure in Lakhs)	Year 1	Year 2	Year 3	Year 4	Year 5	Total
	Basti, Mundasahi, Belkundi Talasahi, Nalda Karakhendra and Sonia sahi						
2.	safety of religious place (Jera)	0.5					0.5
3.	Procurement of Ambulance fitted with necessary equipments for emergency Health Care and Referential Services.	10	0	0	0	0	10
4.	Construction of Village Roads / Culverts in Villages Karakhendra, Karakolha, Belkundi & Uliburu	10	10	10	10	10	50
5.	Construction of Common Meeting / Social congregation place for multi purposes in Villages Belkundi, Mahakud Basti, Mundasahi, Belkundi Talasahi, Nalda Karakhendra and Uliburu	5	5	8	8	8	34
6.	Supply of Clean Drinking Water in Villages Belkundi, Mahakud Basti, Mundasahi, Belkundi Talasahi, Nalda Karakhendra and Uliburu	10	10	10	10	10	50
7.	Provision of vehicle facilities from Karakhendra to Barbil for student		6				6
8.	Electricity provision in Village Playground in Villages Belkundi, Mahakud Basti, Karakolha, Mundasahi, Belkundi Talasahi, Nalda Karakhendra and Uliburu	0	0	0	5	5	10
	Total	43	41	38	43	43	208

19.0 The capital cost of the project is about Rs 83 crores and the capital cost for environmental protection measures is proposed as Rs. 2.69 crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 0.76 crores per annum. The total employment generation from the proposed project is 250 people. The details of fund provision for EMP is as follows:

Description	Capital cost, Rs. Lakhs	Recurring cost per annum, Rs. Lakhs
Air Pollution Control	85.00	27.77
Water Pollution Control	27.60	2.20
Noise Pollution Control	5.00	1.27
Env. Monitoring and management	145.10	28.68
Reclamation	0.00	0.00
Occupational Health	2.00	2.57
Green Belt (Total-Planted) (Ha)	4.41	1.55
Others (EIA/EMP, Expert Advice Etc.)	0.00	2.60
Interest on capital cost		8.07

Overheads (3% of Dep., Energy, R&M & Interest)		1.51
Total	269.11	76.21

20.0 Green belt will be developed in 4.356 acres (1.76 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. Local and native species will be planted with a density of 2500 trees per ha. Total no. of 4400 saplings will be planted within one year.

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

22.0 The project proponent has made detailed presentation on the proposal along with EIA Consultant Organization M/s Min Mec Consultancy Private Limited, New Delhi (Min Mec 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).

23.0 After detailed deliberations, the Committee recommended the project for environmental clearance subject the following Specific and General conditions:

Specific Conditions:

- i. The project proponent shall prepare a detailed DMP including recommendations for off-site emergency preparedness and response plan (ERP) and submit the same within the period of two months from the date of issue of Environmental Clearance to the Ministry.
- ii. An amount of Rs 2.08 crores proposed towards Enterprise Social Commitment (ESC) shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates.
- iii. Green belt shall be developed in 2 Ha with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.
- iv. The Capital cost Rs. 269.11 Lakhs and annual recurring cost Rs. 76.21 lakhs towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted for any other purpose.

General Conditions:

1. The project proponent shall:
 - a. install 24x7 continuous emission monitoring system at all the stacks to monitor stack emission with respect to parameters prescribed in G.S.R 414 (E) dated 30th May 2008 from time to time and connected to CPCB online;
 - b. monitor fugitive emissions in the plant premises;

- c. carryout Continuous Ambient Air Quality monitoring as per National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 (as amended from time to time) within and outside the plant area at least at four locations covering upwind and downwind directions at an angle of 120° each; and
 - d. submit monitoring report to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
2. The project proponent shall
- a) install 24x7 continuous effluents monitoring system at all the discharge points to monitor treated effluents with respect to parameters prescribed in G.S.R 414 (E) dated 30th May 2008 as amended from time to time;
 - b) monitor regularly ground water through sufficient numbers of piezometers in the plant and adjacent areas; and
 - c) submit monitoring report to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
3. The project proponent shall
- a) provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources;
 - b) design suitable capacity of bag filters to handle gas/air shall be 150% of the normal flow from process/ from suction hoods to achieve particulate emission to less than 30 mg/Nm³;
 - c) provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags;
 - d) provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly;
 - e) recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration;
 - f) use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin;
 - g) provide covered sheds for raw materials like scrap and sponge iron, lump ore, coke, coal, etc;
 - h) provide primary and secondary fume extraction system at all melting furnaces; and
 - i) design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.
4. The project proponent shall:
- a) adhere to 'zero liquid discharge';
 - b) provide Sewage Treatment Plant for domestic wastewater; and
 - c) Provide ETP for removal of all rolling mills.

5. The project proponent shall:
 - a) practice rainwater harvesting to maximum possible extent; and
 - b) make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.
6. The PP shall:
 - a) provide waste heat recovery system (pre-heating of combustion air) at the flue gases of reheating furnaces.
 - b) practice hot charging of slabs and billets/blooms as far as possible;
 - c) ensure installation of regenerative type burners on all reheating furnaces;
 - d) provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly; and
 - e) Provide the project proponent for LED lights in their offices and residential areas.
7. Used refractories shall be recycled as far as possible.
8. Sufficient number of colour coded waste collection bins shall be constructed at shop floors in each shop to systematically segregate and store waste materials generated at the shop floors (other than Process waste) in designated coloured bins for value addition by promoting reuse of such wastes and for good housekeeping.
9. Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried, and briquetted and reused melting Furnaces.
10. The PP shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.
11. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
12. The PP shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
13. The PP shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.
14. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Induction/ Electric Arc Furnace and Rolling Mills shall be implemented.
15. A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.

16. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
17. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
18. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
19. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.
20. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dB(A) during day time and 70 dB(A) during night time.
21. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
22. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.
23. The project proponent shall:
 - a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;
 - b. put on the clearance letter on the web site of the company for access to the public.
 - c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at <http://envfor.nic.in>.
 - d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;
 - e. monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company;
 - f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;
 - g. submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company;

- h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

26.13. Proposed 20 MW (8 MW WHRB+ 12 MW AFBC) power plant within existing premises of Sponge Iron Plant (5X100 TPD) at village Karakolha, district Keonjhar, Odisha of **M/s Rungta Mines Limited** [Online Proposal No: IA/OR/IND/59204/2016; MoEFCC File No: J-11011/229/2016-IA-II(I)] – **Environmental Clearance based on ToRs.**

1.0 The proponent has made online application vide proposal no. **IA/OR/IND/59204/2016**, dated **3rd November 2017** 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. 3(a) in Metallurgical industries (ferrous and non-ferrous) and 1(d) Thermal Power Plants under Category "A" EIA Notification 2006 and subsequent amendments. Therefore, the project is appraised at central level.

2.0 The proposed 20 MW (8 MW WHRB+12 MW AFBC) power plant within existing premises of sponge iron plant (5x100 TPD) of Karakolha Sponge Iron Plant of M/s Rungta Mines Limited located in Village Karakolha of District Keonjhar, Odisha, was initially received in the Ministry on 28th September 2016 for obtaining Terms of Reference (TOR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry-1) [EAC(I)] during its meeting held on 27th October 2016 to 28th October 2016 and prescribed TORs to the project for undertaking detailed EIA study for the purpose of obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed TORs to the project vide letter no. J-11011/229/2016-IA.II.(I) dated 18.01.2017.

3.0 The project of M/s Rungta Mines Limited (Karakolha Spong Iron Plant) located in Village Karakolha, Tehsil Barbil, District Keonjhar, Odisha is for setting up 20 MW (8 MW WHRB+12 MW AFBC) power plant within existing premises of sponge iron plant (5x100 TPD). The existing DRI plant is operational after obtaining CTO prior 2006. Certified report after inspection received from OSPCB vide letter dated 24.04.2017. The proposed capacity of power plant shall be 20 MW (8 MW WHRB+12 MW AFBC). Existing and Proposed Plant Facilities & Capacities are given below:

Facilities	Existing Capacities	Proposed additional	Total
Existing- DRI Plant (5X100 TPD)	150000 TPA	-	150000 TPA
Proposed - Power Plant	-	20 MW	20 MW
(i) WHRB	-	8 MW	8 MW
(ii) AFBC	-	12 MW	12 MW

4.0 The total land required for the existing and proposed project is 10.18 ha (25.149 acres). Sponge Iron Plant is already operational in the same area. No /forestland involved. The entire land has been acquired for the project and has been converted into industrial use. No River passes through the project area (p/c). It has been reported that natural water body exist around the project. As the sheet flow runoff from plant site is going into natural drain at present, there will be marginal change in the volume of flow as some of the water from the plant area will get captured and harvested in surface water reservoir or recharged to ground.

5.0 The topography of the area is flat and reported to lie between 22°07'47.36" to 22°08'03.65" Latitude and 85°25'15.88" to 85°25'15.76" E Longitude based on Google Earth Pro and in Survey of India toposheet No. 73-F/8. The average ground elevation of the project area is about 465 to 477 m AMSL. The depth to water level in the district ranges from 1.07 to 12.99 m below ground level during pre-monsoon period and from 0.21 to 6.56 m below ground level during post monsoon period. The seasonal fluctuation of water table pre and post monsoon period (2011) varies from Nil to 7.80 m. Further, the present stage of groundwater development has been worked out to be 25.55% only with the highest in Joda (62.68%) and the least in Banspal (11.10%) and thereby this is designated as safe area.

6.0 The nearest National Park is Simlipal at a distance of 76 km in ESE direction. The nearest sanctuary is Simlipal sanctuary is present at a distance of 108 km in ESE direction from the plant. 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 entire Singhbhum district has been declared as the habitat of Elephant/ Elephant reserve, part of which falls in 10 km radius at a distance of 2 km from the project. The schedule I species found in the study area is Melursus ursinus (sloth bear), Elephas Maximus (Elephant) and Python molurus (Indian rock python). A "Site Specific Conservation Plan" has been prepared and submitted to Divisional Forest Officer, Keonjhar vide letter no RML/SID-486/203/17-18 dated 24.10.2017.

7.0 Sponge Iron is produced by heating Iron with coal and other additives under controlled conditions in Rotary Kiln. The outlet gases are mixed with air and burnt to convert CO into CO₂. As the flue gases contain substantial sensible heat, it is proposed to utilize the heat for power generation through waste heat recovery boilers. Total AFBC based power generation will be 12 MW. The boiler will be of natural circulation, balanced draft, single drum type will be equipped with fluidized bed firing system. The boiler will be provided with Electrostatic Precipitator. The major raw material required for the existing sponge Iron plant are Iron ore (258000 TPA), dolomite (10500 TPA) and Coal (127500 TPA) while for the proposed Captive Power plant are Char (34500 TPA) and coal (64800 TPA). The solid waste generated from existing DRI plant are char (34500 TPA), ESP dust (7500 TPA) and kiln accretion (750 TPA) while from power plant fly ash (57000 TPA).

8.0 The targeted production capacity of the power plant shall be 20 MW (8 MW WHRB+12 MW AFBC). Mode of transport for raw materials will be by rail/ road.

9.0 The water required for the plant is proposed to be sourced from bore well as per sanctioned capacity and rain water harvesting. Existing fresh water requirement is 419 KLD and the proposed requirement of power plant shall be 266 KLD. Total fresh water consumption shall be 685 KLD or 28.54m³/hr. after implementation of power plant. The state Government has permitted withdrawal of 480 m³/day ground water and made agreement with executive engineer Baitarni division. Additional water will be met from rain water harvesting.

10.0 The power generated from proposed plant is 20 MW. It will be utilized for existing DRI Plant (1.5 MW), self (2.0 MW), SMS, Castor and rolling Mill (15 MW), others (0.5 MW) and losses (1.0 MW).

11.0 Base line environmental monitoring has been carried from December 2016 to February 2017. Ambient Air quality monitoring was carried out at 8 locations and the data submitted

indicated that average PM₁₀ level was found to range from 48.4 to 71.0 µg/m³, PM 2.5 was found to vary from 27.7 to 41.8 µg/m³, SO₂ from BDL to 19.0 µg/m³ and NO₂ from 7.9 to 24.7 to µg/m³. The results of the air quality prediction modeling study indicate that the maximum increase of GLC for the proposed project PM₁₀, PM_{2.5} SO₂ and NO₂ shall be 7.90 µg/m³, 4.54 µg/m³, 0.84 µg/m³ and 0.65 µg/m³ respectively.

12.0 Ground water & supply water quality has been monitored in 8 locations in the study area and results indicate pH in range of 6.8-7.7, total hardness between 128-240 mg/l, Chloride between 13-56 mg/l, Fluoride between 0.13-0.48 mg/l and Heavy metal are well within the limits. Surface water samples have been monitored in 10 locations in the study area. pH was in range of 6.9-7.9, DO between 6.7-7.5 mg/l, BOD between 5-20 mg/l and COD between 13-37 mg/l.

13.0 Noise level are in the range of 56.9 to 68.98 dB (A) during day time and at night time varies from 41.71 to 59.20 dB (A).

14.0 It has been reported that there are no people in the core zone of the project. No R&R plan is involved. The power plant shall be within the existing premises of sponge iron plant. The entire area of core zone i.e. 10.18 acres has been converted into industrial use.

15.0 It has been reported that solid waste will be generated from the plant are Char and fly ash. Char shall be 100% utilized in house consumption for power generation through AFBC, and fly ash shall be utilized in brick plant (17%) and NHAI/SH road construction (83%).

16.0 Company has earmarked 4.0 acres for dumping and stacking the solid wastes of the DRI and Power plant. It has been envisaged that that an area of 3.36 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.

17.0 It has been reported that Consent to Operate from the Odisha State Pollution Control Board has been obtained and has been periodically renewed and is valid till 31.03.2018.

18.0 The public hearing was held on 12.10.2017 at the back side of Gurudev Filling Station, Karakolha village, Dist. Keonjhar Odisha, under the Chairmanship of Shri Dr. Bhakta Charan Pradhan, Additional District Magistrate, Keonjhar, for proposed 20 MW power plant. The main issues raised during public hearing are employment opportunity; provision of health care & drinking water supply; pollution control measures, etc.

19.0 An amount of 2.25 crores (2.5% of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues. The details of the ESC is given as follows:

Sl. No.	Enterprise Social Commitment Activities (Expenditure in Lakhs)	Year 1	Year 2	Year 3	Year 4	Year 5	Total
1	Schools- repair/ renovation, provision of toilets and computer centres in Villages Karakolha Karakhendra, Belkundi, Mahakud Basti, Nalda, Uliburu, Mundasahi	6	6	3	3	3	21
2	Procurement of Ambulance fitted with necessary equipment for emergency Health Care for round-the-clock availability	10	0	0	0	0	10

Sl. No.	Enterprise Social Commitment Activities (Expenditure in Lakhs)	Year 1	Year 2	Year 3	Year 4	Year 5	Total
3	Construction of Village Roads in Villages Karakolha, Karakhendra & Belkundi	0	0	40	40	40	120
4	Construction of Toilets of households in Village Karakolha, where no toilet has yet been constructed under Swachh Bharat Mission (total possible approx. 300@Rs.10,000)	6	6	6	6	6	30
5	Supply of Clean Drinking Water (construction of overhead tank, bore well, hand pump, pipe supply system) in Mahakud Basti, Nalda, Uliburu, Mundasahi	5	5	5	5	5	25
6	Provision of additional vehicle facility (RTV) from Karakolha to Barbil for villagers	6	0	0	0	0	6
7	Electrification in village Uliburu and left out areas of Villages Karakhendra & Karakolha	6	0	0	0	0	6
8	Solar lighting at Uliburu and Karakolha village	0	5	0	0	0	5
9	Renovation of village temple (Tarini Temple Karakhendra, Shiv Temple Karakolha, Village Temple at Dalki Basti)	2	0	0	0	0	2
	Total	41	22	54	54	54	225

20.0 The capital cost of the project is about Rs 90 crores and the capital cost for environmental protection measures is proposed as Rs. 2.87 crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 0.66 crores per annum. The detailed CSR plan has been provided in the EMP in its chapter 8 page 8-7 to 8-9. The total employment generation from the proposed project is 105 people. The details of fund provision for EMP is as follows:

Description	Capital cost, Rs. Lakhs	Recurring cost per annum, Rs. Lakhs
Air Pollution Control	243.00	38.61
Water Pollution Control	18.00	3.67
Noise Pollution Control	5.00	1.27
Env. Monitoring And management	12.00	6.18
Reclamation	0.00	0.00
Occupational Health	7.00	2.62
Green Belt (Total-Planted) (Ha.)	0.00	1.24
Others (EIA/EMP, Expert Advice etc.)	1.50	2.35
Interest on capital cost		8.60

Overheads (3% of Dep., Energy, R&M & Interest)		1.42
Total	286.50	65.95

21.0 Green belt will be developed in 8.3 acres (3.36 ha) which is about 33% of the total area. A 7.0 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. Local and native species will be planted with a density of 2500 trees per ha. Till date 5000 plant planted over an area of 5.0 acres and 3025 no of saplings will be planted over an area of 3.03 acres and completed within one year.

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

23.0 The project proponent has made detailed presentation on the proposal along with EIA Consultant Organization M/s Min Mec Consultancy Private Limited, New Delhi (Min Mec 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).

24.0 After detailed deliberations, the committee recommended for issue of environmental clearance with following specific and general conditions:

Specific conditions:

1. An amount of Rs 2.25 Crores proposed towards Enterprise Social Commitment (ESC) shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates.
2. Green belt shall be developed in 8.3 Acres of the plant area with a native tree species in accordance with CPCB guidelines by September 2018. The greenbelt shall inter alia cover the entire periphery of the plant.
3. The Capital cost Rs. 286.50 Lakhs and annual recurring cost Rs. 65.95 Lakhs towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted for any other purpose.
4. Kitchen waste shall be composted or converted to biogas for further use.
5. The PP shall ensure 100% utilization of fly ash and dolochar generated in the complex.
6. The project proponent shall empower the village community by taking village level institutions for maintaining water supply and local transport provided by PP.

General Conditions:

1. The project proponent shall:
 - a. install 24x7 continuous emission monitoring system at all the stacks to monitor stack emission with respect to parameters prescribed in G.S.R 414 (E) dated 30th May 2008;

S.O. 3305 (E) dated 7th December 2015 for thermal power plant as amended from time to time and connected to CPCB online;

- b. monitor fugitive emissions in the plant premises;
 - c. carryout Continuous Ambient Air Quality monitoring as per National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 (as amended from time to time) within and outside the plant area at least at four locations covering upwind and downwind directions at an angle of 120° each; and
 - d. submit monitoring report to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
2. The project proponent shall
- a) install 24x7 continuous effluents monitoring system at all the discharge points to monitor treated effluents with respect to parameters prescribed in G.S.R 414 (E) dated 30th May 2008; S.O. 3305 (E) dated 7th December 2015 for thermal power plant as amended from time to time;
 - b) monitor regularly ground water through sufficient numbers of piezometers in the plant and adjacent areas; and
 - c) submit monitoring report to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
3. The project proponent shall
- a) provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources;
 - b) design suitable capacity of bag filters to handle gas/air shall be 150% of the normal flow from process/ from suction hoods to achieve particulate emission to less than 30 mg/Nm³;
 - c) provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags;
 - d) provide pollution control system in the steel plant as per the CREP Guidelines of CPCB;
 - e) provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly;
 - f) recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration;
 - g) use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin; and
 - h) provide wind shelter fence and chemical spraying on the raw material stock piles.
4. The project proponent shall:
- a) adhere to 'zero liquid discharge';
 - b) provide Sewage Treatment Plant for domestic wastewater; and

- c) provide garland drains and collection pits for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
- 5. The project proponent shall
 - a) practice rainwater harvesting to maximum possible extent; and
 - b) make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.
- 6. The PP shall:
 - a) provide waste heat recovery system on the DRI Klins;
 - b) use dolochar generated for power generation;
 - c) provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly; and
 - d) provide for LED lights in their offices and residential areas;
- 7. Used refractories shall be recycled as far as possible.
- 8. Sufficient number of colour coded waste collection bins shall be constructed at shop floors in each shop to systematically segregate and store waste materials generated at the shop floors (other than Process waste) in designated coloured bins for value addition by promoting reuse of such wastes and for good housekeeping.
- 9. The PP shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.
- 10. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- 11. The PP shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- 12. The PP shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.
- 13. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the steel plants shall be implemented.
- 14. A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.
- 15. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

16. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
17. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
18. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.
19. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dB(A) during day time and 70 dB(A) during night time.
20. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
21. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.
22. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding shall be submitted to the Ministry's Regional Office.
23. The project proponent shall:
 - i. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;
 - j. put on the clearance letter on the web site of the company for access to the public.
 - k. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at <http://envfor.nic.in>.
 - l. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;
 - m. monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company;
 - n. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;
 - o. submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company;

- p. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

26.14. Proposed Mini Integrated Steel Plant located at Village Temtema, Tehsil Kharsiya, District Raigarh, Chhattisgarh by M/s SKY Alloys & Power Pvt. Ltd., [Online Proposal No. IA/CG/IND/4652/2010; MoEFCC File No. J- 11011/380/2009-IA.II(I)]- Extension of Validity of Environmental Clearance.

1.0 M/s SKY Alloys & Power Private Limited made application vide Online Proposal No. IA/CG/IND/4652/2010 dated 3rd November, 2017 seeking extension of validity of Environmental Clearance granted vide J- 11011/380/2009-IA.II(I) dated 22/12/2010 & 23/05/2012.

2.0 Following is the plant configuration for which Environmental Clearance was obtained:

S.No.	Details	Plant Configuration	Production Capacity
1	Sponge Iron through DRI Kilns	4 x 100 TPD	1,20,000 TPA
2	Billets through Induction Furnace with Concast	3 x 10 MT	1,00,000 TPA
3	Rolled product such as TMT bars / Structural Steels through Rolling Mill	1 x 300 TPD	1,00,000 TPA
4	Ferro Alloys through Submerged Arc Furnaces (FeSi, SiMn, FeMn)	2 x 9 MVA	FeMn – 30,000 TPA FeSi – 9,600 TPA SiMn – 21,700 TPA
5	Power Plant (55 MW)	WHRB based	4 x 2 MW
		FBC based	1 x 12 MW & 1 x 35 MW

3.0 Following is implementation status of the Expansion project:

S. No.	Details	Plant Configuration	Production Capacity	Status of Implementation of present proposal
1.	Sponge Iron through DRI Kilns	4 x 100 TPD	1,20,000 TPA	<ul style="list-style-type: none"> • 2 x 100 TPD Kilns is in operation • 2 x 100 TPD Kilns is yet to be implemented and will be completed by Dec.2018 & March 2019
2.	Billets through Induction Furnace with Concast	3 x 10 MT	1,00,000 TPA	<ul style="list-style-type: none"> • Implemented and in operation
3.	Rolled product such as TMT bars / Structural Steels through Rolling Mill	1 x 300 TPD	1,00,000 TPA	<ul style="list-style-type: none"> • Yet to be implemented and will be completed by March 2019
4.	Ferro Alloys through Submerged Arc Furnaces	2 x 9 MVA	FeMn – 30,000 TPA	<ul style="list-style-type: none"> • 1 x 9 MVA SEAF is in operation.

S. No.	Details	Plant Configuration	Production Capacity	Status of Implementation of present proposal
	(FeSi, SiMn, FeMn)		FeSi – 9,600 TPA SiMn – 21,700 TPA	<ul style="list-style-type: none"> • 1 x 9 MVA SEAF is yet to be implemented and will be completed by December 2020
5.	Power Plant (55 MW)	WHRB based	4 x 2 MW	<ul style="list-style-type: none"> • 2 x 2 MW WHRB based power plant is in operation • 2 x 2 MW WHRB based power is yet to be implemented and will be completed by Dec.2018 & March 2019
		FBC based	1 x 12 MW & 1 x 35 MW	<ul style="list-style-type: none"> • 12 MW FBC based power plant has been implemented and is having valid CTO from CECB. • 1 x 35 MW FBC based power plant is yet to be implemented and will be completed by September 2020

4.0 It was informed that after obtaining the Environmental Clearance, part of the facilities has been implemented and could not go ahead with the implementation of the unimplemented portion of the above referred EC due to severe recession in steel sector (sluggish market condition) and fall in cash flow of the company during the past few years. With the improvement in market condition, the company will likely to implement the remaining unimplemented portion for which EC has been accorded by 22nd December 2020.

5.0 The project proponent has made presentation along with Consultant M/s PIONEER ENVIRO Laboratories & Consultants Pvt. Ltd.

6.0 After detailed deliberations, the committee recommended for extension of validity of EC up to 21st December 2020

26.15. Integrated Steel Plant (2.0 MTPA) Cement Plant (1.4 MTPA) and captive Power Plant (230 MW) at Village Danapura, Taluk Hospet, District Bellary, Karnataka by M/s BMM Ispat Ltd. [Online Proposal No. IA/KA/IND/3588/2010; MoEFCC File No. J-11011/236/2008-IA.II(I)]- Corrigendum and Amendment of Environmental Clearance.

1.0 M/s BMM Ispat Ltd. made made an application vide Online Proposal No. IA/KA/IND/3588/2010 dated 15th November 2017 seeking Corrigendum and Amendment of Environmental Clearance granted vide J-11011/236/2008-IA.II (I) dated 18th May 2010 read with extension of validity granted dated 17th May 2017.

2.0 The Ministry of Environment and Forests, GOI (I.A. Division) granted Environment Clearance vide its letter No F. No. J-11011/236/2008- IA II (I) dated 18th May 2010 to M/s B.M.M. Ispat Ltd., (BMMIL), to set up 2 MTPA Integrated Steel Plant, 230 MW Captive Power Plant and 1.4 MT Cement Plant near Danapura Village, Hospet Taluk, Bellary District Karnataka State.

3.0 M/s BMMIL after obtaining Consent for Establishment (CFE) and Consent of Operation (CFO) from Karnataka State Pollution Control Board has Commissioned the following manufacturing units and they are in operation. The Status position of project implementation is as follows:

Sl. No.	Items	Unit	Capacity Granted	Existing Capacity / in operation	To be established
1	Iron ore beneficiation plant	MTPA	3.40	1.30	2.1
2	Palletizing Plant	MTPA	1.20	1.20	-
3	DR Plant	MTPA	0.70	0.70	-
4	EAF & BOF Steel making	MTPA	2.30	1.1	1.20
5	Rolling mills Hot strip mill Structural's /wire rods	MTPA MTPA	1.00 1.00	0.85	1.15
6	Oxygen Plant	TPD	2x500	1x 500	1x500
7	Power Plant	MW	230	3x70	20
8	Continuous Casting machines Slab Caster Billet Caster	MTPA MTPA	1.00 1.00	- -	1.00 1.00
9	Blast furnace	MTPA	1.70	-	1.70
10	Coke Oven	MTPA	0.80	-	0.80
11	Sinter Plant	MTPA	2.50	-	2.50
12	Calcining	TPD	1,080	-	1080
13	Cement Plant	MTPA	1.40	-	1.40

4.0 The proposal of Extension of Validity of EC was considered by Expert Appraisal Committee in its 17th meeting held on 6th-7th April 2017 and recommended for of Validity Extension of EC for a further period of 3 years w.e.f. 18.05.2017. MoEF&CC, (I.A. Division) granted Extension of Validity of Environment Clearance valid up to 17.05.2020 vide its letter No F. No. J-11011/236/2008- IA II (I) dated 17th May 2017.

5.0 It was informed that mention of the Sinter Plant unit and Continuous Casting machines are was not made in the table given in the validity of extension letter.

6.0 Therefore, it is requested to issue corrigendum to extension of validity of EC granted on 17th May 2017 by way of incorporating Sinter Plant and Continuous Casting machines in the Table.

7.0 The specific condition No. XX of EC granted vide Letter No. F. No. J-11011/236/2008-IA II (I) dated 18th May 2010 says that “Tailings from the beneficiation plant shall be disposed properly in the tailing dam only.

8.0 It was informed that, the tailings from beneficiation plants in demand and is used in various applications viz., used as raw material in cement manufacturing, used for making geo polymer bricks, also used for making aggregates adding binders etc. in the present days. Advantages selling the tailings inter alia include proper utilization of natural resources; mineral conservation; land conservation by avoiding further land occupied by the tailing ponds and air pollution control by avoiding dry tailing escape with the wind.

9.0 It was also informed that Cement Industries located in Karnataka & neighbouring states have approached BMM Ispat Ltd., to supply Iron ore tailings stored in the tailing ponds and to use in their Cement manufacturing units. BMM Ispat Ltd intends to dispose these tailings for self-consumption in our steel plant/ supply to nearby Cement plants as raw material.

10.0 Therefore, it was requested to amend the Specific condition No. XX as “Tailings from the beneficiation plant shall be stored properly in the tailing Ponds and dried tailings/partially moist tailings is be disposed of by way of self-consumption in the proponent’s steel plant / supply to nearby Cement plants as raw material for further usage”.

11.0 The project proponent has made presentation of the facts along with the EIA Consultant M/s Environment & Power Technologies Pvt. Ltd.,(Sl.No. 2 of List ‘3’ of QCI).

12.0 After detailed deliberation, the committee recommended for corrigendum and amendment in the EC as mentioned above.

26.16. Steel Plant 60,000 TPA of TMT bars and 19,400 TPA of Ms Ingot located at Sy. No. 67/2 Village Devarapalli, Mandal Hindupur, District Ananthapur, Andhra Pradesh by **M/s Shyam Ferrous Limited** [Online Proposal No. IA/AP/IND/61021/2009; MoEFCC File No. J-11011/634/2009-IA.II(I)]- **Extension of Validity of Environmental Clearance.**

Consideration of the proposal was deferred as the Project Proponent did not attend the meeting. The proposal may be considered subject to satisfactory explanation of the reasons of absence by the applicant

26.17. Proposed for 0.18 MTPA Integrated Steel Plant, 24 MW Captive Power Plant and 2 x 9 MVA Ferro Alloys located at Jamuria Industrial State, Ikra, P.O Jamuria, District Burdwan, West Bengal of **M/s Maan Steel And Power Limited** [Online Proposal No. IA/WB/IND/6154/2010; MoEFCC File No. J-11011/695/2009- IA.II(I)]- **Extension of Validity of Environmental Clearance.**

1.0 **M/s Maan Steel & Power Limited** has made application vide online proposal No. **IA/WB/IND/6154/2010** dated **7th November, 2017** seeking extension of validity of Environmental Clearance granted vide File No. J-11011/695/2009- IA.II(I) dated 31st December 2010.

2.0 M/s Maan Steel & Power Limited is located at Jamuria Industrial Estate in Paschim Burdwan district of WB. The earlier project is continuing to run with 2x95 TPD DRI Kilns and producing 57,000 TPA sponge iron.

3.0 The company has obtained EC for the expansion of the unit to 0.18 MTPA Integrated steel Plant, based on additional 4x100 TPD DRI kilns, and 4x15T IF with 2x30T LRF and matching CCM, 550 TPD Rolling mill, 24 MW Captive Power Plant & 2x9 MVA Ferro Alloy Plant. The validity of EC is upto 30th December 2017.

4.0 CTE for all the facilities as per EC has been received from WBPCB vide letter No 124863, dt. 20.10 2014, and remains valid up to 31.08.2019. The company has so far commissioned only 2x15T IF with CCM and running the plant along with 2x95 TPD DRI Kilns which is existing prior to EC. CTE of 2x200 TPD DRI Kiln has been permitted by WBPCB against 4x100 TPD.

5.0 It was informed that now the situation has changed; Tata Capital Financial Services Limited (TCFSL) vide letter No-CF\TL\Kol\1455825, 14th September 2017 has sanctioned Term Loan for Rs.20.00crores for a tenure of 78 Months; Punjab National Bank vide letter dated 27th Nov.2017 have sanctioned Rs 50 cores to the company; and the company has also spent Rs. 11.20 Crores towards expansion of Sponge iron, billet, CPP & RM unit till 13.10.2017.

6.0 The company has placed orders for purchase of equipment and expecting delivery soon, so as to complete erection and commissioning within coming two years. The details of Orders Placement & delivery schedule of equipment as follows:

Equipment	Order No	Price	Agency	Delivery date
Boiler Feed Water pumps 3 nos	MSPL/PO/16-18/067, 11.10.2017	Rs 43 Lakhs	M/s KSB Pumps Ltd, Nariman Point, Mumbai	9 months from PO. i.e by 10.7.2018
Air cooled Condenser, Erection & Commissioning	MSPL/PO/16-18/062, 11.10.2017	Rs500 Lakhs	M/s Thermax SPX Energy Technologies, Pune	10months from PO, i.e by 10.8.2018
2x10 TPH & 1x20 TPH WHRB, 1x30 TPH AFBC	MSPL/PO/16-18/48, 24.8.2017	Rs15 Crore 11 lakhs	M/s Thermax Ltd, Pune	11months from PO, i.e. by 23.7.2018
12 MW steam Turbo-generator	MSPL/PO/16-18/040, 18.8.2017	Rs7.8 Crore	M/s Siemens Ltd	9months from PO, i.e. by 17.5.2018
DRI KILN	MSPL/16-18/001 DT 15/9/16	RS 4.86 Crore	M/s Beekay Engineering corporation	90 % of delivery completed.
Miscellaneous Items	Ordered	Rs6.00 Crore	To various parties	Delivery On

7.0 After detailed deliberations, the committee recommended for extension of validity of EC up to 30th December 2020

26.18. Expansion of existing steel manufacturing unit having existing capacity 25,2000TPA(70 TPD) of steel Ingots to 1,72,800TPA (480TPD) of steel Ingots/Billets and 1,50,000 TPA of

round, MS Bars, Flats, Wire, Rod and TMT Bars by replacing existing Induction Furnace at Village Gobindgarh, Adjoining, Phase-VII, Focal Point, Ludhiyana, Punjab by **M/s Sharu Special Alloys Pvt Ltd.**, [Online Proposal No. IA/PB/IND/70840/2017 dated 8th November, 2017; MoEFCC File No. J-11011/402/2010-IA.II(I)] – **Terms of Reference.**

1.0 **M/s Sharu Special Alloys Pvt Ltd.** has made online application vide proposal no. IA/PB/IND/70840/2017 dated 8th November, 2017 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & nonferrous) under category 'A' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

2.0 M/s. Sharu Special Alloys Pvt. Ltd. proposes expansion of existing manufacturing unit by installation of one rolling mill for manufacturing of Round MS-Bars, TMT Bars, wire rod, Flats and two number induction furnaces of 20 TPH for manufacturing of Steel ingots and billets.

3.0 Consent to Operate of water was accorded by Punjab pollution Control Board vide Ir. No. RI5LDH4CTOW3448580 validity of CtO is up to 30/06/2020. Consent to Operate of Air was accorded by Punjab pollution Control Board vide Ir. No. RI5LDH4CTOA3448621 validity of CtO is up to 30/06/2020.

4.0 The proposed unit will be located at Village: Gobindgarh, Adjoining Phase- VII, Focal Point, District: Ludhiana, State: Punjab.

5.0 The project has already 4.5 acres (1.821 Ha) land. No additional land is required for expansion. No forestland involved. Of the total area 33% land will be used for green belt development.

6.0 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.

7.0 Total project cost is approx 27.55 Crores rupees. Proposed employment generation from proposed project will be 400 Persons by direct employment.

8.0 The targeted production capacity of the unit after expansion will be 1, 72,800 TPA Steel Billets/Ingots, 3300TPA forged roll & 1, 50,000 TPA Round, TMT bars, wire rod, and flats. The ore for the plant would be procured from Local & international Market. The ore transportation will be done through Covered Trucks. The proposed capacity for different products for new site area as below:

Sl	Name of unit	No. of units	Capacity of each Unit	Production Capacity
1	Induction Furnace	2	20 TPH each	1,72,800
2	Rolling Mills	1	18 TPH each	1,50,000

9.0 The electricity load of total 21000 KW will be procured from Punjab State Power Corporation Limited, Punjab. One number sound proof DG sets having capacity 180KVA already installed. No DG set required for expansion.

10.0 Proposed raw material and fuel requirement for project are Sponge Iron, MS Scrap & Ferro Alloys. The requirement would be fulfilled from local & international market.

11.0 Water Consumption for the proposed project will be 38 KLD (Existing-5.0 KLD). Domestic & industrial waste water will be treated through septic tank and reused for plantation within premises. Proposed project is based on Zero discharge.

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

13.0 The Project proponent has made detailed presentation along with EIA Consultant M/s Chandigarh Pollution Testing Laboratory (Certificate No. NABET/ EIA/ 1619/ IA 0012).

14.0 The committee noted that the proposed project is located in the critically polluted area.

15.0 After detailed deliberations, the committee asked the PP to submit revised pre-feasibility report *inter alia*, covering existing ambient air quality and incremental pollution load due to proposed expansion proposal for further consideration of the proposal.

26.19. Expansion of production capacity of Sponge Iron: 2,25,000 TPA to 3,73,500 TPA, TMT Bars: 3,30,000 TPA to 4,22,400 TPA, M.S. Billet/ S.S. Billets: 3,36,600 TPA to 4,29,000 TPA, MS Rolled Bars: 6,483 TPA, Coal based Captive Power Plant (AFBC): 35MW and WHRB: 16 MW located at Village Samkhaiyali, Tehsil Bhachau, District Kutch, Gujarat by **M/s Gallant Metal Limited**. [Online Proposal No. IA/GJ/IND/70882/2017; MoEFCC File No. J-11011/52/2013-IA.II(I) – **Terms of Reference**.

1.0 **M/s Gallant Metal Limited** has made online application vide proposal no. IA/CG/IND/67974/2017 dated **10th November 2017** along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & nonferrous) under category 'A' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

2.0 M/s Gallant Metal Limited has proposed expansion of existing manufacturing unit for Sponge Iron Plant with M.S. Billets, TMT Bars, MS Rolled Bar, Runner & Raiser and Power Plant. It is proposed to set up the plant for expansion of Sponge Iron Plant (2,25,000 TPA to 3,73,500 TPA); M. S. Billets (3,36,600 TPA to 4,29,00 TPA); TMT Bars (3,30,000 TPA to 4,22,400 TPA); M.S Rolled Bar (5,346 TPA to 6,843 TPA); Runner & Raiser [(891 TPA (no Change in Capacity)] with CPP (25 MW to 35 MW); WHRB (8MW to 16 MW).

3.0 The existing project was accorded Environmental Clearance has been granted by MoEF&CC, New Delhi for the existing capacity of manufacturing Sponge Iron, TMT Bars, M.S. Billet/ S.S. Billets, Coal based Captive Power Plant and WHRB vide letter no.-J-11011/52/2013-IA II(I) dated 19.05.2016. Consent to Operate for Manufacturing of existing products (i.e. Sponge Iron, M.S. Billets, TMT Bars, MS Rolled Bar, Runner & Raiser) with 8 MW & 17MW Captive Power Plant has been obtained from GSPCB, Gujarat vide letter no. AWH/ 76789 dated 29.02.2016 which is valid up to 27.12.2020. Consent to Operate for additional 8MW (Total Capacity- 17+8=25MW) Captive Power Plant has been obtained from GSPCB, Gujarat vide letter

no. PC/ CCA-KUTCH-351(5)/GPCB ID 17845/412240 dated 11.05.2017 which is valid up to 27.12.2020.

4.0 The proposed unit is located at Village -Samkhaiyali, Tehsil -Bhachau, District -Kutch, Gujarat.

5.0 The land area acquired for the plant is 116 Acre (including plant and residential colony). No /forestland involved. The entire land has been acquired for the project. The total area 38.28Acre (33%) land is allotted for green belt development (Existing- 28.08Acre, Proposed – 10.20Acre).

6.0 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.

7.0 Total project cost after expansion is approx. Rs. 596 Crore (Existing- 380 Crore; Proposed- 216Crore). Proposed employment generation from project will be 1250 direct employment (Existing - 960; Proposed – 290) and 50 indirect employments.

8.0 The targeted production capacity of the Sponge Iron Plant (2,25,000 TPA to 3,73,500 TPA); M. S. Billets (3,36,600 TPA to 4,29,00 TPA); TMT Bars (3,30,000 TPA to 4,22,400 TPA); M.S Rolled Bar (5,346 TPA to 6,843 TPA); Runner & Raiser (891 TPA) with CPP (25 MW to 35 MW); WHRB (8MW to 16 MW). The iron ore for the plant would be procured from Imported/Indian and transported by ships to nearest port and later transported via dumper to site. The proposed capacity after expansion for different products are as below:

Name of Unit	Existing Capacity (TPA)	Proposed capacity (TPA)	Production capacity after expansion (TPA)
Sponge Iron	2,25,000	1,48,500	3,73,500
M.S. Billets	3,36,600	92,400	4,29,000
TMT Bars	3,30,000	92,400	4,22,400
M S Rolled Bar	5,346	1,497	6,843
Runner & Raiser	891	-	891(No change)
Power Generation			
Power Plant (AFBC)	25MW	10MW	35 MW
Power Plant (WHRB)	8MW	8MW	16MW

9.0 The electricity load of 51 MWH after expansion project is being/will be existing & proposed CPP and remaining will be met from State Grid as and when required.

10.0 Proposed raw material and fuel requirement for project are Iron ore, Coal, Sponge, Scrap, MS Billets, MS Billets. The requirement would be fulfilled by:

S. No.	Raw Material	Existing Consumption	Proposed	Total	Source	Mode of transport
Sponge Iron Plant						
1	Iron ore	360000 TPA	237600 TPA	597600 TPA	Imported/ Indian	Transported by ships to nearest port and later transported via dumper to site
2	Coal	241200 TPA	159192 TPA	400392 TPA	Imported / Indian	

Billets						
3	Sponge	225360 TPA	148140 TPA	373500 TPA	In-house production	Internal Transported by Trucks
4	Scrap	156660 TPA	Nil	156660 TPA	Local Market	Transported by Trucks
TMT Bars						
5	MS Billets	341976 TPA	87024 TPA	429000 TPA	In house production	
AFBC/CFBC Power Plant						
6	Coal	187618 TPA	75047 TPA	262665 TPA	Imported /Indian coal	Transported by ships to nearest port and later transported via dumper to site
7	Coal Char	66795 TPA	26718 TPA	93512 TPA	In-house production	Transported by Trucks

11.0 Water Consumption for the project after proposed expansion will be 1,855 KLD (Existing - 1,318 KLD proposed- 537 KLD) and domestic waste water is being treated in the existing STP and industrial waste water generated is being /will be treated in existing ETP and reused in the process and for green belt development and dust depression after treatment.

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

13.0 The project proponent has made detailed presentation on the proposal along with EIA Consultant M/s Enkay Enviro Services Pvt. Ltd., Jaipur, QCI Accredited (SI.No.41, at QCI list dated 16/11/ 2017).

14.0 The committee noted that, the PP has not provided the specifications of the plant; solid waste management in the pre-feasibility report and also found there is no plantation proposed at one side of the boundary of the plant.

15.0 During the course of the meeting, the PP has submitted details of the specification, solid waste management and revised layout including the plantation in all the sides.

16.0 After detailed deliberation, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at **Annexure I read with additional ToRs at Annexure-2.**

- i. Public Hearing to be conducted by the concerned State Pollution Control Board.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA. I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and Enterprise Social Commitment

(ESC) related issues. The social impact assessment study so carried out should form part of EIA and EMP report.

- iv. Certificate compliance of earlier EC from the Regional office of SPCB shall be submitted along with EIA/EMP.
- v. The plantation shall *inter alia* include plantation all along the boundary of the plant.

26.20. Setting up of Cement grinding Plant (OPC, PSC AND PPC-6 MTPA) and Captive Power Plant (2x30 MW) located at Village Mora, Tehasil Choryasi, District Surat, Gujarat of **M/s ABG Energy Gujarat Limited** [Online Proposal No. IA/GJ/IND/19839/2009 dated 11th November, 2017; MoEFCC File No. J-11011/583/2008-IA.II(I)]- **Extension of validity of Environmental Clearance.**

Consideration of the proposal was deferred as the Project Proponent did not attend the meeting. The proposal may be considered subject to satisfactory explanation of the reasons of absence by the applicant

26.21. Expansion of Ferro Alloy Plant by adding new product of 'Ferro Chrome' with existing Furnace and expansion of 6.5 MVA Ferro Alloys, Plot No.-89, Mouza, Waria Road, P.O.-Angadpur, Durgapur District- Paschim Burdwan (West Bengal) by **M/s. Karthik Alloys Limited** - [Online Proposal No. IA/WB/IND/70898/2017 dated 13th November 2017; MoEFCC; File No. J-11011/934/2007-IA.II(I)] – **Terms of Reference.**

1.0 **M/s. Karthik Alloys Limited** has made online application vide proposal no. **IA/WB/IND/70898/2017** dated 13th November 2017 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under category 'A' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

2.0 **M/s. Karthik Alloys Ltd.** proposes to install an expansion of existing manufacturing unit for production of High Carbon Silico Manganese & low Carbon Silico Manganese. It is proposed to set up the plant for new product Ferro Chrome with existing Furnace and expansion of 6.5 MVA Ferro Alloys based on Submerged Electric Arc Furnace technology.

3.0 The existing project was accorded environmental clearance vide Ir. J-11011/934/2007-IA II (I) dated 16th April, 2008. Consent to Operate was accorded by West Bengal State Pollution Control Board vide Ir. no. C0100820 dated 12/08/2016 validity of CTO is up to 31/03/2019.

4.0 The proposed unit will be located at Plot No.-89, Mouza, Waria Road, Village: Angadpur, Taluka: Durgapur, District: Paschim Burdwan, State: West Bengal.

5.0 The land area acquired for the proposed plant is 3.3791 Ha. which is private land. No forestland involved. The entire land has been acquired for the project. Of the total area 1.11 ha (33%) land will be used for green belt development.

6.0 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.

7.0 Total project cost is approx 3.0 Crore rupees. Proposed employment generation from proposed project will be approximately 100.

8.0 The targeted production capacity of the expansion of 6.5 MVA Ferro Alloys is 15,000 TPA. The ore for the plant would be procured from local vendors and vendors from Odisha. The ore transportation will be done through Road. The proposed capacity for different products for new site area as below:

Name of unit	No. of units	Capacity of each unit	Production Capacity
M/s. Karthik Alloys Ltd. (Unit-II)	01	6.5 MVA	15,000 TPA

9.0 The electricity load of existing 10.75 MVA and proposed 5.75 MVA, Total 16.5 MVA will be procured from Damodar Valley Corporation (DVC) Company has not proposed to install any DG Set and already 02 D.G. set of capacity 125 KVA each is being operated inside acoustic enclosure.

10.0 Proposed raw material and fuel requirement for project are Chrome Ore: 31,875 TPA (for Ferro Chrome) & Iron (5,625 TPA). The requirement would be fulfilled by Vendors from Odisha as well as Local Vendors. Fuel consumption will be mainly Coke & HSD.

11.0 Water Consumption for the proposed project will be 40 KLD and waste water generation will be 8 KLD. Domestic waste water will be treated into soak pit via septic tank and industrial waste water generated will be treated and reused.

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

13.0 The committee noted that the pre-feasibility report is not as per the prescribed format and did not include the details of existing facilities and project proponent did not bring the EIA consultant and senior representatives of project proponent.

14.0 Therefore, the proposal is deferred and advised to submit revised feasibility report and present before the committee with the EIA consultant and senior representatives of project proponent.

13th December, 2017 (Brahmaputra)

26.22. Expansion of mini integrated steel plant at village Taraimal, P.O.Gerwani, Tehsil Gharghoda, District Raigarh, Chhattisgarh by **M/s Singhal Enterprises Pvt. Ltd.**, - [Online Proposal No. IA/CG/IND/53125/2016; MoEF File No. J-11011/195/2007-IA-II(I)- Environmental Clearance based on ToRs

Consideration of the proposal was deferred as the Project Proponent did not attend the meeting. The proposal may be considered subject to satisfactory explanation of the reasons of absence by the applicant

26.23. Mini Blast Furnace (65 m³) and Sinter Plant (12 m²) located at Village Bongabari , P.O Vivekanandnagar, District Purulia, West Bengal of **M/s Purulia Metal Casting Private Limited (Pig Iron Division)**. [Online Proposal No. IA/WB/IND/65443/2016 dated 16th November, 2017; MoEFCC File No. J-11011/236/2016-IA.II(I)]- **Corrigendum**.

Consideration of the proposal was deferred as the Project Proponent did not attend the meeting. The proposal may be considered subject to satisfactory explanation of the reasons of absence by the applicant

26.24. Enhancement in production capacity from 1,45,000 TPA to 1,60,000 TPA due to process optimization located at Balgopalpur, Industrial Esatate, Balasore, Orissa of **M/s Balasore Alloys Ltd.** [Online Proposal No. IA/OR/IND/3667/2008 dated 18th November, 2017; MoEFCC File No. J-11011/245/2008-IA.II(I)] - **Amendment in EC**.

1.0 **M/s Balasore Alloys Limited** made application vide Online Proposal No. IA/OR/IND/3667/2008 dated 18th November, 2017 for seeking enhancement in production capacity from 1,45,000 TPA to 1,60,000 TPA due to process optimization located at Balgopalpur, Industrial Esatate, Balasore, Orissa under clause 7(ii) of EIA Notification, 2006 and subsequent amendments.

2.0 M/s Balasore Alloys Limited (formerly known as Ispat Alloys Limited) having Ferro Alloy plant at Balgopalpur Industrial Estate, Balgopalpur, District- Balasore, Odisha equipped with 5 furnaces (Furnace -1 (18 MVA), Furnace – 2 (15 MVA), Furnace – 3 (15 MVA), Furnace – 4 (18 MVA), Furnace – 5 (18 MVA) with total capacity of 84 MVA to produce 1,45,000 tonne per annum (TPA) of Bulk Ferro Alloys.

3.0 The plant is mainly producing High Carbon Ferro Chrome (HCFerCr). Raw material i.e. Chrome ore is transported by road from its captive mine Kaliapani Chromite Mine located in Sukinda valley of Jajpur district in Odisha. The distance between mine and plant is approximately 175 km. Coke is imported and the other fluxes are procured locally.

4.0 The project has obtained environmental clearance Vide No F. No.J-11011/245/2008-IA-II (I) dated 25th August, 2008 and further revalidated on 3rd March, 2016 extended up to 24th August.2018 issued Vide No: J-11011/245/2008 –IA.II (I) 3rd March, 2016.Subsequently, Consent to Establish vide No 27391/IND-II-NOC-4940 Dtd.31.12.2008 obtained from State Pollution Control Board, Odisha has been revalidated by same authority Vide letter no 12596/IND-II-NOC-4940 date 10.08.2016. After completion of required modification/installation for expansion, Consent to Operate has been obtained from State Pollution Control Board, Odisha under Water (PCP) Act, 1974 and Air (PCP) Act, 1981 vide letter No 15883/IND-I-CON-1616 dated 31.10.2016 valid upto 31.3.2021.

5.0 Certified report of the status of compliance of earlier EC is awaited from regional office.

6.0 Detailed design engineering undertaken after grant of environmental Clearance and assumed that due to effective furnace operation, consistency in feed raw material quality,

monitoring of process parameters, preventive maintenance, zero breakdown & automation of furnace operation achieving by adopting various efficiency measures like Six Sigma & TPM, the production quantity can increase without any change in the existing facility and extra pollution load. An estimate was made considering the upgraded factors related to furnace operation, On the basis of quantity estimated for production of Ferro chrome, we seek amendment in Environmental Clearance under Clause 7 (ii) of EIA notification 2006 for the capacity of 1, 60,000 TPA owing to increase in efficiency in furnace production.

7.0 The committee noted that the instant proposal is for enhancement in production capacity from 1,45,000 TPA to 1,60,000 TPA. However, the project proponent has made application under amendment. No certificate of compliance of earlier EC from the regional office is available with the PP. It was also observed that, the PP has not engaged any accredited EIA Consultant for the preparation of EMP.

8.0 Therefore, the committee recommended for returning the application and advised to make fresh application along with certified copy of compliance of earlier EC conditions from the regional office of MoEFCC and addendum to earlier EIA/EMP on the proposed incremental capacity.

26.25. Production of Mild Steel WIRE ROD of capacity 70000 TPA by setting up of wire rod rolling mill within the existing production of the plant of Rerolled products (70,000 TPA) and Steel Ingots and Billets (70,000 TPA) at village Sondra, Tehsil & District Raipur, Chhatisgarh by **M/s Nandan Steel & Power Ltd** [Online Proposal No. IA/CG/IND/71149/2017; MoEFCC File No. J- 11011/328/2007-IA.II(I)] - ToR.

The project proponent has requested for withdraw of application as he will make an application for expansion under 7(ii) of EIA Notification, 2006 and this request was agreed to.

26.26. Expansion of Iron Ore Beneficiation plant from the existing capacity of 10.7 MTPA (throughput) to 16.0 MTPA (throughput), Relocation of tailing Dam at Malda, Laying of Tailing Pipeline and Return Water Pipeline from Beneficiation Plant to Tailing Dam and Laying of Water Pipeline and Slurry Pipeline from Beneficiation Plant located at Dabuna, Tehsil Barbil, District Kendujhar Odisha to Ghoraburhani-Sagashi Iron Ore Block by **M/s Esaar Steel India Ltd.**, [Online Proposal No. IA/OR/IND/58662/2016 dated 28th October, 2017; MoEFCC File No. J-11011/222/2016-IA.II(I)] – **Amendment in Terms of Reference.**

1.0 **M/s Esaar Steel India Ltd.** made application vide Online Proposal No. **IA/OR/IND/58662/2016** dated **28th October, 2017** seeking amendment in Terms of Reference issue for the above mentioned project vide File No. J-11011/222/2016-IA.II(I) dated 20.07.2017.

2.0 1.0 M/s Essar Steel India Ltd (ESiL) proposes for amendment of ToR for expansion of its Iron Ore Beneficiation Plant from existing capacity of 10.7 MTPA (throughput) to 16.0 MTPA (throughput), Relocation of Tailing Dam at Village-Sankari, Gram Panchayat-Phuljhar, Dist-Keonjhar, Odisha, Laying of Tailing Pipeline and Return Water Pipeline from Beneficiation Plant to Tailing Dam & Laying of Water Pipeline and Slurry Pipeline from Beneficiation Plant to Ghoraburhani-Sagashi Iron Ore Block.

3.0 Land use break-up of the proposed expansion project is given below:

SL	Land Description	Beneficiation Plant	Truck Unloading Station	Tailing Dam	Pipelines from BP to Tailing Dam at Sankari	Pipeline from BP to Sagasahi Iron Ore Block
1.0	Govt. Land (Non-Forest) In Ha/Acres	Nil	Nil	127.56ha (315.20 acres)	2.929ha (7.24 acres)	7.420ha (18.33 acres)
2.0	Private Land in Ha/Acres	34.40ha (85.0 acres)	1.92ha (4.75 Acres)	2.67ha (6.6 acres)	6.362ha (15.72 acres)	Nil
3.0	Forest Land in Ha/Acres	Nil	Nil	Nil	12.728ha (31.45 acres)	16.466ha (40.69 acres)
4.0	Total Land in Ha/Acres	34.40ha (85.0 acres)	1.92ha (4.75 acres)	130.23ha 321.80 acres	22.019ha (54.40 acres)	23.886ha (59.02 acres)

4.0 It was informed that during the detailed engineering, total area of the Tailing Dam has increased from 110 ha to 130.23 ha & there is no forest land in it. Total area involved in laying of underground tailing pipeline and return water pipeline from Beneficiation Plant to Tailing Dam is 22.019 ha including 12.728 ha of forest land. Total area involved in laying of water pipeline and slurry pipeline from Beneficiation Plant to Ghoraburhani - Sagasahi Iron Ore Block is 23.886 ha including 16.466 ha of forest land.

5.0 Therefore, it was requested for a following amendments:

- Total area of the Tailing Dam has now increased from 110 ha to 130.23 ha & there is no forest land in it.
- Total area involved in laying of underground tailing pipeline and return water pipeline from Beneficiation Plant to Tailing Dam is 22.019 ha including 12.728 ha of forest land.
- Total area involved in laying of water pipeline and slurry pipeline from Beneficiation Plant to Ghoraburhani - Sagasahi Iron Ore Block is 23.886 ha including 16.466 ha of forest land.
- Location of approved Tailing Dam is at Sankari village in Phuljhar Gram Panchayat of Banspal Tehsil of Keonjhar District, Odisha

6.0 The project proponent along with EIA Consultant has made detailed presentation on the requirement of the proposed amendment.

7.0 After detailed deliberations, the Committee agreed to amend the ToRs as requested by the PP. As per the amended ToRs, the tailing pond will now be located at village Sankari, (Grampanchayat Phuljhar), district Keonjhar. The area of the tailing pond would now be 130.23 ha without involving any forest land. The PP shall submit a letter from the state forest department confirming that the new location of the tailing pond does not involve any forest land and does not require any clearance under Forest (Conservation Act) 1980. One third of the tailing pond area shall be used for green belt development. Further, the green belt shall be designed to control the dust pollution.

8.0 In view of the change of location of tailing pond dam, the title of the project shall now be read as “*Expansion of Iron Ore Beneficiation plant from the existing capacity of 10.7 MTPA (throughput) to 16.0 MTPA (throughput), Relocation of tailing Dam at village Sankari, (Grampanchayat Phuljhar), Laying of Tailing Pipeline and Return Water Pipeline from Beneficiation Plant to Tailing Dam and Laying of Water Pipeline and Slurry Pipeline from Beneficiation Plant located at Dabuna, Tehsil Barbil, District Kendujhar Odisha to Ghoraburhani-Sagashi Iron Ore Block by M/s Esaar Steel India Ltd.,*”

26.27. Expansion of Steel Manufacturing Unit (Steel Billets: 72000TPA to 1, 06,000 TPA; Rounds, TMT Bars, MS Bars, Flats: 72000TPA to 1, 06,000TPA) by **M/s Bhawani Casting (P) Limited** at Ambey Majra- Mullanpur Road, Village- Mullanpur Kalan, Tehsil: Sirhind, District: Fatehgarh Sahib, Punjab [Online Proposal No. **IA/PB/IND/70388/2017**; MoEFCC File No. **J-11011/398/2011-IA.II(I)**] – **Terms of Reference**

Consideration of the proposal was deferred as the Project Proponent did not attend the meeting. The proposal may be considered subject to satisfactory explanation of the reasons of absence by the applicant

STNADARIZATION OF EC CONDITIONS

Aluminium Based Industries

SPECIFIC CONDITIONS:

- i. The red mud generated from the project shall be stored in the red mud pond lined with impervious clay prior to use to prevent leakage, designed as per the CPCB guidelines with proper leachate collection system. Ground water shall be monitored regularly all around the red mud disposal area and report submitted to the Regional Office of the Ministry. Proper care shall be taken to ensure no run off or seepage from the red mud disposal site to natural drainage.
- ii. Water spraying of the mud stack shall be arranged to prevent fine dust from being blown off the stack. Longer- term treatment of the mud shall include reclamation of the mud, neutralization, covering with topsoil, and planting with vegetation.
- iii. A plan for utilisation of red mud generated shall be implemented. Under the Plan, MOU with shall be signed with potential buyers including cement companies for supply of red mud.
- iv. 100 % of the fly ash generated shall be utilised.
- v. Green belt shall be developed in 33% area to mitigate the effects of fugitive emissions as per the CPCB guidelines. Plant species form local area shall be selected in consultation with DFO for green belt development.
- vi. In order to control the fluoride emissions, the PP shall adopt measures to recover fluoride gas from electrolytic cells and recycle the same in the process.

- vii. In order to control emissions of tar and volatile organic compounds (VOCs), the PP shall adopt dry scrubbing combined with incineration. The waste heat shall be recovered from the flue gases of incinerator.
- viii. In order to control emissions, the PP shall practice use of low-sulphur tars for baking anodes.
- ix. In order to reduce emissions during the lifecycle, the PP shall make efforts to increase the life of pot lining through better construction and operating techniques.
- x. The PP shall make arrangements to recycle alumina dust collected in ESPs installed in calciner.
- xi. In order to control secondary emissions, the pot room roofs shall be designed with louvers and roof ventilators.
- xii. In-plant control measures for checking fugitive emissions from spillage/raw materials handling etc. should be provided and particulate matter from Bauxite transport and crushing shall be provided with highly efficient bag filters and covered conveyers and adequate water sprinkling shall be done.
- xiii. The company shall construct separate RCC drains for carrying storm water inside the plant. Decanted water from red mud pond is collected in the Process Water Lake during the monsoon and the same water recycled back to the process through pumping arrangements.
- xiv. The PP shall take measures to reduce water consumption in bauxite beneficiation and alumina refinery by concentrating the solids in the tailings.
- xv. All the hazardous waste shall be properly disposed of as per the Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016.
- xvi. The water drawl shall not exceed --- (existing and the expansion project put together).
- xvii. An amount of Rs----- proposed towards Enterprise Social Commitment (ESC) shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates.
- xviii. Green belt shall be developed in ----- Ha equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.
- xix. The Capital cost Rs. ----- and annual recurring cost Rs. ----- towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted for any other purpose.
- xx. Kitchen waste shall be composted or converted to biogas for further use.

B. GENERAL CONDITIONS:

1. The project proponent shall:

- a. install 24x7 continuous emission monitoring system at all the stacks to monitor stack emission with respect to parameters prescribed in G.S.R 742 (E) dated 30th August 1990 and thereafter amended vide G.S.R 46 (E) dated 3rd February 2006; S.O. 3305 (E) dated 7th December 2015 for thermal power plants as amended from time to time and connected to CPCB online;
 - b. monitor fugitive emissions in the plant premises;
 - c. carryout Continuous Ambient Air Quality monitoring as per National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 (as amended from time to time) within and outside the plant area at least at four locations covering upwind and downwind directions at an angle of 120o each; and
 - d. submit monitoring report to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
2. The project proponent shall
- a. install 24x7 continuous effluents monitoring system at all the discharge points to monitor treated effluents with respect to parameters prescribed in G.S.R 742 (E) dated 30th August 1990 and further amended vide G.S.R 46 (E) dated 3rd February 2006; S.O. 3305 (E) dated 7th December 2015 for thermal power plants as amended from time to time and connected to CPCB online;
 - b. monitor regularly ground water through sufficient numbers of piezometers in the plant and adjacent areas; and
 - c. submit monitoring report to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
3. The project proponent shall
- a. provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources;
 - b. design suitable capacity of bag filters to handle gas/air shall be 150% of the normal flow from process/ from suction hoods to achieve particulate emission to less than 30 mg/Nm³;
 - c. provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags;
 - d. provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly;
 - e. recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration;
 - f. use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin;
 - g. provide covered sheds for raw materials like bauxite, coal, etc;
4. The project proponent shall:

- a. adhere to ‘zero liquid discharge’;
 - b. provide Sewage Treatment Plant for domestic wastewater; and
 - c. provide garland drains and collection pits for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
5. The project proponent shall:
- a. practice rainwater harvesting to maximum possible extent; and
 - b. make efforts to minimise water consumption in the aluminium smelter complex by segregation of used water, practicing cascade use and by recycling treated water.
6. The PP shall:
- a. provide waste heat recovery system (pre-heating of combustion air) at the flue gases.
 - b. provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly; and
 - c. Provide the project proponent for LED lights in their offices and residential areas.
7. Used refractories shall be recycled as far as possible.
8. Sufficient number of colour coded waste collection bins shall be constructed at the working area to systematically segregate and store waste materials generated (other than Process waste) in designated coloured bins for value addition by promoting reuse of such wastes and for good housekeeping.
9. Oily scum and metallic sludge recovered from ETP shall be mixed, dried, and briquetted and reused.
10. The PP shall prepare GHG emissions inventory and shall submit the programme for reduction of the same including carbon sequestration including plantation.
11. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
12. The PP shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
13. The PP shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.
14. Ventilation system shall be designed for adequate air changes as per ACGIH document for all tunnels, motor houses.

15. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Aluminium Industry shall be implemented.
16. A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.
17. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
18. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
19. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
20. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.
21. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dB(A) during day time and 70 dB(A) during night time.
22. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
23. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.
24. The project proponent shall:
 - a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;
 - b. put on the clearance letter on the web site of the company for access to the public.
 - c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at <http://envfor.nic.in>.
 - d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;
 - e. monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company;

- f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;
- g. submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company;
- h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

For Asbestos Based Industries:

- 1. The project proponent shall adhere to the prescribed BIS standards and laws regarding use and handling of asbestos, safety of employees etc. Raw materials like asbestos fibre and cement shall be transported in closed containers. Asbestos fibre shall be brought in pelletized form in impermeable bags and under compressed condition.
- 2. Only Chrysotile white asbestos fibre shall be used. Blue asbestos shall not be utilized as raw material in the manufacturing process.
- 3. There shall be no manual handling/opening of asbestos fibre bags. The company shall install fully automatic asbestos fibre debagging system.
- 4. Fugitive emissions shall be controlled by bringing cement in closed tankers, fly ash in covered trucks and asbestos in impervious bags opening inside a closed mixer. Dust collectors shall be provided to Fibre mill, Bag opening device (BOD), Cement and Fly ash silos to control emissions. Bag filters followed by wet washer shall be provided at automatic bag opening machine, bag shredder, fibre mill and to cement silo to collect the dust and recycle it into the process. Fugitive emissions generated from hopper of Jaw crusher and pulverizer shall be channelized through hood with proper suction arrangement, bag filter and stack.
- 5. The Company shall comply with total dust emission limit of 2 mg/Nm³ as notified under the Environment (Protection) Act, 1986. Adequate measures shall be adopted to control the process emission and ensure that the stack emission of asbestos fibre shall not exceed the emission limit of 0.2 fibre/cc. Asbestos fibre in work zone environment shall be maintained within 0.1 fibre/cc.
- 6. The PP shall install High Efficiency Particulate Air filters (HEPA) preceded by primary filters on all asbestos contaminated areas.
- 7. Bags containing asbestos fibre shall be stored in enclosed area to avoid fugitive emissions of asbestos fibre from damaged bags, if any.
- 8. Asbestos contaminated materials (non-encapsulated) for off-site removal shall be placed in sealed packaging such as double sealed heavy duty (700 gauge) plastic bags, suitably labelled.

9. Proper housekeeping shall be maintained within the plant premises. Process machinery, exhaust and ventilation systems shall be laid in accordance with Factories Act. Better housekeeping practices shall be adopted for improvement of the environment within the work environment also. These include:
 - a. All monitoring transfer points shall be connected to dust extraction system.
 - b. Leakages or dust from machines and ducts shall be plugged.
 - c. Floor shall be cleaned by vacuum cleaner only and the dust collected shall be reused in the process.
 - d. Enclosed belt conveyer shall be used instead of manual transportation of asbestos within the premises.
10. Quarterly monitoring of pollutant (PM10, asbestos fibre count) in the work zone area and stack(s) shall be undertaken by the Project proponents. In addition, the asbestos fibre count including the fugitive dust in the work zone area shall be monitored by an Independent monitoring agency like NIOH / ITRC / NCB or any other approved agency on six monthly basis and reports shall be submitted to the Ministry's Regional Office, SPCB and CPCB.
11. The PP shall ensure that the entire solid waste generated including process rejects, cement, fly ash, dust from bag filters and empty asbestos bag shall be recycled back in the manufacturing process. There will be no solid waste disposal outside the plant premises. Asbestos fibres which cannot be further recycled due to contamination of iron dust shall be stored in HDPE lined secured landfill. The disposal facilities for asbestos waste shall be in accordance with the Bureau of Indian Standard Code.
12. Empty and damaged fibre bags shall be shredded into fine particles in a bag shredder and recycled into the process.
13. Piling of AC sheets shall be done in wet condition only.
14. The PP shall obtain a certificate from the supplier of Chrysotile fibre that it does not contain any toxic or trace metals. A copy of certificate shall be submitted to the Ministry of Environment and Forests.
15. Regular medical examination of the workers and health monitoring of all the employees shall be carried out and if cases of asbestosis are detected, necessary compensation shall be arranged under the existing laws. The proponent shall create in-house facilities for spirometry test. A competent occupational health physician shall be appointed to carry out medical surveillance. Occupational health of all the workers shall be monitored for lung function test, Spirometry test, chest x-ray, sputum for acid-fast-bacilli (AFC) and asbestos body (AB), urine for sugar and albumen, blood tests for TLC, DLC, ESR, Hb and records maintained for at least 40 years from the beginning of the employment or 15 years after the retirement or cessation of employment whichever is later. Occupational Health Surveillance shall be carried out as per the directives of the Hon'ble Supreme Court including the recent Kalyaneswari case.
16. All the commitments made to the public during the Public Hearing/Public Consultation meeting held on shall be satisfactorily implemented and a separate budget for

implementing the same should be allocated and information submitted to the Ministry's Regional Office

17. The water drawl shall not exceed --- (existing and the expansion project put together).
18. An amount of Rs----- proposed towards Enterprise Social Commitment (ESC) shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates.
19. Green belt shall be developed in ----- Ha equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.
20. The Capital cost Rs. ----- and annual recurring cost Rs. ----- towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted for any other purpose.
21. Kitchen waste shall be composted or converted to biogas for further use.

General Conditions:

1. The project proponent shall:
 - a. install 24x7 continuous emission monitoring system at all the stacks to monitor stack emission with respect to parameters prescribed in G.S.R. No. 913 (E) dated 24th October, 1989; S.O. 3305 (E) dated 7th December 2015 for thermal power plants as amended from time to time and connected to CPCB online;
 - b. monitor fugitive emissions in the plant premises;
 - c. carryout Continuous Ambient Air Quality monitoring as per National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 (as amended from time to time) within and outside the plant area at least at four locations covering upwind and downwind directions at an angle of 120° each; and
 - d. submit monitoring report to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
2. The project proponent shall
 - a) install 24x7 continuous effluents monitoring system at all the discharge points to monitor treated effluents with respect to parameters prescribed in G.S.R. No. 913 (E) dated 24th October, 1989; S.O. 3305 (E) dated 7th December 2015 as amended from time to time; and
 - b) submit monitoring report to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
3. The project proponent shall
 - a) provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources;

- b) design suitable capacity of bag filters to handle gas/air shall be 150% of the normal flow from process/ from suction hoods to achieve particulate emission to less than 30 mg/Nm³;
 - c) provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags;
 - d) provide pollution control system in the plant as per the CREP Guidelines of CPCB;
 - e) provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly;
 - f) use leak proof trucks/dumpers for carrying coal and other raw materials and shall cover them with tarpaulin. Use closed bulkers for carrying fly ash;
 - g) provide Low NO_x burners to control NO_x emissions. Regular calibration of the instruments must be ensured. If needed, NO_x will be controlled by using SCR/NSCR technologies; and
 - h) have separate truck parking area and monitor vehicular emissions at regular interval.
4. The project proponent shall:
- a) adhere to ‘zero liquid discharge’;
 - b) provide Sewage Treatment Plant for domestic wastewater; and
5. The project proponent shall
- a) practice rainwater harvesting to maximum possible extent;
 - b) provide water meters at the inlet to all unit processes in the cement plants; and
 - c) make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.
6. The PP shall:
- a) provide Waste heat recovery system for kiln and cooler;
 - b) provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
 - c) provide the project proponent for LED lights in their offices and residential areas;
 - d) maximize utilization of fly ash, slag and sweetener in cement blend as per BIS standards; and
 - e) maximize utilization of alternate fuels and Co-processing to achieve best practice norms.
7. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by the use of covered conveyor belts/railways as a mode of transport.
8. Used refractories shall be recycled as far as possible.

9. The PP shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.
10. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
11. The PP shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
12. The PP shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.
13. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the cement plants shall be implemented.
14. A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.
15. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
16. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
17. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
18. The waste oil, grease and other hazardous shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.
19. To educate the workers, all the work places where asbestos dust may cause a hazard shall be clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects.
20. The company shall also undertake rain water harvesting measures and plan of action shall be submitted to the Ministry's Regional Office within three months.
21. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dB(A) during day time and 70 dB(A) during night time.
22. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
23. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.

24. Ventilation system shall be designed for adequate air changes as per ACGIH document for all tunnels, motor houses, cement bagging plants.
25. Sufficient number of colour coded waste collection bins shall be constructed at shop floors in each shop to systematically segregate and store waste materials generated at the shop floors (other than Process waste) in designated coloured bins for value addition by promoting reuse of such wastes and for good housekeeping.
26. The project proponent shall:
 - a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;
 - b. put on the clearance letter on the web site of the company for access to the public.
 - c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at <http://envfor.nic.in>.
 - d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;
 - e. monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company;
 - f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;
 - g. submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company;
 - h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

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 (Quantative) 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 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB/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 PM₁₀, PM_{2.5}, SO₂, NO_x, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
 - iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
 - iv. Surface water quality of nearby River (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. Enterprise Social Commitment (ESC)
- i. To address the Public Hearing issues, 2.5% of the total project cost of (Rs.crores), amounting to Rs.crores, shall be earmarked by the project proponent, towards Enterprise Social Commitment (ESC). Distinct ESC 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 ESC 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 ESC 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 4th 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.

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 (PM₁₀ and P_{2.5}) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM₁₀ 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.

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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(PM₁₀ and P_{2.5}) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM₁₀ 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

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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 basebleaching 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.

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.

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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.

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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.

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INDUCTION/ARC FURNACES/CUPOLA FURNACES 5TPH OR MORE

1. Details of proposed layout clearly demarcating various units within the plant.
2. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs and outputs (material and energy balance).
3. Details on design and manufacturing process for all the units.
4. 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.
5. Details on requirement of raw materials, its source and storage at the plant.
6. 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).
7. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
8. Details on toxic content (TCLP), composition and end use of chrome slag. Details on the recovery of the Ferro chrome from the slag and its proper disposal.

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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

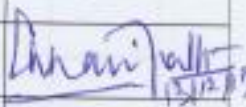
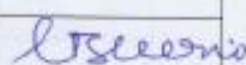
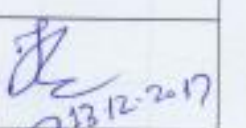
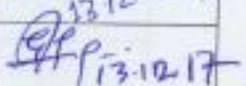

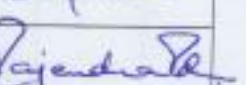
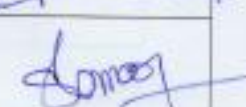
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Executive Summary

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 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

LIST OF PARTICIPANTS OF EAC (I) IN 26TH MEETING OF EAC (INDUSTRY-I)
HELD ON 11TH TO 13TH DECEMBER 2017

S. No	Name and Address	Position	Attendance			Signature
			11 th	12 th	13 th	
1	Dr. Chhavi Nath Pandey, IFS(Retired)	Chairman	P	P	P	
Members						
2.	Dr. B.P. Thapliyal, Director Central Pulp and Paper Research Institute	Member	A	A	A	
3.	Director, Central Leather Research Institute	Member	A	A	A	
4.	Dr. Siddarth Singh, Representative of Indian Meteorological Department	Member	A	A	A	
5.	Representative of Central Ground Water Board	Member	A	A	A	
6.	Dr. G. Bhaskar Raju	Member	P	P	P	
7.	Prof. Naresh Chandra Pant	Member	A	A	A	
8.	Dr. Jagdish Kishwan, IFS(Retired)	Member (Chairman on 15 th)	P	P	P	
9.	Dr. G.V. Subrahmanyam	Member	P	P	P	
10.	Prof. Arun Pandey	Member	P	P	A	
11.	Shri Santosh Raghunath Gondhalekar	Member	A	A	A	
12.	Shri Ashok Upadhyay	Member	P	P	P	
13.	Mr. R.P. Sharma	Member	P	P	P	
14.	Shri Sharath Kumar Pallerla, Scientist 'F' / Director, MoEF&CC	Member Secretary	P	P	P	
15.	Shri Rajasekhar Ratti, Scientist 'C', MoEF&CC	Dy. Director	P	P	P	