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

SUMMARY RECORD OF THE TWENTY- FOURTH (24TH) MEETING OF EXPERT APPRAISAL COMMITTEE HELD ON 13TH–15THNOVEMBER 2017 FOR ENVIRONMENTAL APPRAISAL OF INDUSTRY-I SECTOR PROJECTS CONSTITUTED UNDER EIA NOTIFICATION, 2006.

The Twenty-fourth 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 13th – 15th November 2017 in the Ministry of Environment, Forest and Climate Change. The list of participants is annexed.

24.1 After welcoming the Committee Members, discussion on each of the agenda items was taken up ad-seriatim. First two days i.e. 13th and 14th November, 2017, the meeting was chaired by Dr. C.N Pandey and on 15th November, 2017 by Shri Jagadish kishwan.

24.2 Confirmation of the minutes of the 23rdMeeting

The minutes of the 23rd meeting, as circulated were confirmed.

DATE: 13th November 2017

24.3. Expansion of Re-rolling mill by installation of new 30 T Rolling Mill Furnace (from 13000 TPA to 180500 TPA) **by M/s JMD Alloys Ltd. (JMDAL)** at Vill. Deokuli, Bihta, District Patna, Bihar [Proposal No IA/BR/IND/67762/2017; MoEF&CC File No. IA-J-11011/478/2017-IA.II(I)] **– Environmental Clearance based on ToR.**

1.0 **M/s JMD Alloys Ltd. (JMDAL)** has made online application vide proposal no. **IA/BR/IND/67762/2017**dated 29th August 2017along 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 "B" EIA Notification, 2006 and due to non-existence of the SEIAA in the state of Bihar the proposal is appraised at Central level.

2.0 The proposed Rolling Mill and Induction Furnace project of M/s JMD Alloys Ltd., is located near Vill. Deokuli, Block Bihta, Dist. Patna, State Bihar, was initially received in SEIAA, Bihar on 11th February 2017 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the State Expert Appraisal Committee [Bihar] during its meeting held on 07thMarch 2017 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, SEIAA, Bihar had prescribed ToRs to the project on 16.03.2017 vide Lr. Ref. No. 570.

3.0 The present proposal of M/s JMD Alloys Ltd., is for enhancement of production of MS/TMT Bar from 13000 tonnes per annum (TPA) to 180500 tonnes per annum (TPA). The project is located near Village Deokuli, Block Bihta, Dist. Patna, State Bihar. The existing project is a Secondary metallurgical processing industry was established in 1995 and not listed in the Schedule I of EIA Notification 1994 for obtaining Environment Clearance (EC) and project is still

running on same capacity. Till date no expansion or modernization of the plant has been done. The proposed capacity for different products for existing site area as below:

Name of unit	No. of units	Capacity of each Unit	Production Capacity
Re-rolling Mill	1	13000 TPA (Existing) 180500 TPA (Proposed)	13000 TPA (Existing) 180500 TPA (Proposed)

4.0 The total land required for the project is 6.44 Acres, which is owned by project proponent. No forestland involved. The entire land has been acquired for the project. No River passes through the project area. It has been reported that no 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 and reported to lies between 25°36'3.63"N to 25°36'12.25"N Latitude and 84°51'54.82"E to 84°52'0.01"E Longitude in Survey of India topo sheet No. 72 C/14 at an elevation of 51 m AMSL. The ground water table reported to ranges between 2.53 – 3.24 m. below the land surface during the post-monsoon season and 3.05 – 4.42 m. below the land surface during the pre-monsoon season. Based on the hydro-geological study, it has been reported that the radius of influence of pumped out water will be 500 m. Further, the stage of groundwater development is reported to be 55% in core and buffer zone and thereby these are designated as safe areas.

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

7.0 The production facilities inter alia include Induction Furnace (MS Ingot / Billet); and Re-rolling Mill (TMT Bar/Rods). Product wise raw materials requirement for the proposed project, source of raw materials & its transportation are mentioned in table below:

Raw Material	**Input Ration**	**Existing raw material requirement (TPA)**	**Proposed raw material requirement (TPA)**
MS Ingot / Billet	106%	13780	181583

8.0 The targeted production capacity of the project is 180500 TPA. The raw materials for the plant would be procured from local suppliers in Bihar & Jharkhand. The transportation of raw materials will be done through Road.

9.0 The water requirement of the project is estimated as 20 m^3/day, which will be obtained from the borewells inside premises. Applied for permission for drawl of groundwater from CGWB vide Application No. 21-4/306/BR/IND/2017 dated 28.07.2017.

10.0 The power requirement of the project is estimated as 21000 KVA, which will be obtained from the BSEB Grid.

11.0 Baseline Environmental Studies were conducted during pre-monsoon season i.e. from March to May'2017. Ambient air quality monitoring has been carried out at 8 locations during March to May'2017 and the data submitted indicated: PM_{10} (48.3 µg / m^3 to 140.9µg / m^3), $PM_{2.5}$ (32.3 to 85.4 µg/m^3), SO_2 (11.2 to 37.0 µg/m^3) and NOx (31.4 to 64.7 µg/m^3). The results of the modelling study indicated that the maximum increase of GLC for the proposed project is 3.86µg/m^3 with respect to the PM_{10}.

12.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 6.64 to 7.86, Total Hardness: 196.0 to 312.0 mg/ l, Chlorides: 10 to 32 mg/ l, Fluoride: 0.18 to 0.42 mg/l. Heavy metals are within the limits except Arsenic concentration of 0.015 & 0.018 mg/l. Surface water samples were analysed from 2 locations. pH: 7.12 to 7.18; DO: 5.4 to 5.8 mg/ l and BOD: 2.0 to 2.5 mg/ l. COD from 8.0 to 12.0 mg/l.

13.0 Noise levels are in the range of 42.2 to 60.3 dB(A) for daytime and 33.8 to 45.0 dB(A) for night-time.

14.0 It has been reported that there are no people in the core zone of the project. No R&R is involved. It has been envisaged that no families to be rehabilitated as the project site is located within existing industry.

15.0 It has been reported that a total of 10050 tons of waste will be generated due to the project, which will be recycle and reused back in process for production of MS Ingot/Billet within existing plant premises. It has been envisaged that an area of 0.86 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.

16.0 It has been reported that the Consent to Operate from the Bihar State Pollution Control Board obtained vide Ref. No. T-7937 & T-7936 dated 06.10.2016 and consent is valid up to 31.12.2018.

17.0 The Public hearing of the project was held on 29th Jul.'2017 at PWD Inspection Bungalow at Bihta, Dist. Patna, State Bihar under the chairmanship of Sri Sanjiv Kumar, Sub-Divisional Officer, Danapur (nominated representative of DM Patna), District: Patna (Bihar) for production of 180500 TPA MS/TMT Bars. The issues raised during public hearing inter alia include Air, Water and Noise pollution; employment generation; development of green belt; etc.

18.0 The capital cost of the project is Rs. 24.58 Crores and the capital cost for environmental protection measures is proposed as Rs. 60 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs. 38 Lakhs. The employment generation from the proposed expansion project is 50 nos. (indirect manpower).

19.0 Greenbelt has been developed in 0.86 Ha which is about 33% of the total acquired area. Local and native species have been planted with a density of 2500 trees per hectare. Total no. of 1000 saplings will be planted and nurtured within premises in 5 years.

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

21.0 The Project Proponent along with EIA Consultant **M/s Consulting Engineers Group Ltd. (CEG)** (Sl. No. 28 of Rev. 57 Sep 05, 2017) made detailed presentation on the proposal.

22.0 After detailed deliberations, the committee observed following:

i. The EIA/EMP submitted is not as per the generic structure envisaged in the EIA Notification, 2006;

ii. There is no clarity in the proposed facilities. The proposed discontinuation of the Induction furnace shown as continuing facility and no mention of reheating furnace which is required for the manufacturing of the proposed products;

iii. No explanation of the process involved in the proposal;

iv. No interpretation of the baseline data is presented;

v. No land break-up details presented;

vi. The PH issues are not presented properly; and

vii. No details of Enterprise Social Commitment.

viii. All FAEs required to prepare an EIA have not been involved.

23.0 Therefore, the committee asked the PP to submit following details for further consideration of the proposal:

i. the revised EIA/EMP as per the generic structure envisaged in the EIA Notification, 2006 including the proposed facilities;

ii. process involved in manufacturing of the proposed products;

iii. pollution control devices proposed at various facilities;

iv. interpretation of BLD;

v. land use-breakup;

vi. tabulation of issues raised in public hearing along with commitment made by PP, timebound action plan and fund provision for the same; and

vii. details of Enterprise Social Commitment based on the issues raised in Public hearing and need based assessment.

24.0 In view of the above, the proposal is deferred till submission of reply to the above points by PP.

24.4. Expansion of Cement Plant (Clinker from 1.5 to 4.0 MTPA and Cement from 2.0 to 4.6 MTPA) located at Village Boyareddypalli, Yadiki Mandal, District Anantapur, Andhra Pradesh by **M/s. Penna Cement Industries Limited**. [Proposal No **IA/AP/IND/59430/2016**; File No. **IA-J-11011/351/2016-IA.II(I)**] – **Environmental Clearance regarding.**

1.0 **M/s. Penna Cement Industries Limited (PCPL)** has made online application vide proposal no. **IA/AP/IND/59430/2016**dated **23rd 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(b) Cement Plants under Category "A" EIA Notification, 2006 and the proposal is appraised at the Central Level.

2.0 M/s PCIL is operating a cement plant located in Boyareddypalli in South-Western Andhra Pradesh, the unit was commissioned in Sep 2008. PCIL received Environmental Clearance for 2.0 MTPA cement plant 1.5 MTPA Clinker production form MoEF&CC vide letter no. J-11011/351/2006-IA.II(I) dated 18th May 2007. The certified report on status of compliance of earlier EC submitted vide RO, Chennai Lr. No. EP/12.1/570/AP/0985 dated 27th June 2017. There are some non-compliances and partial compliance are reported by the RO.

3.0 Now, M/s PCIL proposed to increase production capacity (Clinker from 1.50 MTPA to 4.0 MTPA; Cement from 2.00 to 4.6 MTPA; and WHRB from 10 to 20 MW) of Boyareddypalli Cement Plant located at Boyareddypalli Village, Yadiki Mandal, Anantapur District, Andhra Pradesh.

4.0 Increase in production of clinker from 1.50 MTPA to 4.0 MTPA inter alia include increase of clinker production from 1.5 MTPA to 1.65 MTPA by up gradation/modernization of existing Unit – I by modification of pre-heater cyclones; up gradation of equipment; increase in kiln in speed; increase of surface area of cooler and installation of a new line i.e., Unit – II with clinker production capacity of 2.35 MTPA. The production capacity of various units of the plant before and after expansion are given below:

Cement Plant	Existing Capacity			Capacity after proposed enhancement		
	Clinker (MTPA)	Cement	WHRB (MW)	Clinker (MTPA)	Cement	WHRB (MW)
Unit –I	1.5	2.0	10	1.65	2.00 (OPC/PSC/PPC)	10
Unit –II (new line)	-	-	-	2.35	2.60 (OPC/PSC/PPC)	10
Total	1.5	2.0	10	4.00	4.60	20

5.0 The expansion proposal was initially received in the Ministry on 04th October 2016 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 12thmeeting held during 27th – 28th October, 2016 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on 27.03.2017.

6.0. The existing cement plant is located in the area of 60 Ha. The proposed expansion will be carried in the existing plant premises and no additional land is required to be acquired. There is no R&R is involved; no Forest area is involved; and no River passes through the project area. It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed. Land break up for the existing and proposed expansion is given below:

Sl. No	Description of plant facilities	Existing	After proposed expansion
		Area in Ha	
1	Plant area and roads	30	34
2	Colony with infrastructure	04	05
3	Parking area	04	01
4	Greenbelt	16	20
5	Vacant land	06	00
	Total	60	60

7.0 The Cement plant is located near Boyarredypalli Village, Yadiki Mandal, Anantapur District, Andhra Pradesh. The project site bounded between 15° 3'35.20" - 15° 3'52.10"N latitude and 77°56'52.03 - 77°57'12.55 E longitude with an average altitude of 276m above MSL and covered in Survey of India Toposheet no. 57/E/ 16.Ground water table occurs at a depth of 45m bgl as per the gathered information in the nearby villages in summer and 35 m bgl during the rainy season.

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

9.0 It was reported that dry process of cement manufacture utilising the pre-calciner technology is adopted. The clinkerisation process along with the technological advances in the area of grinding, homogenization, pre-calciner as well as packing of cement will be incorporated.

10.0 The basic raw materials used in the cement plant are Limestone, Iron Ore, Laterite and Gypsum. Imported Coal will be used in the process. The major raw material for manufacture of cement is limestone and is sourced from the captive limestone mine.Limestone excavated from the mines is crushed at the crusher located at 1.5 km from the captive limestone mine and the crushed limestone is transported through closed conveyor of 4.5 km length upto stacker reclaimer provided in the cement plant. The requirement of raw material is given below:

Raw Material	Before Expansion	After Expansion	Source	Mode of Transport
Limestone	2.30	5.30	Captive mines	Conveyor
Iron ore	0.02	0.10	Bellary / Hospet	Railway
Laterite/red mud	0.08	0.24	Veldurty, Rajahmundry	Railway
Gypsum	0.10	0.23	SPIC and Sterlite Industries, Tuticorin, FACT, Chennai &Coramandel Fertilizers Ltd., Vizag	Railway

Coal / petcoke	0.26	0.60	Singareni Collieries Company Ltd/ Imported Coal/Petcoke from USA	Railway
Slag	0.50	1.67	Jindal Steel and Garuda Steel	Railway
Ash requirement for PPC	0.10	1.14	Rayalaseema Thermal Power Station and Jindal Power Plant, AP Genco Power Plant, Nellore.	Road

11.0 The present water requirement of the plant is 930 m^3/day (700 m^3/day for cement plant and colony and 230 m^3/day for waste heat recovery based power plant) and is sourced from bore wells within the plant site and also from mine pit. Additional Water requirement for expansion of cement plant and WHRB power plant is 500 m^3/day and sourced from bore well and mine pit.

12.0 The peak power consumption of the Cement plant at present is 25 MW and is being met from Grid and WHRB Power Plant. Additional power required is about 35 MW and the same will be sourced from Grid and proposed WHRB Power plant.

13.0 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 and the data submitted indicated: PM_{10}(50.9 – 56.5 µg/m^3), $PM_{2.5}$ 21.2 – 26.0 µg/m^3), $SO_2$11.7 – 13.0 µg/m^3) and NOx (12.8 – 14.4 µg/m^3). The results of the modeling study indicate that the maximum increase of GLC for the proposed project is 8.02 µg/m^3 with respect to the PM_{10}, 2.41 µg/m^3 with respect to the $PM_{2.5}$, 1.92 µg/m^3 with respect to SO_2 and 11.5 µg/m^3 with respect to the NOx.

14.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 7.12 – 7.56, Total dissolved solids: 72 – 605 mg/l, Chlorides: 23 - 110 mg/l, Fluoride: 0.16 – 0.12 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 1 location. pH: 7.26; Total dissolved solids: 412 mg/l.

15.0 Noise levels recorded were found to be in the range of 50.5 – 70.3 dB (A) during daytime and in the range of 40.3 – 61.7 dB (A) during night time.

16.0 No additional area is required for the expansion. Therefore, No Rehabilitation and Resettlement involved.

17.0 The dust collected in the air pollution control equipment in the cement plant will be recycled back to the process. Hence no solid waste which requires disposal is generated from the plant. Refractory bricks are one of the solid waste generated from the kiln section will be disposed to outside agencies. Solid waste generated from colony is disposed after segregating the waste into biodegradable and non-biodegradable. Bio- Degradable waste is being used as compost and Non-Bio- Degradable waste is land filled within the colony premises at identified areas.Solid waste generated at STP is dried in the sand beds and is being used as compost for Green Belt development.

18.0 Consent Order for operation of the plant issued by APPCB vide letter no. APPCB/KNL/ATP/97/HO/CFO/2015-475 dated 22nd April 2015.

19.0 The Public hearing of the project was held on 2nd August, 2017 at existing plant premises under the chairmanship of Joint Collector and Additional District Magistrate for the proposed expansion project. The issues raised during public hearing are inter alia include employment; development of social infrastructure; supply of drinking water; pollution issues; etc. An amount of 20.00 Crores (2.5% of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues and need based assessment. The details of Enterprise Social Commitment proposed by PP as follows:

PROPOSED ACTION PLAN FOR CSR - 2017- 22 (Amount in Rs. In Lakhs)						
ACTIVITY	**2017-2018**	**2018-2019**	**2019-2020**	**2020-2021**	**2021-2022**	**Total**
Promotion of Higher educational facilities to all the boys & girls	3	3	3	3	3	12
Internal Roads at Burugula, Kovalapalli, Chintalayalpalli, and other two villages	10	10	10	10	10	50
Renovation of temples and Masjids	3	2	2	2	2	11
Health / Medical Camps	15	10	10	10	5	50
Development of Road facility	10	10	10	10	10	0.5
Individual Toilet Facilities	5	5	5	5	5	25
Drinking water RO Plant	10	10	10	10	10	0.5
Boundary wall & Burial grounds in three village and renovation of roads to burial ground.	2	2	2	2	2	10
Infrastructure development	5	5	5	5	5	25
Improvement in the Drainage (Side Drains)	3	3	3	3	3	15
Social causes	3	2	2	2	3	12
Veterinary camps	2	2	2	2	1	9
Renovation, scholarship, books infrastructural facilities for all the schools	5	2	2	2	1	12
Contribution for performing Peddamma Jathara at Boyareddypalli village	2	2	2	2	2	10
Contribution for Sri Gomeswara swamy temple development works at Kundanakota	5	5	0	0	0	10
Contribution to Govt. onbehalf of Village for arranging 10 Nos. Solar Street lights in in each and every village	5	5	0	0	0	10
Sri Kothavenkata Ramana swamy temple renovation works at Chintalayapalli village	5	5	0	0	0	10
Construction of culvert on drainage in Veerareddipalli, and road work upto main road village(10 years)	20	20	20	20	20	200
Unforseen expenditure from the villages	10	10	10	10	10	50
Construction of college for the villagers	100	200	100	0	0	400
Laying of pipeline to villages for drinking water supply	50	50	20	0	0	120
Construction of checkdams and Rainwater harvesting structures	100	100	100	100	0	400
Hostel for the students	40	60	50	50	50	500

PROPOSED ACTION PLAN FOR CSR - 2017- 22 (Amount in Rs. In Lakhs)						
ACTIVITY	**2017-2018**	**2018-2019**	**2019-2020**	**2020-2021**	**2021-2022**	**Total**
And maintenance (10 years)						
Medical camps every year (10 years)	10	10	10	10	10	100
Contribution to colleges and hostels outside (10 years)	20	20	20	20	20	200
Total	**443**	**553**	**330**	**278**	**172**	**2000**

20.0 The cost of the proposed expansion is estimated to be about Rs. 800 Crores and the Capital Cost of Environmental measures (EMP) is about Rs. 120 Crores and the annual recurring cost is about Rs. 4.5 Crores. The details of budget allocated for implementation of environmental management plant is given below:

Sl	Component	Area	Capital Cost	Recurring Cost
1	Air environment	Raw Mill / Kiln bag house	44.0	04.00
2		Cooler ESP, Coal Mill and Cement Mill bag houses	49.0	
3		Transfer point Bag Filters	20.0	
4		Continuous Monitoring Equipment	02.0	
5	Green belt Development	Plant and Colony	01.0	0.50
6	Rainwater Harvesting		04.00	--
	Total		120.00	4.5

21.0 The required greenbelt as per norms is 33 % of the plant area. PCIL has already developed greenbelt in an area of 16 Ha and now proposes to develop the greenbelt in additional area of 4.0 Ha. PCIL has taken up plantation outside the cement plant area in an area of about 11.17 Ha.

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

23.0 The project proponent has made detailed presentation on the proposal along with EIA Consultant M/s B. S. Envi-Tech Pvt Limited, Hyderabad.

24.0 After detailed deliberation the committee observed the following:

i. Material balancing is not matching;

ii. No Hydrogeological details are furnished in the EIA/EMP report;

iii. There are certain non-compliances / partial compliances of earlier EC conditions reported by Regional Officer, MoEFCC, Chennai;

iv. There is no mechanism of reporting of non-compliances / infringements observed in compliance of EC conditions envisaged in the Environmental Policy document of the company;

v. No rationalization in noise level monitoring and soil sample analysis; and

vi. Hazard identification and mitigation measures suggested in the Risk Assessment Plan is not proper;

25.0 Therefore, the committee advised to submit revised EIA/EMP incorporating following details for further consideration of the proposal:

i. Possibility of recovering more heat from the kiln and cooler;

ii. No Use of Pet coke in power generation;

iii. The emission levels within 25 mg/Nm^3;

iv. The additional green belt of 4 Ha in addition to the existing 16 Ha with native and broad leaved tree species;

v. Establishment of the environmental cell with qualified person as head-environment with requisite support staff;

vi. Revised Corporate Environment Policy including its approval in the Board of directors; SoPs for reporting of non-compliances to the board of directors; hierarchical system to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions;

vii. Soil quality representing the various land uses in the area;

viii. Hazard identification and Risk Assessment (HIRA) along with proposed mitigation measures specific to the plant;

ix. The hydrogeological report based on GEC methodology;

x. Enterprise Social commitment shall be revised with addressing the issues raised during the public hearing and need based assessment for creation of facilities in CAPEX mode and implemented in concurrence with expansion proposal; and

xi. Ground water withdrawal should not exceed 700 m^3/day and maximize the use of rainwater harvested

24.5. Modernization-cum-expansion of Bhilai Steel Plant (Crude Steel capacity from 4 MTPA to 7.0 MTPA; Captive Power Plant - 76 MW; TRT -14 MW & CDCP – 4 MW; Total Power Generation: 94 MW) at Bhilai, Chhattisgarh by M/s Steel Authority of India Ltd [Proposal No IA/CG/IND/67974/2017; MoEF&CC File No. IA-J-11011/28/2007-IA II (I)] – Terms of Reference for Modernization – Further consideration based on site visit.

1.0 **M/s Steel Authority of India Limited** has made online application vide proposal no. IA/CG/IND/67974/2017 dated **6thSeptember 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. Bhilai Steel Plant (BSP) is established in 1956 and since then there has been phases of expansion. The Environmental Clearance (EC) for 4.0 MTPA to 7.0 MTPA Modernization-Cum-Expansion Plan of Bhilai Steel Plant along with Captive Power Plant has been accorded by MoEFCC dated 31.03.2008 with amendments dated 23.06.2011 and 23.07.2014. The EC validity was extended up to 30.03.2018by MoEFCC vide letter dtd. 05.07.2013. Consent to Establish was accorded by Chhattisgarh Environment Conservation Board (CECB) vide lr. no. 12981/TS/CECB/2009 dated 01.06.2009.

4.0 Now, it is proposed to revise configuration of ongoing 7.0 MTPA modernization-cum-expansion of Bhilai Steel Plant along with captive power plant, while the crude steel production and project area remains same as per earlier accorded EC for the project. The details of existing facilities and proposed facilities along with the capacities are as follows:

S. No.	Unit	Existing configuration	Existing Capacity	Proposed configuration	Proposed capacity	Total configuration after Expansion	Total capacity after Expansion
1.	**Sinter Plant Complex**						
a.	Sinter Plant-1	4x50m^2	Phased Out	Phased Out	-	-	-
b.	Sinter Plant-2	3x75m^2 + 1x80m^2	-	No change	-	3x75m^2 + 1x80m^2	-
c.	Sinter Plant-3	1x 320 m^2 (existing) +1x 320 m^2 (New)	-	1x 320 m^2 (existing) +1x 360 m^2**(new)**	-	1x 320 m^2 (existing) +1x 360 m^2**(new)**	-
d.	**Total Sinter Production**	**-**	**9.235 MTPA**	**-**	**Installed capacity enhancement by - 0.537MTPA**	**-**	**9.772 MTPA**
2.	**Coke Oven Complex**						
a.	Battery 1	65 Oven 4.3 m tall to be phased out	-	65 Oven 4.3 m tall to continue	-	65 Oven 4.3 m tall	-
b.	Battery 2	65 Oven 4.3 m tall	-	No change	-	65 Oven 4.3 m tall	-
c.	Battery 3	65 Oven 4.3 m tall	-	No change	-	65 Oven 4.3 m tall	-
d.	Battery 4	65 Oven 4.3 m tall	-	No change	-	65 Oven 4.3 m tall	-
e.	Battery 5	65 Oven 4.3 m tall	-	No change	-	65 Oven 4.3 m tall	-
f.	Battery 6	65 Oven 4.3 m tall	-	No change	-	65 Oven 4.3 m tall	-
g.	Battery 7	65 Oven 4.3 m tall to be phased out	-	65 Oven 4.3 m tall to continue	-	65 Oven 4.3 m tall	-
h.	Battery 8	65 Oven 4.3 m tall to be phased out	-	65 Oven 4.3 m tall to continue	-	65 Oven 4.3 m tall	-
i.	Battery 9	67 Oven 7 m tall	-	No change	-	67 Oven 7 m tall	-
j.	Battery 10	67 Oven 7 m tall	-	No change	-	67 Oven 7 m tall	-
k.	Battery 11	67 Oven 7 m tall (new battery) with coke dry cooling and Associated facilities	-	No change	-	67 Oven 7 m tall with CDCP	-
l.	**Coke Production**	-	**3.94MTPA**	Small Battery Nos. 1, 7 & 8	**3.94MTPA**	Any 2 or 3 batteries to be	**3.94MTPA**

S. No.	Unit	Existing configuration	Existing Capacity	Proposed configuration	Proposed capacity	Total configuration after Expansion	Total capacity after Expansion
				will not be phased out. Any 2 or 3 batteries to be always kept under repair / rebuilding cycle envisaged.		always kept under repair / rebuilding cycle envisaged.	
3.	**Blast Furnace Complex**						
a.	BF 1 with CDI	1033m3 to be phased out	-	1033m3 Will continue to operate post 30.03.2018 for additional 3 years till Blast Furnace 8 & SMS-III is stabilized	-	1033m3 Will continue to operate post 30.03.2018 for additional 3 years	-
b.	BF 2 with TIS	1033m3 to be phased out	-	-do-	-	-do-	-
c.	BF 3 with TIS	1033m3 to be phased out	-	-do-	-	-do-	-
d.	BF 4	1719 m3	-	No change	-	1719 m3	-
e.	BF 5 with CDI	1719 m3	-	No change	-	1719 m3	-
f.	BF 6 with CDI	1719 m3	-	2000 m3	-	2000 m3	-
g.	BF 7 with CDI	2363 m3	-	No change	-	2363m3	-
h.	BF 8 with CDI	4060 m3 (New) with TRT	-	4060 m3 (New) with TRT	-	4060 m3 with TRT	-
4.	**Hot Metal Production**	-	**7.5 MTPA**	-	**7.5 MTPA**	BF 1,2 & 3 will continue to operate post 30.03.2018 for additional 3 years.	**7.5 MTPA**
5.	**Steel Making & Casting Units**						
a.	SMS I	4x 500t Twin Hearth Furnaces to be phased out	-	SMS – 1 will continue to operate post 30.03.2018 for additional 3 years till SMS-III is stabilized.	-	SMS – 1 will continue to operate post 30.03.2018 for additional 3 years.	
b.	SMS II	• 3x 120 t BOF • 2 x120t LF • 2x120t RH	-	No change	-	• 3x 120 t BOF • 2 x120t LF • 2x120t RH	

S. No.	Unit	Existing configuration	Existing Capacity	Proposed configuration	Proposed capacity	Total configuration after Expansion	Total capacity after Expansion
		• 1x120t VD • Two Hot metal Desulphirisation units • #ms 1,2,3 & 6 Single strand slab caster • #mc 4 : 4 strands Bloom-cum-Beam Blank Caster • #mc 5: 1x4 strand Bloom Caster				• 1x120t VD • Two Hot metal Desulphirisation units • #ms 1,2,3 & 6 Single strand slab caster • #mc 4 : 4 strands Bloom-cum-Beam Blank Caster • #mc 5: 1x4 strand Bloom Caster	
c.	SMS III (New Unit)	3x160 t BOF	-	No change	-	3x160 t BOF	
		-	-	3x160t argon rinsing unit (ARU) New envisaged	-	3x160t argon rinsing unit (ARU)	
		2x160 hot metal de-sulfurisation unit (HMDU)	-	No change	-	2x160 hot metal de-sulfurisation unit (HMDU)	
		3x160 t LFs	-	No change	-	3x160 t LFs	
		1x 160 t RH-OB	-	No change	-	1x 160 t RH-OB	
		1x vacuum tank degassing unit (Space provision)	-	No change	-	1x vacuum tank degassing unit (Space provision)	
		2x6 strand Billet Casters	-	No change	-	2x6 strand Billet Casters	
		1x6 strand Bloom cum Billet Casters	-	No change	-	1x6 strand Bloom cum Billet Casters	
		1x1 strand Thin Slab Caster &Continuous Hot strip finishing train of -6 stands	-	-	-	-	
		-	-	Conversion of 1x3 strand Beam Blank Caster to 1x3 strand Bloom-cum-Beam-Blank Caster of same capacity	-	1x3 strand Bloom-cum-Beam-Blank Caster	
d.	**Crude Steel Production**	-	**7.0 MTPA**	-	**7.0 MTPA**	-	**7.0 MTPA**
6.	**Rolling Mills Complex**						

S. No.	Unit	Existing configuration	Existing Capacity	Proposed configuration	Proposed capacity	Total configuration after Expansion	Total capacity after Expansion
a.	Blooming & Billet Mill (BBM) associated with SMS-I	To be phased out	-	Will continue to operate post 30.03.2018 for additional 3 years till SMS-III is stabilized (i.e. till SMS-I is not phased out)	-	Will continue to operate post 30.03.2018 for additional 3 years	-
b.	Rail & Structural Mill	Rail & Structural Mill (RSM) with Universal Rail Mill (URM)	1.70 MTPA	Capacity up-gradation of Rail & Structural Mill (RSM) with URM	Enhancement in capacity :0.50 MTPA	Rail & Structural Mill (RSM) with Universal Rail Mill (URM)	2.20 MTPA
c.	Plate Mill	-	1.42 MTPA	Capacity up-gradation of Plate Mill	Enhancement in capacity :0.23 MTPA	Plate Mill	1.65 MTPA
	Quenching and Tampering facility in Plate Mills	-	-	New Quenching and Tampering facility in Plate Mills envisaged	-	Quenching and Tampering facility in Plate Mills	-
d.	Merchant Mill	-	0.60 MTPA Merchant Products	Capacity up-gradation of Merchant Products	Enhancement in capacity :0.25 MTPA	Merchant Mill	0.85 MTPA
e.	Wire Rod Mill	-	0.68 MTPA Wire Rods	Capacity up-gradation of Wire Rod Mill	Enhancement in capacity :0.02 MTPA	Wire Rod Mill	0.70 MTPA
f.	Universal Beam Mill	Now Not Coming	-	-	-	-	-
g.	Bar & Rod Mill	-	0.9 MTPA	No change	-	-	0.9 MTPA
h.	**Total finished steel production**	-	**6.3 MTPA**	-	**6.3 MTPA**	-	**6.3 MTPA**
7.	**Refractory Material Plant (RMP)**						
8.	RMP-I	To be phased out	-	Will continue to operate post 30.03.2018 for additional 3 years till SMS-III is commissioned	-	Will continue to operate post 30.03.2018 for additional 3 years	-

S. No.	Unit	Existing configuration	Existing Capacity	Proposed configuration	Proposed capacity	Total configuration after Expansion	Total capacity after Expansion
				(i.e. till SMS-I is not phased out)			
9.	RMP-II	• 2x 330 tpd + 1 x 144 tpd Lime kiln • 1x 330 tpd kiln	-	No change	-	• 2x 330 tpd + 1 x 144 tpd Lime kiln • 1x 330 tpd kiln	-
10.	RMP-III	5x450 tpd lime and dolo kiln	-	No change	-	5x450 tpd lime and dolo kiln	-
11.	**Total Lime &Dolo Production**	-	**1.58 MTPA**	-	**1.58 MTPA**	-	**1.58 MTPA**
12.	**Power Blowing Station**						
13.	PBS I	6 x 150 tph boiler	-	No change	-	6 x 150 tph boiler	-
		1 x 150 tph boiler (new)	-	No change	-	1 x 150 tph boiler (new)	-
		1 x 15 MW + 3 x 12 MW turbo-generators	-	No change	-	1 x 15 MW + 3 x 12 MW turbo-generators	-
14.	PBS II	2 x 150 TPH BF gas fired boiler with 1 x 25 MW turbo-generator	-	No change	-	2 x 150 TPH BF gas fired boiler with 1 x 25 MW turbo-generator	-
15.	TRT	TRT	Capacity not specified	No change	14MW	TRT	14MW
16.	CDCP	CDCP	Capacity not specified	No change	4MW	CDCP	4MW
17.	**Total Power Generation (MW) installed capacity & Steam Generation Boilers (TPH)**	-	**76 MW with Steam Generation 1390TPH + Green power from TRT (Capacity not specified) & CDCP (Capacity not specified)**	-	-	-	**76 MW + Green power from TRT (14 MW) &CDCP (4 MW)**
18.	**Oxygen Plant (OP)**	• 3x550 TPD • 1x700 – Amendment accorded by MoEFCC	-	No change	-	3x550 TPD 1x700 TPD	3x550 TPD 1x700 TPD
19.	**Captive Secured Land Fill (SLF)**	-	-	New SLF envisaged	34250m^3	SLF	Capacity: 34250m^3

5.0 It was informed that during detailed engineering of the project, for techno-economic advantage and considering the market scenario, certain changes were envisaged viz. change in

installed capacity of sinter plant & requirement of iron ore fines; change in finished steel product mix (rolling mills sections), change in operation regime of coke oven complex, and change in turbo-power generation capacity, while keeping the hot metal and crude steel production same as per the accorded EC. Some new units like Argon rinsing unit in SMS-III, Quenching and Tampering facility and Secured landfill (Captive landfill) not considered at the time of earlier accorded EC are now envisaged. In SMS-III, in place of thin-slab caster and continuous hot strip finishing train, now bloom-cum-beam-blank caster is envisaged. Therefore, the present application is for seeking fresh Environmental Clearance for revised configuration.

6.0 The facilities envisaged as per the EC accorded in 2008; status of existing facilities and changes proposed is given in Table below:

SN.	Description	Existing Facilities as per 7.0 MTPA Expansion EC Accorded Valid till 30.03. 2018	Status of Existing Facilities	Plant as per revised configuration
1.	Hot Metal Production	7.5 MTPA	5.04 MTPA	No Change
2.	Crude Steel Production	7.0 MTPA	4.74 MTPA	No Change
3.	Total finished steel production	6.3 MTPA	3.124 MTPA	No Change
4.	**Sinter Plant Complex**			
a.	Sinter Plant-1	Phased out	Phased Out	No Change
b.	Sinter Plant-2	3x75 m2+ 1x 80 m2	Under Operation	No Change
c.	Sinter Plant-3	1x 320m^2 (existing) +1x 360 m^2**(new)**	Under Operation (Production not beyond 2008 EC capacity)	1x 320 m^2 (existing) +1x 360 m^2
d.	Total Sinter Production	9.235 MTPA	7.04 MTPA	9.772 MTPA (enhanced installed capacity - 0.537MTPA)
5.	**Coke Oven Complex**			
a.	Battery 1	Shall be phased out	Stopped	For meeting the coke requirement of Blast Furnaces, Battery No. 1will continue to operate. However, as per the proposed repair/rebuilding cycle, 2/ 3 batteries will always be non-operational.
b.	Battery 2	65 Oven 4.3 m tall	Stopped	No Change

SN.	Description	Existing Facilities as per 7.0 MTPA Expansion EC Accorded Valid till 30.03. 2018	Status of Existing Facilities	Plant as per revised configuration
c.	Battery 3	65 Oven 4.3 m tall	Under Operation	No Change
d.	Battery 4	65 Oven 4.3 m tall	Under Operation	No Change
e.	Battery 5	65 Oven 4.3 m tall	Under Operation	No Change
f.	Battery 6	65 Oven 4.3 m tall	Under Operation	No Change
g.	Battery 7	Shall be phased out	Stopped	For meeting the coke requirement of Blast Furnaces, Battery No. 7 will continue to operate. However, as per the proposed repair/rebuilding cycle, 2/ 3 batteries will always be non-operational.
h.	Battery 8	Shall be phased out	Under Operation	-DO-
i.	Battery 9	67 Oven 7 m tall	Under Operation	No Change
j.	Battery 10	67 Oven 7 m tall	Under Operation	No Change
k.	Battery 11	67 Oven 7 m tall(new battery) with coke dry cooling and Associated facilities	Under Operation	No Change
l.	**Coke Production**	**3.94MTPA**	3.14 MTPA	No Change
6.	**Blast Furnace Complex**			
a.	BF 1 with CDI	Shall be phased out	Under Operation	Will continue to operate post 30.03.2018 for additional 3 years till Blast Furnace 8 & SMS-III is stabilized
b.	BF 2 with TIS	Shall be phased out	Under Operation	
c.	BF 3 with TIS	Shall be phased out	Under Operation	
d.	BF 4	1719 m3	Under Operation	No Change

SN.	Description	Existing Facilities as per 7.0 MTPA Expansion EC Accorded Valid till 30.03. 2018	Status of Existing Facilities	Plant as per revised configuration
e.	BF 5 with CDI	1719 m3	Under Operation	No Change
f.	BF 6 with CDI	2000 m3	Under Operation	No Change
g.	BF 7 with CDI	2363 m3	Under Operation	No Change
h.	BF 8 with CDI	4060 m3(New)with TRT	Sub-units under testing / trial	No Change
i.	**Hot Metal Production**	7.5 MTPA	5.04 MTPA	No Change
7.	**Steel Making & Casting Units**			
a.	SMS I	4x 500t Twin Hearth Furnaces, Shall be phased out	Under Production	SMS – 1 will continue to operate post 30.03.2018 for additional 3 years till SMS-III is stabilized.
b.	SMS II	• 3x 120 t BOF • 2 x120t LF (1 new) • With matching secondary refining & Casting facilities	Under Production	No Change
c.	SMS III (New Unit)	3x160 t BOF	Under Construction	No Change
		-	Envisaged	3x160T argon rinsing unit (ARU) New envisaged
		2x160 hot metal de-sulfurizationunit (HMDU)	Under Construction	No Change
		3x160 t LFs	Under Construction	No Change
		1x 160 t RH-OB	Under Construction	No Change
		1x vacuum tank degassing unit (Space provision)	Under Construction	No Change

SN.	Description	Existing Facilities as per 7.0 MTPA Expansion EC Accorded Valid till 30.03. 2018	Status of Existing Facilities	Plant as per revised configuration
		2x6 strand Billet Casters	Under Construction	No Change
		1x6 strand Bloom cum Billet Casters	Under Construction	No Change
		1x1 strand Thin Slab Caster &Continuous Hot strip finishing train of 6 stands	Not coming	Not coming
		-	Envisaged	1x3 strand beam blank caster subject to modification into 3 strand bloom-cum-beam blank caster envisaged
d.	**Crude Steel Production**	**7.0 MTPA**	4.74 MTPA	**No Change**
8.	**Rolling Mills Complex**			
a.	Blooming & Billet Mill (BBM) associated with SMS-I	To be phased out	Under Production	Will continue to operate post 30.03.2018 for additional 3 years till SMS-III is stabilized (i.e. till SMS-I is not phased out)
b.	Rail & Structural Mill	1.7 MTPA Rail & Structural Mill (RSM) with new Universal Rail Mill (URM)	Under Production	Capacity up-gradation of Rail & Structural Mill (RSM) with URM to 2.2MTPA envisaged
c.	Plate Mill	1.42 MTPA Plate Mill	Completed	Capacity up-gradation of Plate Mill to 1.65 MTPA envisaged.
d.	Quenching and Tampering facility in Plate Mills	Not Envisaged		New facility envisaged
e.	Merchant Mill	0.6 MTPA Merchant Products	Under Production	Capacity up-gradation of Merchant Products to 0.85 MTPA envisaged

SN.	Description	Existing Facilities as per 7.0 MTPA Expansion EC Accorded Valid till 30.03. 2018	Status of Existing Facilities	Plant as per revised configuration
f.	Wire Rod Mill	0.68 MTPA Wire Rods	Under Production	Capacity up-gradation of Wire Rod Mill to 0.7 MTPA envisaged
g.	Universal Beam Mill	1.0 MTPA	Now not coming	Proposal for setting up of Universal Beam Mill has now been dropped.
h.	Bar & Rod Mill	0.9 MTPA	Under Testing / Trial	No Change
i.	**Total finished steel production**	**6.3 MTPA**	3.124 MTPA	**No Change**
9.	**Refractory Material Plant (RMP)**			
a.	RMP-I	To be phased out	Under Operation	Will continue to operate post 30.03.2018 for additional 3 years till SMS-III is commissioned (i.e. till SMS-I is not phased out)
b.	RMP-II	□ 2x 330 tpd + 1 x 144 tpd Lime kiln □ 1x 330 tpd kiln	Under Operation	No Change
c.	RMP-III	5x450 tpd lime and dolo kiln	Partly Under construction / Partly Under Testing & Trial	No Change
d.	**Total Lime &Dolo Production**	1.58 MTPA	0.286 MTPA	No Change
10.	**Power Blowing Station**			
a.	PBS I	6 x 150 tph boiler (existing)	Under Operation	No Change
		1 x 150 tph boiler (new)	Under Operation	No Change
		1 x 15 MW + 3 x 12 MW turbo-generators;	Under Operation	1 x 15 MW + 3 x 12 MW turbo-generators;

SN.	Description	Existing Facilities as per 7.0 MTPA Expansion EC Accorded Valid till 30.03. 2018	Status of Existing Facilities	Plant as per revised configuration
b.	PBS II	2 x 150 TPH BF gas fired boiler with 1 x 25 MW turbo-generator with 40 TPH steam generation.	Under Testing / Trial	2 x 150 TPH BF gas fired boiler with 1 x 25 MW turbo-generator with 40 TPH steam generation.
	TRT	Power Generation Capacity not specified	Construction completed to Testing & Trail to be done	14MW
	CDCP	Power Generation Capacity not specified	Under Testing / Trial	4MW
c.	**Total Power Generation (MW) installed capacity & Steam Generation Boilers (TPH)**	**72 MW with Steam Generation 1390 TPH + Green power from TRT & CDCP**		**76 MW with Steam Generation 1390TPH + Green power from TRT (14 MW) &CDCP (4 MW)**
11.	**Oxygen Plant (OP)**	3x550 TPD -No Change 1x700 – Amendment accorded by MoEFCC 2 x1250 TPD – On BOO basis to M/s. Praxair Delinking permitted by MoEFCC.	Under Production	3x550 TPD 1x700 TPD
12.	**Water Requirement (m3/h)**	15981 m3/h	7617 m3/h	No Change
13.	**Power Requirement**	468 MW	267 MW	No Change
14.	**Total area under Bhilai Steel Plant (BSP) and Plant Area**	Total area under BSP: 6286.75 *ha.* *Plant area:* ***3284.75 ha.***	Total area under BSP: 6286.75 *ha.* *Plant area:* ***3284.75 ha.***	No Change
16.	**Captive Secured Land Fill (SLF)**	• Not envisaged		• SLF(Capacity; 34250m^3) envisaged

Summary of the Units to be Phased out			
SN.	**Description**	**7.0 MTPA Expansion EC Accorded Valid till 30.03. 2018**	**Plant as per revised Configuration**
a)	Old small Coke Oven Batteries, 4.3m tall& 1x65 ovens total eight in number (Battery No. 1 to 8).	Battery No. 1, 7 & 8 to be phased out and 5 small batteries in operation	Battery No. 1, 7 & 8 to continue operation with 2 or 3 batteries to be always kept under repair / rebuilding cycle.
b)	Steel Melting Shop – I (SMS-I)	To be phased out by 30.03.2018	SMS – 1 will continue to operate post 30.03.2018 for additional 3 years till SMS-III is stabilized.
c)	Blooming & Billet Mill (BBM) associated with SMS-I	To be phased out by 30.03.2018	Will continue to operate post 30.03.2018 for additional 3 years till SMS-III is stabilized (i.e. till SMS-I is not phased out)
d)	Refractory Material Plant – I (RMP-I) associated with SMS-I	To be phased out by 30.03.2018	Will continue to operate post 30.03.2018 for additional 3 years till SMS-III is stabilized (i.e. till SMS-I is not phased out)
e)	Blast Furnace 1, 2, & 3	To be phased out by 30.03.2018	Will continue to operate post 30.03.2018 for additional 3 years till Blast Furnace 8 & SMS-III is stabilized

7.0 BSP-SAIL is located in Bhilai, District Durg, State Chhattisgarh between North latitude 21o11' to 21o13' and East longitude 81o22'to 81o24'and falls under Survey of India Topo-sheet No. F44P08. The plant area is 3284.75 ha. No forestland is involved. Green belt is well developed within and around the project area. The tree plantation has been done in 1171.33 ha, which is about 35% of the project land

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

9.0 The estimated project cost for the modernisation-cum-expansion project in 2008 at the time of Environmental Clearance by MoEFCC was Rs. 12,954.30 Crores. The revised SAIL Board Approved cost is Rs. 17,265 Crores (Net of CENVAT) which is inclusive of foreign exchange component. Under the modernisation-cum-expansion plan, it was estimated that about 5900 people will be employed.

10.0 The targeted Crude steel production capacity of the Integrated Steel Plant is 7.0 million TPA, same as per the previous accorded Environmental Clearance. BSP is presently based on Blast Furnace-Twin Hearth Furnace (BF-THF) and BF- Basic Oxygen Furnace (BF-BOF) routes for

production of iron and steel. Under ongoing modernization-cum-expansion plan the crude steel production capacity is envisaged to be 7.0 MTPA within the existing premises of BSP.

11.0 The total estimated power demand for 7.0 MTPA modernization-cum-expansion plant has been estimated to be 468 MW. Only critical power and total process steam will be generated through the captive power plant. The balance power requirement will be met from outside sources.

12.0 The gas generated from Coke Ovens, BFs and LD/BOFs is being utilized inside the plant operation. The total generation of BF gas: 1380417 Nm^3/hr; BOF/LD gas: 71,529 Nm^3/hr; CO Gas: 189,195 Nm^3/hr is envisaged at 7.0 MTPA stage.

13.0 The revised raw material requirements, source and mode of transport for the integrated steel plant for production of 7.0 MTPA crude steel are:

Raw Material	**Quantity (TPA)**	**Sources**	**Mode of Transport**
Iron ore fines	7,699,245	Dalli/Rajhara/Rowghat	Rail
Iron Ore lumps	4,378,000	Dalli/Rajhara/Rowghat	Rail
Limestone	1,847,000	Nandini / Kuteshwar/Jaisalmer	Rail / Road
Dolomite	1,114,700	Hirri	Rail
Quartzite	104,600	Muripar	Rail
Coking Coal	5,679,000	Imported / Indigenous	Rail

14.0 The source of water for the BSP is the Tandula, Gondli and the Kharkhara reservoirs. Water is fed to the storage reservoir of the plant (Maroda-II) through the Tandula Irrigation Canal. Total water requirement after Modernisation-cum-expansion of 7.0 MTPA plant is 15981m/hr(5.0 TMC ft/y) and will be taken from Chhattisgarh Water Resource Department through Tandula Canal to Maroda-II reservoir of BSP. The water requirement of BSP is met from Maroda-I and Maroda-II reservoirs. The capacity of Maroda-I are 9.0 MM^3 and Maroda-II reservoirs is 27.4 MM^3.

15.0 Solid waste management for the proposed expansion project is as follows:

Sl. No.	**Plant section**	**Nature**	**Qty (TPA)**	**Utilization**
1.	BF slag	Non-hazardous	2239800	To be sold to cement plant
2.	BF sludge	Non-hazardous	52500	Reuse in the Sinter plant after briquetting
3.	BF flue Dust	Non-hazardous	120008	Reuse in the Sinter Plant / sold to cement plant
4.	SMS / BOF Slag	Non-hazardous	747000	Reuse as flux in Sinter plant / to be used in road making
5.	SMS sludge / Dust	Non-hazardous	102000	Reuse in the Sinter plant after briquetting
6.	Fly Ash	Non-hazardous	15000	100% Utilisation
7.	Other process wastes like Waste Refractories, Dolo fines, Lime fines, Mill Scales and Cinder, will be 100% recycled/reused/sold.			

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

17.0 The proposal was considered in the 23rd meeting of Expert Appraisal Committee (Industry-I) held during 9th – 10th October, 2017. After detailed deliberations, it was observed that the proposal had a number of complexities as detailed below:

- The EC given to them is due to expire in March 2018 and the PP had not in a position to complete the facilities in the valid EC period. The Committee would like to examine the present status of the completion of the existing EC due to appreciate the need and scope of new ToR which has been asked for.

- There are large number of modifications envisaged in the already approved configuration. Moreover, large number of additional facilities are also been proposed, which requires clear on-site assessment of the need and scope of the each facilities.

- The status of waste utilization needs on-site assessment in view of the large and gigantic scale of operations.

18.0 In view of the above, the committee decided to have a site visit by a sub-committee of the EAC. The proposal will be considered based on the report of the sub-committee.

19.0 The sub-committee visited the site during 30th – 31st October 2017 and made following observations:

A. The current status of the facilities approved as per the EC accorded in 2008 as seen during the site visit is given in table below:

S No	Plant Unit	Details	Status	Remarks/Observations
1	**Sinter Plant Complex**			
a.	Sinter Plant-1	Closed	Closed	No Issue
b.	Sinter Plant-4 two Machines	3x75 m^2 and 1x 80 m^2	Under Operation	No Issue
c.	Sinter Plant-3 – One old Machine and One New under EC	1x 320 m^2 (existing) and 1x 360 m^2 **(new)**	Under Operation (Production not beyond 2008 EC capacity)	PP has changed the size of the Machine from 320 Sq. M to 360 Sq. M without informing MOEFCC and not applied for amendment of EC.
2.	**Coke Oven Complex**			
a.	Battery 1	To be closed after March 2018	Production Stopped	PP informed that the Battery will be cold repaired and kept standby to operate as per production schedule to maintain the production of coke to the level approved as per EC

b.	Battery 2	To be closed after March 2018	Production Stopped	PP informed that the Battery will be cold repaired and kept standby to operate as per production schedule to maintain the production of coke to the level approved as per EC (3.94 MTPA).
c.	Battery 3	65 Oven 4.3 m tall To Continue	Under Operation	Running. No issue
d.	Battery 4	65 Oven 4.3 m tall To Continue	Under Operation	Running. No issue
e.	Battery 5	65 Oven 4.3 m tall To Continue	Under Operation	Running. No issue
f.	Battery 6	65 Oven 4.3 m tall To Continue	Under Operation	Running. No issue
g.	Battery 7	To be closed after March 2018	Closed	PP informed that the Battery will be cold repaired and kept standby to operate as per production schedule to maintain the production of coke to the level approved as per EC (3.94 MTPA).
h.	Battery 8	To be closed after March 2018	Under Operation	PP informed that the Battery will be cold repaired and kept standby to operate as per production schedule to maintain the production of coke to the level approved as per EC (3.94 MTPA).
i.	Battery 9	67 Oven 7 m tall	Under Operation	No Issue
j.	Battery 10	67 Oven 7 m tall	Under Operation	No Issue
k.	Battery 11	67 Oven 7 m tall (new battery) with coke dry cooling and	Under Operation	No Issue
3	**Blast Furnace Complex**			
a.	BF 1 with CDI	To be closed after March 2018	Under Operation	

b.	BF 2 with TIS	To be closed after March 2018	Under Operation	PP proposes to continue to operate post 30.03.2018 for additional 3 years till Blast Furnace 8 and SMS-III is
c.	BF 3 with TIS	To be closed after March 2018	Under Operation	
d.	BF 4	1719 m3 capacity. To Continue	Under Operation	No Issue
e.	BF 5 with CDI	1719 m3 capacity. To Continue	Under Operation	No Issue
f.	BF 6 with CDI	2000 m3 Capacity. To Continue	Under Operation	No Issue
g.	BF 7 with CDI	2363 m3 Capacity. To Continue	Under Operation	No Issue
h.	BF 8 with CDI New	4060 m3(New) with TRT	Sub-units under testing / trial	The Furnace is to be fired by Dec, 2017 and would require about 30 days to stabilize. This unit will be commissioned as per schedule to produce Hot metal required for & MTPA expansion.
4	**Steel Making & Casting Units**			
a.	SMS I	4x 500t Twin Hearth Furnaces, to be phased out after March 2018	Under Production	PP proposes to continue SMS – 1 operation post 30.03.2018 for additional 3 years till SMS-III is stabilized.
b.	SMS II	• 3x 120 t BOF • 2 x120t LF (1 new) • With matching secondary	Under Production	No Issue
c.	SMS III (New Unit)	3x160 t BOF	Under Construction	The progress at site is extremely slow. Sub Committee feels that the job can be completed within March 2018 provided PP takes it at war footing. The urgency of the same was not visible during site visit.
		2x160 hot metal de-	Under Construction	do

		3x160 t LFs	Under Construction	do
		1x 160 t RH-OB	Under Construction	do
		1x vacuum tank degassing unit (Space provision)	Under Construction	do
		2x6 strand Billet Casters	Under Construction	do
		1x6 strand Bloom cum Billet Casters	Under Construction	do
		1x1 strand Thin Slab Caster &Continuous Hot strip finishing	Dropped	MoEFCC not informed for amendment of EC
5	**Rolling Mills Complex**			
a.	Blooming & Billet Mill (BBM) associated with SMS-I	To be closed after March 2018	Under Production	PP wants to continue to operate post 30.03.2018 for additional 3 years till SMS-III is stabilized (i.e. till SMS-I is not phased out)
b.	Rail & Structural Mill	1.7 MTPA Rail & Structural Mill	Under Production	No Issue
c.	Plate Mill	1.42 MTPA Plate Mill	Completed	No issue w.r.t. EC. New expansion proposal to be dealt separately.
d.	Merchant Mill	0.6 MTPA Merchant Products	Under Production	No issue w.r.t. EC. New expansion proposal to be dealt separately
f.	Wire Rod Mill	0.68 MTPA Wire Rods	Under Production	No issue w.r.t. EC. New expansion proposal to be dealt separately
g.	Universal Beam Mill	1.0 MTPA	Dropped	Dropped but no information to MoEFCC for Amendment of EC.

h.	Bar & Rod Mill	0.9 MTPA	Under Testing / Trial	Can be completed within Validity Period. No issue.
6.	**Refractory Material Plant (RMP)**			
a.	RMP-I	To be phased out	Under Operation	PP proposes to continue to operate post 30.03.2018 for additional 3 years till SMS-III is commissioned (i.e. till SMS-I is not phased out)
b.	RMP-II	2x 330 tpd + 1 x 144 tpd Lime kiln	Under Operation	No Issue
c.	RMP-III	5x450 tpd lime and dolo kiln	Partly Under construction / Partly Under Testing & Trial	Can be completed within validity period. No issue.
7	**Power Blowing Station**			
a.	PBS I	6 x 150 tph boiler (existing)	Under Operation	No Issue
		1 x 150 tph boiler (new)	Under Operation	No Issue
		1 x 15 MW + 3 x 12 MW turbo-	Under Operation	No Issue
b.	PBS II	2 x 150 TPH BF gas fired boiler with 1 x 25 MW turbo-generator with 40 TPH steam generation.	Under Testing / Trial	2 x 150 TPH BF gas fired boiler with 1 x 25 MW turbo- generator with 40 TPH steam generation.
	TRT	Power Generation Capacity not specified	Construction completed to Testing & Trail to be done	No Issue
	CDCP	Power Generation Capacity not	Under Testing / Trial	No Issue

8.	**Oxygen Plant (OP)**	3x550 TPD -No Change 1x700 – Amendment accorded by MoEFCC 2 x1250 TPD – On BOO basis to M/s. Praxair	Under Production	No Issue

B. Comments on Solid waste management after site Visit:

Sl. No.	Plant section	Utilization Practice with Remarks
1.	BF slag	Being sold to Cement Plants. No Issue
2.	BF sludge	Used in the sinter plant after briquetting. No Issue
3.	BF flue Dust	Reuse in the Sinter Plant / sold to cement plant
4.	SMS / BOF Slag	Partly used as Flux. Major part being dumped in slag yard. The dump yard is not managed well. High level of dust and poor housekeeping.
5.	SMS sludge / Dust	Reuse in the Sinter plant after briquetting
6.	Fly Ash	Partly sold. More than 40 % being ponded.
7	Refractory Waste	Partly used. Balance dumped in slag yard.

C. Other Observations at Site:

a. Operation of Coke Oven Battery 11 with Regard to air pollution was excellent. Structures in Phenol Treatment Plant are highly corroded. Minimum on line instrumentation like pH Meters and DO meters in the aeration tanks not provided.

b. Housekeeping in By Product plant was poor and tar spillage was observed at several places.

c. 30 KLD STP is not operating effectively. No green sludge seen. No evidence of enough MLSS in the aeration tanks. Area stinking badly.

d. General Housekeeping in the plant is not up to the mark. ISO 14001 implementation is not effective as lots of valuable material found dumped haphazardly throughout the plant premises.

e. Township is very green. Plant greenery although adequately planned, but not healthy due to deposition of dust. Work area dust levels are high.

f. The facility planned jointly by SAIL and UNIDO to destroy PCBs and Transformer oil using Plasma Technology is a welcome move. However, during site visit, no one was able to explain the technology and process flow diagram.

g. AAQ station in Town ship is surrounded by thick plantation making the sampling location improper. Other two AAQ stations in the plant are at Oxygen Plant and Rail Mill. These locations are also not representative of pollution from polluting plants.

20.0 Recommendations of the sub-committee: After detailed deliberations with the officials of the plant during the site visit, the following recommendations were made by the sub-committee for further consideration of the proposal.

a. Summary of the Units to be Phased out and Status during Site Visit:

SN.	**Description**	**7.0 MTPA Expansion**	**Status as on 31st Oct 2017**
a)	Old small Coke Oven Batteries, 4.3 m tall & 1x65 ovens total eight in number (Battery No. 1 to 8).	Battery No. 1, 7 & 8 to be phased out by March 2018 and only 5 small batteries to be kept in operation	PP does not want to dismantle the battery # 1, 7 and 8. Instead they plan to keep three batteries at any point in time under cold repair or under rebuilding making sure that only 5 small batteries remain in operation after March 2018. Cold repair and rebuilding schedule is to be recast and submitted to EAC keeping total coke production at EC level of 3.94 MTPA for analysis and review.
b)	Steel Melting Shop – I (SMS-I)	To be phased out by 30.03.2018	PP wants to continue to operate post 30.03.2018 for additional 3 years till SMS- III is stabilized. Under present situation it is not possible to grant extension to EC for another three years. PP needs to apply for ToR , carry out fresh EIA and go through Public Consultation as per EIA Notification 2006.
c)	Blooming & Billet Mill (BBM) associated with SMS-I	To be phased out by 30.03.2018	Under present situation it is not possible to grant extension to EC for another three years. PP needs to apply for ToR, carry out fresh EIA and to go through

d)	Refractory Material Plant –I (RMP-I) associated with SMS-I	To be phased out by 30.03.2018	Under present situation it is not possible to grant extension to EC for another three years. PP needs to apply for ToR, carry out fresh EIA and to go through Public Consultation as per EIA Notification 2006.
e)	Blast Furnace # 1, 2, & 3	To be phased out by 30.03.2018	Under present situation it is not possible to grant extension to EC for another three years. PP needs to apply for ToR, carry out fresh EIA and to go through Public Consultation as per EIA Notification 2006.

b. New units now proposed to be discussed as proposed above.

c. Waste utilization practices are not satisfactory as 100 % utilization of waste has not been achieved as per the requirement of CREP and EC.

d. Operations at Dump yard need improvement as the area is very dusty and dumping is haphazard.

e. In the event the units under EC cannot be completed by 31st March 2018, PP must go for fresh ToR and EIA. In such an event all further work on completion of units that have not been completed will be suspended till new EC is obtained after EIA and Public Consultation.

21.0 Based on the recommendations of the committee, the project proponent has agreed to seek the amendments in the existing EC for the units need change in configuration and to be completed by March, 2018 and also seek fresh ToRs to carryout fresh EIA and Public Consultation as per EIA Notification 2006. Accordingly, the PP also filed that separate application for amendment.

22.0 Therefore, the status of the plant configuration as per EC accorded in 2008, after seeking amendment and for which ToR is requested is furnished by the PP which is given below:

SN	Plant Configuration as per EC 31st March 2008	Plant Configuration after Acceptance of EC Amendment Request	Present Proposal for grant of ToR	Proposed Plant Configuration for the first three years after Grant of EC	Proposed Total Plant Configuration (after completion of three years from Grant of EC)
1.	Sinter Plant Complex				
	Sinter Plant-1 (4 x 50 m^2) Phased out	Phased out	No Change	-	-

SN	Plant Configuration as per EC 31st March 2008	Plant Configuration after Acceptance of EC Amendment Request	Present Proposal for grant of ToR	Proposed Plant Configuration for the first three years after Grant of EC	Proposed Total Plant Configuration (after completion of three years from Grant of EC)
	Sinter Plant-2 (3x75 m^2+ 1x 80 m^2)	Sinter Plant-2 (3x75 m^2+1x 80 m^2)	No Change	Sinter Plant-2 (3x75 m^2+1x80 m^2)	Sinter Plant-2 (3x75 m^2+1x 80 m^2)
	Sinter Plant-3 : Machine 1 (1x 320 m^2) Machine 2 (1x 320 m^2) (new)	Sinter Plant-3 : Machine 1 (1x 320 m^2) Machine 2 (1x 360 m^2)	SP3, Machine 2 – No Change SP3, Mc. 2 ; Production from 3.168 to 3.706 MTPA (+0.537 MTPA)	Sinter Plant-3 : Machine 1 (1x 320 m^2) Machine 2 (1x 360 m^2);	Sinter Plant-3 : Machine 1 (1x 320 m^2) Machine 2 (1x 360 m^2)
	Total Sinter Production 9.235 MTPA	Total Sinter Production 9.235 MTPA	Increase in Sinter Production = 0.537 MTPA	Total Sinter Production 9.772 MTPA	Total Sinter Production 9.772 MTPA
2	Coke Oven Complex				
	Battery 1 (65 Oven 4.3 m tall) (phase out)	• 8 Nos. - 65 Oven 4.3 m tall battery • 3 Nos. - 67 Oven 7 m tall battery • At any time 3 Coke Oven batteries will be shut-down for cold repair & rebuilding cycle. • 8 Battery in Operation	• Running one extra battery, keeping the coke production same • At any time 2 batteries will be shut-down for cold repair & rebuilding. • 9 Battery in Operation	• 8 Nos. - 65 Oven 4.3 m tall battery • 3 Nos. - 67 Oven 7 m tall battery • At any time 2 batteries will be shut-down for cold repair & rebuilding. • 9 Battery in Operation	• 8 Nos. - 65 Oven 4.3 m tall battery • 3 Nos. - 67 Oven 7 m tall battery • At any time 2 batteries will be shut-down for cold repair and rebuilding. • 9 Battery in Operation
	Battery 2 (65 Oven 4.3 m tall)				
	Battery 3 (65 Oven 4.3 m tall)				
	Battery 4 (65 Oven 4.3 m tall)				
	Battery 5 (65 Oven 4.3 m tall)				
	Battery 6 (65 Oven 4.3 m tall)				
	Battery 7 (65 Oven 4.3 m tall) (phase out)				
	Battery 8 (65 Oven 4.3 m tall) (phase out)				
	Battery 9 (67 Oven 7 m tall)				
	Battery 10 (67 Oven 7 m tall)				

SN	Plant Configuration as per EC 31st March 2008	Plant Configuration after Acceptance of EC Amendment Request	Present Proposal for grant of ToR	Proposed Plant Configuration for the first three years after Grant of EC	Proposed Total Plant Configuration (after completion of three years from Grant of EC)
	Battery 11 (67 Oven 7 m tall)				
	Total Gross Coke Production = 3.94	Total Gross Coke Production = 3.94	No Change in Gross Coke Production	Total Gross Coke Production = 3.94	Total Gross Coke Production = 3.94
3	Blast Furnace Complex				
	BF 1 with CDI (1033 m^3) Shall be phased out	Phase out	BF 1 (1033 m^3); Operation for two years till capital repair of BF 4, 5 & 6 and stabilisation of BF 8	BF 1 with CDI (1033 m^3) in operation for two years	-
	BF 2 with TIS (1033 m^3) (Phase out)	Phase out	No Change	-	-
	BF 3 with TIS (1033 m^3) (Phase out)	Phase out	No Change	-	-
	BF 4 (1719 m^3) (Relining)	BF 4, 1719 m^3	BF 4, 1719 m^3 Capital Repair	BF 4, 1719 m^3	BF 4, 1719 m^3
	BF 5 with CDI (1719 m^3) (Relining)	BF 5, 1719 m^3	BF 5, 1719 m^3 Capital Repair	BF 5, 1719 m^3	BF 5, 1719 m^3
	BF 6 with CDI (2000 m^3) Modernisation	BF 6, 1719 m^3 (Not Modernized)	BF 6, 1719 m^3 Capital Repair	BF 6, 1719 m^3	BF 6, 1719 m^3
	BF 7 with CDI (2000 m^3)	BF 7, 2363 m^3	No Change	BF 7, 2363 m^3	BF 7, 2363 m^3
	BF 8 with CDI & TRT (4060 m^3)	BF 8, 4060 m^3	No Change	BF 8, 4060 m^3	BF 8, 4060 m^3
	Total Hot Metal (HM) - 7.5 MTPA	HM - 7.5 MTPA	No Change	HM - 7.5 MTPA	HM - 7.5 MTPA
4	Steel Making & Casting Units				
	SMS I	Phase Out	SMS I	SMS I	-

SN	Plant Configuration as per EC 31st March 2008	Plant Configuration after Acceptance of EC Amendment Request	Present Proposal for grant of ToR	Proposed Plant Configuration for the first three years after Grant of EC	Proposed Total Plant Configuration (after completion of three years from Grant of EC)
	4x 500t Twin Hearth Furnace and Blooming and Billet mill (Phase Out)		4x 500t Twin Hearth Furnace in operation for 3 years till SMS III & BF 8 stabilization	4x 500t Twin Hearth Furnace in operation for three years	
	SMS II • 3x120t BOF • 2X120t LF (1 new) • 3x120t RH (1 new) • 1x120t VD • Hot metal Desulphirisation (new) • 3x1 strand Slab Casters (MC#1, 2 ,3) • Bloom (3 strand)-cum-Slab (1 strand) Caster (mc#4) (new) • 1x4 strand Bloom Caster (MC#5) (modernized) • 1x1 slab caster (mc#6) (new)	SMS II • 3x120t BOF • 2X120t LF • 3x120t RH • 1x120t VD • Hot metal Desulphirisation • 3x1 strand Slab Casters (MC#1, 2, 3) • Bloom (3 strand)-cum-Slab (1 strand) Caster (mc#4) (new) • 1x4 strand Bloom Caster (MC#5) • 1x1 slab caster (mc#6)	No Change	SMS II • 3x120t BOF • 2X120t LF • 3x120t RH • 1x120t VD • Hot metal Desulphirisation • 3x1 strand Slab Casters (MC#1, 2, 3) • Bloom (3 strand)-cum-Slab (1 strand) Caster (mc#4) (new) • 1x4 strand Bloom Caster (MC#5) • 1x1 slab caster (mc#6)	SMS II • 3x120t BOF • 2X120t LF • 3x120t RH • 1x120t VD • Hot metal Desulphirisation • • 3x1 strand Slab Casters (MC#1, 2, 3) • Bloom (3 strand)-cum-Slab (1 strand) Caster (mc#4) (new) • 1x4 strand Bloom Caster (MC#5) • 1x1 slab caster (mc#6)
	SMS III (New) • 3x160 t BOF • 3x160 t LFs • 1x 160 t RH-OB • 1x vacuum tank degassing unit (Space provision)	SMS III • 3x160 t BOF • 3x160 t LFs • 1x 160 t RH-OB • 1x vacuum tank degassing unit (Space provision)		SMS III • 3x160 t BOF • 3x160 t LFs • 1x 160 t RH-OB • 1x vacuum tank degassing	SMS III • 3x160 t BOF • 3x160 t LFs • 1x 160 t RH-OB • 1x vacuum tank degassing

SN	Plant Configuration as per EC 31st March 2008	Plant Configuration after Acceptance of EC Amendment Request	Present Proposal for grant of ToR	Proposed Plant Configuration for the first three years after Grant of EC	Proposed Total Plant Configuration (after completion of three years from Grant of EC)
	• 2x6 strand Billet Casters • 1x6 strand Bloom cum Billet Casters • 1x3 strand Beam Blank Caster	• 2x6 strand Billet Casters • 1x6 strand Bloom cum Billet Casters • 1x3 strand Beam Blank Caster	• New 3x160t Argon Rinsing Unit (ARU) envisaged • 1x3 strand Beam Blank Caster modified into 1x3 strand Bloom-cum-Beam blank Caster	unit (Space provision) • New 3x160t Argon Rinsing Unit (ARU) envisaged • 2x6 strand Billet Casters • 1x6 strand Bloom cum Billet Casters • 1x3 strand Bloom-cum-Beam blank Caster	unit (Space provision) • New 3x160t Argon Rinsing Unit (ARU) envisaged • 2x6 strand Billet Casters • 1x6 strand Bloom cum Billet Casters • 1x3 strand Bloom-cum-Beam blank Caster
	Blooming & Billet Mill (2.149 MTPA) (Phased out)	Phased out	Blooming & Billet Mill (2.149 MTPA) in operation for 3 years till stabilization of SMS III & BF 8	Blooming % Billet Mill (2.149 MTPA) in operation for 3 years	-
	Total Crude Steel Production : 7.0 MTPA	Total Crude Steel Production : 7.0 MTPA	No Change in Crude Steel Production	Total Crude Steel Production : 7.0 MTPA	Total Crude Steel Production : 7.0 MTPA
5	Rolling Mills				
	Universal Beam Mill (1.0 MTPA)	Not Coming	No Change	-	-
	1.7 MTPA Rail & Structural with new universal rail mill	2.2 MTPA Rail & Structural with Universal Rail Mill	No Change	2.2 MTPA Rail & Structural with Universal Rail Mill	2.2 MTPA Rail & Structural with universal rail mill

SN	Plant Configuration as per EC 31st March 2008	Plant Configuration after Acceptance of EC Amendment Request	Present Proposal for grant of ToR	Proposed Plant Configuration for the first three years after Grant of EC	Proposed Total Plant Configuration (after completion of three years from Grant of EC)
	Plate Mill (1.42 MTPA)	1.65 MTPA	New Quenching & Tampering facility	1.65 MTPA with Quenching & Tampering facility	1.65 MTPA with Quenching & Tampering facility
	Bar & Rod Mill (0.90 MTPA)	Bar & Rod Mill 0.90 MTPA	No Change	Bar & Rod Mill 0.90 MTPA	Bar & Rod Mill 0.90 MTPA
	Medium Merchant Mill (0.60 MTPA)	Medium Merchant Mill (0.85 MTPA)	No Change	Medium Merchant Mill (0.85 MTPA)	Medium Merchant Mill (0.85 MTPA)
	Wire Rod Mill (0.68 MTPA)	Wire Rod Mill (0.7 MTPA)	No Change	Wire Rod Mill (0.7 MTPA)	Wire Rod Mill (0.7 MTPA)
	Total Finished Steel = 6.30 MTPA	Total Finished Steel = 6.30 MTPA	No Change	Total Finished Steel = 6.30 MTPA	Total Finished Steel = 6.30 MTPA
6	Power Blowing Station & Turbo-generators				
	6 x 150 tph boiler 1 x 150 tph boiler (new) 1 x 12 MW + 2 x 15 MW 1 x 15 MW (new) 2 x 170 tph BF gas fired boiler (new) 1 x 15 MW (new)	6 x 150 tph boiler 1 x 150 tph boiler 3 x 12 MW 1 x 15 MW 2 x 150 tph BF gas fired boiler 1 x 25 MW	No Change	6 x 150 tph boiler 1 x 150 tph boiler 3 x 12 MW 1 x 15 MW 2 x 150 tph BF gas fired boiler 1 x 25 MW	6 x 150 tph boiler 1 x 150 tph boiler 3 x 12 MW 1 x 15 MW 2 x 150 tph BF gas fired boiler 1 x 25 MW
	1390 tph steam, Power Generation 76 MW	1350 tph steam, Power Generation 76 MW	No Change	1350 tph steam, Power Generation 76 MW	1350 tph steam, Power Generation 76 MW
	TRT Power Capacity Not Specified	TRT Power Generation 14 MW	No Change	TRT Power Generation 14 MW	TRT Power Generation 14 MW
	CDCP Power Capacity Not Specified	CDCP Power Generation 4 MW	No Change	CDCP Power Generation 4 MW	CDCP Power Generation 4 MW
7	Refractory Material Plant (RMP) : Lime & Dolo plant)				
	RMP I shall be phased out RMPII	RMP I shall be phased out RMP-II	RMP I in operation for 3 years till	RMP I in operation for 3 years	- RMP-II

SN	Plant Configuration as per EC 31st March 2008	Plant Configuration after Acceptance of EC Amendment Request	Present Proposal for grant of ToR	Proposed Plant Configuration for the first three years after Grant of EC	Proposed Total Plant Configuration (after completion of three years from Grant of EC)
	• 2x 330 tpd + 1 x 144 tpd Lime kiln • 1x 330 tpd kiln (new) RMP III 5x450 tpd lime and dolo kiln for SMS-III (new)	• 2x 330 tpd + 1 x 144 tpd Lime kiln • 1x 330 tpd kiln RMP III 5x450 tpd lime and dolo kiln for SMS-III	stabilization of SMS III & BF 8 No Change No Change	RMP-II • 2x 330 tpd + 1 x 144 tpd Lime kiln • 1x 330 tpd kiln RMP III 5x450 tpd lime and dolo kiln for SMS-III	• 2x 330 tpd + 1 x 144 tpd Lime kiln • 1x 330 tpd kiln RMP III 5x450 tpd lime and dolo kiln for SMS-III
	Total 1.58 TPD	Total 1.58 TPD	Total 1.58 TPD	Total 1.58 TPD	Total 1.58 TPD
8	Oxygen Plant (3 x 550 tpd) 1 x 700 tpd (new)	Oxygen Plant (3 x 550 tpd) 1 x 700 tpd	No Change	Oxygen Plant (3 x 550 tpd) 1 x 700 tpd	Oxygen Plant (3 x 550 tpd) 1 x 700 tpd
9	Other Auxiliary facilities (Matching facilities for achieving production)	Other Auxiliary facilities (Matching facilities for achieving production)	No Change	Other Auxiliary facilities (Matching facilities for achieving production)	Other Auxiliary facilities (Matching facilities for achieving production)
10	Not Envisaged	Not Envisaged	Secured Land Fill (SLF (Capacity; 34250m^3) New	Secured Land Fill (SLF (Capacity; 34250m^3)	Secured Land Fill (SLF (Capacity; 34250m^3)
11	Total Raw Material Requirement • Iron ore fines (TPA) • Iron Ore lumps (TPA) • Limestone (TPA) • Dolomite (TPA) • Quartzite (TPA) • Coking Coal (TPA)	Total Raw Material Requirement • 7287000 TPA • 4,378,000 TPA • 1,847,000 TPA • 1,114,700 TPA • 104,600 TPA • 5,679,000 TPA	Additional Raw Material • 412250 TPA • No Change • No Change • No Change • No Change • No Change	Total Raw Material Requirement • 7,699,250 TPA • 4,378,000 TPA • 1,847,000 TPA • 1,114,700 TPA • 104,600 TPA • 5,679,000 TPA	Total Raw Material Requirement • 7,699,250 TPA • 4,378,000 TPA • 1,847,000 TPA • 1,114,700 TPA • 104,600 TPA • 5,679,000 TPA
12	Total Water Requirement	15981 m3/hr	No Change	15981 m3/hr	15981 m3/hr

SN	Plant Configuration as per EC 31st March 2008	Plant Configuration after Acceptance of EC Amendment Request	Present Proposal for grant of ToR	Proposed Plant Configuration for the first three years after Grant of EC	Proposed Total Plant Configuration (after completion of three years from Grant of EC)
13	Total Power Requirement	468 MW	No Change	468 MW	468 MW
14	Fuel Gas Generation & Utilization inside Plant • BF gas (Nm^3/hr) • BOF/LD gas (Nm^3/hr) • CO Gas (Nm^3/hr)	• 1380417 (Nm3/hr) • 71,529 (Nm3/hr) • 189,195 (Nm3/hr)	• No Change • No Change • No Change	• 1380417 (Nm3/hr) • 71,529 (Nm3/hr) • 189,195 (Nm3/hr)	• 1380417 (Nm3/hr) • 71,529 (Nm3/hr) • 189,195 (Nm3/hr)
15	Transportation of Material	96% by Rail; 4% By Road	Increased Iron Ore Fines - Transport by Rail	96% by Rail; 4% By Road	96% by Rail; 4% By Road
16	Total Project Area	3284.75 ha	No additional Land required	3284.75 ha	3284.75 ha

23.0 During the deliberations, the committee advised to take the EC for the SLF for the disposal of waste from the proposed PCB facility separately from the SEAC. The project proponent has agreed.

24.0 After detailed deliberations, the Committee recommended the project proposal excluding the SLF for the facilities envisaged in the pre-para (22) for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed **at <u>Annexure I read with additional ToRs at Annexure-2:</u>**

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 and disposal of hazardous waste as per the Hazardous and Other Waste Management Rules, 2016 shall be addressed in the EIA/EMP.

vi. Explore the possibility of installation of WHRB on Sinter Plant -3 cooler and details to be submitted in EIA/EMP.

vii. Action plan to improve the effectiveness of ISO 14001 implementation.

viii. Action plan for cleaning of the roads by mobile vacuum cleaners

ix. Action plan for installation of online pH and DO meters in aeration basins of BOD plants

x. Action plan to improve the performance of sewage treatment and recycling of treated sewage water in the process.

xi. Details of action plan to improve the greenery in the entire plant area, specifically in the dump yard and finishing mill areas

xii. Action plan for implementation of waste segregation at source (shop floors and colony); disposal of solid waste as per the Solid Waste Management Rules, 2016.

24.6. 4.605 MTPA Steel Plant of M/s Steel Authority of India Limited located at Bokaro, Jharkhand - [Proposal No IA/JH/IND/6949/2008; MoEF&CC File No. IA-J-11011/99/2007-IA-II(I)] – Amendment in Environmental Clearance for development of alternate system of drawl of raw water from Damodar river.

1.0 M/s Steel Authority of India Limited has made online application vide proposal no. IA/JH/IND/6949/2008 dated 23rd October 2017 seeking amendment in Environmental Clearance granted on 16th October 2008 for increase in production capacity from 4 MTPA to 7 MTPA.

2.0 **M/s** Bokaro Steel Plant (BSL) was set up and commissioned in the year 1972-73 for production of 1.7 MTPA of flat rolled products. Subsequently, the plant was expanded to 4.0 MTPA for which EC was obtained in 1991 and proposed for further expansion from 4 MTPA to 7 MTPA and obtained EC in 2008. SAIL-Bokaro is undergoing the expansion of existing Bokaro Steel Plant from 4 MTPA to 4.606 MTPA.

3.0 As part of modernization of the existing plant, Addition of a 2.0 MTPA Pellet plant and 7m tall top charged Coke oven battery of 0.768 MTPA production capacity were also proposed within the same plant premises without increasing the approved production capacity of the existing plant. EC application for the same has been submitted to MoEFCC.

4.0 The required raw water for BSL plant operations and township is being drawn from Tenughat Dam which is built on upstream of Damodar River at a distance of about 35 Km from

Plant site. The maximum limit for drawl of water from Tenughat Dam is 23140 m^3/hr. At present, the raw water drawl by BSL is about 17500 m^3/hr.

5.0 Water is supplied through a Gravity Canal which is controlled by WRD, Govt. of Jharkhand (Tenu canal which is about 35 km long from the dam). The canal discharges water into the Cooling Pond-l (which serves as the re-circulating basin for the plant). The Canal is mainly built with earthen embankments, has PCC lining and has intermittent civil structures like RCC aqueducts or cross drainages over the nalas, small seasonal rivers, low lying land etc.

6.0 The canal is more than 50 years old. Its condition has deteriorated considerably. At many places the canal lining is damaged. Due to poor condition, causing complete disruption in water supply to BSL, which is effecting plant operations very often.

7.0 BSL is therefore, contemplating an alternate pipeline route for water drawl from Damodar River via Baidhmara Weir near Bokaro (approx. 5 km), to meet the water requirements of the plant and the township as an alternate route (same source) of raw water. In future, this will serve as a standby arrangement to Tenu canal during exigencies. The amount of water which is being released from Tenughat Dam will be diverted through Damodar River and same water will be drawn from the upstream of Baidhmara weir by creating a pumping facility with pipe lines up to cooling pond - 1 for which NOC from Govt. of Jharkhand, Ministry of Water Resource Department has obtained on January 06, 2017.

8.0 The route survey was carried out and the land of ROW (right-of way) does not involve any eco-sensitive area and forest land. There shall be no change in the present water required for the existing Steel Plant complex and township.

9.0 The capital cost of the proposed diversion of pipeline is estimated around Rs 118.45 Crores.

10.0 After detailed deliberations, the committee recommended for proposed amendment in the earlier EC for alternate pipeline route for water drawl from Damodar River via Baidhmara Weir near Bokaro.

24.7. Expansion of Cement Plant (Clinker from 2.0 MTPA to 5.0 MTPA and Cement from 3.0 MTPA to 6.0 MTPA) located at Villages Itagi & Diggaon, Taluk Chittapur, District Kalaburagi, Karnataka by **M/s Orient Cement Limited** - [Proposal No **IA/KA/IND/69976/2017**; File No. **J-11011/342/2011-IA.II(I)**] – **Terms of Reference for expansion**.

1.0 The proponent has made online application vide proposal no. **IA/KA/IND/69976/2017** dated 29th September 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) Cement Plants under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

2.0 M/s. Orient Cement Limited is operating a Cement Plant with a Clinker production capacity of 2.0 Million Tonnes Per Annum (MTPA) at Itagi & Diggaon villages, Chittapur taluk, Kalaburagi district, Karnataka. The limestone requirement of the cement plant is met from

Chittapur Limestone mine located at Itga & Diggaon villages, Chittapur taluk, Kalaburagi district, Karnataka. Environmental Clearance for 2.0 MTPA Clinker and 3.0 MTPA cement capacity along with a 50 MW Coal based power vide MoEF letter no. J-11011/342/2011-IAII(I), dt. 11.3.2013. The current status of various units along with installed production capacities are given below:

Sl	Units	Capacity
1	Clinker Production Capacity	2.0 MTPA
2	Cement Production Capacity	3.0 MTPA
3	Captive Limestone Mining	3.0 MTPA
4	Captive Power Plant (CPP)	50 MW

3.0 M/s Orient Cement Limited proposed to increase clinker production capacity from 2.0 to 5.0 MTPA and cement production from 3.0 to 6.0 MTPA by enhancing the Unit-I production capacity from 2.0 to 2.50 MTPA and by installing another 2.5 MTPA new unit i.e., Unit-II. With increase of clinker production capacity, the limestone requirement also increases from 3.0 to 7.5 MTPA. The proposed capacities for expansion of cement plant are as below:

Cement Plant	Present approved Capacity (MTPA)		Capacity after proposed enhancement (MTPA)	
	Clinker	Cement	Clinker	Cement
Unit –I	2.00	3.00	2.50	3.00
Unit –II	-	-	2.50	3.00
Total	2.00	3.00	5.00	6.00

4.0 The additional limestone requirement will be met by increasing limestone production from captive limestone mining lease. The mining lease extends over an area of 519 Ha. in Itagi & Diggaon villages, Chittapur taluk, Kalaburagi district, Karnataka.

5.0 It was informed that the proposal for increase of Limestone from 3.0 to 7.5 MTPA is being submitted to MoEF&CC separately for necessary environmental clearance.

6.0 M/s OCL complex is located in an area of 266 Ha. No forestland involved. The new unit will be located within the existing complex. No additional area is required. Of the total area 33 % land will be used for green belt development.

7.0 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.

8.0 Total project cost is about 1354 Crores. Proposed employment generation from proposed expansion project will be 143 persons direct or indirect employment.

9.0 The targeted production capacity of the Cement plant capacity of the Cement Plant is 5.0 MTPA Clinker and 6.0 MTPA Cement. The raw material for manufacture of Cement is Limestone and is sourced from the Captive Limestone Mine and others details is given below:

	Present	Additional	Total	Source	Mode of Transport
Limestone	3.0	4.5	7.5	Captive mine	Conveyor

Laterite		0.109	0.164	0.213	Vizag or Rajamundry Warangal	Road/Rail
Bauxite		0.118	0.178	0.296	Belgaum area, Karnataka	
Feld Spar		0.029	0.044	0.073	Vikarabad	
Gypsum		0.150	0.200	0.350	EID Pary India Ltd., Chennai & Coramandel Fertilizers Ltd., Vizag.	
Coal	Cement Plant	0.300	0.450	0.750	SCCL or WCL or Mahanandi	
	CPP	0.262	-	0.262		
Pet Coke		0.166	0.250	0.416	MRPL, Mangalore	
Ash requirement for PPC		0.590	0.790	1.376	Raichur power plant & Jindal Steel, Bellary	

10.0 The peak power consumption in the OC Cement plant complex including mine is 36 MW and is met from Captive Power Plant (CPP). An additional power of 36 MW is required for the expansion project which can be met from the Grid power and CPP.

11.0 Water Consumption for the proposed expansion project will be 2000 m3/day and waste water generation will be from cement plant and domestic activities. Waste water will be treated in ETP 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 proposal involves multi sectoral components such as cement plant and mining. The committee informed that the procedure for consideration of the integrated and inter linked projects was issued by MoEF&CC vide OM No. J-11013/41/2006-IA.II(I), dated 24th December, 2010. Integrated and interlinked projects having multi sectoral components shall prepare a common EIA report, covering impact of each of the component in a comprehensive manner after obtaining ToR from each of the respective sectoral Expert Appraisal Committee (EACs). For the purpose, the project proponent shall submit the applications to each of the sector simultaneously giving full details of the project (comprehensively for the integrated / interlinked projects as also for the particular component, sector specific) in the prescribed format (Form-I) and the pre-feasibility report.

14.0 After detailed deliberations, the committee advised the project proponent to submit fresh application along with full details of the project (comprehensively for the integrated / interlinked projects as also for the particular component, sector specific) in the prescribed format (Form-I) and the pre-feasibility report. Therefore, the committee recommended to return the proposal in the present form.

24.8. Expansion of Ferro Alloys Plant (1,20,000 TPA to 1,80,000 TPA); Manganese Ore Sintering Plant (28,000 TPA to 56,000 TPA); and installation of new Chrome ore Briquetting Plant (2 X 1,50,000 TPA) and Manganese Ore Pelletisation Plant (9900 TPA) by M/s Maithan Alloys Ltd., at Plot No. 42, 43 & 44 Andhra Pradesh Special Economic Zone (APSEZ), (Village & Mandal) Atchutapuram (Village & Mandal), District Vishakhapatnam, Andhra Pradesh- [Proposal No **IA/AP/IND/69967/2017**; File No. **J-11011/220/2009-IA.II (I)**] – **Terms of Reference for expansion**.

1.0 The proponent has made online application vide proposal no. **IA/AP/IND/69967/2017** dated **28th September 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" EIA Notification, 2006 and the proposal is appraised at Central level.

2.0 M/s Anjaney Alloys Limited has obtained Environment Clearance from the Ministry of Environment, Forest & Climate Change, New Delhi vide F.No. J-11011/220/ 2009- IA II (I), Dated 08thJune, 2009and subsequently amended vide F.No.J-11011 / 220 / 2009- IA II (I), Dated 30thSeptember, 2015 for the following units & capacities:

Sl	Units	EC obtained on 08thJune, 2009	Amendment to EC obtained on 30thSeptember, 2015
1	Submerged Electric Arc Furnaces (4X18 MVA	1,20,000 TPA (Fe-Mn – 65,000 TPA, Si-Mn- 55,000 TPA and Fe-Si if required)	1,20,000 (FeMn/SiMn/FeSi)
2	Briquetting plant	28,000 TPA	--
3	Sintering plant	28,000 TPA	--

3.0 Presently, plant is operating Ferro alloys unit (4X18 MVA), with production capacity of 1,20,000 TPA of Ferro Manganese/Silico Manganese/Ferro Silicon& Sinter plant with production capacity of 28,000 TPA of Sintered Manganese ore in Plot No. 42, 43 & 44, Andhra Pradesh Special Economic Zone (APSEZ), Village& Mandal Atchutapuram, District Vishakhapatnam, Andhra Pradesh and having valid Consent to Operate to existing units from APPCB which is valid upto 30th April2020. Briquetting plant of 28,000 TPA unit was not established.

4.0 Subsequently, Anjaney Alloys Limited was amalgamated with Maithan Alloys Limited through order issued by the Hon`ble High Court, Calcutta. Latter we have submitted a application for change of company name from Anjaney Alloys Limited to Maithan Alloys Limited in Environmental clearance order issued by Ministry. Subsequently MOEF&CC, New Delhi has issued Change of name in Environmental order vide F.No.J-11011 / 220 / 2009- IA II (I), Dated 31stJuly, 2017.

5.0 Now, M/s Maithan Alloys Limited has proposed expansion of Ferro Alloys plant from 1,20,000 TPA to 1,80,000 TPA, Expansion of Manganese Sintering plant from 28,000 TPA to 56,000TPA & installation of new Chrome ore Briquetting plant of 2 X 1,50,000 TPA & Installation of Manganese ore pelletisation plant of 9900 TPA in the existing plant premises of Plot No. 42, 43 & 44, Andhra Pradesh Special Economic Zone (APSEZ), Atchutapuram(Village &Mandal),Vishakhapatnam District, Andhra Pradesh. The Briquette Plant envisaged in the earlier

EC has not been implemented and dropped. The existing and proposed capacity for different products are given below:

S.No.	Unit	Plant configuration & Production Capacity		
		EC obtained in 2009 & Amendment in 2015	**Present Proposal**	**After the present proposal**
1	Submerged Electric Arc Furnaces	4 x 18 MVA (FeMn / SiMn / FeSi) 1,20,000 TPA	2X18 MVA (FeMn / SiMn / FeSi/**FeCr**) 60,000 TPA	6 x 18 MVA (FeMn / SiMn / FeSi / **FeCr)** 1,80,000 TPA
2	Chrome ore Briquetting		3,00,000 TPA (2 x 1,50,000 TPA)	3,00,000 TPA
3	Manganese ore Briquetting	28,000 TPA ** (Unit not implemented)	--	will be dropped now
4	Manganese Sintering plant	28,000 TPA	28,000 TPA	56,000 TPA
5	Manganese pellets	--	9,900 TPA	9,900 TPA
**** EC validity expired for this unit**				

6.0 The existing plant is falls in the Survey of India Topo-Sheet No. 65 K/14 & 65K/15 and is located in Plot No. 42, 43 & 44, Andhra Pradesh Special Economic Zone (APSEZ), Village & Mandal Atchutapuram, District Vishakhapatnam, Andhra Pradesh.

7.0 Existing plant is located in 60.15 acres of land. Proposed expansion will be taken up partially in the Existing plant (i.e. 60.15 acres). Of the total area, 20.0 Ac. (33%) of land is developed with greenbelt. No Forest land is involved in the plant site.

8.0 Panchadarla RF (SW) – 5.1 Kms., Gokivada RF (S) – 8.3 Kms., Pudimadaka RF (SW) – 2.5 Kms. Rambilli RF (SW) – 8.6Kms and Sitapalem PF (SW) – 7.8 Kms exist within 10 Km. radius of the plant site. No National Park/ Sanctuary/Biosphere reserve/tiger reserve are reported to be located in the core and buffer zone of the plant.

9.0 Total project cost for proposed expansion is approx. Rs. 98.0 Crores. Proposed employment generation from proposed expansion project will be 200 nos. direct employment and 100 nos. indirect employment.

10.0 The targeted production capacity of the total plant is 1.8 Lakh TPA. The ore for the plant would be procured from Andhra Pradesh and imported from other countries. The ore transportation will be done through by rail & road (through covered trucks).

11.0 The Power required for operating existing &proposed expansion projects will be85.4 MW and power will be supplied from existing line. Also 2 x 500KVA standby D.G. sets are available in the plant.

12.0 Proposed raw material and fuel requirement for expansion project are Manganese Ore, Quartz, Coal/coke, Electrode Paste Scrap, Chrome ore. Requirement would be fulfilled by external purchase. Fuel Consumption will be mainly Coal. The details of raw material required along with quantity, source and mode of transport is as given below:

S.No.	RAW MATERIALS	QUANTITY IN TPA	SOURCES OF SUPPLY	METHOD OF TRANSPORTATION
FERRO ALLOYS				
Silico Manganese;				
1	Manganese Ore/Mn Slag	159000	Imported	By Ship and from Port by Road
2	Coal/Coke	48000	Imported	By Ship and from Port by Road
3	Quartz	12000	Local	By Road
4	Electrode Paste	1500	Local	By Road
5	M.S. Casing/Round/Lancing Pipe	1080	Local	By Road
Ferro Manganese:				
1	Manganese Ore	159000	Imported	By Ship and from Port by Road
2	Coal/Coke	45000	Imported	By Ship and from Port by Road
3	Electrode Paste	1200	Local	By Road
4	M.S. Casing/Round/Lancing Pipe	660	Local	By Road
Ferro Silicon:				
1	Quartz	102000	Local	By Road
2	Coal/Coke	84000	Imported	By Ship and from Port by Road
3	MS Scrap	24000	Local	By Road
4	Electrode paste	1800	Local	By Road
5	M.S. Casing/Round/Lancing Pipe	2100	Local	By Road
Ferro Chrome:				
1	Chrome ore briquettes	144000	Produced at site	Truck
2	Coke	26400	Imported	Sea / Road
3	Coal	6600	Imported	Sea / Road
SINTER PLANT				
1	Dust from Ferro alloy plant	14000	From own Ferro alloys unit	Truck
2	Manganese ore	14560	Local and/or imported	Sea /Rail/ Road
3	Coal/coke	2100	Imported	Sea / Road
BRIQUETTING				

1	Chrome Ore	279000	Local and/or imported	Sea /Rail/ Road
2	Mollases	16500	Local	Road
3	Hydrated Lime	9000	Local	Road
MANGANESE PELLETISATION				
1	Bag Filter dust	4950	In plant	Truck
2	Manganese Ore	4950	Local and/or imported	Sea /Rail/ Road

13.0 Water requirement as per earlier Environmental clearance accorded to existing plant is 1910 KLD. The actual water requirement for existing plant is 645 KLD only and is being supplied by A.P. Industrial Infrastructure Corporation (APIIC), water supply agreement with APIIC exists for 700 KLD. Water required for the proposed expansion project will be 350 KLD and same will also be supplied by APIIC. Accordingly, agreement will be entered with APIIC for supply of additional water for the expansion proposal. The total water requirement after the present expansion will be 995 KLD. This includes make water for Ferro Alloys, Briquetting unit, Sinter unit & Pelletisation unit. There is no wastewater generation from the Process, as closed-circuit cooling system will be provided. The sanitary waste will be treated in the existing STP.

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

15.0 The project proponent has made detailed presentation along with EIA Consultant M/s Pioneer Enviro Laboratories and Consultants limited.

16.0 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 <u>Annexure I read with additional ToRs at Annexure-2.</u>**

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. Action plan for briquetting and recycling of all the fines generated in the APCD and plant.

vi. Possibility of waste heat recovery from the ferro alloy furnace shall be explored and addressed in the EIA/EMP.

vii. Additional greenbelt of 5.4 Acs in addition to the existing plantation with loacal and broad leaved tree species shall be planned.

viii. Management and disposal of hazardous waste as per the Hazardous and Other Waste Management Rules, 2016 shall be addressed in the EIA/EMP

ix. The slag shall be characterised including the TCLP test for the hazardous metals in the slag.

24.9. Expansion of Sponge Iron Plant (6,00,000 TPA to 13,20,000); Ferro Alloy Plant (72,000 TPA to 1,44,000) with Briquette plant and addition of New Steel Melting Shop- (9,00,000 TPA) with Slag crushing unit, Hot Rolling Mill- (5,50,000 TPA, Cold Rolling Mill with Pickling line & Galvanizing line- (3,00,000 TPA), Lime Dolime Plant- (200 TPD), Oxygen Plant- (200 TPD) CPP- [45 MW to 159 MW (50 MW Coal &Dolochar Mix based and 109 WHRB] of M/s Rashmi Cement Limited at Mouja-Jitusole (J.L No. – 702 & 703), Junglekhas (J.L No. – 731) and Baghmundi (J.L No. – 928),VillageJitusole, PS-Jhargram, District- Paschim Midnapore, West Bengal. - [Proposal No **IA/WB/IND/69919/2017**, File No. **J-11011/604/2008-IA.II(I)**] – Terms of Reference Regarding – Further consideration based on ADS reply on 26.09.2017.

1.0 The proponent has made online application vide proposal no. **IA/WB/IND/69919/2017** dated **27th September 2017** along with the application in prescribed format (Form-I), copy of prefeasibility 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. Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous), under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central Level.

2.0 M/s **Rashmi Cement Limited** proposed to go for expansion of existing manufacturing unit for **Sponge Iron Plant with Ferro Alloy Plant and Power Plant.** It is proposed to set up the plant for expansion of Sponge Iron Plant (6,00,000 TPA to 13,20,000); Ferro Alloy Plant (72,000 TPA to 1,44,000) with Briquette plant and addition of New Steel Melting Shop- (9,00,000 TPA) with Slag crushing unit, Hot Rolling Mill- (5,50,000 TPA; Cold Rolling Mill with Pickling line & Galvanizing line- (3,00,000 TPA); Lime Dolime Plant- (200 TPD); Oxygen Plant- (200 TPD); CPP- [45 MW to 159 MW (50 MW Coal & Dolochar Mix based and 109 WHRB].

3.0 The existing project was accorded environmental clearance vide File No-. J-11011/604/2008.I A II (I) dated 12.02.2009 and obtained validity extension for next three year till 11th-Feb-2019 and also amendment in EC (inclusion of ferrochrome with ferro alloy within EC approved capacity) vide File No-J-11011/604/2008.I A II (I) dated 07.07.2017. Consent to Operate is accorded by West Bengal State Pollution Control Board vide Co No-102823 issued vide memo No-5683-hl-co-5/10/0399 dated 14-12-2016 validity of CTO is up to 31-Dec-2021. The detail about EC obtained vide File No- J-11011/604/2008.I A II (I) dated 12.02.2009 & 07.07.2017 is as given below:

Plant	Existing (TPA)	Proposed (TPA)		Total Capacity
		Phase –I*	Phase-II*	
DRI (Sponge Plant)	3,00,000 (10 x 100 TPD)	1,20,000 (4 x 100 TPD)	1,80,000 (2 x 350 TPD)	6,00,000
Submerged Arc Furnace (SAF)		36,000 (3 X 9 MVA)	36,000 (3 X 9 MVA)	72,000 (Ferro Alloy like FeMn, SiMn, FeSi & FeCr)
Power	25 MW	--	--	25 MW

4.0 The proposed unit will be located at Mouza – Jitusole (J.L No.-702 & 703), Junglekhas (J.L. No. 731) and Baghmundi (J.L. No.928), at Village: Jitusole, P.O – Garhsalboni, P.S – Jhargram, District: Paschim Mednipur, State: West Bengal.

5.0 The earlier EC of M/s Rashmi Cement Limited was awarded on 48.6 ha land. No forestland is involved. The complete 48.6 ha land is in possession by M/s Rashmi Cement Limited. The existing operational plant is located on 17.4 hectare of land and proposed expansion will take place within the RCL premises for which 12.2 hectare of land will be needed within the 48.6 hectare of land. Out of 48.6 hectare already 16.02 hectare (33%) of land is earmarked for green belt development. No additional land is required for the proposed expansion project.

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 790 Crores rupees. Proposed employment generation from proposed project will be 1200 direct employment and 2500 indirect employment.

8.0 The targeted production capacity of the proposed proposal is 9, 00,000 TPA Integrated Steel Plant & 114 MW CPP. The Iron ore for the plant would be procured from Barbil-Joda, Orissa (from our current mines owner like, Rungata Mines, Sirajuddin Mines & TP Sahoo Mines), and Coal would be procured from E-Auction or Imported. The ore transportation will be done through Rail/ Road. The proposed capacity for different products for new site area as below:

Sr. No	Plant	Existing (TPA)		Proposed		Total Production Capacity
		No. of unit	Production Capacity	No. of unit	Production Capacity	
1	DRI (Sponge Plant)	11 x 100 + 1 x 350 + 1 x 600 TPD	6,00,000	4 x 600 TPD	7,20,000 TPA	13,20,000 TPA
2	Ferro Alloy Plant	6 x 9 MVA	72,000	6 x 9 MVA	72,000 TPA	1,44,000 TPA

	(FeMn, SiMn, FeSi & FeCr) with FeCr Briquette plant					
3	Steel Melting Shop (SMS) with Slag Crushing unit	----	-----	10 x 20 T I.F with LRF, AOD & CCM	9,00,000 TPA	9,00,000 TPA
4	Hot Rolling Mill Product: (TMT Bar, Wire Rod, Wire & Structural long product like- Angel, Channel & Beam)	----	-----	----	5,50,000 TPA	5,50,000 TPA
5	Cold Rolling Mill/ Wire drawing with Pickling Line & Continuous Galvanizing Line Product: (Galvanized Sheet/ Plate /Coils, Flat Sheet, H.R. Coils, Checkered Sheet, Nail & Broad Flange Joist)	----	-----	---	3,00,000 TPA	3,00,000 TPA
6	Lime Dolime Plant	----	-----	01	200 TPD	200 TPD
7	Oxygen Plant	----	-----	01	200 TPD	200 TPD
8	Captive Power Plant	WHRB Based	45 MW WHRB**	64 MW WHRB Based + 50 MW CFBC)	114 MW	159 MW

9.0 The electricity load of 219 MW for proposed expansion project will be procured from proposed 114 MW Captive Power Plant and the remaining 105 MW will be drawn from WDSEDCL/Open Access. Company has also proposed to install 10 Number DG Set of 720 KVA. At the time of Construction phase power requirement will be met from current operational Captive power plant of Rashmi Cement limited.

10.0 Proposed raw material and fuel requirement for proposed expansion project are Iron Ore, Bentonite, Coaking Coal, Dolomite, Quartzite, Lime, Magnesium Ore, Chromium Ore, etc. Requirement would be fulfilled by:

Sr. No.	Name of the Raw Materials	Source
1	Iron ore lump	Barbil-Joda, Orissa (From our current mines owner like, Rungata Mines, Sirajuddin Mines & TP Sahoo Mines)
2	Iron ore fines	
3	Non-coking coal	From our current source , or Through E-Auction or Imported
4	Coking coal	From our current source: Purchased from BCCL, Dhanbad
5	Dolomite	From our current source: Birmitrapur, Orissa / Bilaspur,
6	Limestone	From our current source: Birmitrapur, Orissa / Bilaspur, Raipur CG / Katni MP
7	Manganese ore	From our current source: Captive mines in Balaghat,
8	Quartzite	From our current source: Belpahar Orissa / / Bilaspur, Raipur CG

Fuel consumption will be mainly Electricity & Diesel (If required).

11.0 Water Consumption for the proposed expansion project will be 6456 KLD (less water requirement because of use of Air type cooling system for Power Plant) and waste water generation will be 82 KLD. Rashmi Cement Limited has water withdrawal permission for 2060 KLD from SWID and application for withdrawing additional required water will/is made to SWID, West Bengal. 30 KLD Domestic waste water will be treated in Septic Tank followed by Soak Pit and 52 KLD industrial waste water generated will be treated and reused in the process and for green belt development and dust depression after treatment.

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 Grass Root Research & Creations Private limited.

14.0 After detailed deliberations, the committee observed that details of processes, products, raw materials to be used, potential impacts on the environment and proposed mitigation measures which are required to prescribe the specific ToRs were missing in the PFR submitted by the PP and not able to explain to the committee.

15.0 Therefore, the committee advised to submit revised PFR *inter alia* include details of processes, products, raw materials to be used, potential impacts on the environment and proposed mitigation measures to meet the standards.

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 Clearance - Further consideration based on reply to ADS on 04.10.2017.

1.0 M/s Hindalco Industries Limited has made online application vide proposal No. IA/MP/IND/3428/2008, dated 8th February 2017 seeking amendment in Environment Clearance granted vide Letter No. J-11011/217/2007-I.A.II (I) with subsequent amendment to the EC dated15th February 2012 for increase in the Aluminium metal production from 3.59 LTPA to 3.71 LTPA through process optimization; change in the Fuel Mix (use of Pet coke and Rice husk); Change in source of fuel (permission for road transportation of certain quantity of coal); sale of carbon anode; sale of Bath material; use of Aluminium Scrap from sister units; sale of molten metal, etc.

2.0 The Integrated Aluminium Smelter Complex (3.25 LTPA & Primary Aluminium) along with Coal Based Captive Power Plant (750 MW) at village Orgari, Tehsil Bargawan, Dist Sidhi, Madhya Pradesh of M/s Hindalco Industries Limited was granted Environment Clearance vide Letter No. J-11011/217/2007-I.A.II (I). Subsequently amendment to the EC was obtained on 15th February 2012 for upgradation of Aluminium Smelter Plant from 3.25 LTPA to 3.59 LTPA and installation of Standby 1X 150 MW Captive Power Plant (with a condition of generation shall not exceed 750 MW).

3.0 As per the earlier Environmental Clearance, 3.5 MTPA coal requirement will be met from Mahan Coal Block located at 25 Km from the project.

4.0 Now, M/s Hindalco Industries Limited is seeking change in fuel source and fuel mix for concurrence for 900 MW (5x150 MW in Operation and 1 x 150 MW Standby) Captive Power Plant in EC as follows:

- Due to cancellation of Mahan Coal block, change in fuel source consequent to allotment of Kathautia Coal Mines and Dumri Coal Mines in place of Mahan Coal Mines.

- So long Kathautia Coal Mines and Dumri Coal Mines do not become operative & after in become operative to meet the balance coal requirement to procure Domestic coal (alternate sources, i.e., linkage coal, coal from open market, e-auction, washery tailing/rejects) and imported coal.

The summary of the proposal:

Sl. No	Item	Existing Source as per EC	Proposal for Change in Fuel Source & Fuel Mix
	A proposal for change in fuel source and fuel mix.	Captive Mahan Coal Block allocated to HIL Existing practice: As the allocation of Mahan Coal Block to HIL has been cancelled by Hon'ble Supreme Court, HIL is continuing to source coal from alternate sources i.e. Domestic Coal, E-auction, imported coal, Pet Coke, etc.	Captive Kathautia and Dumri Coal Block allocated to HIL Coal from other sources, i.e., Domestic Coal (Linkage Coal, coal from Open Market, E-auction, Washery reject/ tailing), imported coal, etc.

Sl. No	Item	Existing Source as per EC	Proposal for Change in Fuel Source & Fuel Mix
			Small quantity of Agri Residues (1-4 %) and Pet coke (1-2%)

5.0 Coal requirement of CPP is 3.5 MTPA of domestic coal from Mahan Coal Block as per EC.

Mahan Coal Block	3.5 MTPA	S - 0.5% Ash - 34% GCV - 4300 Kcal/kg

6.0 The following is the proposed combination of fuel sources and fuel mix:

1	Linkage coal from own mines (Kathautia&Dumri mines) and coal from open market from CCL/ NCL, washery tailings/ rejects	90 – 97%	S - 0.49% Ash - 31.78% GCV - 3000 Kcal/kg
2	Pet Coke	1 – 2 %	S - 4.7% Ash - 1.23% GCV - 8104 Kcal/kg
3	Imported Coal	1 – 10%	S - 0.62% Ash - 16.61% GCV - 5850 Kcal/kg
4	Agri Residues	1 – 4%	S % - 0.22% Ash - 15.2% GCV - 3400 Kcal/kg
Average fuel quality			S % - 0.49% Max Ash - 33% Max GCV - 3974 Kcal/kg

7.0 **Capacity expansion of Aluminium Smelter**: M/s HIL has obtained capacity expansion of Aluminium smelter from 3.25 LTPA to 3.59 LTPA vide amendment to the EC dated 15th February 2012. Now it is proposed further capacity expansion of Aluminium Smelter from 359 to 371 KTPA. The proposed production increase is through Process Optimization by increase in the Current Amperage from the existing level of 360 kA to 372 kA. This will be achieved with the existing systems in the Smelter Plant without addition of Pots or any new Equipment. The key process of optimization is through thermal balance and controlling the operational parameters. The associated facilities like Cast House and Carbon Plant is adequate to receive the enhanced production. There will be no changes in the bus bar for this incremental increase of current. Enhancement of input amperage will result into marginal increase (3.6 %), to the tune of 12 KTPA, in Aluminium Production Level.

8.0 It was reported that following raw materials and other requirements have been envisaged for the proposed production enhancement:

- **Alumina** - HIL will require 23500 MT of additional alumina to meet this enhanced volume. This will be sourced from HIL's Captive Alumina Plants and import, if required based on Business decision.

- Power - Existing installed capacity of 900 MW (5 x 150 MW Units in Operation and 1 x 150 MW Unit as Standby) will be sufficient.

- Water - No additional requirement. Water consumption will be within the approved limit of 4600 m3/h.

- Coal - Power Generation will remain within 750 MW and the coal consumption will remain within approved limit of 3.5 MTPA.

- Aluminium Fluoride – Plant's Fluoride Consumption will remain within approved limit of 10 kg/MT of Aluminium (CREP Guidelines)

- Land - No additional requirement; No Forest Land is involved.

- Capital Investment - No additional Capital Investment is needed to meet this enhanced production capacity.

- Manpower - No additional Manpower requirement

- Addition of New Equipment - None

- Change in Product Portfolio - None. The Product will be Aluminium Ingot, SOWS, Billet and Wire Rod.

9.0 It was also reported that the following change in pollution load:

- ETP – Since there is no additional requirement of water for this enhanced production capacity, no change in the current ETP capacity: 300 m3/h.

- Fluoride Level – Since the increase in production capacity is very marginal (3.6 %), with the existing Gas Treatment Centre, HIL will be able to maintain the Fluoride Emission within approved limit of 0.67 kg/MT, mentioned in the EC.

- PAH Level – No change. Will remain with the approved limit within the Existing Fume Treatment Centre.

- Spent Pot Lining – No additional generation as there is no increase in number of Pots.

10.0 PP mentioned that to achieve desired GCV, using agro waste and pet coke are blended with higher grade coal.

11.0 The proposal was considered in the 16th meeting of Expert Appraisal Committee (Industry-I) held during 6th – 7th March 2017. After detailed deliberations, the committee noted that the use of pet coke in CPP is not permitted and the committee asked the project proponent to submit following information for further consideration:

i) Certificate of compliance of existing EC from Regional Office of MoEF&CC

ii) Details of coal linkage and transportation of coal to power plant shall be planned as per earlier EC (i.e. mode of transportation shall be through rail).

iii) No pet coke will be allowed in CPP in view of high sulphur content.

12.0 The project proponent has submitted reply to the ADS on 4th October 2017. The reply inter alia includes:

- Certificate of compliance of earlier EC conditions vide MOEFCC Rgional office, Bhopal's letter no. 5-93/2009 (part) /919, dated 11th August 2017 was submitted. There are no non-compliances reported by the Regional Officer.

- At present, Mahan Aluminium is procuring coal from open market, i.e., from subsidiaries of Coal India, Import and through e-auction. Presently, maximum coal comes from rail mode including imported coal and rest coal comes from road mode at different area of UP, MP and Chhattisgarh. The details of the fuel transport options considered are provided in following table:

Sl. No.	Coal Source	Mode	Distance	FY 2017 - 2018				FY 2018 - 2019		FY 2019 - 2020	
				March 2017		Revised					
				MT	%	MT	%	MT	%	MT	%
A.	Own mine / CIL	Rail	--	22,21,200	65	25,01,200	73	27,01,200	79	27,01,200	79
1	NCL - Bina / Krishnshila	Road	64 Km	7,18,900	21	7,18,900	21	7,18,900	21	7,18,900	21
2	CIL Subsidries	Road	260 Km	4,80,000	14	2,00,000	6	-	-	-	-
Sub Total (B) by Road				11,98,900	35	9,18,900	27	7,18,900	21	7,18,900	21
TOTAL - A+B				34,20,100	100	34,20,100	100	34,20,100	100	34,20,100	100

Sl. No.	Coal Source	Mode	Distance	FY 2020 - 2021		FY 2021 - 2022		FY 2022 - 2023	
				MT	%	MT	%	MT	%
A	Own mine / CIL	Rail	--	27,01,200	79	28,80,925	84	34,20,100	100
1	NCL - Bina / Krishnshila	Road	64 Km	7,18,900	21	5,39,175	16	-	-
2	CIL Subsidries	Road	260 Km	-	-	-	-	-	-
Sub Total (B) by Road				7,18,900	21	5,39,175	16	-	-
TOTAL - A+B				34,20,100	100	34,20,100	100	34,20,100	100

- Summary of Traffic Count - Coal Transport by Road

S. No	Coal Source	FY 2017 - 2018 (Mar 2017)	FY 2017 - 2018 (Revised)	FY 2018 - 2019	FY 2019 - 2020	FY 2020 - 2021	FY 2021 - 2022	FY 2022 - 2023
Traffic Count (Trucks/day)								
1	NCL-Bina/ Krishnshila (Bina - Anpara- Singrauli – Mahan)	87	87	87	87	87	65	0
2	CIL Subsidries (Baikuntpur-Baidhan-Mahan)	58	24	0	0	0	0	0
3	CIL Subsidaries (Shahdol-Siddhi-Mahan)							
TOTAL - Trucks/day		145	145	111	87	87	87	0
Traffic Count (PCU/day)								
1	NCL-Bina/ Krishnshila (Bina - Anpara- Singrauli – Mahan)	261	261	261	261	261	195	0
2	CIL Subsidries (Baikuntpur-Baidhan-Mahan)	174	72	0	0	0	0	0
3	CIL Subsidaries (Shahdol-Siddhi-Mahan)							
TOTAL - PCU/day		435	435	333	261	261	261	0
Traffic Count (PCU/hr)								
1	NCL-Bina/ Krishnshila (Bina - Anpara- Singrauli – Mahan)	11	11	11	11	11		0
2	CIL Subsidries (Baikuntpur-Baidhan-Mahan)	8	3	0	0	0	0	0
3	CIL Subsidaries (Shahdol-Siddhi-Mahan)							
TOTAL - PCU/day		27	19	14	11	11	11	0

*Note : *Computed as ratio of total quantity and Max load/ truck/day, considering truck capacity of 25 tonnes, 330 working days/annum, PCU Factor=3*

- The summary of predicted maximum GLC; maximum baseline concentrations and estimated the post-project scenario of AAQ is given as:

S. No	Particular	Concentration of Pollutants (microg/cum)			
		CO	SO_2	NO_2	PM10/PM2.5
1	Baseline Monitored AAQ (max Conc)	630	17.7	26.3	66.1/ 36.7
2	Predicted max GLC due road transport	0.4	-	0.2	5.4
3	NAAQS	2000	80	80	100/ 60

- Expected Traffic Volume - Post implementation of the Project is as below:

Sl. No	Coal Source	Existing V (Volume in PCU/hr)	*V (Volume in PCU/hr) : Existing traffic including the MAHAN Traffic					
			FY 2017 - 2018 (Proposed)	FY 2018 - 2019	FY 2019 - 2020	FY 2020 - 2021	FY 2021 - 2022	FY 2022 – 2023
1	NCL-Bina/ Krishnshila (Bina - Anpara- Singrauli – Mahan)	241	230+11	230+11	230+11	230+11	230+11	230+8
2	CIL Subsidries (Baikuntpur-Baidhan-Mahan)	316	314 +2	314+2	314+0	314+0	314+0	314+0
3	CIL Subsidries (Shahdol-Siddhi-Mahan)	159	157+2	157+5	157+0	157+0	157+0	157+0
Sl. No	Coal Source	Existing V (Volume in PCU/hr)	**V/C Ratio (LOS)					
			FY 2017 - 2018 (Proposed)	FY 2018 - 2019	FY 2019 - 2020	FY 2020 - 2021	FY 2021 - 2022	FY 2022 - 2023
1	NCL-Bina/ Krishnshila (Bina - Anpara- Singrauli – Mahan)	241	B	B	B	B	B	B
2	CIL Subsidries (Baikuntpur-Baidhan-Mahan)	316	C	C	C	C	C	C
3	CIL Subsidries (Shahdol-Siddhi-Mahan)	159	B	B	B	B	B	B

- Environmental Mitigation measures:

  - Water Sprinkling for dust suppression in following two identified vulnerable areas through water tankers;

  - Barauniya to Majagawa junction (Badokar mod) – 2.2 km – 2 water tankers (5 kL capacity) deployed per day during day time for 8 hours – 4 trips per tanker;

  - Bargawan Police station to Dhaurar -3.3 km - 3 water tankers (5 kL capacity) deployed per day during day time for 8 hours – 4 trips per tanker;

  - M/s HINDALCO will take up with DFO and PWD and others, as appropriate, to initiate plantation of trees in the vulnerable areas at Barauniya to Majagawa

junction (Badokar mod) – 2.2 km – 2750 no of trees and Bargawan Police station to Dhaurar -3.3 km – 4750 no of trees

13.0 After detailed deliberations, the recommendation of the committee is given below:

1	Increase in the Aluminium metal production from 3.59 LTPA to 3.71 LTPA through process optimization	Recommended			
2	Change in the Fuel Mix (use of Pet coke and Rice husk)	Not recommended			
3	Change in source of fuel	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%
4	Sale of carbon anode	Recommended			
5	Sale of Bath material	Not recommended			
6	Use of Aluminium Scrap from sister units	Not recommended			
7	Sale of molten metal	Not recommended			

24.11. Proposed Integrated Steel Plant of 0.7 MTPA Capacity by M/s. Mukand Ltd. at VillageKanakapur, Taluka & District- Koppal, Karnataka by M/s Mukund Limited [Online Proposal No. IA/KA/IND/51427/2016; MoEF File No. IA-J-11011/105/2016-IA.II(I)] - Amendment in Terms of Reference.

1.0 M/s. Mukand Limited has made online application vide proposal no. **IA/KA/IND/51427/2016** dated **26th September 2017** seeking amendments in Terms of Reference granted for the proposed Integrated Steel Plant of 0.7 MTPA Capacity vide J-11011/105/2016-IA II (I) dated 19.05.2016.

2.0 It was informed that the name of the company has been changed from M/s. Mukand Ltd. to M/s. Mukand Alloy Steels Private Ltd. (MASPL) and changes of the components in phasing. The details of amendments sought are given below:

Sr. No.	Description	As Per ToR dated 19.05.2016	Amendment required
1	Change the name of the Company.	M/s. Mukand Ltd.	M/s. Mukand Alloy Steels Private Ltd. (MASPL)

2	Registered Address	M/s. Mukand Ltd. (Hospet Division), Hospet-Koppal Road, Village- Kanakapur, Taluka& District- Koppal, Karnataka.		M/s. Mukand Alloy Steels Private Ltd. Flat No. 11, 7 West wing, Shah House, JankiKutir, Juhu Tara Road, Vile Parle (W), Mumbai-400049, Maharashtra, India.	
3	Production Details	Phase I	Phase II	Phase I	Phase II
i	Wire Rods Cold heading wire rods, low carbon/Boron steels, special steel wire rods i.e. semi free/free cutting/Alloy steels/high carbon/mild steel rods	Installation of following facilities: 1. Wire Rod Mill - 550,000MetricTonnes Per Year 2. Blast Furnace - 1 3. E.O.F 4. Ladle furnace - 1 5. Vacuum Degassing - 1 6. Billet/Bloom Caster - 1 7. Sinter Plant - 1 8. Oxygen Plant – 1 9. Power Plant - 1	Installation of following facilities: 1. Blast Furnace - 1 2. Ladle Furnace - 1 3. Vacuum Degassing-1 4. Billet/Bloom Caster - 1 5. Sinter Plant - 1 6. Oxygen Plant - 1 7. Power Plant – 2 (One from Waste Gases)	700,000 TPA – Wire Rod cum Bar Mill	Installation of following facilities: 1. Blast Furnace 2. DRI 3. Coke oven Plant 4. E.O.F 5. Ladle Furnace 6. Vacuum Degassing 7. Billet/Bloom Caster 8. Sinter plant 9. Oxygen plant 10. Power Plant
ii	Bar Products Special steel bar products		Bar Mill –150,000 TPA		
	Total	700,000 TPA		700,000 TPA	

3.0 After details deliberation, the committee opined that the change in the name and phasing of the components are administrative in nature. The committee opined that no amendment is required and may be applied to the ministry directly for change in the name of the company with requisite documents as envisaged in the clause 11 of EIA Notification, 2006. Therefore the proposal is returned in the present form.

24.12. Expansion of Steel Plant (Sponge Iron:1,12,500 TPA; MS Billets:1,21,500 TPA; TMT Bars:1,00,000 TPA; and Power Plant:15 MW) by M/s Amoda Iron and Steel Limited located at Sy. No. 79/80, 81, 82, 83 & 172, Jayanthipuram Village, Jaggayyapet Mandal, Krishna District, Andhra Pradesh [Online Proposal No. IA/AP/IND/21175/1910; MoEFCC File No. J-11011/502/2009-IA.II(I)] – Extension of validity of EC.

1.0 The proponent has made online application vide proposal no. IA/AP/IND/21175/1910 dated **13th October 2017** seeking extension of validity of Environmental Clearance granted on 2ndNovember 2010 for the proposed expansion of Steel Plant by M/s Amoda Iron and Steel Limited located at Sy. No. 79/80, 81, 82, 83 & 172, Jayanthipuram Village, Jaggayyapet Mandal, Krishna District, Andhra Pradesh.

2.0 M/s Amoda Iron and Steel Limited has obtained Environmental Clearance vide no. F. No. J-11011/502/2009-IA.II(I) dated 2ndNovember 2010 for following plant configuration:

S. No	Units	Products	Capacity		
			Existing	Expansion	After Expansion

1	DRI (Existing 1X100 & 2X50 TPD) and (proposed 1X175 TPD)	Sponge iron	60,000 TPA	52,500 TPA	1,12,500 TPA
2	Electric Arc Furnace (1X25 MT)	M.S. Billets	--	1,21,500 TPA	1,21,500 TPA
3	Rolling Mill (1X330 TPD)	TMT bars	--	1,00,000 TPA	1,00,000 TPA
4	Power (15 MW)	WHRB	-	5 MW	15 MW
		FBC	-	10 MW	

3.0 It was reported that the status of implementation of the expansion project is as follows:

Sl	Units	Capacity	Status of implementation
1	Sponge Iron Kiln	1X175 TPD	1X175 TPD SpongeIron Kiln not implemented
2	Electric Arc Furnace	1X25 MT	1X25 MT Electric Arc Furnace not implemented
3	Rolling mill	1X330 TPD	1X330 TPD Rolling mill not implemented
4	Power plant WHRB-5 MW FBC-10 MW	15 MW	15 MW power plant not implemented as it is linked with establishment of sponge iron plant

4.0 It was informed that after obtaining the Environmental Clearance expansion plant could not implemented due to severe recession in steel sector (sluggish market condition). Now, with the improvement in market condition, the company is will likely to implement the remaining unimplemented portion for which EC has been accorded by July 2020. The time schedule provided by PP for implementation of the expansion project is given below:

Sl	Units	Capacity	Schedule date of completion
1	Sponge Iron Kiln	1X175 TPD	February, 019
2	Electric Arc Furnace	1X25 MT	July 2020
3	Rolling mill	1X330 TPD	July 2020
4	Power plant WHRB-5 MW FBC-10 MW	15 MW	February, 019

5.0 During the deliberations the project proponent were not able to demonstrate any physical progress on the ground. The committee felt that it was very crucial for taking decision to know what progress has been made on the ground. However, the PP sought more time for producing documentary and photographic evidence on the ground regarding the implementation of the expansion project for which the EC was granted in the year 2010. Therefore, the committee agreed to this request of the PP and deferred till further information submitted by PP.

14th November 2017

24.13. Expansion and Modernization of 1.2 MTPA Pellet Plant of M/s MSPL Limited at Village Halavarthi, District Koppal, Karnataka by) [Proposal IA/KA/IND/68989/2017, File No. J-11011/383/2014-IA-II(I)] – Environmental Clearance – Expansion under clause 7(ii) of EIA Notification.

1.0 M/s MSPL Limited has made online application vide proposal no. IA/KA/IND/68989/2017, dated 23rd October 2017 seeking environmental clearance under the provisions of Clause 7(ii) of the EIA Notification, 2006 for the proposed modification in throughput process due to non-availability of high grade iron ore without changing any product mix or quantity of product.

2.0 MSPL Limited (MSPL) has established a 1.2 MTPA Iron Ore Pellet Plant over 41 Acres, at Survey no. 2, 8, 9, 12 to 15, 132, 136 & part of 5, 6, 7, 16, 17 at Village: Halavarthi, Tahsil: Koppal, District: Koppal, Karnataka. The EC was accorded to the project by MOEF&CC vide their Letter No. F.N. J-11011/383/2014-IA.II(I), dated: 23rd September 2016 as per directives of Honorable NGT for operational 1.2 MTPA Iron Ore Pellet Plant.

3.0 The quality of ore available to the process is in the range of 53-54% of Fe while the existing process is meant to be operated at 63% plus Fe. Therefore it is proposed for modification in throughput process without changing any product mix or quantity of product.

4.0 A Comparison between the present operating process and conditions and those proposed after introduction of fine ore beneficiation is as follows:

Sl	Parameter	Existing	After proposed modification
1	Process	Pellet making with high grade(av. 63.5%) fine ore input	Pellet making with low grade fine ore (53-54%) input
2	Product	1.2 million tons Pellets for use in sponge iron kilns and blast furnaces mostly.	1.2 million tons Pellets for use in sponge iron kilns and blast furnaces mostly
3	Input iron ore	Ore fine (-) 10 mm 1.3486 million tons; Fe 63-65%	Ore fine (-) 10 mm 2.2 million tons; Fe 53-54%
4	Process steps	• Wet grinding of ore fines and other raw materials • Proportioning • Balling to green pellets • Heat induration to hardened pellets • Cooling • Despatch	• Wet grinding of ore fines and beneficiation of iron content. • Dry grinding of other raw materials • Proportioning • Balling to green pellets • Heat induration to hardened pellets • Cooling • Despatch
5	Area of the plant	41 acres out of available 113 acres	41 acres out of available 113 acres. The modification would be limited to the existing plant site. However, some of

			the adjoining available land to be utilized to store tailing for a few years till their reuse. Separate EC for the temporary dump will be sought.
6	Make up water requirement	19.4 m^3/Hr	76.9 m^3/Hr

5.0 Environmental Impact of Beneficiation Circuit (proposed Modification) and corresponding Mitigation Plan is given below:

	Environment impact on	Existing Impact of pellet plant	Additional Impact after modification	Mitigation measures proposed
	Air Environment	The Existing pellet plant uses ESP and bag filter to collect dust from the flue gases from the plant. The process dust is collected and recycled in the process. Spray is used to reduce dust in the yards and junction houses.	No air pollution from the beneficiation circuit since it is a wet process.	Existing mitigation measures suffice as there is no additional air emission envisaged
	Discharges to Water environment	The existing process uses very little water. Zero discharge of water is practiced.	Introduction of beneficiation will require more make up water (57.5m3 /h) as explained. Most of these water will be ultimately be evaporated either in the atmosphere or at the raw mix driers. Water spilled from the processes and tank blow downs will be collected and used for spraying in the yards as well as for irrigation.	Additional makeup water shall be required, which shall further put pressure on surrounding water resources. However corresponding fine ore utility shall make this balance of natural resources. We have proposed to install tailing filters in the circuit to recover the water and stack the tailings. The optimum use of fresh makeup water shall be practiced and maximum recycling for washing shall be done. Water conservation measures shall be additionally proposed in the form of rain water harvesting to save fresh makeup

				surface water. Zero discharge of water from the plant site will be maintained.
	Impact on land environment due to Solid waste generation and dumping	In the present process the entire solid waste is collected and re-used in the process. So there is practically no solid waste generation.	With beneficiation of fine low grade ores, a rejected portion called tailing will arise which is approximately 35% of the overall iron ore throughput. This will be very low in Fe about 28.2% and mostly of silica and alumina.	The tailings with moisture(15-18%) will be temporarily stored within the plant boundary for drying and then shifted to an adjoining site (land owned by MSPL) for storage for a few years till it is used at the filling work of the upcoming steel plant in the site or used by employing some of the upcoming technologies for recovery of silica and alumina.

6.0 Overall advantages of the proposed modification submitted by PP *inter alia* include:

i) Poorer grade local iron ore fine including those owned by MSPL (with Fe 54-56%) which have a very restricted use in the Indian/local steel industry will find an outlet leading to the conservation of iron ore resources in line with our national mineral policy;

ii) This would lead to clearing of accumulated low grade fine ore dumps in nearby mines;

iii) The company would be able to increase the output of the mine with poor grade ore and would be able to lengthen the life of the better ore grade mine by reducing output. This would improve the viability of the pellet production. The present margin in pellet production from better grade ores is very thin;

iv) Even when the company is to buy fine ore from the market in Karnataka, going for poorer grade fines would give price advantages. Now that demand of poor grade fine ores from China had dwindled and import of low grade fine ore is restricted in China; and

v) In the present highly depressed price situation of iron ore and pellets, the modification would bring cost reduction of the manufactured pellets thereby providing better margin for the company.

7.0 The certificate of compliance of earlier EC was submitted vide EP/12.1/2016-17/7/Kar, dated 4th October, 2017. There are no non-compliances were reported by Regional office, Bangalore.

8.0 The project proponent has made detailed presentation along with EIA Consultant M/s Pollution & Ecology Control Services, Nagpur.

9.0 After detailed deliberations, the committee observed the following:

i. The proposed modification would significantly increase the traffic pressure on the road connecting the project site. This would increase the pollution and cause inconvinence to local people.

ii. Requirement of water would increase for the same level of production

iii. Additional slime generation would require additional land for tailing disposal

10.0 The above mentioned pollution loads and inconvenience to the people likely to increase and, also, the para 7(ii) of EIA Notification being a procedure without mandatory Public hearing, the Committee was of the opinion that the proposal does not merit to be processed under para 7(ii).

11.0 Therefore the proposal is recommended to returned in the present form and PP may make an application for obtaining fresh ToR as an expansion proposal.

24.14. Steel/Sponge Iron Manufacturing plant of (3x60 TPD) 54000 MTPA in existing steel Manufacturing unit having capacity 72 TPD of steel Ingots of **M/s Eden Steel Alloys** located at Village Mullanpur Kalan, AmbeyMajra Road Mandigobindgarh, Tehsil Sirhind, District Fatehgarh Sahib, Punjab [Online proposal no. IA/PB/IND/59542/2016; MoEFCC File No. J-11011/233/2016-IA-II(I)] – Environmental Clearance - Further consideration based on reply to ADS on 16th October, 2017.

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

24.15. Expansion of existing Steel Plant along with installation of Cement Grinding Unit of M/s Shyam Sel & Power Ltd. at Village Dasna, Jamuria, P.O. Bahadurpur, PS. Jamuria, District Burdwan, West Bengal [Online proposal No. **IA/WB/IND/20395/2013;** MoEF&CC File No. **IA-J-11011/327/2013-IA-II(I)**] – Environmental Clearance for expansion.

1.0 M/s Shyam Sel & Power Limited has made online application vide proposal no. **IA/WB/IND/20395/2013** dated 25th September 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 Proposed expansion of existing steel plant along with installation of cement grinding unit of M/s Shyam Sel & Power Ltd., located at Village Dhasna, Jamuria, P.O. Bahadurpur, District Burdwan, West Bengalwas initially received in the Ministry on 5th October, 2013 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 14th meeting held on 19th December, 2013 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental

clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on 17th February, 2014 vide Letter No J-1011/327/2013-IA-II (I). Extension of validity of ToR was granted vide letter even number dated 28th April 2017 with a validity upto 16th February 2018.

3.0 The project of M/s Shyam Sel & Power Ltd. located at Village Dhasna, Jamuria, P.O. Bahadurpur, District Burdwan, West Bengal is for setting up of a new units like Pellet Plant, Cold Rolling Mill with Continuous Galvanising Line & Corrugation unit along with Cement Grinding Unit for production of 1.2 MTPA pellet, 0.35 MTPA CR Coils/Sheets from HR Coils, 0.3 MTPA Galvanised CR Coils, 0.3 MTPA Corrugated Sheet, 75,000 Nm^3/Hour Producer Gas and 1.2 MTPA Portland Slag Cement & Portland Pozzolona Cement. The existing project was accorded environmental clearance vide letter no. J-11011/887/2007- IA.II(I) dated18th March, 2009. The Status of compliance of earlier EC was obtained from Regional Office, Bhubaneshwar vide Letter No. 102-222/EPE dated 09.08.2017. The proposed units with their capacities for different products are as below:

Name of unit	No. of units	Capacity of each Unit	Production Capacity
Pellet Plant	2	0.6 MTPA	1.2 MTPA
Cold Rolling Mill Unit	1	0.35 MTPA	0.35 MTPA
Continuous Galvanising Line	1	0.30 MTPA	0.30 MTPA
Corrugation Unit	1	0.30 MTPA	0.30 MTPA
Producer Gas Plant	1	480 TPD ($75,000\ Nm^3$/hour)	480 TPD ($75,000\ Nm^3$/hour)
Cement Grinding Unit	1	1.20 MTPA	1.20 MTPA

4.0 The total land required for the project is 445.15 ha. No forestland involved. The entire land has been acquired for the project. No river passes through the project area. It has been reported that no 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 and reported to lies between Latitude 23°41'37.04"N and Longitude 87°7'13.55"E at an elevation of 106.68 m AMSL. The water level in existing open wells range from 2.1 m to 16.5 m and 6.7 m to 9.0 m below ground level in pre and post-monsoon respectively.

6.0 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported 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 through the study and reported presence of no schedule-I fauna in the study area.

7.0 The major raw materials, which will be handled, consist of Concentrate Iron Ore, Bentonite, Limestone and Coal for the Pellet Plant and Clinker, Gypsum, Fly Ash & Slag for the

Cement Grinding Unit. Raw materials will be received at plant site by rail/road. The annual requirement of raw materials, which will be required for the proposed project, is presented below:

Raw Materials	Annual Requirement (in MT)	Source
A) Pellet Plant (1.2 MTPA)		
Iron Ore Fines	12,60,000	Barbil, Orissa
Coal Fines	12,000	Local Market
Bentonite	6,000	Kauch, Orissa
Coke	1,800	Local Market
Limestone	7,200	Birmitrapur, Orissa
B) Cement Grinding Unit (1.2 MTPA)		
i) Portland Pozzolana Cement		
Clinker	3,90,000	Satna, Meghalaya (Star Cement), Madhya Pradesh (JP Cement, Prism Cement, Orient Cement)
Gypsum	18,000	Bikaner/ Nagaur region, Rajasthan and Tata Chemicals, Paradeep (IFCO & PPL), Haldia
Fly ash	1,92,000	Power Plant of DVC, Andal
ii) Portland Slag Cement		
Clinker	2,52,000	Satna, Meghalaya (Star Cement), Madhya Pradesh (JP Cement, Prism Cement, Orient Cement)
Gypsum	18,000	Bikaner/ Nagaur region, Rajasthan and Tata Chemicals, Paradeep (IFCO & PPL), Haldia
Slag (15% Moisture)	3,90,000	In-house & Durgapur Steel Plant, Neo Metallic, Durgapur, Tata Steel, Jamshedpur, Tata Metallic, Kharagpur and local steel plants

8.0 Solid waste generation and its disposal from the different units are given below:

Sl. No.	Type	Quantity in TPA	Utilization
1.	Coal ash from Producer Gas Plant	43,200	To be used for Brick making/ PPC Cement manufacturing/ internal road making etc.
2.	Tar from Producer Gas Plant	10,800	To be stored in drums & will be sold to the vender registered with WBPCB.

9.0 The targeted production capacity of the proposed Pellet Plant is 1.2 million TPA. The iron ore for the plant would be procured from Barbil, Orissa. The iron ore transportation will be done through Rail/Road.

10.0 The water requirement of the project is estimated as 520 m^3 /day, which will be sourced from Ajay River.

11.0 The power requirement of the project is estimated as 87 MW, which will be sourced from Captive Power Plant.

12.0 Baseline Environmental Studies were conducted during summer season i.e., from 1st March, 2014 to 31st May, 2014. Ambient air quality monitoring has been carried out at 8 locations during 1st March, 2014 to 31st May, 2014 and the data submitted indicated: PM_{10} (50 µg/m^3 to 109 µg/m^3), $PM_{2.5}$ (17 to 48 µg/m^3), SO2 (4 to 18 µg/m^3) and NOx (8 to 29 µg/m^3). The results of the modelling study indicates that the maximum increase of GLC for the proposed project is 1.8 µg/m^3 with respect to the PM_{10} and 3.45 µg/m^3 with respect to the NOx.

13.0 Ground water quality has been monitored in 9 locations in the study area and analysed. pH: 6.5 to 7.5; Total Hardness: 302 to 416 mg/l; Chlorides: 107 to 164 mg/l; and Fluoride: 0.4 to 0.8 mg/l. Heavy metals are within the limits.

14.0 Surface water samples were analysed from 10 locations, eight (8) locations for Pond water samples, one (1) location at Damodar River, one (1) location at Ajay River. For pond water: pH:6.8 to 7.4; DO:5.2 to 6.1mg/l; and BOD:4 to 9 mg/l. For River Damodar water: pH:7.5; DO: 6.4mg/l; and BOD:3 mg/l. For Ajay River water: pH:7.7; DO:6.5mg/l; and BOD:4 mg/l.

15.0 The equivalent Noise levels are in the range of 55.6 - 68.8 dB(A) for day time and 47.6 - 60.4 dB(A) for nighttime.

16.0 As per 2011 census, the total population in the 10 km radius area is 4,32,229.No R&R is involved in the project.

17.0 It has been reported that a total of 43,200 TPA of Coal ash from Producer Gas Plant will be generated due to the project, which will be used for used for Brick making/ PPC Cement manufacturing/ internal road making etc. 10,800 TPA of Tar from Producer Gas Plant will be stored in drums & will be sold to the vender registered with WBPCB.

18.0 Out of the total plant area of 445.15 hectares (1100 acres), around 146.9 hectares (363 acres) i.e., 33% of the total plant area has been earmarked for green belt development.

19.0 It has been reported that the Consent to Operate from the West Bengal Pollution Control Board is valid up to 31-07-2018.

20.0 The Public Hearing was conducted on 14th August, 2015 at Panchayat Samity Meeting Hall, P.S. Jamuria, District Burdwanin West Bengal. An amount of 36.75 Crores (2.5% of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues.

21.0 The capital cost of the project is Rs. 1469.54 Crores and the capital cost for environmental protection measures is proposed as Rs. 73 Crores. The annual recurring cost towards the

environmental protection measures is proposed as Rs. 8.5 Crores. The detailed CSR plan has been provided in the EMP. The employment generation from the proposed expansion project is 469 persons.

22.0 Greenbelt will be developed in 146.9 Ha which is about 33% of the total acquired area. A 20 m wide greenbelt 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 1500 trees per hectare. Total no. of 2,20,350 saplings will be planted.

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 After detailed deliberations the committee observed the following:

i. PP has changed the configuration of the plant without prior approval of the ministry. This PP has clarified that their EC is still valid and they have already applied for the amendment.

ii. The EIA prepared for the expansion project does not include these changes in the configurations. Hence the base status of the status is not clear;

iii. BLD is of more than 3 year old

iv. ToR numbers 28, 34, 37(i to xi), 42, 46, 47, 49, 61 were not complied

v. Structure of the EIA/EMP is not as per the generic structure envisaged EIA Notification and the contents are generic and not project specific.

24.0 Therefore, the revised EIA/EMP to be submitted after validating the BLD with fresh data for one month to be collected henceforth and incorporating reply to all aforesaid observations.

24.16. Expansion from 2 X 100 TPD DRI Plants to 1 X 300 TPD and 3X 100 TPD with 18 MW CPP for M/s Shivam Iron & Steel Company Ltd., at BandiDigdhu, P.O Chandwara, District JumriTelaiya, Jharkhand. [Proposal No IA/JH/IND/69883/2017; File No. IA-J-11011/526/2017-IA.II (I)] - Terms of Reference Regarding.

1.0 M/s Shivam Iron & Steel Company Limited has made online application vide proposal no. **IA/JH/IND/69883/2017** dated **26th September 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 Shivam Iron & Steel Company Limited is operating 2x100 TPD DRI Kilns and producing 64,000 TPA Sponge Iron with NOC from the State Pollution Control Board since 2005 and did not attract the provisions of EIA Notification since the capital cost of the project 14.92 Crs.

3.0 Now, it is proposed to install additional 1x100 TPD & 1x300 TPD DRI kilns; 12 MW power plant based on WHRB; and 16 MW based on AFBC.

4.0 M/s Shivam Iron & Steel Company Ltd. Is located at Bandi Digdhu, PO: Chandwara, Jhumritelaiya, Koderma in the state of Jharkhand, at Latitude 24º 24' 49.55'' N and longitude 85º 28' 59.87'' E with 387 m AMSL. Land in possession is 22.837 Ac. (9.24 ha) on which existing two sponge Iron plants are operating and expansion is proposed in the existing plant premises.

5.0 The capital cost of the proposed expansion is 190 Cores. The total manpower requirement for plant operation on completion of the proposed expansion will be around 300 including 200 employees of the existing unit. Besides this some contractual workers are to be employed to manage canteen, security and housekeeping during construction as well as operation phase.

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 The estimated gross annual quantity of major raw materials to be handled and their mode of receipt are tabulated in Table below:

Sl	Materials	Gross quantity in TPA	Source	Mode of Transport
1	Boiler grade Coal	30,000	Eastern Coal Field Ltd	Rail / Road
2	DRI grade Coal	2,70,000	Eastern Coal Field Ltd	Rail / Road
3	DRI grade Iron Ore	3,10,000	Barbil & Banspani	Rail / Road
4	Dolomite/Lime stone	**8,000**	Biramitrapur	Rail / Road

8.0 Power requirement for the project is about 4MW and captive generation is 18 Mw, so balance power is to be sold to Jharkhand state power grid.

9.0 Make up water requirement for the project is 590 m^3/day. DRI kilns require minimum water, but AFBC will require more water for condensate cooling. Waste water from DRI kilns will be reused after cooling. Waste water from AFBC will be settled, treated and recycled to process. There will be zero waste water discharge outside plant boundary.

10.0 Dolchar produced as waste material from DRI kilns will be burnt in AFBC to generate power for the plant. Fly ash from AFBC will be supplied free of cost to brick manufacturing plants. Bottom ash can be given to cement plants or will be used as land fill material. The Solid wastes will be treated as by products and these will be fully utilized.

11.0 To control dust emissions from DRI kilns and AFBC ESPs with ID fan and high stack will be used. On line monitoring of stack emission will be ensured. DG sets will have stack extended above the roof as per guide line of CPCB.

12.0 The committee observed that the pollution (thick iron ore dust and fumes from chimney) are observed form the google maps presented by project proponent.

12.0 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 <u>Annexure I read with additional ToRs at Annexure-2.</u>**

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

iv. Certificate compliance of CTO from the Regional office of MOEFCC shall be submitted along with EIA/EMP (as pollution from the existing plant is noticed by the committee)

v. Comprehensive EIA/EMP covering the existing plant and retrofitting to the existing plant.

vi. A dedicated environmental cell with qualified personnel shall be operationalized and details shall be furnished in the EIA/EMP.

vii. Details on evacuation of the extra power generation

24.17. Proposed Steel Plant [800 TPD Pellet Plant; 600 TPD DRI; 1000 TPD Induction Furnace; 17 MW Power Plant (12 MW WHRB and 5 MW FBC)] by M/s Genext Steels Private Limited at Village Bagodara Tehsil Baula District Ahmedabad State Gujarat- [Proposal No IA/GJ/IND/70023/2017; File No. IA-J-11011/501/2017-IA.II(I)] – Terms of Reference Regarding.

1.0 M/s Genext Steels Private Limited has made online application vide proposal no. **IA/GJ/IND/70023/2017** dated **30th September 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 Genext Steels Private Limited has proposed to establish a Greenfield mini integrated steel project comprising of Pellet plant (800 TPD), DRI (600 TPD), Induction Furnace (1000 TPD), Rolling Mill (1000 TPD), Power Generation – 17 MW (12 MW through Waste Heat Recovery Boiler (WHRB) and 5 MW through Fluidized bed combustion (FBC) Boiler) in Village: Bagodara, Tehsil: Baula, District: Ahmedabad, State: Gujarat.

3.0 The manufacturing technology inter alia include manufacturing of pellets through rotary grate kilns; manufacturing of Sponge Iron through Rotary kilns; manufacturing of MS Billets through IF along with concast; manufacturing of Structural Steel TMT bars & Rolled products through Rolling Mill; power generation through WHRB & FBC Boiler.

4.0 The proposed unit will be located inSurvey Nos. 661,662,664,665,1822 & 1823, Village: Bagodara, Tehsil: Baula, District: Ahmedabad, State: Gujarat.

5.0 Total land envisaged for the proposed project is 37.5 acres. Of the total area, 12.0 acre (33%) of land will be used for greenbelt development. No Forest land is involved.Agreements have been entered for total 37.5 acres of land.

6.0 There are no Reserve Forests, National Parks, Wild life Sanctuaries within 10 Km. radius of the project site. Nalsarovar Bird Sanctuary is at a distance of 12 Kms. from the proposed project site. However ESZ of Nalsarovar Bird Sanctuary is at a distance of 1.9 Kms. from the proposed project site. The proposed project site does not fall in the ESZ of Nalsarovar Bird Sanctuary.

7.0 Total project cost for proposed project is approx. **Rs. 261 Crores**. Proposed employment generation from the proposed project will be **500 nos.** direct employment and **1000 nos.** indirect employment.

8.0 The targeted production capacity of the total plant is 0.33 million TPA. The ore for the plant would be procured from Rajasthan, Orissa, Chhattisgarh and Karnataka. The ore transportation will be done through by road (through covered trucks). The proposed capacity for different products for new site area as below:

S.No.	Unit		Plant configuration	Production capacity
1.	Pellet (I/o Pellets)		4 X 200 TPD	800 TPD
2.	DRI Kilns (Sponge Iron)		4 X150 TPD	600 TPD
3.	Induction Furnace with Concast (MS Billets)		4 X 25 MT	1000 TPD
4.	Rolling Mill (Structural Steel TMT bars & Rolled products)		2 X 500 TPD	1000 TPD
5.	Power Plant (Electricity)	WHRB	4 x3 MW	12 MW
		FBC	1 X 5MW	9 MW

9.0 The total power requirement for the proposed project will be 57 MW, this will be met partly from the captive power plant of 17 MW (i.e. 12 MW WHRB and 5 MW FBC based power plant), and the remaining 40 MW will be procured from the state grid i.e. Gujarat State Electricity Corporation Limited (GSECL).

10.0 Proposed raw materials and fuel requirement for project are Iron Ore, Dolomite, Scrap, Ferro Alloys, Bentonite, etc. Fuel Consumption will be mainly Coal & Furnace Oil. The details of raw material requirement and mode of transport id given below:

Raw Material	Quantity (TPD)	Source	Mode of Transport
For pellet plant			
Iron ore fines/Iron Oxide (Mill Scale)	832	Rajasthan Chattisgarh, Karnataka,Odissa	By road (through covered trucks)
Bentonite	48	Kutch (Gujarat)	By road (through covered trucks)
Imported Coal	128	South African from Kandla port (Gujarat)	By road (through covered trucks)
For DRI (Sponge Iron)			
Pellets	800	Internal	Through covered conveyors
Imported Coal	570	South African from Kandla port (Gujarat)	By road (through covered trucks)
Dolomite	48	Local/Gujarat	By road (through covered trucks)
For Steel Melting Shop (MS Billets)			
Sponge Iron	600	Internal	Through covered conveyors
M.S.Scrap	562	Bhavnagar/ Alang Imported	By road (through covered trucks)
Ferro alloys	12.5	Local /Gujarat	By road (through covered trucks)
For Rolling Mill (Structural Steel, TMT Bars & Rolled products)			
Billets	1000	Internal	Through Conveyors
Imported Coal	155	South African from Kandla port (Gujarat)	By road (through covered trucks)
For FBC Boiler [Power Generation 5 MW]			
Char/Dolochar	100	Internal/local	through covered conveyors
Imported Coal	30	South African from Kandla port (Gujarat)	By road (through covered trucks)

11.0 Water consumption for the proposed project will be 1680 KLD and will be sourced from Ground Water. Water drawl permission will be obtained from the concerned Authority.

12.0 Domestic waste water will be treated Septic tank followed by sub-surface dispersion trench and there will be no wastewater generation from the pellet, DRI, SMS & Rolling Mill processes, as closed-circuit cooling system will be provided. Boiler blowdown & DM plant regeneration wastewater will be treated in Neutralization tanks and will be mixed with CT Blowdown in a Central Monitoring Basin (CMB). The treated effluent from CMB will be reused for dust suppression, ash conditioning and for greenbelt development.

13.0 The proponent has mentioned that there is no court case against the proposed site and project.

14.0 The committee observed following:

i. The proposed project site is land locked, surrounded on three sides by agricultural lands as seen by the google maps presented by PP

ii. On the fourth side, the plant is bounded by a seasonal river

iii. Plant site is almost touching (140 m distance) from the main national highway connecting Ahmedabad to Rajkot and being only about 20 to 30 Km from the busy Taluka headquarters of Bawla. This is already very busy and vital highway as it connects mainland Gujrat to Saurashtra.

iv. The raw material required for the plant is planned from the Rajasthan about 500 Km from the plant and coal is planned from Kandla Port which is at 400 Km from the plant.

v. The proposed project would likely to further increase the traffic load by about 500 trucks per day. Considering 12 hours of permitted truck transportation on this road, it would mean an additional truck plying on the road in every 1.5 minutes.

vi. The proposed project demands drawl of ground water @ 1700 KLD.

15.0 The committee was of the opinion that the suitability of the proposed site from the environmental perspective needs to be intensively examined before taking the decision on ToR proposal. Therefore, the committee asked the project proponent the following;

i. Explore alternative sites with environmental strengths and weaknesses;

ii. Detailed traffic analysis based on the data collected on different time periods of the day;

iii. Details of competitive users for withdrawal of ground water within 5 Km;

iv. Analysis of the ground water quality and proposal for achieving ZLD;

v. Likely impact on the surrounding agricultural land

16.0 During the deliberations, likely inconveniences to the local people was discussed. The project proponent proposed that they will conduct the pre-ToR public hearing through the SPCB to ascertain site suitability and opinion of people likely to be affected by the proposed project site.

17.0 The committee agreed to this proposal of the PP and decided that the suggested pre-ToR public hearing to be carried out through SPCB under the chairmanship of local revenue authority.

24.18. Expansion of Cement Plant (Clinker 425000 TPA and Cement 1952250 TPA) of M/s J.K. Cement Works, Gotan, (Unit of JK Cement Ltd.) at P.O Gotan, Tehsil- Merta, District-

Nagaur, Rajasthan. [Proposal No IA/RJ/IND/69405/2017; File No. J- 11011/63/2008-IA-II(I)] – **Terms of Reference**.

1.0 M/s J.K. Cement Works, Gotan, (Unit of JK Cement Ltd.) has made online application vide proposal no. IA/RJ/IND/69405/2017 dated **26th September 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) Cement Plants under category 'A' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

2.0 M/s J K Cement Works, Gotan is operating Cement Plant at Gotan, Tehsil-Merta, District -Nagaur Rajasthan with capacity of 471900 TPA Cement and 262500 TPA Clinker. Environmental Clearance for the existing plant was obtained vide letter no. F.No.J-11011/63/2008-IA(II) Dated 18.08.2008.

3.0 Now, it is proposed for expansion cement plant by installation of new production line of 1425000 TPA clinker and cement grinding capacity of 1952250 TPA. After expansion, the production of total cement will be 2424150 TPA and Clinker 1687500 TPA.

4.0 The project site is covered in the Survey of India toposheet No. 45 F/10 near village Gotan, Tehsil-Merta, District–Nagaur in the state of Rajasthan.

5.0 Total existing plant and colony is located in 51.82 hectare, out of which 18.5 ha has been developed as green belt (33 % of total plant area). Additional land required for the proposed expansion is 17.17 ha. Greenbelt will be developed in 33% of the total area.

6.0 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported 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. 1250 Crore rupees. No additional manpower is required for the proposed expansion.

8.0 The total power requirement after expansion will be 21200 KW including existing powr requirement of 5200 KW. The additional power requirement will be met from the purchasing from AVVNL & Open excess power (IEX).

9.0 Total water requirement at project will be about 1166 KLD for drinking & domestic use, dust suppression and plantation. Water will be sourced from bore wells within plant premises. A permission for the same is already obtained vide letter no. 21-4/247/WR/CGWA/2008-1792 Dated 30th Nov. 2015.

10.0 Raw material required along with estimated quantity, likely source, marketing area of final products/s, Mode of transport of raw Material and Finished Product is given below:

Sl. No	Name of Raw Material				Source	Mode of Transportation
		Existing	Proposed	Total		
1	Limestone	1200	5592	6792	Own Limestone mines and local Vendors	By road 13 KM from mines

2	Clay/ Feldspar	300	1398	1698	Existing/ local vendors	Rail and Road
3	Laterite/Red ochre/Fluorspar	100	447.36	547.36	Existing/ local vendors	Rail and Road
4	Gypsum	100	447.36	547.36	Gypsum will be fulfilled from our existing selenite mines at Thob and purchased from our existing vendors	Rail and Road
5	Grinding add	0.3	1.5	1.8	Existing/ local vendors	Rail and Road
6	Fly ash	550	1300	1850		
7	If Petcoke	140	510	650		
8	If Coal	260	1110	1370		
9	If LDO/FO	15	60	75		

11.0 No solid waste generation from the cement plant. However, material collected by the dust collectors (Bag Filters) is being /will automatically be recycled in the process. STP treated water is used for plantation and sludge is utilized as manure for green belt development. There will no discharge outside the project premises.

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 JM EnviroTech

14.0 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 <u>Annexure I read with additional ToRs at Annexure-2.</u>**

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 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. Particulate Emissions from the chimneys shall be below 25 mg/Nm^3.

vi. Exploration of use of alternative fuels in cement kiln shall be submitted in the EIA/EMP.

vii. Water stress analysis shall be carried out in view of increased future competent users in the study area.

viii. PP shall use air cool condenser in place of water cooled condenser for conserving water.

ix. Extensive rain water harvesting and ground water recharge shall be adapted.

x. Break up of material transport by road and rail shall be furnished.

xi. Enterprise social commitment shall be worked out based on social need assessment and feedback during public consultation.

xii. Efforts shall be made to reduce power consumption to less than 67 kwh / ton of cement

xiii. The PP confirmed to appoint local people and also train the unskilled local people in various trades during construction of the plant.

xiv. PP shall maximize the use of fly ash in cement and also attempt to use slag from metallurgical industries.

24.19. Expansion of Cement Plant Capacity (2600 TPD to 3 MTPA) Clinkerisation & Captive Power Plant (from 10 MW to 40 MW) of M/s Meghalaya Cements Limited at Village Thangskai, P.O Lumshnong, DistJaintia Hills, Meghalaya. - [Proposal No IA/ML/IND/67977/2017; File No. IA-J-11011/496/2017-IA-II(I)] – Terms of Reference Regarding.

1.0 M/s Meghalaya Cements Limited has made online application vide proposal no. IA/ML/IND/67977/2017 dated **26th September 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) Cement Plants under category 'A' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

2.0 M/s Meghalaya Cements Limited is operating integrated cement plant located in Meghalaya on NH 44, at Village Thangskai, District East Jaintia Hills with clinkerization capacity of 2600 tons per day and 3600 tons of cement per day along with its grinding unit located at Amingaon, Guwahati, Assam. It also has its own 10 MW Captive Power Plant to ensure 100% uninterrupted power availability.

3.0 The company started its production in 2006 with capacity of 900 tons per day and later expanded to 2600 tons per day of clinkerisation and 3600 tons per day of cement with its new grinding unit. Environmental Clearance for the existing plant was obtained from the State Environmental Impact Assessment Authority, Meghalaya. The plant is based on nearby limestone deposits in the villages of Moing, Kheliegari and New Kheliejari and proposed in South Khlehjeri in Jaintia hills district of Meghalaya.

4.0 Now, it is proposed to expand the Cement Plant capacity (From 2600 TPD to 3 MTPA) Clinkerisation & Captive Power Plant (From 10 MW to 40 MW) at Village: Thangskai, P.O:

Lumshnong, Dist: Jaintia Hills, State: Meghalaya. The details of existing, proposed and total production after expansion is as given below:

Sl. No	Product	Capacity in TPA		
		Existing	Proposed	Total
1	Clinker	858,000	2,142,000	3000000
2	Cement	168,615 (OPC) 155,242 (PPC)	1047174 (OPC) 1621681 (PPC)	1215789 (OPC) 1776923(PPC)
3	Captive Power Plant (MW)	10 MW	30 MW	40 MW
4	DG sets (KVA)	12000 kVA	After Installation of 30MW CPP with Existing Grid power. No additional DG will be required.	

5.0 The project area is bounded between latitudes of N 25°12' 05" – N 25°13' 12" and longitudes of E 92°22' 42" – E 92°23' 25" and site is covered in the Survey of India toposheet 83C/SW(Restricted).

6.0 Total project area is 59.29 ha which is already under the possession of M/s Meghalaya Cements Ltd., hence, no additional land is required for the proposed expansion project. Land use of the existing land area is already industrial. Topography of the land is almost flat with minor undulation. The elevation of plant area is 754m RL. Plant area break up is given below:

Particulars	Existing Area (Ha)	Area after expansion (Ha)	Percentage (%)
Cement Plant & Raw Material Storage	15.84	22.36	38%
Captive Power Plant	4.59	6.01	10%
Colony	2.21	2.21	4%
Greenbelt / Plantation	4	19.83	33%
Roads	5.32	5.32	9%
Open Area	27.33	3.56	6%
Total	59.29	59.29	

7.0 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. The proposed plant-site area falls in Seismic Zone V as per IS 1893:2002(Part-1), which is a highly sensitive seismic zone.

8.0 Total project cost is approx. 1276.8 Crores rupees. Existing manpower: 232; Additional manpower after expansion: 100 (40 on MCL payrole and 60 may be on contract); and Total Manpower: 332.

9.0 The existing power demand of the plant is about 15 MVA and is fed from MESEB at 132 KV. Captive power plant of 10 MVA is available to meet total plant requirement. Existing 6 Nos 1.5 MVA DG sets have been considered to supply power to the plant in case of power outage from the Grid. After expansion the CPP is proposed to expand to 40 MW.

10.0 Existing Water requirement: 1292.9 KLD Total Water requirement after expansion: 2240 KLD Source: River Chynryntong-Umparti near Thangskai Village.

11.0 Raw material required along with estimated quantity, likely source, marketing area of final products/s, Mode of transport of raw Material and Finished Product is given below:

Sl. No	Name of Raw Material	Quantity in TPA			Source	Mode of Transportation
		Existing	Proposed	Total		
Cement Plant						
1	Limestone	1065086	2662696	3727782	Local Mines (5 km)	Road
2	Clay	183834.75	459588	643422.75	Existing/ local vendors (20Km)	Road
3	Gypsum	3553.38	80066 (@3%)	83619.38	Purchase From Bhutan	Road
4	1)Coal 2)High Ash Coal	1)29899 2)160008.37	308880 (NCV @ 5000 kcal/kg fuel)	498787.37	Coal India Ltd. (Dibrugarh) (800 – 850 Km) & Meghalaya local coal (40-50 km)	Road
Captive Power Plant						
1	Coal	15500	47000	62500	Coal India Ltd. (Dibrugarh) (800 – 850 Km)	Road
2	Lignite (High Ash Coal)	31000	90000	121000	Meghalaya Coal (40-50 km)	Road
DG Set						
1	Diesel	UP to 500 KL	After Installation of 30MW CPP with Existing Grid power. No additional DG will be required.		Indian Oil (20 KM)	Road

12.0 Dust collected from various APCs is being totally recycled into the process. Fly ash generated from CPP is being utilized in manufacturing of PPC. Sludge generated from STP will be used as manure in greenbelt development. Cooling tower blow down is being treated in neutralization pit and is being utilized in dust suppression purposes.

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

14.0 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 <u>Annexure I read with additional ToRs at Annexure-2.</u>**

xv. Public Hearing to be conducted by the concerned State Pollution Control Board.

xvi. 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.

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

xviii. Certificate compliance of earlier EC from the Regional office of MoEFCC shall be submitted along with EIA/EMP

xix. Greenbelt shall be completed in the 33% of the plant area within a year and shall submit status in the EIA report

xx. The provision for WHRB for the kiln and cooler shall be included and details shall be provided in the EIA report.

xxi. Traffic stress study of all raw material transportation routes shall be carried out

xxii. Particulate emissions shall be less than 25 mg/Nm^3

xxiii. Efforts shall be made to bring down the specific power consumption less than 70 kWh/ton of PPC.

xxiv. Certification from the local DFO, regarding presence of elephant in the study area

24.20. Existing Pig Iron Plant (capacity- 39,600 TPA) and Hard Coke Plant (capacity- 33,000 TPA) at Village Mohanpur Tehsil & District: Giridih, Jharkhand by M/s Swati Sponge and Iron Private Limited [Online proposal No IA/JH/IND/6651/2010; MoEF&CC File No. J-11011/866/2007-IA.II(I)] – Amendment in Environmental Clearance regarding EC condition.

1.0 M/s Swati Sponge and Iron Private Limited has made online application vide proposal no. IA/JH/IND/6651/2010 dated **1st October 2017** seeking amendment in Environmental Clearance condition.

2.0 This is an existing plant having facilities for pig iron manufacturing and a non-operational Hard Coke plant established in 2010 at village Mohanpur, District Giridih (Jharkhand). Plant was established after due environmental clearance vide letter no EC file No. J-11011/866/2007/IA-II(I) dated 18/06/2010. JSPCB has accorded consent to operate on regular basis.

3.0 It was informed that the hard coke unit is shut down for long due to techno-economic reason and only pig iron unit is under operation at present.

4.0 During recent consent to operate, JSPCB asked the plant authority to establish on-line ambient air quality monitoring station as per specific condition of EC issued to plant or get the condition waved off from MOEF&CC.

5.0 The Plant is a very small unit with a capital budget of 14.0 Cr with mandate to spend Rs 11.0 Cr on environmental management. The commercial cost of on-line AAQ station equipment and maintenance start from 75 lakhs on wards. Currently plant is monitoring AAQ via off-line monitoring through JSPCB approved third party monitoring and submitting regularly to JSPCB. The unit has provided employment to about 90 persons in various categories for production.

6.0 Therefore, it was requested to permit submission of Ambient Air Quality (AAQ) monitoring data generated through off-line mode instead of on-line mode as per EC specific condition A (i).

7.0 After detailed deliberations, the Committee did not accept the request of the PP to waive of the condition of installation of CAAQMS as the same is mandatory as per the CPCB directions under the provisions of the Air (Pollution and Control of Pollution) Act 1981.

24.21. 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, Tehasil: 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

24.22. Expansion of DRI Plant, Power Plant Steel Melting shop and Rolling Mill at Sy. No. 229, 288, 289, Village Halakundi, Taluk and District Bellary, Karnataka by M/s VRKP Sponge and Power Plant LLP. [Proposal No IA/KA/IND/70242/2017; File No. IA-J-11011/527/2017-IA.II(I)] - Terms of Reference for expansion.

1.0 **M/s VRKP Sponge and Power Plant LLP** has made online application vide proposal no. **IA/KA/IND/70242/2017** dated **11th October 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 VRKP Sponge and Power plant LLP is an existing steel plant located at Sy No. 229, 288, 289, Halkundi village, Bellary taluk and district, Karnataka. Existing plant has obtained Environmental Clearance vide Letter No. SEIAA:31:IND:2007, dated 1st January 2009. Consent to Operate was accorded by Karnataka state pollution Control Board vide consent order No. AWH-301748 validity of CFO is up to 30/06/2021.

3.0 Now, M/s VRKP Sponge and Power Plant LLP proposes to the expansion of existing manufacturing unit for TMT Bars. It is proposed to set up the plant for sponge iron and TMT bars

based on secondary metallurgical technology. The details of existing and proposed expansion are given below:

No	Details	Existing Production	Proposed Production	Total Production
1	Sponge Iron Plant	100x3 TPD/1,00,000 TPA	350x3 TPD/3,50,000 TPA	4,50,000 MTPA
2	Steel Melting Shop	12 MT x 1/47,000 MTPA	40 MT x 3/ 4,95,000 MTPA	5,42,000 MTPA
3	Rolling Mill	72,000 MTPA	3,30,000 MTPA	4,02,000 MTPA
4	Power Plant	10 MW	24 MW	34 MW

4.0 The proposed project site is located at Sy No. 229, 288 and 289, Halkundi village, Bellary taluk and district, Karnataka. The latitude and longitude of the project site are 15° 04'0.09" N and 76°52'9.90"E respectively. Bellary is at a distance of 9.4 km from project site in northeast direction.

5.0 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.

6.0 Total project cost is approx. 570 crores. Proposed employment generation from proposed project will be 831 including skilled and unskilled labour.

7.0 The targeted production capacity of the TMT Bars is 4.8 lakhs TPA. The raw materials for the plant would be procured from local and international markets depending on the quality. The ore transportation will be done through Bellary road which connects to NH-63.

8.0 The electricity load of 89.5 MW will be provided by cumulative effort of captive power plant (34 MW) and the remaining power will be provided by state electricity board. Company has also proposed to install 2 x 1000 and 1 x 1250 KVA DG Sets.

9.0 Proposed raw material details are flourished in the table below:

Name	**Existing Details**		**Proposed Details**		**Total (MT/month)**
	Quantity (MT/month)	**Storage**	**Quantity (MT/month)**	**Storage**	
Pallet/Iron Ore	15000/20000	Open	45000/60000	Open	60000/80000
South African coal	10000	Shed	30000	Shed	40000
Indonesian Coal	2000	Shed	6000	Shed	8000
Dolomite/Limeston e	300/1658	Shed	900/4800	Shed	1200/6458
Sponge finished goods	9000	Storage Bins	27000	Storage Bins	34000
Raw material for SMS	10000	Shed	45000	Shed	55000
Billets	10000	Shed	30000	Shed	40000

10.0 Water Consumption for the proposed project will be 3016 KLD and No waste water will be generated as the company will follow zero waste water discharge policy. The waste water will

be treated and will be used again in process operation, ash settling and for green belt development. Domestic waste water will be sent to septic tank followed by soak pit.

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

12.0 The project proponent has made detailed presentation along with EIA consultant M/s Pragathi Labs and Consultants Pvt. Ltd. (S.L. No. 224 in QCI list of Accredited consultants, Certificate No. NABET/EIA/1518/RA 018).

13.0 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 <u>Annexure I read with additional ToRs at Annexure-2.</u>**

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 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. Action plan for conservation of water through rain water harvesting and ground recharging shall be furnished.

vi. Details of Land use classification and the corresponding soil quality analysis and interpretation shall be provided.

vii. Traffic analysis for the study area shall be carried out

viii. Details of solid waste management plan shall be provided

ix. Management and disposal of hazardous waste as per the Hazardous and Other Waste Management Rules, 2016 shall be addressed in the EIA/EMP

24.23. Integrated Limestone Mine Area 251.9 Ha, Clinkerization Plant (3X3.3 MTPA), Cement Plant (3 MTPA), Captive Power Plant (99 MW) including coal based Thermal Power Plant & Waste Heat Recovery System), Berthing Jetty of length 820mx28m (Capacity 15 MTPA) and conveyor corridor (10.2 Km.) of **M/s Lakhpat Cement Works** at Villages Koriyani, Kapurasi, Maldo, Mudhvay, Taluka Lakhpat, District Kutch, Gujarat - [Proposal No. IA/GJ/IND/69706/2017; File No. IA-J-11011/494/2017-IA-II(I)] – Terms of Reference for Cement Plant component only in the Integrated project.

1.0 M/s Lakhpat Cement Works has made online application vide proposal no. **IA/GJ/IND/69706/2017** dated **26th September 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 proposal involved multi sectoral components such as activities listed in 3(b) Cement Plants; 1(a) Mining of Minerals; 1(d) Thermal Power Plants; 7(e) Berthing Jetty with anchorage under category 'A' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

2.0 M/s Adani Cementation Limited proposed to install a new manufacturing unit for Cement, Clinker, captive power generation and their transportation through a berthing jetty. It is proposed to setup the plant for 3 MTPA Cement; 10 MTPA clinkerization; 99MW Captive Power; and of 15.0MMTPA; Berthing Jetty in phase wise manner based on VRM/Ball Mill (Cement) and Coal/WHRB (Power) technology. The details of proposed plant along with capacities are given below:

Sl. No	Plant / Activity	Area	Commodity	Capacity
1	Limestone Mine	251.9 Ha	Limestone	12 MTPA
2	Captive Jetty (820m x 28m)	4.05 Ha (Backup Storage Area)	Clinker	8 MTPA
			Cement	3 MTPA
			Lime Stone	1 MTPA
			Coal / petcoke	3 MTPA
3	Cement Plant + Conveyor Corridor	198.32 Ha	Clinker	10 MTPA
			Cement	3 MTPA
4	Captive Power Plant (TPP & WHRB)	Within Cement Plant	Power	99 MW

3.0 The proposed project will be located in Koriyani, Kapurashi, Maldo & Mudhvay, Taluka: Lakhpat, District: Kutch, State: Gujarat. The terrain of the proposed plant land is generally flat with minimum undulations. The project site is covered in Survey of India toposheet No. 41A/10. The details of plant location along with geographical coordinates are given below:

Sl. No	Plant / Activity	Location	Latitude	Longitude
1	Limestone Mine	Village Mudhvay, Taluka: Lakhpat, District:Kutch, State: Gujarat.	23º 43' 59.93" N	68º 41' 51.66" E
			23º 44' 04.90" N	68º 42' 08.92" E
			23º 42' 52.44" N	68º 42' 40.94" E
			23º 42' 43.64" N	68º 41' 53.25" E
2	Cement Plant	Village Koriyani, Taluka: Lakhpat, District:Kutch, State: Gujarat	23º 43' 42.76" N	68º 40' 26.67" E
			23º 43' 54.26" N	68º 39' 46.54" E
			23º 44' 35.90" N	68º 39' 42.44" E
			23º 44' 45.52" N	68º 40' 11.01" E
			23º 44' 28.97" N	68º 40' 44.72" E
3	Conveyor Corridor	Villages Koriyani, Kapurashi, Maldo & Mudhvay, Taluka: Lakhpat,	23º 44' 05.63" N	68º 41' 33.34" E
			23º 44' 20.04" N	68º 38' 46.29" E
			23º 44' 15.09" N	68º 36' 56.19" E

		District:Kutch, State: Gujarat		
4	Berthing Jetty (Water front)	In Kori Creek with anchorage in Gulf of Kutch and	23º 44' 50.99" N	68º 34' 41.81" E
			23º 44' 36.93" N	68º 34' 50.69" E
	Backup storage area	Near Village near Kapurashi of Taluka: Lakhpat, District:Kutch, State: Gujarat	23º 44' 00.99" N	68º 36' 53.51" E
			23º 43' 53.51" N	68º 36' 51.63" E

4.0 The land area to be acquired for the proposed clinker / cement plant, conveyor corridor and backup area near jetty is 202.3352 Ha out of which 46.8008 ha is an agricultural land, 1.7235 ha is grazing land, 151.1545 ha is others (151.1545 Government Land) and 2.6564 ha forestland. The entire land is under acquisition for the project. Of the total area ~67 Ha (~33%) land will be used for green belt development. The breakup of land requirement for different activities area as give below:

Sl. No	Plant / Activity	Area in Ha
1	Limestone Mine	251.90
2	Backup storage near Jetty	4.05
3	Cement Plant	190.23
4	Conveyor Corridor	8.09
	Total	454.27

5.0 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core zone of the project. However, Narayan Sarovar Wildlife Sanctuary is located at about 4 km south of the project site (Buffer Zone). The area also does not report to form corridor for Schedule-I fauna.

6.0 Total project cost is approx. Rs. 5330 Crore Rupees (including mining). Proposed employment generation from proposed project will be 150 direct Employment and 450 indirect Employment during operation.

7.0 The targeted production capacity of the Clinker and Cement is 10 Million and 3 Million TPA respectively. The ore for the plant would be procured from (linkages Mudhvay Limestone Mine Block 'C' and GMDC Mine Block). The ore transportation will be done through Conveyor (Rail/Road/Conveyor/Slurry Pipeline). The details of material transportation along with source, distance and mode of transport is given below:

Sl. No	Material		Source	Distance in Km	Mode of Transport
1	Clinker		From Jetty to Plant	~ 8 Km	By conveyor
2	Fuel	Coal (imported)	From Jetty to Plant	~ 8 Km	By conveyor
		Lignite (Domestic)	GMDC Mine	~ 20 Km	By Road
3	Silica Sand		From Mundra to Plant	~ 210 Km	By Road
4	Gypsum	Imported	From Jetty to Plant	~ 8 Km	By conveyor

		Domestic	From Village Ler to Plant	~ 160 Km	By Road
5	Lime stone	High grade	From Mine to Plant	~ 2 Km	By conveyor
		Low grade	From GMDC Mine to Plant	~ 12 Km	By Road
6	Cement		From Plant to Jetty	~ 8 Km	By conveyor

9.0 The total power requirement will be 125 MVA, of which 99 MW will be met from the CPP and remaining from the GUVNL/Solar Power Plant.

10.0 Total water requirement is estimated as 9000 m^3/day will be sourced from Sea by desalination. A desalination and RO water plant shall be installed at about 4.7 km distance from plant on the way to jetty. From here, desalinated RO water shall be pumped to plant treated water tank. Waste water generation will be around 300 m^3/day. Domestic wastewater will be treated in STP and industrial waste water generated will be treated through Neutralization Tank and reused.

11.0 The proposed kiln system shall be designed with emphasis to minimize emissions to < 30 mg/Nm3 to the atmosphere. Modern technology burners, dosing systems (fuel and kiln feed), emissions monitoring and kiln control systems shall be considered to minimize gaseous emissions from combustion processes (e.g. NOx, CO, SO2) Integrated pollution measurement and monitoring shall consider gaseous effluents and dust emissions measurement to verify and ascertain the limits of pollution standard.

12.0 The proponent has mentioned that there is no court case against the proposed site or related activity.

13.0 The project proponent along with EIA Consultant M/s Greencindia Consulting Private Limited (NABET/EIA/1619/RA0058, Rev. 58 October 16, 2017) have made detailed presentation on the proposal.

14.0 After detailed deliberations, the committee observed the following:

- Multi sectoral components such as activities listed in 3(b) Cement Plants; 1(a) Mining of Minerals; 1(d) Thermal Power Plants; 7(e) Berthing Jetty etc.;
- Involvement of forest land in the proposed conveyor corridors;
- Proposed berthing jetty falls in the CRZ area;
- Desalination plant and deposition of the salt on the seabed over the period of time;
- The land required for depositing the sludge during the regular dredging operations;
- Presence of Narayansarovar Bird Sanctuary is at distance of 2.0 km from mine and 4.0 Km cement plant;
- Proposed coal based power plant units (25 MW) is very small;

- Impact of fugitive dust on the creek and marine ecosystem needs to be evaluated;
- Presence of international boarder at a distance of 24 km;
- Hydrology of the area needs to be studied in view of the ingress of the migrated population; and
- The location of the plant is in high seismic zone – V.

15.0 In view of above, the Committee is of the opinion to pay a site visit by constituting a sub-committee to ascertain the ground situation before considering the proposal for prescribing ToRs.

16.0 The Committee also adviced the PP to approach the Non-coal mining, Infrastructure –II and CRZ committees for prescribing respective sector specific ToRs.

24.24. Setting up of a greenfield Integrated Steel Plant of capacity 13.2 MTPA crude steel with 10 MTPA cement and 900 MW captive power plant near Paradeep, Jagatsinghpur district, Odisha by M/s JSW Steel Limited [Online Proposal No. IA/OR/IND/70478/2017; MoEFCC File No. IA-J-11011/524/2017-IA-II(I)] – Terms of Reference.

1.0 **M/s JSW Steel Limited** has made online application vide proposal no. **IA/OR/IND/70478/2017** dated **25th October 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 proposal involved multi sectoral components such as activities listed in 3(a) Metallurgical industries (ferrous & non-ferrous); 3(b) Cement Plants; 1(d) Thermal Power Plants under category 'A' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

2.0 M/s. JSW Steel Limited, Odisha Project proposed to install a new manufacturing unit for producing Steel, Pellet, Cement & Power. It is proposed to set up the plant as a Greenfield Integrated Steel Plant (ISP) of capacity 13.2 MTPA (Million Tonne Per Annum) Crude Steel with 10 MTPA cement and 900 Mega Watt (MW) Captive Power Plant (CPP) near Paradeep in Jagatsinghpur District, Odisha based on Blast Furnace (BF)-Basic Oxygen Furnace (BOF)-Caster route, followed by hot & cold rolling for production of flat & long products.

3.0 The proposed unit will be located on the north western bank of Jatadharmohan River Creek, District: Jagatsinghpur, State: Odisha. The site on the western bank of Jatadharmohan River Creek is about 12 km south of Paradeep Port. The geographical location of the project site lies within 20º11' to 20º13' North latitude and 86º30' to 86º35' East longitude.

4.0 The land area envisaged to be allocated for the proposed plant is 1416.40 Ha (3500 acres) out of which approx. 155.80 Ha (385 acres) is Private land and 1260.60 Ha (3115 acres) is Government land including Forest land. Of the total area 467.40 Ha (1155 acres) (33%) land will be used for green belt development.

5.0 Bargud Protected Forest (PF) and Athgarh PF are located within 15 Km from the proposed 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.

6.0 Total project cost is approx Rs. 55,000 Crore. Employment generation from proposed project as envisaged will be 12,000 direct employments and 45,000 indirect employments.

7.0 The targeted production capacity is 13.20 Million Tonne Per Annum (MTPA) Crude Steel, 10 MTPA Cement and 900 Mega Watt (MW) Power. The iron ore for the plant would be concentrate slurry obtained from Joda central pumping station via the slurry pipeline. The proposed capacities for different production units for new site area as below:

Sl. No.	Name of Unit	Facility		Production Capacity MTPA
1	Slurry dewatering system	Thickener, Filtration (pressure filter) with water recovery system		30.0
2	Coke oven & Byproduct Recovery Plant	8 x 62 ovens block, 6.25 m tall stamp charged, CDQ		6.00
3	Sinter plant	1 x 500 m sq.		6.00
4	Pellet plant	4 x 8.0 MTPA		32.00
5	Blast furnace	3 x 5,350 cum		13.50
6	DR Plant	Reductant- Coke oven gas		1.20
7	Steelmaking Shop (SMS)	SMS-1 3 x 350 t BOF 3 x 350 t LF 2 x 350 t RH	SMS-2 2 x 180 t BOF 2 x 180 t LF 1 X 180 t RH	13.49
8	Caster Shop	Slab Caster - 3 x 2 strand Billet Caster - 1 x 8 strand Billet/Bloom Caster - 1 x 6 strand		13.20
9	Flat Product Mills	Plate Mill - 1 x 1.5 MTPA Hot Strip Mill - 2 x 5.5 MTPA Tinplate Coil- 2 X 0.25 MTPA Silicon Steel – 2 X 0.25 MTPA Cold Rolling Mill - 2 x 2.3 MTPA - Pickling line tandem cold mill(PLTCM)-2x2.3 MTPA - Continuous Annealing Line (CAL) – 2x1.0 MTPA - Continuous Galvanizing Line CGL -4x0.5 MTPA - Colour coating Line CCL – 4x0.25 MTPA		9.15
10	Long Product Mill	Rebar mill - 1 x 1.2 MTPA Wire Rod Mill - 1 x 0.6 MTPA Medium Section Mill - 1.0 MTPA		2.80
11	Calcining Plant	6 x 600 TPD Lime Calcining Plant 1 x 600 TPD Dolo Calcining Plant		0.89 0.14
12	Cement Plant	Grinding and mixing of slag, clinker & fly ash		10.00
13	Captive Power Plant	Dual fired- By-product gas and coal 3 x 300 MW		900 MW

Sl. No.	Name of Unit	Facility	Production Capacity MTPA
14	Air Separation Plant	4 x 2,500 TPD	10,000 TPD
15	Tar processing plant	Distillation units for producing Carbon Black Oil, Anthracene Oil, Naphthalene, Wash Oil and Pitch	300,000 TPA
16	Benzol Refining Plant	Distillation units for producing BTX and other value added products	100,000 TPA

8.0 The electricity load of 1342 MW will be met by Captive Power Generation Units as well as the Grid power supply. DG sets of adequate capacities are proposed for the plant units as well as CPP auxiliaries to cater to the requirement of safe shutdown and safety of personnel during total black-out condition when power supplies to plant network from both the sources have failed.

9.0 Proposed raw material for project are coking coal, iron ore concentrate/ slurry/fines, lump ore, limestone, dolomite, clinker, gypsum and steam coal among others. While major raw materials like coking coal, limestone, etc would be imported, iron ore would be transported in Slurry Pipeline from mineral belts in Joda, Koira, Nayagarh & other regions of Odisha/Jharkhand. Lump iron ore would be transported nearby mineral states. Additives would be procured locally.

10.0 The total water required would be approximately 12,000 m3/hr out of which 10,200 m3/hr (53.8 MGD) drawn from Jobra barrage of Mahanadi river, for which around 87 Km pipeline would be laid down from Jobra barrage to the plant and balance 1,800 m3/hr would be recovered from iron ore slurry. Industrial wastewater will be treated at Central Effluent Treatment Plant (CETP) and reused as make-up water. Domestic waste water will be treated in Sewage Treatment Plant (STP).

11.0 The estimated generation of major solid wastes is tabulated below:

Sl	Solid wastes	Expected generation in MTPA	Management Scheme
1	BF Slag	4.45	Granulation in Slag granulation plant and used in cement manufacturing in captive cement plant. About 3% of the BF slag would be air cooled and used for construction sector
2	Steelmaking Slag	2.0	Recovery of metallics & non-metallics for in-plant use. Balance utilized as railway ballast, in construction aggregrate, after processing.
3	Flue Dusts	0.3	Reuse in Agglomeration
4	Mill Scales/ Sludge	0.15	Reuse in agglomeration
5	Chrome & other Sludge	0.0015	Transferred to authorized agency
6	Fly Ash	0.38	Used to produce cement in the captive cement plant.

12.0 Besides the above, there would be other solid wastes like clarifier sludges, ESP/ Bag Filter dust, refractory debris etc. generated from the proposed steel plant. While some of these can be recycled in the process, others would be disposed off in environmentally friendly manner.

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

14.0 After detailed deliberations, the committee observed the following:

i. The proposal involves multi sectoral components such as activities listed in 3(a) Metallurgical Industries (ferrous and non-ferrous); 3(b) Cement Plants; 1(a) Mining of minerals; 1(d) Thermal Power Plants; 7(e) Ports; 1(a)(iii) Slurry pipeline; 2(b) mineral beneficiation; etc.

ii. The source of raw material (iron ore) is not finalized

iii. R&R involved

iv. Proposal involved diversion of forestland

15.0 The committee informed that the procedure for consideration of the integrated and inter linked projects was issued by MoEF&CC vide OM No. J-11013/41/2006-IA.II(I), dated 24th December, 2010. Integrated and interlinked projects having multi sectoral components shall prepare a common EIA report, covering impact of each of the component in a comprehensive manner after obtaining ToR from each of the respective sectoral Expert Appraisal Committee (EACs). For the purpose, the project proponent shall submit the applications to each of the sector simultaneously giving full details of the project (comprehensively for the integrated / interlinked projects as also for the particular component, sector specific) in the prescribed format (Form-I) and the pre-feasibility report.

16.0 Therefore, the committee recommended for returning the proposal in the present form and advised to make a fresh application in the prescribed format (Form-I) and the pre-feasibility report giving full details of the project (comprehensively for the integrated / interlinked projects as also for the particular component, sector specific).

24.25. Standardization of EC conditions:

Shri RP Sharma, Member EAC has submitted the draft conditions for consideration of the committee. After deliberations, the committee decided to finalize the standardization of EC conditions based on the draft prepared by Shri RP Sharma and finalization of some of the conditions in the earlier meetings on 20th November, 2017. Therefore, it was decided to convene special EAC on the 20th November.

ANNEXURE –I

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 PM_{10}, $PM_{2.5}$, SO_2, 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).

<u>The following general points shall be noted:</u>

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 (QCl)/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 SPCBshall 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.

****

ANNEXURE-2

ADDITIONAL ToRS FOR INTEGRATED STEEL PLANT

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
3. For Large ISPs, a 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. MRL details of project site and RL of nearby sources of water shall be indicated.
4. Recent land-use map based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
5. PM(PM_{10} 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 PM_{10} 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

--

ADDITIONAL ToRS FOR PELLET PLANT

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

11. Trace metals in waste material especially slag.
12. Trace metals in water

–

ADDITIONAL ToRs FOR CEMENT INDUSTRY

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

ADDITIONAL ToRs FOR PULP AND PAPER INDUSTRY

i. A note on pulp washing system capable of handling wood pulp shall be included.

ii. Manufacturing process details for the existing and proposed plant shall be included. Chapter on Pulping & Bleaching shall include: no black liquor spillage in the area of pulp mill; no use of elemental chlorine for bleaching in mill; installation of hypo preparation plant; no use of potcher washing and use of counter current or horizontal belt washers. Chapter on Chemical Recovery shall include: no spillage of foam in chemical recovery plant, no discharge of foul condensate generated from MEE directly to ETP; control of suspended particulate matter emissions from the stack of fluidized bed recovery boiler and ESP in lime kiln

iii. Studies shall be conducted and a chapter shall be included to show that Soda pulping process can be employed for *Eucalyptus/Casuarina* to produce low kappa (bleachable) grade of pulp.

iv. Commitment that only elemental Chlorine-free technology will be used for the manufacture of paper and existing plant without chemical recovery plant will be closed within 2 years of issue of environment clearance.

v. A commitment that no extra chlorine 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.

--

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.

--

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.

--

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.

--

METALLURGICAL INDUSTRY (FERROUS AND NON-FERROUS)

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

--

Executive Summary

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

i. Project name and location (Village, Dist, State, Industrial Estate (if applicable)
ii. Products and capacities. If expansion proposal, then existing products with capacities and reference to earlier EC.
iii. Requirement of land, raw material, water, power, fuel, with source of supply (Quantitative)
iv. Process description in brief, specifically indicating the gaseousemission, 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. Capitalcost 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 is 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

ANNEXURE-3

Air Pollution

Plant /Unit	**Pollutants**	**Qty generated**	**Method used to Control/ and specifications/attach Separate Sheet to furnish Details**	**Number of units planned & Capacity**	**Budget**	**Estimated Post Control Qty of Pollutant**	
						Per Unit	Per Day

LIST OF PARTICIPANTS OF EAC (I) IN 24TH MEETING OF EAC (INDUSTRY-I) HELD ON 13TH TO 15TH NOVEMBER 2017

S. No	Name and Address	Position	Attendance			Signature
			13th	14th	15th	
1	Dr.Chhavi Nath Pandey, IFS(Retired)	Chairman	P	P	A	
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	A	A	A	
7.	Prof. Naresh Chandra Pant	Member	A	A	A	
8.	Dr. Jagdish Kishwan, IFS(Retired)	Member (Chairman on 15th)	P	P	P	
9.	Dr.G.V.Subrahmanyam	Member	P	P	P	
10.	Prof.Arun Pandey	Member	A	A	A	
11.	Shri Santosh Raghunath Gondhalekar	Member	A	P	P	
12.	Shri Ashok Upadhyay	Member	A	A	A	
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 RajasekharRatti, Scientist 'C', MoEF&CC	Dy. Director	P	P	P	

****