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

#### SUMMARY RECORD OF THE TWENTY-THIRD (23<sup>RD</sup>) MEETING OF EXPERT APPRAISAL COMMITTEE HELD ON 9<sup>TH</sup>-10<sup>TH</sup>OCTOBER 2017 FOR ENVIRONMENTAL APPRAISAL OF INDUSTRY-I SECTOR PROJECTS CONSTITUTED UNDER EIA NOTIFICATION, 2006.

The Twenty-third 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  $9^{\text{th}} - 10^{\text{th}}$  October 2017 in the Ministry of Environment, Forest and Climate Change. The list of participants is annexed.

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

# 23.2 Confirmation of the minutes of the 21<sup>st</sup>Meeting

The minutes of the  $22^{nd}$  meeting, as circulated were confirmed.

# DATE:9<sup>th</sup> October 2017

23.3. Expansion of Asbestos Cement Sheet manufacturing unit (72,000 TPA to 1,75,000 TPA) of M/s HIL Limited located in Industrial Area, Jasdih, District Deogarh, Jharkhand. [Proposal No. IA/JH/IND/42684/2016; File No. J-11011/01/2016-IA-II(I)]- Environmental Clearance - Further Consideration based on ADS.

1.0 The proponent has made online application vide proposal no. **IA/JH/IND/42684/2016**, dated **30<sup>th</sup> April 2017** along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 4(c) Asbestos milling and Asbestos based products as Category "A" under EIA Notification 2006 and subsequent amendments. Therefore, the project is appraised at central level.

2.0 The Fibre Cement & Roofing Sheets (Asbestos) Project of **M/s Hyderabad Industries Limited (HIL)** located in Industrial Area, Jasidih, Tehsil Deoghar, District Deoghar, State Jharkhand, was initially received in the Ministry on 1<sup>st</sup> February 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 5<sup>th</sup> meeting held on 31<sup>th</sup> March 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 20th May, 2016 vide Lr. No. J-11011/01/2016-IA-II(I).

3.0 The project of M/s HIL Ltd., located in Industrial Area, Jasidih, TehsilDeoghar, District Deoghar, State Jharkhand is for enhancement of production of Fibre Cement & Roofing Sheets from 72000 tonnes per annum (TPA) to 175000 tonnes per annum (TPA). The existing project was established in the year 1980 and is being in operation with 72000 TPA. Till date no expansion or modernization of the plant has been done. The proposed capacity for different products for new site area as below:

S1.	Description of product	Existing production	Proposed expansion	Total capacity
No		capacity	capacity	
1	Fibre Cement &	72,000 TPA	1,03,000 TPA	1,75,000 TPA
	Roofing Sheets			

4.0 The total land required for the project is 21.53 Acres, which is in Notified Industrial Area under the authority of Santhal Pargana Industrial Area Development Authority, Govt. of Jharkhand. No forestland is 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 undulated and reported to lies between 24° 31'4.3968" N to 24° 30'59.9544" N Latitude and 86° 38'19.2948" E" to 86° 38'25.2312" E Longitude in Survey of India Topo Sheet No. 72 L/10, 72 L/11, 72 L/14, 72 L/15, at an elevation of 264 m AMSL. The ground water table reported to ranges between 2.6 - 12 m below the land surface during the post-monsoon season and 5.6 - 12 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 35% 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 form corridor for Schedule-I fauna.

7.0 Asbestos roofing sheets manufacturing in the proposed project uses the renowned Hatschek process. In this process the raw material of port land cement, fly ash, Chrysotile fibre and cotton / paper pulp are treated and mixed to predetermined proportion with water to form slurry. Raw Chrysotile fibre packed in impermeable bags is placed in a pneumatic lift which automatically lifts & pushes the bags inside bag opening device (BOD), which is fully enclosed and connected to a pulsejet bag filter thus creating a vacuum (negative pressure) inside the BOD so that none of the fibre escapes into the atmosphere. There is a constant flow of air from the ambient inside the BOD chamber. The main sheeting machine comprises of rotating sieve cylinders which rotate in the vats immersed in cement fibre slurry. These sieve cylinders are in contact at the top with an endless felt pressed down by rubber couch rollers. The endless felt successively runs over 6 such vats. The front end of the felt is tightened against drive roller over which a forming drum of cast iron is pressed down on the felt. The drive roller is driven by a variable speed motor which drives the endless felt conveyors and the sieves and the forming drum. With each rotation of the sieve a thin film of Fibre-Cement (FC) material is deposited on the underside of the felt which immerge at the top and passes through vacuum suction trays for removal of the excess water. The dry films are now transferred to the forming drum at the end and are approximately 1.5 mm thick. Forming drum is allowed to rotate 4 rounds (in 6 vats machine) when the film is accumulated to a thickness of 6mm at which stage it is cut off from the forming drum and transferred to a belt conveyor. The resultant product is a wet FC blanket of 6mm thick and 1400 mm width and 6 m length. This wet sheet is now conveyed through belt conveyor for trimming of the edges and sides and taken to a profiling machine known as corrugators.

8.0 The targeted production capacity of the project is 1,75,000 TPA. The raw materials for the plant would be procured from suppliers in India & Russia. The transportation of raw materials will be done through Road and Rail (cement only).

9.0 The water requirement of the project is estimated at 189 m<sup>3</sup>/day, out of which 153 m<sup>3</sup>/day of fresh water requirement will be obtained from the bore wells inside premises and the remaining requirement of 36 m<sup>3</sup>/day will be met from the recycling of water. Applied for permission for drawl of groundwater from CGWB vide Application No. 21-4/217/JH/IND/2017 dated 03.03.2017.

10.0 The power requirement of the project is estimated as 1070 MW, which will be obtained from the JSEB Grid.

11.0 Baseline Environmental Studies were conducted during pre-monsoon season i.e. from March to May' 2016. Ambient Air Quality monitoring has been carried out at 8 locations during March to May' 2016 and the data submitted indicated:  $PM_{10}$  (48.8 µg/m<sup>3</sup> to 107.5 µg/m<sup>3</sup>),  $PM_{2.5}$  (27.3 to 62.4 µg/m<sup>3</sup>), SO<sub>2</sub> (12.7 to 35.2 µg/m<sup>3</sup>) and NOx (15.8 to 39.1 µg/m<sup>3</sup>). The results of the modelling study indicated that the maximum increase of GLC for the proposed project is 3.66 µg/m<sup>3</sup> with respect to the PM10.

12.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 7.0 to 7.50, Total Hardness: 308.6 to340.2 mg/ l, Chlorides: 15.1 to 34.3 mg/ l, Fluoride: 0.08 to 0.26 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 2 locations. pH: 7.26 to 7.32; DO: 4.3 to 4.8 mg/ l and BOD: 2.1 to 2.7 mg/ l. COD from 8.0 to 14.0 mg/l.

13.0 Noise levels are in the range of 30.8 to 80.7 dB(A) for daytime and 25.4 to 45.8 dB(A) for night time.

14.0 It has been reported that there are 225 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 Industrial Area and industry already exists.

15.0 It has been reported that a total of 1767.5 tons of waste will be generated due to the project, which will be recycle and reused back in process for production of Fibre Cement Roofing Sheets. It has been envisaged that an area of 2.89 ha (7.15 Acres) will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities. At present 1007 Nos. of trees are planted within the premises of HIL Ltd. in approx. 0.65 Ha. (1.60 Acres) of land area. During the proposed expansion activity additional 4000 nos. of trees will be planted in 2.24 Ha. (5.55 Acres of Land).

16.0 It has been reported that the Consent to Operate from the Jharkhand State Pollution Control Board/Pollution Control Committee obtained vide Lr. No. JSPCB/HO/RNC/CTO-667870/2016/771 dated 13.10.2016 and consent is valid up to 30.06.2017.

17.0 The Public hearing of the project was held on 7<sup>th</sup> January, 2017 at Narendra Bhawan, Chakai More, Jasidih, Dist. Deoghar, State Jharkhand under the chairmanship of Sri Radheshyam Prasad, Land Acquisition Officer (ADM level), District: Deoghar (Jharkhand) for production of 175000 TPA Fibre Cement Roofing Sheets. The issues raised during public hearing *inter alia* include water pollution; air pollution; storage of hazardous chemicals; community development; local employment; etc. An amount of 45 Lakhs has been earmarked for Enterprise Social Commitment based on public hearing issues.

18.0 The capital cost of the project is Rs 17 Crores and the capital cost for environmental protection measures such as installation of air pollution control devices, up gradation of existing green belt is proposed as Rs. 55 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs. 17 Lakhs toward environmental monitoring, running cost of pollution control devices, etc. The detailed CSR plan has been provided in the EMP in its page No. 113 to 114 with an amount of Rs. 85 lakhs with a detail of activities such as medical facilities, providing of tube wells in nearby villages, training and skill development etc. The employment generation from the proposed expansion project is 50 nos. (Indirect manpower).

19.0 Greenbelt will be developed in 2.89 ha (7.15 Acres) which is about 33% of the total acquired area. A greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 1200 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 was considered in the 19<sup>th</sup> EAC meeting (Industry-I) held during  $8^{th} - 9^{th}$  June 2017. After detailed presentation by PP along with EIA Consultants, the committee noted that the PP explored use of synthetic fibre in lieu of asbestos fibres; use of imported asbestos fibre; all the operations are covered, automated and spill proof; adhered to ZLD, details provided for the ToR Points namely, Specific ToR (ii), 3(v), 7(iv), 7(vi), 7(ix), 9(iii), 11(i), 14 (v) are not found relevant.

22.0 The proposal was considered in the 19<sup>th</sup> meeting of Expert Appraisal Committee (Industry-I) held on 9<sup>th</sup> June 2017. After detailed deliberations, the committee desired the following information for further consideration of the proposal:

- i. Issues raised in Public Hearing shall be clearly addressed along with time bound action plan and fund provision for the same as part of Enterprise Social Commitment part of CAPEX in project mode.
- ii. Ground water withdrawal permission letter from the competent authority shall be provided.
- iii. Hydro geological report including ground water development, category of development of ground water, recharge measures shall be submitted.
- iv. Water flow diagram clearly indicating the quantity of consumption for different purpose including recycling, disposal shall be submitted.

- v. Corporate Environmental Policy along with board resolution, hierarchy and mechanism of reporting non-compliances to the board of directors as per the OM dated 26<sup>th</sup> April 2011 shall be provided
- vi. Details for the ToR Points namely, Specific ToR (ii), 3(v), 7(iv), 7(vi), 7(ix), 9(iii), 11(i), 14 (v) shall be revised and submitted as per the deliberations.
- vii. Provision for vacuum cleaning to check fugitive dust in the plant premises.
- viii. Provision for planting of 4,000 trees of local broad-leaved species in addition to about 1,000 presently existing in the plant area

23.0 Accordingly the project proponent submitted reply to Additional details sought above on 4<sup>th</sup> August 2017. The project proponent presented the details before the committee. After detailed deliberations the committee observed that the reply is not satisfactory and not furnished the relevant information. Therefore, the committee advised to submit the reply in proper manner by 10<sup>th</sup> October 2017. However, the project proponent requested for some more time vide their letter MoEF/16-17/EXP/EIA/EC, dated 9<sup>th</sup> October 2017.

# 24.0 **Therefore, the proposal is deferred**.

**23.4.** 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 Village 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 The Project Proponent informed that their senior officers are not available due to preoccupied engagements and requested to consider the case in the next meeting. The committee agreed for the request of the PP

23.5. Proposed Secondary Lead Recycling Plant (Secondary Lead Smelter with a Lead and Lead Alloy Production Capacity: 1,80,000 TPA) at Mouza - Basudevpur, P.S.-Durgachak at Haldia Township, District PurbaMedinipur, West Bengal by M/s CHLORIDE METALS LIMITED [Proposal No IA/WB/IND/69555/2017; MoEF&CC File No. IA-J-11011/475/2017-IA-II(I)] – Terms of Reference

1.0 **M/s Chloride Metals Limited** has made online application vide proposal no. IA/WB/IND/69555/2017 dated **18<sup>th</sup> 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 is appraised at the Central Level.

2.0 M/s. Chloride Metals Limited is proposed to install a new unit for lead recycling. It is proposed to set up the plant for Secondary Lead Recycling based on Secondary Lead Smelting technology at Mouza – Basudevpur, J.L. No. – 126, P.S. – Durgachak, Haldia, Dist – Purba Midnapore, West Bengal.

3.0 The project area is bounded by latitudes from  $22^{\circ}$  4' 55.21" to  $22^{\circ}$  5' 18.23" N Longitudes 88° 7' 15.52" to 88° 7' 49.23" E covered in Survey of India. There is a general gradual slope towards Southern side.

4.0 The land area acquired for the proposed plant is 8.094 Ha (20 acres). No forestland is involved. The entire land has been acquired for the project. Of the total area 2.833 Ha (7 acres) (35%) land will be used for green belt development.

5.0 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.

6.0 Total project cost is approx. 170 Crore rupees. Proposed employment generation from proposed project will be 138 numbers.

7.0 The targeted production capacity of the proposed secondary lead recycling plant is 1,80,000 TPA. Proposed raw material and fuel requirement for project are used lead acid batteries, furnace oil, liquid Oxygen and HSD. The proposed capacity for different products for new site area as below:

Name of unit	No. of units	Production Capacity
Secondary Lead Recycling Unit	Lead and Lead Alloy	1,80,000 TPA

8.0 The electricity load of 2800 KVA will be procured from WBSEDCL. Company has also proposed to install 3 nos. 1010 KVA DG Sets.

9.0 Proposed raw material and fuel requirement for project are used lead acid batteries, furnace oil, liquid Oxygen and HSD.

10.0 Water Consumption for the proposed project will be 90 KLD and waste water generation will be 76 KLD. Domestic waste water will be treated in an STP based on MBBR technology and industrial waste water generated will be treated in an ETP and reused.

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

12.0 After detailed deliberations the committee observed that the proposed secondary lead recycling plant does not require prior Environmental Clearance as "the recycling industrial units registered under HSM Rules are exempted" from prior Environmental Clearance as per the provisions of EIA amendment Notification No. S.O.3067(E) dated 1<sup>st</sup> December 2009. As such the project proponent is required to obtain necessary registration / authorisation under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 from the concerned State Pollution Control Board.

# 23.6. Expansion of Integrated Steel Plant at village Taraimal, Tehsil Gharghoda, Dist. Raigarh, Chattisgarh by M/s Nalwa Steel & Power Limited [Proposal No IA/CG/IND/23753/2007, File No. J-11011/1108/2007-IA-II(I)] – Environmental Clearance – Further Consideration based on reply to ADS.

1.0 The Integrated Steel Plant of M/s Nalwa Steel & Power Ltd. is located in Village Taraimal, Tehsil Tamnar, District Raigarh, Chhattisgarh was initially received in the Ministry on 16<sup>th</sup>November 2010 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006 for expansion. The earlier environmental clearance was accorded vide letter no. J-11011/398/2006-IA.II (I) dated 24<sup>th</sup> January 2007 and amended vide letter dated 30th September 2010 and 17<sup>th</sup>December 2012. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its meeting held on 22<sup>nd</sup> -23<sup>rd</sup> February 2011 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment and Forests had prescribed ToRs to the project on 13<sup>th</sup>April 2011 with subsequent amendments on 9<sup>th</sup> June 2011 and 18<sup>th</sup> November 2011. Validity of ToR was extended vide letter dated 12<sup>th</sup> November 2013. Based on the ToRs prescribed to the project, the project proponent applied for environmental clearance to the Ministry on 3<sup>rd</sup>June 2014.

2.0 The project of M/s Nalwa Steel & Power Ltd. located in Village Taraimal, Tehsil Tamnar, District Raigarh, Chhattisgarh is for expansion of the existing Steel Plant from 0.16 MTPA to 1.0335 MTPA. The details of existing and proposed expansion are given below:

S1.	Name of the Unit	Existing Capacity	Proposed addition	Final Capacity
No				
(a)	(b)	(c)	(d)	(e)
1	Blast Furnace	Nil	318,500 TPA	318,500 TPA
2	Sponge Iron Plant	198,000 TPA	726,000	924,000 TPA
		(6 X 100 TPD)	(4 X 500 TPD)	
3	Sinter Plant	Nil	408,100 TPA	408,100 TPA
			(40 sq.m)	
4	Coke Oven	Nil	200,000 TPA	200,000 TPA
5	Steel Making Shop (EAF)	Nil	624,000 TPA	624,000 TPA
6	Steel Making Shop	160,000 TPA	249,500 TPA	409,500 TPA (4 X
		(2x12  tons + 1x30)	$(2X12T + 2 \times 30)$	12 T + 3 x 30
		tons Induction	tons Induction	tons IF)
		Furnace)	Furnace)#	
Tota	l Steel production			1033,500 TPA
7	Rolling Mill	250,000 TPA	200,000 TPA	450,000 TPA
8	Coal Washery*	1,320,000 TPA	Nil	1,320,000 TPA
9	WHRB based CPP	8 MW	60 MW	68 MW
10	AFBC based CPP using coal,	16 MW	135 MW CFBC	151 MW
	rejects and char			
Tota	l Power generation			219 MW
11	Producer Gas Plant	12000 Nm3/hr	12000 Nm3/hr	24000 Nm3/hr
12	Oxygen Plant	100 Nm3/hr	3000 Nm3/hr	3100 Nm3/hr
	Nitrogen	Nil	12000 Nm3/hr	12000 Nm3/hr
	Argon	Nil	70 Nm3/hr	70 Nm3/hr

Note:

# The configuration of proposed IF is now being proposed to be changed from 3X30 T to [2X12T + 2X30T]

\* Although in TOR, washery was part of the proposal but now the proposal has been revised/changed and coal washery is no more proposed in the expansion phase

3.0 The total land required for the expansion project is 122.279 ha, out of which 77.268 ha is an agricultural land, no grazing land, 1.711 ha is Government Land. No forestland is involved. The entire land has not been acquired for the project. 38.605 ha has been purchased. 40.374 ha has been administratively processed and possession awaited while 43.30 ha is under process of acquisition. No river passes through the project area. It has been reported that natural water body exist around the project and modification/ diversion in the existing natural drainage pattern at any stage has not been proposed.

4.0. The topography of the area is flat and reported to lie between 22°00'35" to 22°02'10" N Latitude and 83° 22' 18" to 83° 23' 22" E Longitude in Survey of India topo sheet No. 64 N/8, at an elevation of 260 m AMSL. The ground water table at adjacent Taraimal village reported to ranges between 3.60 below the land surface during the post-monsoon season and 4.9 below the land surface during the pre-monsoon season. No ground water will be extracted for industrial use. Further, the stage of groundwater development is reported to be 12.84% in study area and thereby this is designated as safe area.

5.0. No wildlife sanctuary is located within distance of 10 km from the site. 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.

6.0. The process of manufacturing will be steel through the DRI as well as blast furnace route. There will be installation of Blast furnace (318,500 TPA), expansion of sponge iron plant (from 198,000 to 924,000 TPA), sinter plant (408,100 TPA), coke oven plant (200,000 TPA), SMS through EAF (624,000 TPA), SMS through IF-LF (160,000 to 409,500 TPA) rolling mill (250,000 to 450,000 TPA), WHRB based CPP (8 to 68 MW), CFBC based CPP (16 to 151 TPA), producer gas (12,000 to 24,000 Nm<sup>3</sup>/hr) Oxygen plant (100 to 3100 Nm<sup>3</sup>/hr), nitrogen plant (12,000 Nm<sup>3</sup>/hr) and argon plant (70 Nm<sup>3</sup>/hr). The sponge iron will increase from 6X100 TPD by addition of 4X500 TPD kilns while IF will increase from 2X12T+1X30T by addition of 2X12 T+2X30T furnaces (proposed revised configuration). The major raw materials to be used for expansion phase will be 1.49 million TPA iron ore, 1.37 million TPA coal & CPC, 0.14 million TPA limestone/ dolomite and 5000 TPA ferro alloys. Of the various solid wastes generated in the plant, 100% recycling/ reusing will be done for sponge iron plant dust, char, sinter plant dust, blast furnace slag, blast furnace sludge & flue dust, SMS slag & flue dust, rolling mill rejects & mill scales and coke oven dust. Ash will be generated from producer gas plant and captive power plant which will be disposed as per Fly Ash Notification.

7.0. The targeted production capacity of the crude steel from SMS is 1.033 million TPA. The iron ore for the plant would be procured from mines located in Odisha. Limestone, quartzite, dolomite and manganese ore will be purchased from mines located in Chhattisgarh and Madhya Pradesh. The ore transportation will be done through rail followed by road.

8.0. The make-up water requirement for the expansion project is estimated to be 18901  $m^3$ /day, all of which is fresh water and will be obtained from Mirouni Barrage across river Mahanadi.

9.0 The power requirement for the expansion project is estimated to be around 112 MW, all of which will be available from the captive power plant comprising of WHRB (68 MW) and CFBC (151 MW). Excess power will be sold.

10.0 Ambient air quality monitoring has been carried out at 8 locations during December 2015 and earlier during March-June 2011 and the data submitted indicated: PM10 (34.5  $\mu$ g/m<sup>3</sup> to 74.4  $\mu$ g/m<sup>3</sup>), PM<sub>2.5</sub> (23.9 to 44.7  $\mu$ g/m<sup>3</sup>), SO<sub>2</sub> (BDL to 16.6  $\mu$ g/m<sup>3</sup>) and NOx (9.8 to 30.0  $\mu$ g/m<sup>3</sup>). The results of the modelling study indicate that the maximum increase of GLC for the proposed project is 12.85  $\mu$ g/m<sup>3</sup> with respect to the PM<sub>10</sub>, 26.25  $\mu$ g/m<sup>3</sup> with respect to the SO<sub>2</sub> and 5.58  $\mu$ g/m<sup>3</sup> with respect to the NO<sub>2</sub>.

11.0 It has been reported that there are no people in the core zone of the project. R&R plan as per Model R&R policy of Chhattisgarh had been prepared and majority of the land acquired after paying due compensation. Land losers will be given preference in employment.

12.0 It has been reported that a total of 1.392 million tonnes of waste will be generated due to the expansion phase of the project, out of which 1.372 million tonnes will be reused used in sinter plant, power generation, cement plant, metal recovery, road making, SMS, brick / block / aggregate making or sold to consumers and 19602 TPA will be dumped in the earmarked dump yard. It has been envisaged that green belt/ afforestation will be developed in about 33% of the expansion area to attenuate the noise levels and trap the dust generated due to the project development activities.

13.0 The Public hearing of the project was held on 7<sup>th</sup> March 2014 for the proposed expansion. The main issues raised during public hearing are pertaining to increase in road accidents due to movement of trucks; employment; compensation; CSR; control of air and water pollution; water supply; cancellation of public hearing; stray elephants; ground water utilization; discharge into Kelo river and impact on fish yield; shortage of drinking water; Gram Sabha not conducted; impact of dust on crop yield/ trees/ gauchar; de-allocation of coal linkage; infrastructural development to be taken up in villages and in colony; dust pollution; and impact on agriculture & forest.

14.0 The capital cost of the project is Rs. 3500 Crores and the capital cost for environmental protection measures is proposed as Rs. 125 crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 15 crores per annum. Additional manpower required for the project is about 750 directly and about 2000 for contractual jobs indirectly.

15.0 The proponent has mentioned that there is one court case to the project or related activity.

16.0 The Regional Office, MoEF&CC, Bhopal has inspected the site and submitted monitoring report vide letter no. 5-4/2007(ENV)/135 dated 21.07.2014 consequent to the Terms of Reference issued on 13.04.2011.

17.0 As reported in 29<sup>th</sup> EAC MoM, one litigation is pending at High Court of Chhattisgarh, Bilaspur against the project. Gita Devi Agrawal and others. Respondents, State of Chhattisgarh and others. Writ Petition No. 1700 of 2013. It is submitted by the petitioner that the Land Acquisition Officer, Gharghoda has initiated land acquisition proceedings for acquisition of Khasra Nos. 51 and 52 owned by the petitioners and registered a case bearing case no. 03-A-82/2012-2013 in which a declaration under section 6 of the Land Acquisition Act 1894 has been published in the newspaper on 18-10-2013. The litigation is in regard to acquisition vide Article 300A of the Constitution of India as well as various provisions of Land Acquisition Act 1894, the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act 2013 and the provisions of the Panchayats (Extension of the Scheduled Areas) Act 1996.

The proposal was considered in 29th reconstituted Expert Appraisal Committee (Industry) 18.0 held during 11<sup>th</sup> and 12<sup>th</sup> December 2014 and the Committee observed that the baseline data was collected in 2011; Plant was established in 2003; ToR for the proposed expansion was granted in 2011; ToR validity was extended by a year in November 2013; Public hearing was held in April 2014; EC proposal submitted to MOEF&CC in May 2014. The Committee further observed that a village is existing adjacent to the Plant. The habitation is sandwiched between the existing and proposed projects. The EAC observed that AAQ values appeared very low as compared to CPCB data for Raipur located about 10 km away and also keeping in view that the TPP of M/s Jindal Power Ltd is located upwind of the project site. Fresh one-month AAQ data to be generated. Transportation involves 800 trucks (to-and-fro). The Committee desired that a Plan for minimising truck movement and feasibility of using railway line and siding of project of their sister concern – M/s Jindal Power Ltd. located adjacent to this project should be explored. The EAC observed that number of complaints have been received during Public Hearing regarding poor air quality. The Committee after deliberations decided to send a team (sub-committee) of the EAC for a site visit to ascertain issues concerning the proposed expansion project. Further, the Committee also noted that there are several inconsistencies and shortcomings in the report and sought the following clarification:

- i. Baseline air data should be monitored for 1 month since the data presented is of 2011.
- ii. Coal washery details including capacity and status of EC. A component of coal washery has been included in the existing and the proposed expansion project. A clarification may be provided whether coal washery is included as a part of expansion project.
- iii. Water reservoir capacity
- iv. village population- whether 1800 or 597 persons residing in the villages adjoining the plant.
- v. Layout of the existing and proposed plant on a map as well as on a table along with land use breakup existing and proposed in terms of agricultural land, forest land, habitation (settlements), water bodies, etc. Details of habitation of 597 persons in between existing and proposed expansion project areas.
- vi. Clarification on water consumption of the Plant per tonne of Steel Produced vis-à-vis CREP standards and the best available technologies in the world.
- vii. Requirement of cleaning system for the effluents + Scrubber for the PGP.

- viii. A specific plan for utilisation of solid waste management along with MOU from units for utilisation of the solid wastes. Plan for disposal of SMS slag.
- ix. Disaster Management Plan in line with the district DMP and should be submitted including the population close to the industrial premises.
- x. Existing OHS details should be submitted
- xi. Decongestion plan for the existing roads should be submitted for the proposed 600-800 trucks per day and a Plan for utilising the existing railway line of M/s Jindal Power Ltd. adjoining the existing Steel Plant should be examined.

19.0 Accordingly, the PP submitted the details to the ministry. Therefore, the proposal was considered in the  $17^{th}EAC$  meeting held during  $6^{th}$  - $7^{th}$  April 2017. After detailed presentation by PP along with their consultant M/s Min Mec Consultancy Private Ltd., the committee noted following observations:

- i) No site visit was made by the sub-committee of EAC as desired in the 29th EAC;
- ii) No fresh status of compliance is presented;
- iii) Baseline ambient air quality monitoring data was collected during December 2015 and earlier during March-June 2011 not comparable as collected in two different periods. The earlier data is of 6 years old and additional data is also more than 1-year old;
- iv) The proposal for establishment of coal washery for 1.32 MTPA was made during the ToR. However, the PP dropped the proposed coal washery during the public hearing without prior approval from the ministry;
- v) Proposal was made for further changes in the configuration of the plant from 3X30 T to 2X30 T + 2X24 T in the present presentation; and
- vi) The habitation existing adjacent to the plant is sandwiched between the operating and proposed projects. In view of these facts and after detailed deliberations, the committee recommended that the PP should make fresh application for seeking ToRs.

20.0 However, during the process of the proposal, the ministry advised to re-consider the proposal. The matter was deliberated in the 19<sup>th</sup> meeting of Expert Appraisal Committee held during  $8^{th} - 9^{th}$  June 2017. The committee agreed to re-consider the proposal and decided to carry site visit by sub-committee of the EAC as decided in the earlier EAC in its 29<sup>th</sup>meeting. The proposal will be deliberated after site visit.

21.0 Based on the decisions in the  $19^{\text{th}}$  EAC meeting, sub-committee visited the site during  $19^{\text{th}}$  to  $20^{\text{th}}$  June 2017 and made following observations:

i. The habitation existing adjacent to the plant (Taraimal Village) is sandwiched between existing plant of M/s Nalwa Steel Plant and M/s Syam Ispat Limited. The proposed extension of the plant towards Taraimal village, will further surround the village.

- ii. Ambient Air Quality monitoring system in place is not as per the General Condition of the earlier EC.
- iii. The fugitive dust generated due to plying of coal transport vehicles from Raigarh to plant site is one of the major sources of air pollution. The traffic congestion of the main road is an issue and it needs to be reduced.
- iv. Plantation was carried only in 22% of the total project area against the prescribed norms of 33% of the Total plant area. Plantation along the entire boundary of the plant is also not available.
- v. Raw material such as iron ore, coal, etc. are not stored in the covered yards and no wind breaks were arranged.
- vi. There is no 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.
- vii. There is no hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions.
- viii. It was reported that the operation of the coal washery is not very regular. The washery is used only when the Indian and high ash content coal is received.

22.0 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.

- i. The PP shall revise the layout plan of the proposed expansion so that the proposed expansion shall not adversely affect Taraimal Village further.
- ii. The revised lay out plan shall be made with at least 33% of Total project area shall cover with the green belt.
- iii. The PP shall explore dropping of proposed coal based power plant and existing ash pond;
- iv. The stoppage of existing coal based power plant; and coal washery shall also be examined by PP. This would greatly reduce the air pollution, traffic load on the main road etc.
- v. PP shall explore alternative mode of transport. Decongestion plan for the existing roads should be submitted and a Plan for utilising the existing railway line of M/s Jindal Power Limited adjoining the existing Steel Plant should be examined.
- vi. PP shall submit time bound action plan for fulfilment of non-compliances of earlier EC conditions along with fund provision.

- vii. Impact on air quality with revised proposal shall be studied using suitable Air Quality Impact Model and assess the increment of GLC on the surrounding areas particularly on Taraimal Village.
- viii. The details of Corporate Environment Policy including its approval in the Board of directors; standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions; hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions; 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 shall be provided in the EIA/EMP Report.

23.0 The observations and recommendations of the sub-committee were placed before the committee in its  $20^{\text{th}}$  meeting held during  $10^{\text{th}}$  - $11^{\text{th}}$  July 2017. The committee fully endorsed the recommendations made by the sub-committee. The committee opined that the decision of the fresh Terms of Reference may not be required if the PP agreed to the recommendations made by the sub-committee.

24.0 The committee informed the observations and recommendations of the sub-committee to the project proponent.

25.0 The PP has agreed to submit revised proposal in line with the recommendations of the sub-committee. Therefore, the proposal is deferred for additional information.

26.0 The PP has submitted revised layout and reply to the recommendations made by subcommittee vide their letter no. NSPL/EMD/2017/136 dated 17<sup>th</sup> August 2017 which inter alia include the revised layout plan considering the proximity of the plant to Taraimal village habitation with massive plantation in the plant area adjoining the habitation; withdrawal of proposed ash pond as envisaged in the earlier proposal; planning of non-polluting facilities such as water reservoir near the Tarimal Village; plantation in 70 Ha i.e. 33% of the plant area; withdrawal of proposed coal based power plant and ash pond; stoppage of operation of existing coal based power plant soon after the commencement of proposed 60 MW WHRB Power Plant; operation of coal washery only intermittently whenever required; possibility of alternate mode of transport; time bound action plan for fulfilment of non-compliances reported on the earlier EC conditions; details of corporate environmental policy; and mechanism to bring the infringements / deviations to the Board of Directors; etc.

Sl.	Action plan		Buc	lget (R	s. Lakh	s)	
110.		Year 1	Year 2	Year 3	Year 4	Year 5	Total
1	Installation of road safety awareness hoardings in villages along the road (villages Taraimal, Lakha and within Raigarh and on road to Kirorimal Railway Siding)	3	2	0	0	0	5
2	Installation of hoardings in consultation with	2	0	0	0	0	2

27.0 The details of Enterprise Social Commitment have been submitted by PP during the presentation and the same is give below:

Sl. No.	Action plan	Budget (Rs. Lakhs)					
		Year 1	Year 2	Year 3	Year 4	Year 5	Total
	forest department to create awareness about elephant sighting and any known elephant crossings, if any						
3	Supply of Clean Drinking Water (construction of over head tank, borewell, handpump, pipe supply system including to schools) in Villages in 2 km radius Taraimal, Ujalpur, Gerwani, Shivpuri, Punjipatra, Barbahali, Bhansgarhi & Ratrot.	2	3	4	5	6	20
4	Agriculture & Fodder centre establishment with infrastructure to provide scientific support and awareness to local farmers to increase yield of crop & fodder and undertake additional activities for income supplementation (such as mushroom farming) at village Taraimal	0	5	0	0	0	5
5	Construction of Health Centre duly equipped with requisite equipment, appointment of Doctor, Pharmacist at village Taraimal	0	0	15	0	0	15
6	Schools- repair/ renovation, provision of toilets and computer centres within radius of 2 km from plant (Villages Taraimal, Ujalpur, Gerwani, Shivpuri, Punjipatra, Barbahali, Bhansgarhi & Ratrot)	2	2	2	4	6	16
7	Construction of Village Roads / Culverts in Villages Taraimal, Ujalpur, Gerwani, Shivpuri, Punjipatra, Barbahali, Bhansgarhi & Ratrot	2	3	4	5	6	20
8	Rain water harvesting pits in villages Taraimal, Ujalpur, Gerwani, Shivpuri, Punjipatra, Barbahali, Bhansgarhi & Ratrot	1	1	1	1	1	5
	TOTAL	13	18	29	19	24	88

28.0	The statement of issues raised from organisations/ individuals and response of the project
propo	nent with action submitted by PP during the presentation and same is given below:

SI.	Issues	Response by project	Action Plan proposed	<b>Budgetary provision</b>
No.	raised during PH	proponent		as on 10-10-2017
		(after PH)		
1.	EIA report is wrong.	EIA is right and has been	Not Applicable	Nil
	PH should be	prepared as per EIA		
	cancelled.	Notification 2006 and all the		
		data in it is correct. PH is		
		being conducted as per rules		
		and regulations.		

Sl. No.	Issues raised during PH	Response by project proponent	Action Plan proposed	Budgetary provision as on 10-10-2017
2.	Increase in road accidents due to movement of trucks	-	A proposal for conversion of the 2-lane road to 4- lane road from Raigarh crossing to Punjipatra has been made by the CGRDC (Chhattisgarh Road Development Corporation). Survey work for the same has been completed. The contract has been awarded to JSPL by CGRDC for execution on BOT model vide CGRDC letter no. 1119/CGRDC/2016 dated 10.08.2016. The company shall create/ spread awareness regarding responsible and safe road use, particularly among the road users and villagers residing along	This is a CGRDC funded project. Road hoarding shall be installed on the villages along the transportation route for which an ESC budget of Rs. 5 lakhs has been earmarked. Awareness campaign shall be a part of the CSR activities for which an expense of Rs. 30,000/ annum has been earmarked.
3.	Jobs and compensation should be given to people whose land is being acquired by NSPL.	Company shall provide jobs and compensation as per Model R&R Policy (2007) of CG Govt. And company rules	the road stretch. R&R has been as per Model R&R Policy (2007) of CG Govt. And company rules	As per R&R Plan of project, total compensation as per CG government guidelines (in Rs.) works out to be 300906118 for Taraimal + 263662559 for Ujalpur = Rs.564568677 (Rs 56.46 crores)
4.	Expenditure earmarked under CSR is not being spent for the development of the villagers and surrounding area. It is being diverted to other non-CSR activities. Give the details of CSR.	NSPL is carrying out CSR Activities as per direction of State Administration. CSR activity report is being submitted to District Collector-Raigarh on routine basis.	<ul> <li>NSPL has earmarked 2% of the profit of last 3 years for undertaking CSR activities. Details of CSR activities done and proposed by the company is given in Chapter 8.</li> <li>Earmarked budget will be spent majorly under the following heads:</li> <li>1. Development of 50 to 100 acres charagaha land,</li> <li>2. Establishing Veterinary Health Care Centre in Taraimal village,</li> <li>3. For training the local youths,</li> <li>4. Develop roof top rainwater harvesting</li> </ul>	CSR expenditure during 2014-15 was nearly Rs.40.5 lakhs and in 2015-16 it was Rs. 65 lakhs. CSR expenditure for the expansion will be as per the provision in the Companies Act.

Sl. No.	Issues raised during PH	Response by project proponent	Action Plan proposed	Budgetary provision as on 10-10-2017
		(after PH)	structures in nearby villages, 5. Providing economically weak students with scholarships and study materials of total CSR expenditure	
5.	Measures for control of air and water pollution	Effluent Handling & Treatment Systems are provided at the existing plant. Treated sewage is utilized for horticulture purposes. Treated industrial effluent is recycled and used for cooling steel products, cooling tower, sprinkling, green belt, etc. Company is taking and will continue to take mitigation measures as suggested in EIA/EMP Report to protect environment.	Installation of control measures for air pollution control and waste water treatment is proposed during expansion phase. Company is committed to install and commission ETP, STP and other necessary measures to recycle and reuse of treated effluent before commencement of operation.	Total capital investment on future environmental protection and improvement work is envisaged as Rs. 125 Crores and recurring expenditure is Rs.15 Crores/year, which includes Rs. 75 crores and Rs. 4.0 crores for air and water pollution control respectively.
6.	Details of industries in 10 km radius	List of industries in 10 km radius is given in table 3. of Chapter 3.	-	-
7.	If 8.27 MCM water is required, than what shall be done with the excess water, will they sell it?	NSPL will make request to the Govt. Of Chattisgarh for revised water allocation from Kalma Barrage.	NSPL has received the permission for revised water requirement vide letter No. 79/SIPB/2016 for 5 MCM.	-
8.	Model Code of Conduct has come into force even then Public hearing has not been canceled.	Notice for Public Hearing was published by CECB before the declaration of election. Therefore it is conducted as per date fixed by CECB. Thus, PH has been conducted as per rules and regulations.	PH was not cancelled as the date was fixed before announcement of election.	-
9.	Elephants stray in the study area.	Presence of elephant in the study area are rare. They are observed in the reserve forests on the north side of the study area.	People shall be sensitized and awareness shall be created among people if they see any elephant in the study area. Hoardings shall be installed in consultation with forest department.	Hoarding shall be installed as directed by forest department for which an ESC budget of Rs. 2 lakhs has been earmarked. Awareness campaign shall be a part of the CSR activities for which an expense of Rs. 30,000/ annum has been earmarked.
10.	Diversion of only 4 ha	There is no forest land in the expansion area	-	-

Sl. No.	Issues raised during PH	Response by project proponent (after PH)	Action Plan proposed	Budgetary provision as on 10-10-2017
	and not of other. Forest land has been encroached.			
11.	Groundwater is being used by NSPL without permission	No ground water is extracted for operating the existing plant. 3.46 MCM water is taken from Banjari nala, for which permission has been obtained by NSPL.	Not Applicable.	
12.	Fishes are dying due to discharge of waste- water and ash into Kelo river Drinking water is not available in nearby villages	NSPL has installed STP and ETP in its existing plant. The entire wastewater is treated and reused within the plant premises. No wastewater is discharged outside the plant (except during monsoon). CECB officials periodically inspect the site for adherence of stipulations and accord Consent to Operate under Water Act.	The expansion project is also planned on zero discharge concept. Entire wastewater shall be treated and reused within the plant premises. Details are provided in EMP. NSPL will provide drinking water to nearby villagers and dug tube- wells as part of ESC.	Company has earmarked budget of Rs 125 crores as capital cost and Rs 15 crores per year as recurring cost for pollution control which includes Rs. 75 crores and Rs. 4.0 crores for air and water pollution control respectively. ESC capital expenditure towards provisioning of drinking water will be Rs. 20 lakhs.
13.	Gram Sabha has not been conducted	Gram sabha has been conducted.	Gram Sabha has been conducted on 30-6-2011 for purchase of private land for industrial use.	-
14.	Agricultural yield has decreased due to heavy air pollution. Yield of Mahua flower and Tendu leaves have decreased, which are the only source of earning for several families in the area. Gauchar land is affected due to dust. Human diseases are increasing in the area.	NSPL has installed necessary air pollution control devices like ESP and Bag Filter to control the air pollution. The air emissions from NSPL are well within the stipulated standards. Reports are regularly submitted to CECB, CPCB and MOEF. CECB is also monitoring the air pollution control systems on regular basis.	Several sponge iron plants, ferro- alloy plants, power plants and steel plants are operating in the area. The area is covered by dense forests with good diversity. Poor people are dependent on collection and selling of mahua seeds, sal seeds and tendu leaves for their livelihood. Hence, company proposes Agriculture & Fodder centre establishment with infrastructure to provide scientific support and awareness to local farmers to increase yield of crop & fodder and undertake additional activities	Company has earmarked budget of Rs. 125 crores as capital cost and Rs 15 crores per year as recurring cost for pollution control which includes Rs. 75 crores and Rs. 4 crores for air and water pollution control respectively. ESC budget earmarked for agriculture & fodder centre will be Rs. 5 lakhs and for health centre it is Rs. 15 lakhs

Sl. No.	Issues raised during PH	Response by project proponent	Action Plan proposed	Budgetary provision as on 10-10-2017
		(after PH)	for income supplementation at Taraimal Construction of Health Centre duly equipped with requisite equipments, appointment of Doctor, Pharmacist at Taraimal	
15.	Coal linkage is from Gare IV-6 which has been de-allocated	Gare Palma Coal Sub Block IV/6 was allotted jointly to M/s Jindal Steel & Power Limited, as leader, & M/s Nalwa Sponge Iron Limited by the Central Government vide Ministry of Coal's (MOC) letter no. 13016/34/2005-CA-I dated 13-01-2006 for mining coal to meet the requirement of their respective Sponge Iron Plants situated at distances of 25 km and 45 km from the Coal Block at Taraimal & Raigarh, respectively.	The company will purchase coal through E- auction to meet the requirement of the plant.	-
16.	The villages of the area lack basic infrastructure, even roads are not developed. Company should take up development work in villages.	NSPL is carrying out CSR Activities as per direction of State Administration. CSR activity report is submitted to District Collector-Raigarh on routine basis.	Company has constructed of water tank and pipe line and payment of electricity bills and maintenance of street lights of village Taraimal.	An ESC budget of Rs. 5 lakhs has been earmarked for rainwater harvesting structures in villages in 2 km radius, Rs. 20 lakhs for supply of clean drinking water, Rs. 15 lakhs for health centre, Rs. 16 lakhs for school repair & toilet construction and Rs. 20 lakhs for village road construction. 7.5% of CSR budget will be earmarked for maintenance of roads and highways
17.	There is enormous dust pollution in surrounding area. Dust, fly ash, coal fines and wastewater are discharged into the Kelo river. ESP is not operated properly.	NSPL has installed necessary air pollution control devices like ESP and Bag Filter to control the air pollution. The air pollution from NSPL is well within the stipulated standards. NSPL has installed ETP and	Company shall follow mitigation measures as suggested in the report	Company has earmarked budget of Rs 125 crores as capital cost and Rs 15 crores per year as recurring cost for pollution control which includes Rs. 75

Sl.	Issues	Response by project	Action Plan proposed	<b>Budgetary provision</b>
No.	raised during PH	proponent		as on 10-10-2017
		(after PH)		
	NSPL is surrounded	STP for treatment of		crores and Rs. 4 crores
	by forests. In future	wastewater. Entire		for air and water
	NSPL will surround	wastewater is treated and		pollution control
	Taraimal village. This	reused in the plant itself. No		respectively.
	will adversely affect	wastewater is discharged		
	the environment.	outside the plant premises		
		(except during monsoon,		
		when the treated wastewater		
		is discharged into Gerwani		
		nala and Banjari nala, that		
		ultimately joins the Kelo		
		river). For use of Flyash,		
		brick making plant has been		
		established 33% land area		
		has been converted to dense		
		greenery. Solid wastes are		
		stored in engineered dump		
		yard, designed and		
		monitored by ISM-		
		Dhanbad. Reports are		
		submitted to CECB, CPCB		
		and MOEF on regular basis.		

29.0 The Project proponent along with their consultant M/s Min Mec Consultancy Private Ltd., the committee noted the following observations:

- The proposal involved expansions i.e. from 0.16 MTPA to 0.5 MTPA and 0.5 MTPA to 1.03 MTPA. The initial expansion involves two stage expansion i.e. from 0.16 MTPA to 0.25 MTPA with Induction furnace with entire billet consumption from the existing plant and 0.25 MTPA to 0.5 MTPA.
- Land acquisition is under process and PP informed that the acquisitions is at final stage.
- Washery rejects are being utilised in AFBC after commissioning of the proposed WHRB, the AFBC shall be closed.
- Disposal of Dolochar and washery rejects after stoppage of AFBC needs an action plan.
- It was informed that proposed road widening (2-line to 4-line) from Raigarh to Nalwa has been awarded to the M/s JSPL by CGRDC and it will take two years for completion.
- The proposed railway line connecting Tilaipali to Lara Via SECR's Kotariya Railway station will pass near to the Nalwa Steel Plant. The land acquisition is under process. The JSPL proposed for the railway siding from the proposed railway line.

30.0 After detailed deliberations, the committee recommended for environmental clearance subject to following specific conditions in addition to the any other conditions by the Ministry while according Environmental Clearance:

- i. The proposed expansion shall be carried as per the revised layout submitted to the Ministry vide NSPL's Letter No. NSPL/EMD/2017/136 dated 17<sup>th</sup> August 2017.
- ii. The area proposed in the east of Taraimal village shall not be used for establishment of any plant facilities except for the plantation with native tree species as proposed in the revised layout plan.
- iii. The present environmental clearance is exclusive of the proposed 135 MW CFBC based Thermal Power Plant as committed by PP.
- iv. The Project Proponent shall stop the operations of the existing 16 MW AFBC based thermal Power Plant before commencement of expansion of steel plant from 0.25 MTPA to 0.50 MTPA as agreed by the PP for control of Air Pollution.
- v. In view of the traffic congestion on the road connecting from Raigarh to Nalwa Steel Plant, the expansion shall be carried out subject to the widening of the road / extension of the railway line as per the following conditions:

Phase	Expansion w.r.t. steel production	Subject to	Remarks
1	From 0.16 MTPA to 0.25 MTPA	Existing road width	By using the billets
			produced in the plant
			premises
2	From 0.25 MTPA to 0.50 MTPA	Widening of the road	Production shall be
		connecting from Raigarh	commenced only after
		to Nalwa from 2-line to	completion of widening
		4-line	of road
3	From 0.50 MTPA to 1.03 MTPA	Extension of the railway	Production shall be
		line/siding near the plant	commenced only after
		premises	completion of
			commencement of
			railway siding

- vi. No fly ash shall be dumped in the premises. The PP shall submit action plan for 100% utilization of fly ash, dolochar and slag within 3 months from the date of issue of EC to the Ministry.
- vii. All the raw materials shall be stored in covered sheds with a provisions to prevent any inflow of runoff into the stock yard.
- viii. The proposed plantation adjacent to the Tariamal Village (east) in and the proposed strengthening of the plantation in the existing premises in shall be completed within one year from the date of issue of EC and remaining proposed plantation *inter alia* include boundary plantation shall be completed in concurrence with the expansion operation of 0.50 MTPA.
  - ix. Filer bag house shall be designed for 150% of the air flow rate. The filter bag shall be PTFE dipped PPS type
  - x. The PP shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board

of Directors and the copy of the board resolution shall be submitted to the MoEFCC as a part of six-monthly report.

- xi. The make-up water requirement for the expansion project (18901 m<sup>3</sup>/day) shall be obtained from Mirouni Barrage across river Mahanadi only. No ground water shall be extracted.
- xii. The proposed fund under Enterprise Social Commitment (ESC) shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates.
- xiii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants shall be implemented.
- xiv. The project proponent shall provide for solar light system for all common areas, street lights, parking around project area and maintain the same regularly
- 23.7. Expansion of Ferro Alloy Plant by installing SAF (9 MVAx1= 40 TPD) for manufacture of Ferro Silicon/Ferro-Manganese by M/s Bihar Foundary and Casting Limited, located at Plot No. 1405, Ramgarh Industrial Area, Village Marar, District Ramgarh, Jharkhand [Proposal No IA/JH/IND/4677/2011, File No. J-11011/384/2010-IA.II(I)] Environmental Clearance under clause 7(ii) of EIA Notification, 2006- Further Consideration based on reply to ADS.

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

23.8. 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.

1.0 **M/s Steel Authority of India Limited** has made online application vide proposal no. IA/CG/IND/67974/2017 dated **6<sup>th</sup>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' 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-cumexpansion 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.	Unit	Existing	Existing	Proposed	Proposed	Total	Total
No.		configuration	Capacity	configuration	capacity	configuration	capacity
						after	after
						Expansion	Expansion
1.	Sinter Plant (	Complex			1	1	
a.	Sinter Plant- 1	4x50m <sup>2</sup>	Phased Out	Phased Out	-	-	-
b.	Sinter Plant- 2	$3x75m^2 + 1x80m^2$	-	No change	-	$3x75m^2$ + $1x80m^2$	-
с.	Sinter Plant- 3	1x 320 m <sup>2</sup> (existing) +1x 320 m <sup>2</sup> (New)	-	1x 320 m <sup>2</sup> (existing) +1x 360 m <sup>2</sup> (new)	-	$\begin{array}{ccc} 1x & 320 \\ m^2 \text{ (existing)} \\ +1x & 360 \\ m^2 \text{(new)} \end{array}$	-
d.	Total Sinter	-	9.235	-	Installed	-	9.772
	Production		MTPA		capacity		MTPA
					enhancement		
					by -		
					0.537MTPA		
2.	Coke Oven C	omplex	•	-	•		
a.	Battery 1	65 Oven 4.3 m	-	65 Oven 4.3	-	65 Oven 4.3 m	-
		tall to be phased		m tall to		tall	
		out		continue			
b.	Battery 2	65 Oven 4.3 m	-	No change	-	65 Oven 4.3 m	-
		tall				tall	
c.	Battery 3	65 Oven 4.3 m	-	No change	-	65 Oven 4.3 m	-
		tall				tall	
d.	Battery 4	65 Oven 4.3 m	-	No change	-	65 Oven 4.3 m	-
		tall				tall	
e.	Battery 5	65 Oven 4.3 m	-	No change	-	65 Oven 4.3 m	-
6	Du	tall		N 1		tall	
I.	Battery 6	65 Oven 4.3 m tall	-	No change	-	tall	-
g.	Battery 7	65 Oven 4.3 m	-	65 Oven 4.3	-	65 Oven 4.3 m	-
		tall to be phased		m tall to		tall	
<u> </u>	<b>D</b>	out		continue		(F.O. 1.0)	
h.	Battery 8	65 Oven 4.3 m	-	65 Oven 4.3	-	65 Oven 4.3 m	-
		tall to be phased		m tall to		tall	
	Datta ma O	Out		Continue No shares		(7.07	
1.	Battery 9	67 Oven 7 m tall	-	No change	-	tall	-
j.	Battery 10	67 Oven 7 m tall	-	No change	-	67 Oven 7 m	-
5	5			e		tall	
k.	Battery 11	67 Oven 7 m tall	-	No change	-	67 Oven 7 m	-
		(new battery)				tall with CDCP	
		with coke dry					
		cooling and					
		Associated					
		facilities					
1.	Coke	-	3.94MTPA	Small Battery	3.94MTPA	Any 2 or 3	3.94MTPA
	Production			Nos. 1, 7 & 8		batteries to be	
				will not be		always kept	

S. No	Unit	Existing	Existing Canacity	Proposed	Proposed capacity	Total configuration	Total capacity
110.		configuration	Capacity	comgutation	capacity	after	after
						Expansion	Expansion
				phased out.		under repair /	
						rebuilding cycle	
				Any 2 or 3		envisaged.	
				batteries to be			
				always kept			
				under repair /			
				rebuilding			
				cycle			
3	Blast Furnace	e Compley		envisageu.			
<u>э</u> .	BE 1 with	1033m3 to be		1033m3	_	1033m3	_
a.	CDI	nhased out	-	Will continue	-	Will continue to	-
	CDI	phased out		to operate		operate post	
				post		30.03.2018 for	
				30.03.2018		additional 3	
				for additional		years	
				3 years till			
				Blast Furnace			
				8 & SMS-III			
				is stabilized			
b.	BF 2 with	1033m3 to be	-	-do-	-	-do-	-
	TIS	phased out					
c.	BF 3 with	1033m3 to be	-	-do-	-	-do-	-
.1		phased out		No shares		17102	
<u>a.</u>	BF 4 BE 5 with	1/19 m3	-	No change	-	1/19 m3	-
е.	CDI	1719 113	-	No change	-	17191115	-
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	4060 m3 (New)	-	4060 m3	-	4060 m3 with	-
	CDI	with TRT		(New) with		TRT	
				TRT			
4.	Hot Metal	-	<b>7.5 MTPA</b>	-	<b>7.5 MTPA</b>	BF 1,2 & 3 will	<b>7.5 MTPA</b>
	Production					continue to	
						operate post	
						30.03.2018 for	
						additional 3	
5	Stool Molting	& Casting Units				years.	
<u>э</u> .	Steel Making	Av 500t Twin		SMS _ 1 will	_	SMS _ 1 will	
<i>u</i> .	5001	Hearth Furnaces		continue to		continue to	
		to be phased out		operate post		operate post	
		is se phased out		30.03.2018		30.03.2018 for	
				for additional		additional 3	
				3 years till		years.	
				SMS-III is			
				stabilized.			
b.	SMS II	• 3x 120 t BOF	-	No change	-	• 3x 120 t	
		• 2 x120t LF				BOF	
		• 2x120t RH				• 2 x120t LF	

S.	Unit	Existing	Existing	Proposed	Proposed	Total	Total
No.		configuration	Capacity	configuration	capacity	configuration	capacity
						after	after Expansion
		• 1 <sub>1</sub> ,120+ VD					Expansion
		• 1X1201 VD				• 2X1201 KH	
		• Two Hot				• 1x120t VD	
		metal				• Two Hot	
		Desulphirisati				metal	
		on units				Desulphirisat	
		• #ms 1,2,3 & 6				ion units	
		Single strand				• #ms 1,2,3 &	
		slab caster				6 Single	
		• #mc 4 : 4				strand slab	
		strands				caster	
		Bloom-cum-				• $\#$ mc 4 · 4	
		Beam Blank				strands	
		Caster				Bloom cum	
		• #ma 5: 1x4				Diooni-cuiii-	
		• #IIIC J. 1X4				Gester	
		Strand Bloom				Caster	
		Caster				• #mc 5: 1x4	
						strand	
						Bloom	
						Caster	
c.	SMS III	3x160 t BOF	-	No change	-	3x160 t BOF	
	(New Unit)	-	-	3x160t argon	-	3x160t argon	
				rinsing unit		rinsing unit	
				(AKU) New		(ARU)	
		2x160 hot metal	_	No change	-	2x160 hot metal	
		de-sulfurisation		i to enange		de-sulfurisation	
		unit (HMDU)				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	-	No change	-	1x vacuum tank	
		degassing unit				degassing unit	
		(Space provision)				(Space provision)	
		2x6 strand Billet	-	No change	-	2x6 strand	
		Casters		C		Billet Casters	
		1x6 strand	-	No change	-	1x6 strand	
		Bloom cum				Bloom cum	
		Billet Casters				Billet Casters	
		IxI strand Thin	-	-	-	-	
		& Continuous					
		Hot strip					
		finishing train of					
		-6 stands					
		-	-	Conversion of	-	1x3 strand	
				1x3 strand		Bloom-cum-	
			1	Beam Blank		Beam-Blank	1

S. No.	Unit	Existing configuration	Existing Capacity	Proposed configuration	Proposed capacity	Total configuration after Expansion	Total capacity after Expansion
				Caster to 1x3 strand Bloom- cum-Beam- Blank Caster of same capacity		Caster	
d.	Crude Steel Production	-	7.0 MTPA	-	7.0 MTPA	-	7.0 MTPA
6.	<b>Rolling Mills</b>	Complex					
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

No.         conliguration         Capacity         conliguration         conliguration <thconliguration< th=""> <thconlis< th="">         conliguratio</thconlis<></thconliguration<>	S.	Unit	Existing	Existing	Proposed	Proposed	Total	Total
RMP-I         To be phased out         -         Will continue to operate post 30.03.2018 for additional 3 years fill SMS-11 is is commissioned G.e. fill SMS-1 is not phased out         -         Will continue to operate post 30.03.2018 for additional 3 years fill SMS-11 is not phased out         -         Vill continue to operate post 30.03.2018 for additional 3 years fill SMS-11 is not phased out         -         No change         -         2x 330 tpd + 1 x         -           9.         RMP-II         2 x 330 tpd + 1 x         -         No change         -         1 × 144 tpd Line kiln         -         1 × 144 tpd Line kiln         -         No change         -         1 × 330 tpd kiln         -         1 × 130 tpd kiln         -         1 × 130 tpd kiln         -         1 × 150 tph kiln         -         1 × 158 MTPA         -         1 ×	No.		configuration	Capacity	configuration	capacity	configuration	capacity
8.       RMP-I       To be phased out       -       Will continue to operate post 30.03.2018 for additional 3 years ill SMS-II is commissioned is readitional 3 years ill SMS-II is not phased out)       -							Expansion	Expansion
Image: Comparison of the point of the po	8.	RMP-I	To be phased out	-	Will continue	-	Will continue to	-
9.     RMP-II     2x 330 tpd + 1 x 144 tpd Lime kin     -     30.03.2018 for additional 3 years ill SMS-III is commissioned (i.e. till SMS-I is not phased out)     -     2x 330 tpd + 1       9.     RMP-II     2x 330 tpd + 1 x 144 tpd Lime kin     -     No change     -     2x 330 tpd + 1       10.     RMP-III     5x450 tpd lime and dolo kin     -     No change     -     5x450 tpd lime and dolo kin     -       11.     Total Lime vertice     -     L58 MTPA     -     L58 MTPA     -     I.58 MTPA       12.     Power Blowing Station     -     No change     -     6 x 150 tph boiler     -     I.58 MTPA       13.     PBS I     6 x 150 tph boiler (new)     -     No change     -     1 x 150 tph boiler (new)     -     2 x 150 TPH BF gas fired boiler with 1 x 25 MW turbo-generator     -     1 x 15 MW + 3 x trabogenerator     -     -     2 x 150 TPH BF     -       14.     PBS II     2 x 150 TPH BF gas fired boiler with 1 x 25 MW turbo-generator     No change     -     1 x 15 MW + 3 trabogenerator     -     -     -       15.     TRT     TRT     Capacity not specified     No change     -     -     -     -       16.     <	0.		10 of phased out		to operate		operate post	
9.     RMP-II     2x 330 tpd + 1 x 144 tpd Lime kin     -     No change     -     2x 330 tpd + 1 x 144 tpd Lime kin     -       9.     RMP-II     2x 330 tpd + 1 x 144 tpd Lime kin     -     No change     -     2x 330 tpd + 1 x 144 tpd Lime kin     -       10.     RMP-III     5x450 tpd lime and dolo kin     -     No change     -     1.330 tpd kin       11.     Total Lime & Dolo Production     -     I.58 MTPA     -     I.58 MTPA       12.     Power Blowing Station     -     No change     -     6 x 150 tph boiler     -       12.     Power Blowing Station     -     No change     -     1 x 150 tph boiler (new)     -       13.     PBS 1     6 x 150 tph boiler (new)     -     No change     -     1 x 150 tph boiler (new)     -       14.     PBS II     2 x 150 TPH BF gas fired boiler with 1 x 25 MW     -     No change     -     2 x 150 TPH BF gas fired boiler with 1 x 25 MW       15.     TRT     TRT     Capacity not specified     No change     4MW     CDCP     4MW       16.     CDCP     CDP     Capacity not specified     No change     4MW     -     -       17.     Total Power installed     -     76 MW with Generation MWY     -     -     -     -    <					post		30.03.2018 for	
9.     RMP-II     2x 330 tpd + 1 x 144 tpd Lime kin     -     No change     -     2x 330 tpd + 1 x 144 tpd Lime kin     -       10.     RMP-III     2x 330 tpd + 1 x 144 tpd Lime kin     -     No change     -     2x 330 tpd + 1 x 144 tpd Lime kin     -       10.     RMP-III     5x450 tpd lime bolo     -     No change     -     5x450 tpd lime and dolo kin     -       11.     Total Lime k Dolo     -     1.58 MTPA     -     1.58 MTPA     -     1.58 MTPA       2     Power Blowing Station     -     1.58 MTPA     -     1.58 MTPA     -     1.58 MTPA       12.     Power Blowing Station     -     No change     -     1 x 150 tph     -       13.     PBS 1     6 x 150 tph     -     No change     -     1 x 150 tph     -       14.     PBS II     2 x 150 TPH BF gas fired boiler with 1 x 25 MW     -     No change     -     1 x 15MW + 3 x 12 MW turbo- generator     -     2 x 150 TPH BF     -       14.     PBS II     2 x 150 TPH BF     -     No change     -     1 x 15 MW + 3 x 12 MW turbo- generator     -     -       14.     PBS III     2 x 150 TPH BF     -     No change     -     1 x 15 MW + 3 x 12 MW turbo- generator     -     -     -       1					30.03.2018		additional 3	
9.     RMP-II     2x 330 tpd + 1 x is not phased out)     -     2x 330 tpd + 1 x is not phased out)     -       9.     RMP-II     2x 330 tpd + 1 x i44 tpd Lime kin     -     No change     -     2x 330 tpd + 1 x 144 tpd Lime kin     -       10.     RMP-III     5x450 tpd lime and dolo kin     -     No change     -     5x450 tpd lime and dolo kin     -       11.     Total Lime k Dolo     -     1.58 MTPA     -     I.58 MTPA     -     I.58 MTPA       12.     Power Blowing Station     -     No change     -     6 x 150 tph boiler     -     I.58 MTPA       13.     PBS I     6 x 150 tph boiler     -     No change     -     6 x 150 tph boiler     -       14.     PBS II     5 x 150 tph boiler     -     No change     -     I 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     -     -     -       15.     TRT     TRT     Capacity not specified     No change     4MW     CDCP     4MW       16.     CDCP     CDCP     Capacity not specified) & CCDCP     -     -     -     <					for additional		years	
9.     RMP-II     2x 330 tpd + 1 x 144 tpd Lime kiln     -     No change     -     2x 330 tpd + 1 x 144 tpd Lime kiln     -       10.     RMP-II     5x450 tpd lime and dolo kiln     -     No change     -     2x 330 tpd kiln       11.     Total Lime & Dolo     -     1.58 MTPA     -     I.58 MTPA       12.     Power Blowing Station     -     1.58 MTPA     -     I.58 MTPA       13.     PBS 1     6 x 150 tph boiler     -     No change     -     I.58 MTPA       14.     PBS 1     6 x 150 tph boiler     -     No change     -     I.58 MTPA       14.     PBS 1     6 x 150 tph boiler     -     No change     -     I x 150 tph boiler     -       13.     PBS 1     6 x 150 tph boiler     -     No change     -     I x 150 tph boiler     -       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       15.     TRT     TRT     Capacity not specified     No change     14MW     TRT     14MW       16.     CDCP     CDCP     Capacity not specified     No change     -     -     -       17.     Total Power     -     76 MW with Steam Generation Boilers <th></th> <th></th> <th></th> <th></th> <th>3 years till</th> <th></th> <th>•</th> <th></th>					3 years till		•	
9.     RMP-II     2x 330 tpd + 1 x 144 tpd Lime kiln     -     No change     -     2x 330 tpd + 1 x 144 tpd Lime kiln     -       10.     RMP-III     5x450 tpd lime and dolo kiln     -     No change     -     5x450 tpd lime and dolo kiln     -       11.     Total Lime & Dolo Production     -     I.58 MTPA     -     I.58 MTPA     -     I.58 MTPA       12.     Power Blowing Station     -     No change     -     1.58 MTPA     -     I.58 MTPA       13.     PBS I     6 x 150 tph boiler     -     No change     -     6 x 150 tph boiler     -     I.58 MTPA       14.     PBS II     2 x 150 tph boiler (new)     -     No change     -     1 x 150 tph boiler     -       14.     PBS III     2 x 150 tPH BF gas fired boiler with 1 x 25 MW turbo-generator     -     No change     -     1 x 15 MW + 3 x 12 MW turbo- generators       15.     TRT     TRT     Capacity not specified     No change     -     -     -       16.     CDCP     CDCP     Capacity not specified     No change     14MW     TRT     14MW       17.     Total Power     -     76 MW with specified     -     -     -     -     -       16.     CDCP     CDCP     CDCP     CDCP <th></th> <th></th> <th></th> <th></th> <th>SMS-III is</th> <th></th> <th></th> <th></th>					SMS-III is			
9.     RMP-II     2x 330 tpd + 1 x 144 tpd Lime kin     -     No change     -     2x 330 tpd + 1 x 144 tpd Lime kin       9.     RMP-II     2x 330 tpd kin     -     No change     -     2x 330 tpd kin       10.     RMP-III     5x450 tpd lime and dolo kin     -     No change     -     5x450 tpd lime and dolo kin       11.     Total Lime & Dolo Production     -     L58 MTPA     -     I.58 MTPA       12.     Power Blowing Station     -     No change     -     6 x 150 tph       13.     PBS 1     6 x 150 tph     -     No change     -     1 x 150 tph       14.     PBS I     6 x 150 tph     -     No change     -     1 x 150 tph       14.     PBS II     2 x 150 TPH BF gas fired boiler with 1 x 25 MW     -     No change     -     1 x 150 tph       14.     PBS II     2 x 150 TPH BF gas fired boiler with 1 x 25 MW     No change     -     2 x 150 TPH BF gas fired boiler with 1 x 25 MW     -       15.     TRT     TRT     Capacity not specified     No change     4MW     CDCP       16.     CDCP     CDCP     Capacity not specified     No change     4MW     CDCP       17.     Total Power Generation Boilers     -     76 MW with Steam     -     -     -					commissioned			
9.     RMP-II     2x 330 tpd + 1 x 144 tpd Lime kiin     -     No change     -     2x 330 tpd + 1 x 144 tpd Lime kiin     -       10.     RMP-III     5x450 tpd lime and dolo kin     -     No change     -     5x450 tpd lime and dolo kin     -       11.     Total Lime boiler     -     I.58 MTPA     -     I.58 MTPA     -     I.58 MTPA       12.     Power Blowing Station     -     No change     -     6 x 150 tph boiler     -     I.58 MTPA       13.     PBS I     6 x 150 tph boiler (new)     -     No change     -     1 x 150 tph boiler (new)     -       14.     PBS II     2 x 150 TPH BF gas fired boiler with 1 x 25 MW turbo- generators     -     No change     -     1 x 15 MW + 3 x 1 2 MW turbo- generators       15.     TRT     TRT     Capacity not specified     No change     -     2 x 150 TPH BF gas fired boiler with 1 x 25 MW     -     -       16.     CDCP     CDCP     Capacity not specified     No change     4MW     CDCP     4MW       17.     Total Power Generation Boilers     -     76 MW with Steam     -     -     -     -       16.     CDCP     CDCP     Capacity not specified     No change     4MW     CDCP     4MW       17.     Total Power Generation Boi					(i.e. till SMS-I			
9.     RMP-II     2x 330 tpd + 1 x 144 tpd Lime kin     -     No change     -     2x 330 tpd + 1 x 144 tpd Lime kin       10.     RMP-III     5x450 tpd lime and dolo kin     -     No change     -     5x450 tpd lime and dolo kin       11.     Total Lime & Dolo Production     -     I.58 MTPA     -     I.58 MTPA     -       12.     Power Blowing Station     -     No change     -     5x450 tpd lime and dolo kin     -       13.     PBS 1     6 x 150 tph boiler     -     No change     -     6 x 150 tph boiler     -       14.     PBS II     2 x 150 TPH BF gas fired boiler with 1 x 25 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     -     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     -     -     -       16.     CDCP     CDCP     Capacity not specified     No change     14MW     TRT     14MW       17.     Total Power     -     -     -     -<					is not phased			
9.       RMP-II <sup>2</sup> X 330 tpd + 1 x i X 330 tpd + 1 i X 330 tpd kiln           - X 330 tpd + 1 x 144 tpd Lime kiln          10.       RMP-III       5x450 tpd lime and dolo kiln           - X 330 tpd kiln          11.       Total Lime & Dolo Production           - X 350 tpd lime and dolo kiln           - Sx450 tpd lime and dolo kiln          12.       Power Blowing Station           - Sx5450 tpd lime boiler           - Sx5450 tpd lime - Sx5450 tpd lime          13.       PBS 1          6 x 150 tph boiler (new)             - No change           - Sx150 tph boiler          14.       PBS II          2 x 150 TPH BF - gas fired boiler with 1 x 25 MW           - No change           - I x 150 tph - boiler (new)          14.       PBS II          2 x 150 TPH BF - gas fired boiler with 1 x 25 MW           - No change           - Z x 150 TPH BF - gas fired boiler          15.       TRT       TRT        TRT           - Z x 150 TPH BF - Specified             16.       CDCP        CDCP        Capacity not -	0				out)			
144       tpd       Line       k.144       tpd       Line         kin       1x 330 tpd kin       -       No change       -       Sx450 tpd line       -         10.       RMP-III       5x450 tpd line       -       No change       -       and dolo kin       -         11.       Total Line       -       I.58 MTPA       -       I.58 MTPA       -       I.58 MTPA         12.       Power Blowing Station       -       No change       -       6 x 150 tph       -         13.       PBS I       6 x 150 tph       -       No change       -       6 x 150 tph       -         14.       I x 150 tph       -       No change       -       1 x 150 tph       -         14.       PBS II       2 x 150 TPH BF       -       No change       -       1 x 15 MW + 3       -         14.       PBS II       2 x 150 TPH BF       -       No change       -       2 x 150 TPH BF       -         14.       PBS II       2 x 150 TPH BF       -       No change       -       2 x 150 TPH BF       -         15.       TRT       TRT       TRT       Capacity not       specified       -       -       -       -	9.	RMP-II	• 2x 330 tpd + 1 x	-	No change	-	• 2x 330 tpd + 1	-
Image: State in the image: State in			144 tpd Lime				x 144 tpd Lime	
It. 3.50 Ipd kiln         It. 3.50 Ipd kiln           10.         RMP-III         5x450 tpd line           and dolo kiln         -         No change           11.         Total Line         -           11.         Total Line         -           12.         Power Blowing Station         -           13.         PBS I         6 x 150 tph           -         boiler         -           -         1 x 150 tph           -         boiler           -         1 x 150 tph           -         boiler (new)           -         1 x 150 tph           -         1 x 150 tph           -         1 x 150 tph           -         No change           -         1 x 150 tph           -         -           -         1 x 150 tph           -         -           -         -           -         -           -			Kiin 1				Kiin 1 - 220 to d 1-:1-	
10.       RMF-III       3A+3.0 (pd fille and dolo kin       -       100 change       -       3A+3.0 (pd fille and dolo kin       -         11.       Total Lime & Dolo Production       -       1.58 MTPA       -       1.58 MTPA       -       1.58 MTPA         12.       Power Blowing Station       -       No change       -       6 x 150 tph       -       -       6 x 150 tph       - <td< th=""><th>10</th><th>DMD III</th><th>• 1x 550 tpd killi 5x450 tpd lime</th><th></th><th>No chango</th><th></th><th>• 1x 550 tpd killi 5x450 tpd lime</th><th></th></td<>	10	DMD III	• 1x 550 tpd killi 5x450 tpd lime		No chango		• 1x 550 tpd killi 5x450 tpd lime	
11.       Total Lime & Dolo Production       -       1.58 MTPA       -       1.58 MTPA       -       1.58 MTPA         12.       Power Blowing Station       -       No change       -       6 x 150 tph boiler       -       -       6 x 150 tph boiler       -	10.		and dolo kiln	-	No enange	-	and dolo kiln	-
& Dolo Production         Production           12.         Power Blowing Station           13.         PBS I         6 x 150 tph boiler         -         6 x 150 tph boiler         -           13.         PBS I         6 x 150 tph boiler         -         No change         -         6 x 150 tph boiler         -           14.         PBS II         2 x 150 TPH BF gas fired boiler         -         No change         -         1 x 15 MW + 3 x 12 MW turbo- generators         -         No change         -         2 x 150 TPH BF gas fired boiler         -	11.	Total Lime	•	1.58 MTPA	-	1.58 MTPA	•	1.58 MTPA
Production         Image: constraint of the specified of th		& Dolo						
$ \begin{array}{ c c c c c c } \hline 12. & \textbf{Power Blowing Station} \\ \hline 13. & PBS I & 6 x 150 tph & boiler & & No change & - & 6 x 150 tph & boiler & & boiler & & boiler & & & boiler & & & & \\ \hline & & 1 x 150 tph & - & No change & - & 1 x 150 tph & - & & & & \\ \hline & & boiler (new) & & & & & & & & & \\ \hline & & & 1 x 15 MW + 3 x & - & & No change & - & & & & & & & & \\ \hline & & & 1 x 15 MW + 3 x & - & & & & & & & & & \\ \hline & & & 1 x 15 MW + 3 x & - & & & & & & & & & \\ \hline & & & & 1 x 15 MW + 3 x & - & & & & & & & \\ \hline & & & & 1 x 15 MW + 3 x & - & & & & & & \\ \hline & & & & 1 x 15 MW + 3 x & - & & & & & & \\ \hline & & & & & 1 x 15 MW + 3 x & - & & & & & & \\ \hline & & & & & 1 x 15 MW + 3 x & - & & & & & \\ \hline & & & & & 1 x 15 MW + 3 x & - & & & & & \\ \hline & & & & & 1 x 15 MW turbo- & & & & & \\ \hline & & & & generators & & & & & & & \\ \hline & & & & & & generators & & & & & & \\ \hline 14. & PBS II & & & 2 x 150 TPH BF & - & & & & & \\ gas fired boiler & & & & & & & & \\ gas fired boiler & & & & & & & & \\ with 1 x 25 MW & & & & & & & & \\ with 1 x 25 MW & & & & & & & & \\ turbo-generator & & & & & & & & \\ turbo-generator & & & & & & & & \\ \hline 15. & TRT & TRT & TRT & Capacity not & No change & 14MW & TRT & & & & 14MW \\ \hline 16. & CDCP & CDCP & CDCP & Capacity not & No change & & & & & & & \\ \hline 17. & \textbf{Total Power} & - & & & & & & & & & & & & \\ Generation & & & & & & & & & & & & & & & & & \\ (MW) & & & & & & & & & & & & & & & & & & &$		Production						
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       -       -       -       -       -       -       76 MW + Green power from TRT (14 MW)         Steam       Green power from Green power from traction Boilers       TRT       Capacity not specified) & CDCP       -	12.	Power Blowin	ng Station	1		1	1	
boiler         boiler         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         -         2 x 150 TPH BF with 1 x 25 MW         -           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         - <th>13.</th> <th>PBS I</th> <th>6 x 150 tph</th> <th>-</th> <th>No change</th> <th>-</th> <th>6 x 150 tph</th> <th>-</th>	13.	PBS I	6 x 150 tph	-	No change	-	6 x 150 tph	-
Image: height of the second system1 x 150 tph boiler (new)-No change-1 x 150 tph boiler (new)-1 x 15 MW + 3 x 1 2 MW turbo- generators-No change-1 x 15 MW + 3 x y 1 x 15 MW + 3 x generators-1 x 15 MW + 3 x y 1 x 1 x 25 MW + 3 x y 1 x 25 MW + 1 x 1 4 MW + 1 x 25 MW + 1 x 25 MW + 1 x 1 4 MW + 1 + 1 4 MW + 1 + 1 4 MW + 1 + 1 + 1 4 MW + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 +			boiler				boiler	
boiler (new)boiler (new)1 x 15 MW + 3 x-12 MW turbo- generators-14.PBS II2 x 150 TPH BF gas fired boiler with 1 x 25 MW-15.TRTTRT16.CDCPCDCPCDCPCDCPCDCPCDCPCDCPCDCPGeneration Boilers (TPH)-76MW with specified17.Total Power Generation (MW)17.Total Power (Capacity & steam Generation (MW)17.Total Power (Capacity & steam Generation (Generation (Capacity not installed Generation (Capacity not specified17.Total Power (Capacity & steam Generation (Generation (Capacity not installed Generation (Capacity not specified)17.Total Power (Capacity & steam Generation (Capacity not installed Generation Boilers (TPH)17.Total Power (Capacity not specified)18.Green specified)19101010111213131313131313131313131313131313			1 x 150 tph	-	No change	-	1 x 150 tph	-
12 MW turbo- generators       -       No change       -       1 x 15 MW + 3 x 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 + Green power from TRT (14 MW)         0       Green power from trt (Capacity not specified)       -       -       -       -       -         17.       Total Power (Capacity & Steam Generation Boilers       -       76 MW with Green power from trt (14 MW)       -       -       -       -       -       -       76 MW + Green power from trt (14 MW)			boiler (new)		NT 1		boiler (new)	
14.       PBS II       2 x 150 TPH BF gas fired boiler with 1 x 25 MW turbo-generator       -       2 x 150 TPH BF gas fired boiler with 1 x 25 MW turbo-generator       -       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)       -       -       -       -       76 MW + Green power from       -       -       -       76 MW + Green power from       -			$1 \times 15 \text{ MW} + 3 \times 12 \text{ MW}$ turks	-	No change	-	$1 \times 15 \text{ MW} + 3$	-
14.PBS II2 x 150 TPH BF gas fired boiler with 1 x 25 MW turbo-generatorNo change-2 x 150 TPH BF gas fired boiler with 1 x 25 MW turbo-generator15.TRTTRTCapacity not specifiedNo change14MWTRT14MW16.CDCPCDCPCapacity not specifiedNo change4MWCDCP4MW17.Total Power Generation (MW) installed Generation Boilers (TPH)76 MW +6eneration Boilers (TPH)76 MW +00Generation specified1390TPH + Green power from TRT (14 MW)17.Total Power Generation (MW)76 MW +17.Total Power Generation (MW)17.Total Power (Capacity & Generation (MW)17.Total Power (Capacity & Generation (Capacity not specified) &18.Green (Capacity not specified)19.No change specified) & CDCP (Capacity not specified)			12 IVI W LUIDO-				x 12 WIW turbo-	
14.     15.     17.     15.     TRT     TRT     Capacity not specified     No change     14MW     14MW     14MW       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)     -     -     -     -     76 MW +       18.     Generation (MW)     Generation 1390TPH +     Steam     -     -     -       Generation Boilers     (Capacity not specified)     No change     -     -     -       76 MW with other     -     -     -     -     -     -       76 MW ith other     -     -     -     -     -     -       76 MW ith other     -     -     -     -     -     -       76 MW ith other     -     -     -     -     -     -       17.     Total Power     -     -     -     -     -       18.     Generation (MW)     Generation (TTT)     -     -     -     -       19.     Freen power from TRT     -     -     -     -     -       19. <t< th=""><th>14</th><th>PRS II</th><th>2 x 150 TPH BF</th><th></th><th>No change</th><th>_</th><th>2 x 150 TPH RF</th><th>_</th></t<>	14	PRS II	2 x 150 TPH BF		No change	_	2 x 150 TPH RF	_
with 1 x 25 MW with 1 x 25 MW turbo-generatorwith 1 x 25 MW turbo-generator15.TRTTRTCapacity not specifiedNo change14MWTRT14MW16.CDCPCDCPCapacity not specifiedNo change4MWCDCP4MW17.Total Power Generation (MW)76 MW +17.Total Power Generation (MW)76 MW +18.Green power from Generation Boilers (TPH)76 MW +19.Green power from TRT (Capacity not specified)76 MW +19.Green power from reen power from reen power from respecified)19.Green power from reen power from respecified) & cCDCP (Capacity not specified)19191010101010 <tr< th=""><th>11.</th><th>1 DO II</th><th>gas fired boiler</th><th></th><th>i to enange</th><th></th><th>gas fired boiler</th><th></th></tr<>	11.	1 DO II	gas fired boiler		i to enange		gas fired boiler	
turbo-generatorturbo-generatorturbo-generator15.TRTTRTCapacity not specifiedNo change14MWTRT14MW16.CDCPCDCPCapacity not specifiedNo change4MWCDCP4MW17.Total Power Generation (MW)76 MW +17.Total Power Generation (MW)76 MW +18.Generation (MW)Generation 1390TPH + Green steam Generation H1390TPH + Green power from TRT (14 MW)Generation Boilers (TPH)TRT Not specified) &CDCP (Capacity not specified) &MW-			with 1 x 25 MW				with 1 x 25 MW	
15.TRTTRTCapacity not specifiedNo change14MWTRT14MW16.CDCPCDCPCapacity not specifiedNo change4MWCDCP4MW17.Total Power Generation (MW) installed capacity & Steam Generation Boilers (TPH)76 MW +17.Total Power Generation (MW) installed capacity & Steam Generation Boilers (TPH)76 MW +17.Total Power Generation (MW) installed capacity & Steam Generation Boilers (TPH)76 MW +17.Green power from TRT (Capacity not specified) & CDCP76 MW +17.Green power from TRT (Capacity not specified) & cocc76 MW +17.Green power from TRT (Capacity not specified) & cocc18.Green (Capacity not specified)19.Green (Capacity not specified)19.Green (Capacity not specified)19.Green (Capacity not specified)19.Green (Capacity not specified) <th></th> <th></th> <th>turbo-generator</th> <th></th> <th></th> <th></th> <th>turbo-generator</th> <th></th>			turbo-generator				turbo-generator	
Image: specified     specified       16.     CDCP     CDCP     Capacity not specified     No change     4MW     CDCP     4MW       17.     Total Power     -     -     76 MW with     -     -     -     76 MW +       17.     Total Power     -     76 MW with     -     -     -     -     76 MW +       Generation (MW)     Generation     1390TPH +     -     -     -     -     76 MW)       steam     gower from     TRT (14     MW)     &     &     MW)     &       Steam     power from     TRT     MW)     &     &     &       Boilers     (Capacity not specified) &     CDCP     (Capacity not specified) &     MW)     &       Image: specified b	15.	TRT	TRT	Capacity not	No change	14MW	TRT	14MW
16.CDCPCDCPCapacity not specifiedNo change4MWCDCP4MW17.Total Power Generation (MW) installed capacity & Steam76 MW +17.Total Power Generation (MW) installed capacity & Steam76 MW +18.Generation (MW) installed capacity & Steam76 MW +190TPH + capacity & Generation Boilers (TPH)1390TPH + power from TRT (Capacity not specified) & CDCP (Capacity not specified)76 MW +10.Generation Generation Boilers (TPH)10.Generation Generation Boilers (TPH)10.Generation Generation Boilers (Capacity not specified) & <t< th=""><th></th><th></th><th></th><th>specified</th><th>U</th><th></th><th></th><th></th></t<>				specified	U			
Image: constraint of the specifiedspecifiedterm of the specified17.Total Power Generation (MW)76 MW +Generation (MW) installed capacity & Steam Generation Boilers (TPH)Green power from TRT (Capacity not specified) & CDCP (Capacity not specified)76 MW +17.Total Power Generation (MW) (TPH)Generation TRT (Capacity not specified)76 MW +17.Generation (MW) (Capacity not specified)Green (Capacity not specified)76 MW +17.Generation (Capacity not specified)Green (Capacity not specified)76 MW +17.Generation (Capacity not specified)Green (Capacity not specified)76 MW +17.Generation (Capacity not specified)76 MW +18.Green (Capacity not specified)76 MW +19.Green (Capacity not specified)76 MW +	16.	CDCP	CDCP	Capacity not	No change	4MW	CDCP	4MW
17.       Total Power       -       76 MW with       -       -       76 MW +         Generation       (MW)       Generation       Generation       power from       TRT (14         installed       1390TPH +       Green       MW)       KCDCP (4       MW)         Steam       power from       TRT       KCDCP (4       MW)         Boilers       (Capacity       not       specified) &       CDCP       CDCP         (Capacity       not       specified)       specified)       specified)       Specified)       Specified)				specified				
GenerationSteamGreen(MW)Generationpower frominstalled1390TPH +capacity &GreenSteampower fromGenerationTRTBoilers(Capacity(TPH)notspecified) &CDCP(Capacitynotspecified)specified)	17.	Total Power	-	76 MW with	-	-	-	76 MW +
(MW)       Generation       power from         installed       1390TPH +       TRT (14         capacity &       Green       MW)         Steam       power from       &CDCP (4         Generation       TRT       MW)         Boilers       (Capacity       MW)         (TPH)       not       specified) &         Not       specified)       specified)		Generation		Steam				Green
Instanced       13901PH +         capacity &       Green         Steam       power from         Generation       TRT         Boilers       (Capacity         (TPH)       not         specified) &       CDCP         (Capacity         not         specified) &         specified)         specified)		(MW)		Generation				power from
Steam     power from     &CDCP (4       Generation     TRT     MW)       Boilers     (Capacity     MW)       (TPH)     not     specified) &       CDCP     (Capacity     Image: Comparison of the specified) in the specified in the		installed		13901PH +				1KI (14 MW)
Generation Boilers (TPH) CDCP (Capacity not specified) & CDCP (Capacity not specified) (Capacity not specified) (Capacity not		Steem		nower from				& CDCP (A)
Boilers (TPH) CDCP (Capacity not specified) & Specified) Specified)		Generation		TRT				MW)
(TPH) not specified) & CDCP (Capacity not specified)		Boilers		(Canacity				101 (1)
specified) & CDCP (Capacity not specified)		(TPH)		not				
CDCP (Capacity not specified)				specified) &				
(Capacity not specified)				CDCP				
not specified)				(Capacity				
specified)				not				
	10	0	2.550 775	specified)	N. alara		2-550 TDD	2-550 TDD
10. $Oxygen$ $5x550 \text{ IPD}$ $-$ INO change $ 5x550 \text{ IPD}$ $3x550 \text{ IPD}$ Plant (OP) $1x700$ $-$ INO change $ 1x700 \text{ TPD}$ $1x700 \text{ TPD}$	18.	Oxygen Plant (OP)	5X550 IPD	-	ino change	-	3x330 TPD 1x700 TPD	5x550 IPD 1x700 TPD

S. No.	Unit	Existing configuration	Existing Capacity	Proposed configuration	Proposed capacity	Total configuration after Expansion	Total capacity after Expansion
		Amendment accorded by MoEFCC					
19.	Captive Secured Land Fill (SLF)	-	-	New SLF envisaged	34250m <sup>3</sup>	SLF	Capacity: 34250m <sup>3</sup>

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.

SN.	Description	Existing Facilities	Status of	Plant as per revised
		as per 7.0 MIPA	Existing	configuration
		Expansion EC	racinties	
1	Hot Motel Production	7 5 MTDA	5 04 MTDA	No Changa
1.	Hot Metal Production	7.5 MIPA	J.04 MIPA	No Change
2.	Crude Steel Production	7.0 MTPA	4.74 MTPA	No Change
3.	Total finished steel	6.3 MTPA	3.124 MTPA	No Change
	production			
4.	Sinter Plant Complex			
a.	Sinter Plant-1	Phased out	Phased Out	No Change
b.	Sinter Plant-2	3x75 m2+ 1x 80	Under	No Change
		m2	Operation	-
c.	Sinter Plant-3	1x 320	Under	1x 320 m <sup>2</sup> (existing)
		$m^2$ (existing) +1x	Operation	$+1x 360 m^2$
		360 m <sup>2</sup> ( <b>new</b> )	(Production not	
			beyond 2008	
			EC capacity)	
d.	<b>Total Sinter Production</b>	9.235 MTPA	7.04 MTPA	9.772 MTPA
				(enhanced installed
				capacity -
				0.537MTPA)

6.0	The facilities	envisaged a	as per the	e EC a	ccorded	in 2008	; status	of e	xisting	facilities	and
change	s proposed is	given in Tał	ole below	:							

SN.	Description	Existing Facilities as per 7.0 MTPA Expansion EC	Status of Existing Facilities	Plant as per revised configuration
		Accorded Valid		
5	Coke Oven Complex			
a.	Battery 1	Shall be phased out	Stopped	For meeting the coke requirement of Blast Furnaces, Battery No. 1 will 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
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

SN.	Description	<b>Existing Facilities</b>	Status of	Plant as per revised
		as per 7.0 MTPA	Existing	configuration
		Expansion EC	Facilities	
		Accorded Valid		
		till 30.03. 2018		
1.	Coke Production	3.94MTPA	3.14 MTPA	No Change
6.	Blast Furnace			
	Complex			
a.	BF 1 with CDI	Shall be phased out	Under	Will continue to
			Operation	operate post
b.	BF 2 with TIS	Shall be phased out	Under	30.03.2018 for
	DE 2 mith TIC	Chall he shaed out	Uperation	Plast Europeo 8 &
C.	BF 3 with 11S	Shall be phased out	Onder	SMS III is stabilized
d		1710 m <sup>2</sup>	Under	No Chango
u.		1/17 1113	Operation	INO Change
e	BE 5 with CDI	1719 m3	Under	No Change
0.		1/1/113	Operation	
f	BF 6 with CDI	2000 m3	Under	No Change
1.		2000 110	Operation	i to chunge
g.	BF 7 with CDI	2363 m3	Under	No Change
0			Operation	6
h.	BF 8 with CDI	4060 m3(New)with	Sub-units	No Change
		TRT	under testing /	C
			trial	
i.	<b>Hot Metal Production</b>	7.5 MTPA	5.04 MTPA	No Change
7.	Steel Making &			
	Casting Units			
a.	SMS I	4x 500t Twin	Under	SMS - 1 will continue
		Hearth Furnaces,	Production	to operate post
		Shall be phased out		30.03.2018 for
				additional 3 years till
h	SMC II	- 2- 120 + DOE	Under	SIVIS-III IS STADIIIZED.
D.	51/15 11	• 3x 120 t BOF	Production	No Change
		• 2 x120t LF (1	FIGURCHOIL	
		New)		
		• with matching		
		& Casting		
		facilities		
C.	SMS III (New Unit)	3x160 t BOF	Under	No Change
			Construction	
		-	Envisaged	3x160T argon rinsing
				unit (ARU) New
				envisaged
		2x160 hot metal	Under	No Change
		de-sulfurization	Construction	-

SN.	Description	Existing Facilities	Status of	Plant as per revised	
		as per 7.0 MTPA	Existing	configuration	
		Accorded Valid	racinties		
		till 30.03. 2018			
		unit (HMDU)			
		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	
		2x6 strand Billet Casters	Under Construction	No Change	
		1x6 strand Bloom cum Billet Casters	Under Construction	No Change	
		1x1strandThinSlabCaster&ContinuousHotstrip finishing trainof 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				
а.	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	Under Production	Capacity up-gradation of Rail & Structural	

SN.	Description	<b>Existing Facilities</b>	Status of	Plant as per revised
		as per 7.0 MTPA	Existing	configuration
		Expansion EC	Facilities	
		Accorded Valid		
		till 30.03. 2018		
		(RSM) with new		Mill (RSM) with
		Universal Rail Mill		URM to 2.2MTPA
		(URM)		envisaged
c.	Plate Mill	1.42 MTPA Plate	Completed	Capacity up-gradation
		Mill		of Plate Mill to 1.65
				MTPA envisaged.
d.	Quenching and	Not Envisaged		New facility
	Tampering facility in			envisaged
	Plate Mills			
e.	Merchant Mill	0.6 MTPA	Under	Capacity up-gradation
		Merchant Products	Production	of Merchant Products
				to 0.85 MTPA
				envisaged
f.	Wire Rod Mill	0.68 MTPA Wire	Under	Capacity up-gradation
		Rods	Production	of Wire Rod Mill to
				0.7 MTPA envisaged
g.	Universal Beam Mill	1.0 MTPA	Now not	Proposal for setting up
			coming	of Universal Beam
				Mill has now been
1.	D 9 D 1 M:11		II. de a Testine /	dropped.
n.	Bar & Rod Mill	0.9 MTPA	Under Testing /	No Change
;	Total finished steel	6 3 MTDA	111ai 2.124 MTDA	No Chango
1.	nroduction	0.3 WIII A	5.124 WITTA	110 Change
9.	Refractory Material			
	Plant (RMP)			
a.	RMP-I	To be phased out	Under	Will continue to
			Operation	operate post
				30.03.2018 for
				additional 3 years till
				SMS-III 18
				commissioned (i.e. till
				SMS-1 is not phased
1			Lador	out)
D.	KWIP-II	$ \square 2X 330 \text{ tpd} + 1 X $	Under	No Change
		144 upd Lime Kiln $\Box$ 1x 220 trad leite	Operation	
		$\square IX 330 \text{ tpd Klln}$	Doutly, U., J.,	No Charge
с.	KWIP-III	5x450 tpd lime and	Partiy Under	No Change
			/ Dorthy Under	
			Testing & Trial	
			resung & mar	

SN.	Description	Existing Facilities as per 7.0 MTPA Expansion EC	Status of Existing Facilities	Plant as per revised configuration
		till 30.03. 2018		
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;
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
с.	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

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
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 <i>ha.</i> <i>Plant area:</i> <b>3284.75 ha</b> .	Total area under BSP: 6286.75 <i>ha.</i> <i>Plant area:</i> <b>3284.75 ha</b> .	No Change
16.	Captive Secured Land Fill (SLF)	<ul> <li>Not envisaged</li> </ul>		• SLF (Capacity; 34250 m <sup>3</sup> ) envisaged

	Summary of the Units to be Phased out				
SN.	Description	7.0 MTPA Expansion	Plant as per revised		
		30.03. 2018	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 21011' to 21013' and East longitude 81022'to 81024'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 =  $1380417 \text{ Nm}^3/\text{hr}$ ; BOF/LD gas =  $71,529 \text{ Nm}^3/\text{hr}$ ; CO Gas =  $189,195 \text{ Nm}^3/\text{hr}$  is envisaged at 7.0 MTPA stage.

Raw MaterialQuantity (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 / Indegenous	Rail

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:

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 TMCft/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<sup>3</sup> and Maroda-II reservoirs is 27.4 MM<sup>3</sup>.

C1	Diant coation	Noture		Litilization	
51.	Plant section	nature	Qly (IPA)	Uunzation	
No.					
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.				

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

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

17.0 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 a 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.

23.9. Clinker Grinding Unit (150000 TPA) Village – Naudhiya, Tehsil – Lalganj Ajhara, Distt.
– Pratapgarh, Uttar Pradesh by M/s Dayodaya Cement Pvt. Ltd. [Proposal No IA/UP/IND/67804/2017; MoEF&CC File No. IA-J-11011/476/2017-IA-II(I)] – Terms of Reference.

1.0 **M/s Dayodaya Cement Private Limited** has made online application vide proposal no. IA/UP/IND/67804/2017 dated 1<sup>st</sup> **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) Cements Plants under category 'B' of the Schedule of EIA

Notification, 2006. Since the SEIAA is not constituted at this time, the proposal is appraised at the Central Level.

2.0 M/s Dayodaya Cement Private Limited proposed to install a new Clinker Grinding Unit. It is proposed to set up the plant for 150000 TPA based on dry process at Naudhiya Village, LalganjAjhara Tehsil Pratapgarh Distt. Uttar Pradesh.

3.0 The project area is bounded by latitudes from 250 54' 48.53" to 250 54' 51.68" N Longitudes 810 30' 53.39" to 810 30' 56.68" E covered in Survey of India Toposheet No. 63 G/9. The plant area is almost flat having gentle slope towards South. The highest elevation of the plant area is 356 ft towards North while the lowest elevation is 355 ft in S-W direction. Nearest Railway Station: Unchahar, 22 Km in West direction.

4.0 The total land required for the proposed plant is 2.061 Ha. No Forest land involved. Land is private agricultural and converted to industrial use. The entire land has been acquired for the project. Of which 1.396 Ha will be required for plant machinery; storage; road etc. and 0.665 will be developed as greenbelt.

5.0 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.

6.0 Total project cost is approx. 14.50 Crore rupees. Total proposed employment generation from proposed project will be 110.

7.0 The targeted production capacity of the proposed plant is 150000 TPA. The raw material for the plant shall be procured from Uttar Pradesh, Madhya Pradesh and Rajasthan. The ore transportation will be done through Road/Rail. The proposed capacity for different products for new site area as below:

Name of unit	No. of units	Capacity of Unit	Production Capacity
Clinker Grinding Unit	1	150000 TPA	150000 TPA

8.0 The electricity load of 1160 KW per hour will be procured from State Grid. Company has also proposed to install 63 KVA DG Set.

9.0 Proposed raw material and fuel requirement for project are CLINKER: 99000 tonnes per annum, GYPSUM: 3000 tonnes per annum, FLY ASH: 48000 tonnes per annum and 8 ltr/hr (in case of power failure). Requirement would be fulfilled by road transport. Fuel consumption will be mainly for DG sets.

10.0 Water Consumption for the proposed project will be 10KLD and waste water generation will be Nil. Domestic waste water will be treated in soak pit and no industrial waste water will be generated

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

12.0 After detailed presentation by PP along with EIA Consultant, observed that the proposed grinding unit is amid of agricultural land.

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 Annexure I read with additional ToRs at Annexure-2.

- i. Public Hearing to be conducted by the concerned State Pollution Control Board.
- ii. The issues raised during public hearing and commitment of the project proponent on the same along with time bound action plan to implement the commitment and financial allocation thereto should be clearly provided.
- iii. The project proponent should carry out social impact assessment of the project as per the Office Memorandum No. J-11013/25/2014-IA. I dated 11.08.2014 issued by the Ministry regarding guidelines on Environment Sustainability and Enterprise Social Commitment (ESC) related issues. The social impact assessment study so carried out should form part of EIA and EMP report.
- iv. The impact on agricultural land shall be assessed and incorporated in the EIA/EMP.
- v. The certificate of land conversion from the agriculture to specified industrial use from the competent authority shall be submitted along with the EIA/EMP Report.
- vi. Filer bag house shall be designed for 150% of the air flow rate.
- 23.10. Expansion of Integrated Steel Plant (Sponge Iron 0.21 to 0.264 MTPA; Steel Melting 0.129 to 0.211 MTPA; Ferro Alloy- 0.0144 to 0.0198 MTPA; Rolling Mill- 0.15 to 0.21 MTPA; New Pellet plant 0.6 MTPA with coal gasifier from alternative fuel) by M/s Shri Bajrang Power & Ispat Limited [Proposal No IA/CG/IND/67789/2017 MoEF&CC File No. J-11011/531/2007-IA-II(I)] Terms of Reference for Expansion.

1.0 **M/s Shri Bajrang Power & Ispat Limited** has made online application vide proposal no. IA/CG/IND/67789/2017 dated **31**<sup>st</sup> **August 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 Shri Bajrang Power & Ispat Limited** is operating 2x350 TPD Sponge Iron Plants with 26 MW Captive Power Plant, 6 x 8 MT Induction Furnace with Continuous Casting machine, 2 x 4 MVA Ferro Alloys plant and 1.2 MTPA Coal Washery and 0.15 MTPA Rolling Mill at village Borjhara, in Urla Industrial Complex, Raipur, Chhattisgarh. The existing project was accorded environmental clearance vide Ir.no. J-11011/531/2007-IA.II (I) dated 17-01-2008; J-11015/159/2009- IA.II(M) dated 28.1.2010; and J-11015/159/2009- IA.II(M) dated 26.8.2013. The details of renewals of Consent to Operate accorded by Chhatisgarh State Pollution Control Board are as follows: -

- 1. Renewal of Consent to operate of Ferro alloys and Biomass based Power Plant granted vide letter No. 2895/TS/CECB/2017 of water and 2897/TS/CECB/2017 Of air dated 26/08/2017 and valid upto 30/05/2020.
- 2. Consent to operate of Steel Melting Shop granted vide letter No. 3531/TS/CECB/2016 of water and 3533/TS/CECB/2016 of air dated 20/09/2016 and valid upto 20/09/2017.Renewal for further period is also under process at CECB.
- 3. Renewal of Consent to operate of Coal washery and Hot Re-Rolling Mill Plant granted vide letter No. 8081/TS/CECB/2015 of water and 8083/TS/CECB/2015 Of air dated 16/03/2015 and valid upto 31/12/2017.
- 4. Renewal of Consent to operate of Sponge Iron and Waste Heat Recovery Based Power Plant granted vide letter No. 8512/TS/CECB/2015 of water and 8514/TS/CECB/2015 Of air dated 27/03/2015 and valid upto 31/03/2018.

3.0 Now, M/s. Shri Bajrang Power &Ispat Ltd. proposes for the expansion of existing manufacturing unit for increase capacity of Sponge iron; Steel Melting; Ferro alloy; rolling mill; and proposed to establish New Pellet Plant. The proposed capacity for different products are as below:

Existing Installed Capacity and Total Capacity after expansion						
Existing Production	Total capacity after	Remark				
capacity and configuration	expansion and					
	configuration					
Sponge Iron - 2,10,000 TPA	Sponge Iron – 2,64,000	Sponge iron process				
2 x 350 TPD x 300 days	TPA 2 x 400 TPD x 330	optimization with same 2				
	days	kilns by use of good quality coal				
Total Power Plant – 26 MW						
(CPP)	WHRB – 18 MW	No change in capacity but Change in fuel Mix for CPP.				
WHRB – 18 MW	CPP - 8 MW	To include coal as fuel in				
	AFBC Boiler 60 TPH	addition to Rice Husk				
CPP – 8 MW	Fuel : Rice Husk,Dolochar	&Dolochar				
AFBC Boiler 60 TPH	and coal					
Fuel : Rice Husk &Dolo						
Char						
SMS – 1, 29,600 TPA	SMS – 2, 11, 200 TPA	Two more induction furnace				
6 x 8T Induction Furnace		of 15 T each along with				
		continuous casting machine				
		and LRF to be installed for				
		additional production 81,600 TPA.				
Ferro Alloys – 14.400 TPA	Ferro Alloys – 19,800 TPA	Existing furnaces 4 MVA – 2				
2 x 4 MVÅ (SAF)	1 x 5 MVA + 1 x 6 MVA	Nos. will be replaced by				
(Combined EC of Ferro &	(SAF)	higher capacity transformer				
Biomass)		1X5 MVA				
		1X6 MVA				

Rolling Mill – 0.15 MTPA	Rolling Mill - 0.21 MTPA	Optimization of production
		capacity of Rolling Mill by
		curtailing Idle running hours.
Pellet plant (0.6 MTPA) CTE	Proposed - Pellet Plant (0.6	New unit – Applying for EC
granted by CECB, but plant	MTPA)	
yet not installed		

4.0 The proposed expansion will be carried in the existing plant premises in Khasra No. 173, 174, 175, 176, 177 & 178, at village Borjhara, in Urla Industrial Complex, Raipur, Chhattisgarh. The project area is bounded by latitudes from 21°18'23" to 21°18'46" Longitudes81°35'09" to 81°35'44" covered in Survey of India Toposheet No. 64G/11.

5.0 The land area acquired for the plant is 27.8 Ha. Present activities are covered under 21.0 Ha and for expansion no additional land required. The 12 Ha. land was allotted by Govt of Chhatissgarh in Industrial area and balance land area is Private Purchased diverted land. The entire land has been acquired for the project. Of the total area 9.23 Ha (33 %) land will be used for green belt development.

6.0 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported 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 approximately 120 Crore rupees. The existing industry is providing employment to about 750 people and the proposed employment generation with expansion will be 100 direct employment and 150 indirect employment.

8.0 The targeted production capacity of the plant after expansion will be Sponge Iron Plant-0.21 MTPA- 0.264 MTPA; Captive Power Plant - 26 MW (No change in capacity); Steel Melting Shop - 0.129 MTPA- 0.211 MTPA; Ferro Alloy- 0.0144 MTPA-0.0198 MTPA; and Rolling Mill - 0.15 MTPA- 0.21 MTPA. The ore for the plant is procured from Shri Bajrang Iron Ore Mines, Hahaladdi. The ore transportation is to be done through Rail and Road Network.

9.0 The electric power requirement for the project will be fulfilled from the existing Captive Power Plant of 26 MW. Additional power will be taken from the grid or from our sister concern.

10.0 Requirement of iron ore would be fulfilled by Our Own Mines as well as Private Sector Mines in Orissa and NMDC, Bailadela Mines. Proposed raw material and fuel requirement and fuel consumption details:

Sponge Iron Plant				
	Existing Capacity-2,10,00	)0 TPA	Proposed Capacity-2,6	4,000 TPA
01.	Coal	0.21	Coal	0.22
02.	Iron Ore	0.2625	Iron Ore	0.33
03.	Dolomite	0.007	Dolomite	0.0088
	Bi	iomass Bas	ed Power Plant	
01.	Dolochar	0.0435	Dolochar	0.02175
02.	Rice Husk	0.1042	Rice Husk	0.02350
03.	Coal Fines	0	Coal Fines	0.07000
		Steel Me	lting Shop	

	Existing Capacity-1,29,600 TPA		Proposed Capacity-2,11,200 TPA	
01.	Sponge Iron	0.110	Sponge Iron	0.17352
02.	Pig Iron	0.0045	Pig Iron	0.00732
03.	MS Scrap	0.011	MS Scrap	0.01834
04.	Ferro & Non- Ferro alloys	0.0011	Ferro &Non- Ferro alloys	0.00176
		Ferro A	lloys Plant	
	Existing Capacity-14,40	0 TPA	Proposed Capacity-19	9,800 TPA
01.	Manganese Ore	0.0216	Manganese Ore	0.0297
02.	Coke	0.0024	Coke	0.0033
03.	Coal	0.0072	Coal	0.0099
04.	Dolomite	0.0012	Dolomite	0.00165
05.	Ferro Manganese Slag	0.012	Ferro Manganese Slag	0.0165
			<b>Proposed Pelletization Plant</b>	t- 6,00,000 TPA
			Iron Ore fines	0.51
			Coke	0.0175
		Limestone		
		Bentonite	0.004	
		LDO or	0.00625	
			Coal	0.0225

10.0 Water Consumption for the project at present is 2442 m<sup>3</sup>/day and after proposed expansion, the requirement will be 2823 m<sup>3</sup>/day and waste water generation will be 22 m<sup>3</sup>/day Domestic waste water is being treated in Septic Tank and Soak Pit and industrial waste water generated is being treated in Settling Tank and reused for plantation/afforestation. The project has already obtained consent for drawl of water through Kharun river (1,25,000 m<sup>3</sup>/month) from water Resources Department, Govt. of Chhattisgarh, vide letter No. 5010/302/TS/AJP/03-D-4 dated 26/10/2004.No ground water will be abstracted.

11.0 The disposal of solid waste is planned by utilizing safely and according to the scientific procedures for its handling, storage and disposal activities. Ash will be extracted and disposed off in wet form. The rejects generated in coal washing will be used in Captive AFBC (Coal Based) Power Plant of SBPIL (sister concern) situated at a distance of 4 Km. Quantitative estimation of solid waste generation from the above units is presented in following table:

Sl	Source and type of	Existing	After	Utilization/disposal method
	solid waste	(Qty in	expansion (Qty	_
		TPA)	in TPA)	
1	Fly ash from Power	108816	90468	Brick manufacturing unit and
	Plant			Cement Plant
2	Slag from SMS unit	17000	25344	Brick manufacturing
3	Slag from Ferro Alloys	21000	23760	Brick manufacturing
	unit			
4	Dolochar from SID	66000	52800	Used in our AFBC based power
				plant (Gondwara unit) as a Raw
				material

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

13.0 It was informed that ToR granted earlier was withdrawn.

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 Enterprise Social Commitment (ESC) related issues. The social impact assessment study so carried out should form part of EIA and EMP report.
- iv. All the facilities envisaged in the different environmental clearances shall be brought in the EIA/EMP Report.
- v. Consolidated EIA/EMP shall be prepared detailing all the existing facilities under different environmental clearances in order to facilitate grant of single consolidated environmental clearance.
- vi. The PP shall plan Air Pollution Control Devices (APCD) with the pulsejet bag filters
- vii. The PP shall establish the briquetting plant for utilization of the dust collected from the APCD and others.
- viii. A detailed scheme for treatment of tar sludge and phenolic effluent from the producer gas plant shall be included in the EIA/EMP report
- ix. Action plan for 100% fly ash utilization shall be included in the EIA/EMP report.
- x. Certificate compliance of earlier EC from the Regional office of MoEF&CC shall be submitted along with EIA/EMP
- 23.11. Brake Lining Manufacturing Plant (Two-wheeler- 6,67,000 PCS/day & commercial Vehicle 5,400 Pcs/day ha.) at Plot No. 5, Sector-7, IMT Manesar, Gurgaon, Haryana by M/s AA Friction Materials Private Limited [Proposal No IA/HR/IND/67766/2017; MoEF&CC File No. IA-J-11011/477/2017-IA-II(I)] Terms of Reference.

1.0 M/s AA Friction Materials Private Limited has made online application vide proposal no. IA/HR/IND/67766/2017 dated 30<sup>th</sup> August 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. 4(c) Asbestos milling and asbestos based products under category 'A' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

2.0 **M/s AA Friction Materials Private Limited** proposed for establishment of project for manufacturing of brake liningswith a capacity of 6,67,000 PCS/day (two-wheeler) and 5700 PCS/day (Commercial Vehicle) at Plot no -5, Sector- 7, IMT Manesar, Gurgaon, Haryana.

3.0 The basic principles of technological process involved in manufacturing of brake liningsinter alia involve compounding, mixing, heat moulding, post curing, slitting, ID grinding, edge grinding and final inspection.

4.0 The proposed plant will be established at Plot no -5, Sector- 7, IMT Manesar, Gurgaon, Haryana.

5.0 The land area acquired for the plant is 4050 sqm. There is a lease agreement between M/s Aadinath Overseas LLP and AA Friction Materials Pvt. Ltd. for land area 4050 sqm and built-up area 3107.68 sqm.

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 The estimated project cost is Rs. 9.5 Crores. During Construction/Installation phase, 100 local labours shall be employed. During operation phase, overall there will be an employment of 250 manpower.

8.0 Raw material requirement for manufacturing of brake linings with a capacity of 6,67,000 PCS/day (two-wheeler) and 5700 PCS/day (Commercial Vehicle) will be as follows:

Sl. No	Raw material	Quantity (Kg/day)
1	Asbestos	11,500
2	Resin	1300
3	Nitrile Butyl Rubber (NBR)	2500
4	Friction Dust	2600
5	Other	7600
	Total	25500

9.0 The Power requirement of the unit is 1110.05 KW. The power supply will be provided by Dakshin Haryana Bijli Vitran Nigam.

10.0 It is estimated that from 260 persons around 39 Kg/day of MSW (garbage) shall be generated. It will be segregated and collected properly, biodegradable waste shall be sent to solid waste management site of Integrated Industrial Estate and non-biodegradable waste shall be given to recycler for recycling. The details of process waste is as follows:

S1.	Solid Waste	Quantity of gen	eration,	Method of Disposal
No		kg/day approx.		
1	Recyclable (lining)	150 Kg/day		Shall be reused after grinding of
				solid waste into powder
2	Packaging Material	100 Kg/day		To recycler
3	Used Oil	14 l/month		Authorized vendor
4	Friction Dust	300 Kg		Particles of mix will be collected
				through dust collector and reused
				in process

11.0 The total water requirement is about 17.5 KLD. Municipal Supply from HSIIDC will be the main source of water supply.

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

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.</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. Undertaking for use of Chrysotile white asbestos fibre only as raw material in the manufacturing process and no blue asbestos shall be used as a part of EMP.
- v. The company shall plan for fully automatic asbestos fibre debagging system and no manual handling/opening of asbestos fibre bags.
- vi. The management plan for asbestos dust generated from the grinding shall be included.
- vii. The storage protocol for bags containing asbestos fibre in enclosed area to avoid fugitive emissions of asbestos fibre from damaged/empty bags shall be addressed in the EIA/EMP Report.
- viii. The action plan for shredding of empty fibre bags into fine particles in a bag shredder and recycled into the process shall be envisaged in the EIA/EMP.
- ix. The Company shall obtain a certificate from the supplier of Chrysotile fibre that it does not contain any toxic or trace metals. A copy of certificate shall be submitted along with EIA/EMP.
- x. The detailed report on occupational hazard identification and risk assessment shall be incorporated in the EIA/EMP.
- xi. The protocol for regular medical examination of the workers *inter alia* include lung function test, Spirometry test, chest x-ray, sputum for acid-fast-bacilli (AFC) and asbestos body (AB), urine for sugar and albumen, bloat tests for TLC, DLC, ESR, Hb and Occupational Health Surveillance shall be carried out as per the directives of the Hon'ble Supreme Court including the recent Kalyaneswari case.

- xii. Management and disposal of hazardous waste as per the Hazardous and Other Waste Management Rules, 2016 shall be addressed in the EIA/EMP.
- xiii. Detailed specification of Air Pollution Control equipment shall be provided in the EIA/EMP. Post project monitoring shall be clearly specified along with number of stations, location, frequency of monitoring, parameters to be monitored, fund provision, etc.
- xiv. Technology adopted with detailed justification, flow chart, process description and layout marking areas of potential environmental impacts
- xv. National standards and codes of practice in the use of asbestos particular to the industry should be furnished
- xvi. The details of asbestos fibre measured at ambient air shall be furnished in the EIA/EMP.
- 23.12. Expansion of Ferro Alloys unit Enhancement in production capacity of Ferro Alloys from 16500 TPA to 33,000 TPA by installing additional 1x9.6 MVA Submerged Arc Furnace with the existing steel plant at plot No.428/2, Phase-I, Industrial Area, Siltara, Raipur by M/s Godawari Power and Ispat Ltd[Online proposal No. IA/CG/IND/65739/2017 MoEF&CC File No. IA-J-11011/326/2005-IA.II(I)]– Amendment in Terms of Reference.

Project proponent requested for withdrawal of application.

23.13. Proposed expansion of existing Steel Plant along with installation of Cement Grinding Unit of M/s ShyamSel& 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.

Project proponent informed that he would not be able to present due to unforeseen circumstances and requested to defer the proposal for next meeting.

23.14. Proposed Enhancement in Clinker Production Capacity (1.6 to 1.94 MTPA) by Process Optimization at Villages - Bhawaliya&Mangrol, Tehsil - Nimbahera, District - Chittorgarh (Rajasthan) by M/s. Nuvoco Vistas Corp. Ltd. (Formerly Lafarge India Limited) [Proposal No IA/RJ/IND/67716/2017, File No. J-11011/113/2011-IA-II(I)] - Environmental Clearance under clause 7(ii) of EIA Notification, 2006.

1.0 **M/s.** Nuvoco Vistas Corp. Ltd. has made online application vide proposal no. IA/RJ/IND/67716/2017, dated 27<sup>th</sup> August 2017 seeking environmental clearance under the provisions of Clause 7(ii) of the EIA Notification, 2006 for the proposed Enhancement in Clinker Production Capacity (1.6 to 1.94 MTPA) by Process Optimization at Villages – Bhawaliya & Mangrol, Tehsil - Nimbahera, District Chittorgarh (Rajasthan). 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. Nuvoco Vistas Corp. Ltd. (Formerly Lafarge India Limited) has an existing Integrated Cement Plant - Clinker (1.6 Million TPA), Cement (2.6 Million TPA), CPP (25 MW),

D.G. Set (5 MW) at Villages – Bhawaliya & Mangrol, Tehsil - Nimbahera, District - Chittorgarh (Rajasthan.

3.0 Environmental clearance for the existing cement plant was obtained vide letter no. J-11011/1097/2007-IA II (I) dated 23<sup>rd</sup> December 2008 and J-11011/113/2011-IA.II (I) dated 19<sup>th</sup> June, 2012 on the name of Lafarge India Limited. The company's name has been changed from Lafarge India Limited to Nuvoco Vistas Corp. Ltd. with effect from 10<sup>th</sup>March, 2017. In this regard, letter reg. transfer of existing EC from M/s. Lafarge India Limited to M/s. Nuvoco Vistas Corp. Ltd. has been issued by Ministry vide even letter number on 11<sup>th</sup> September 2017.

4.0 Status of compliance of earlier environmental clearances dated 23<sup>rd</sup>Dec., 2008 and 19<sup>th</sup> June, 2012 was obtained from Regional Office, Lucknow vide letter no. IV/ENV/R/IND-103/700/2009/115 dated 21<sup>st</sup> August, 2017. There are no non-compliances reported by Regional officer.

5.0 M/s Nuvoco Vistas Corp. Ltd. (NVCL) has found that the clinker production capacity of the existing plant could be enhanced by 0.34 Million TPA by process optimization. In this regard, NVCL is now proposing only 21 % enhancement in clinker production capacity from 1.6 Million TPA to 1.94 Million TPA by Process Optimization in existing plant. The details of the proposed project proposal are given below:

Sl. No.	Product	Existing Capacity	Additional Capacity	Total capacity after proposed enhancement
1.	Clinker	1.6	0.34	1.94
2.	Cement (MTPA)	2.6	No Change	2.6
3.	CPP (MW)	25	No Change	25
4.	D.G. Set (MW)	5	No Change	5

6.0 Total Plant area is 182.87 ha; and since, the proposed enhancement in clinker production capacity will be done within the existing plant premises by process optimization, thus, no additional land is required. 61.9 ha (i.e. 33% of the total plant area) has already been developed under greenbelt / plantation.

7.0 No National Park, Wildlife Sanctuary, Biosphere Reserve, Tiger Reserve / Elephant Reserve are reported in the core and buffer zone of the plant site.

8.0 The raw material required for proposed enhancement project are Limestone, which will be sourced from Captive mines; Red Ochre, Low Iron Red and Sweetner, which will be procured from local market. Fuel required for proposed project proposal includes Petcoke / Coal, alternative fuel etc.

9.0 The targeted production capacity of Clinker will be 1.94 MTPA. Transportation of limestone will be done by covered conveyor belt.

10.0 Existing water requirement is 2380 KLD and no additional water will be required for proposed enhancement in Clinker production capacity by process optimization. Thus, the total water requirement after enhancement will remain same as existing. Water requirement is met from Ground Water and Mine Sump Water (after development of pits).

11.0 Existing power requirement is 40 MW, and no additional power is required for proposed enhancement project. Power is being sourced from RSEB & D.G. Set (for emergency back-up only).

12.0 The manpower in the existing project is 200 persons. Since, there is a minor enhancement by process optimization; there will not be any generation of new employment opportunities. The total manpower requirement after the proposed enhancement project will remain same (i.e. 200 persons).

13.0 Dust collected from air pollution control equipment is being / will be recycled into the process. Sludge generated from STP is being / will be used as manure in greenbelt development/ plantation.

14.0 The estimated cost of the project is Rs. 4.95 Crores. Capital Cost for EMP will be Nil (Present pollution control equipment are capable of handling the pollution load) and Recurring cost will be Rs. 90 Lacs / annum.

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

16.0 The PP along with accredited EIA Consultant M/s J.M. EnviroNet Pvt. Ltd (S. No. in QCI List - "89" as updated on 5<sup>th</sup> September 2017) made a detailed presentation on the proposal.

17.0 After detailed deliberations, the committee recommended for issue of Environmental Clearance subject to following specific conditions in addition to any other conditions by the Ministry while grant of EC:

- i. The Air Pollution Control Systems shall be modified suitably to ensure the particulate emission from the chimney shall be restricted to 25 mg/N-m3.
- ii. The PP shall install low NOx burners and shall restrict the NOx emission to the present level.
- iii. The PP shall plant 15000 trees inside the premises in addition to the 33% of the plant area and 50000 plants shall plant in the surrounding villages/ roads under ESC.
- iv. The arrangement to collect and recharge the entire rain water from the plant and township shall be made.
- v. Roof top solar system shall be provided and all the lamps shall be replaced by LED.
- vi. Alternate fuel to the extent of minimum 2.5% shall be used.
- vii. PP shall explore the possibility of installation of Bio-gas plant using MSW alternately shall explore the possibility of converting the MSW to RDF and used in the Klin.
- **23.15.** Expansion of Tata Sponge Iron Plant (Crude Steel capacity 0.829 MTPA to 1.38 MTPA along with Power Plant 46 MW) at Joda, Keonjhar District in Orissa **M/s Tata Sponge**

# **Iron Limited (TSIL)** [Proposal No IA/OR/IND/69742/2017, File No. J-11011/16/2004-IA.II(I)] – **Terms of reference for Expansion.**

1.0 The proponent has made online application vide proposal no. IA/OR/IND/69742/2017 dated **22<sup>nd</sup> 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' of the Schedule of EIA Notification, 2006 and the proposal is appraised at the Central Level.

**2.0** M/s. TATA Sponge Iron Limited (TSIL) is operating 0.425 MTPA DRI plant (including 26 MW WHRB based power plant) at Joda, Village: Bileipada, Lahanda& Bhagalpur, Tehsil: Barbil, District: Keonjhar, State: Odisha. The existing project was accorded environmental clearance vide lr.no. J-11011/16/2004-IA.II (I) dated 11.11.2004, and amended dated 01.05.2017. Consent to Operate was accorded by State Pollution Control Board, Odisha vide lr. no. 12191/IND-I-CON-309 dated 15.09.2017, validity of CtO is up to 31.03.2018.

4.0 Now, it is proposed to setup 1.38 MTPA (Crude Steel) Integrated Steel Plant based on BF-BOF & DR/BF-EAF route (with Bar Mill and Bar & Wire-Rod Mill along with Sinter plant, Coke Oven, power plant, oxygen plant on BOO basis & auxiliary facilities of matching capacities. The proposed capacity for different products for proposed expansion is as below:

CI	Nome of with	No. of Units / Capacity / Production				
51. No	Name of units/ Technological facilities	Phase-I	Phase-II	Total		
110.	Teennological facilities	I nasc-1	(Additional)			
1.	Coke Ovens (Non-	-	0.6 Mt/yr	0.6 Mt/yr		
	recovery)					
2.	Sinter plant	1 x 132 m <sup>2</sup>	$1 \text{ x } 50 \text{ m}^2$	$1 \text{ x } 132 \text{ m}^2 \&$		
				$1 \text{ x } 50 \text{ m}^2$		
3.	Blast furnace	1 x 1050 m <sup>3</sup>	$1 \text{ x } 370 \text{ m}^3$	$1 \text{ x } 1050 \text{ m}^3 \&$		
				1 x 370 m <sup>3</sup>		
4.	Basic oxygen furnace	1 x 90 t	-	1 x 90 T		
5.	Electric Arc Furnace	-	1 x 90 t, 90	1 x 90 T		
			MVA			
6.	Secondary refining units					
	- Ladle furnace	1 x 90 t, 18	2 x 90 t, 18	3 x 90 T		
		MVA	MVA			
	- VD unit	-	1 x 90 t	1 x 90 T		
7.	Billet caster	1 CCM	1 CCM	2 CCM		
8.	Bloom Caster	-	1 CCM	1 CCM		
9.	Bar mill	0.8 MTPA	-	0.8 MTPA		
10.	Bar & Wire rod mill	-	0.53 MTPA	0.53 MTPA		
11.	Oxygen plant	650 TDD	250 TDD			
	(On BOO Basis)	030 IPD	230 IPD	900 IPD		
12.	Captive Power Plant	1x4 MW	1x42 MW	46 MW		
		(Gas based)	(WHRB)			
CCM	: Continuous Casting Machine	e				

5.0 The total land required for the proposed project is 130.45 ha out of which 124.33 ha is already in possession. Additional 6.12 ha. is under advanced stage of acquisition for proposed plant accessory facilities viz. raw material conveyor system & waste management. No Forest land involved. Of the total project area (130.45ha) about 18.65 ha land will be used for green belt development. In addition, 26.18 ha of land will be acquired for greenbelt development and the total green belt cover will be about 33%.

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 site specific wild life management plan for the existing plant area have been approved by PCCF (Wild Life) & Wild Life Warden, Odisha vide Letter No: 5546/1 WL-SSP-154/2015 dated 22.06.2015.

7.0 Total project cost is approx. Rs. 2784 Crore for Phase-I and Rs. 2561 Crore for Phase-II. Proposed employment generation from proposed project will be 1656 direct employment along with additional indirect employment.

8.0 The targeted production capacity of the Integrated Steel Plant is 1.38 MTPA crude steel. The ore for the plant would be procured from iron ore mines of parent company i.e. Tata Steel as well as from the market. 9.0 Maximum additional power demands during expansion phase I is 73 MW and phase II is 97.2 MW. The prime source of power supply for the proposed project will be 220 KV JODA substation of Orissa Power Transmission Corporation Ltd (OPTCL) at Joda. Additionally, surplus power from proposed new power plant (1x4 MW) based on surplus BF gas will also be utilized to meet the power requirement of the proposed plant in Phase I. However, in Phase II, new 1x42 MW power plant based on WHRB will also be additionally available besides grid

Sl.	Dow motorial	Quantity G	<b>Quantity Gross (TPA)</b>		
No.	Kaw materiai	Phase-I	Phase-II		
1	Iron ore lump (BF grade)	352,100	142,100		
2	Iron ore fines for sinter plant	1,135,500	459,000		
3	Limestone for sinter plant	83,200	33,700		
4	Dolomite for sinter plant	85,700	34,600		
5	Non- coking coal for CDI	155,300	62,700		
6	Purchased coke	447,500	Nil		
7	Purchased coking coal	Nil	856,500		
8	Purchase coke breeze	46,000	Nil		
9	Quartzite	50,100	20,300		
10	Calcined Lime (SMS grade)	88,100	46,900		
11	Calcined Dolo (SMS grade)	21,400	14,300		
12	Ferro-alloys	9,400	23,000		
13	Aluminium	1,700	1,200		
14	Flourspar	650	430		
	Total	2,476,650	1,694,300		

10.0 The ore transportation will be done through Rail/Road/Conveyor system. Proposed annual gross raw material requirement (in tonnes) for the project are as follows:

11.0 Water requirement of the 1.38 MTPA proposed expansion plant will be 1850 m<sup>3</sup>/hr. The existing water requirement for the DRI plant is 410 m<sup>3</sup>/hr. Therefore, total water requirement for including the existing & proposed expansion will be 2260 m<sup>3</sup>/hr. The source of water will be KundraNala of Sona River. Presently, TSIL is 'zero' water discharge plant. The expansion project will maintain its 'zero' wastewater discharge standard. 100% waste water will be utilized for its brick manufacturing unit, dust suppression, road washing, garden maintenance etc. after its preliminary treatment.

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

13.0 The project proponent made detailed presentation along with EIA Consultant M/s Mecon Limited, Rachi. The committee observed that the details of plant configurations regarding the present proposal vis-a-vis existing facilities were not clear. Therefore, the committee sought details in this regard and the following details were provided during the meeting:

Technological facilities	Existing	Proposed Configuration	Total Configuration	
DRI Kilns with Connected	2 x 375 TPD	-	2 x 375 TPD	
WHRBs	1 x 500 TPD		1 x 500 TPD	
Coke Ovens (Non-recovery	-	0.6 Mt/yr	0.6 Mt/yr	
Stamp Charge)		4x35 Nos; 4.43 m	4x35 Nos; 4.43 m height	
		height		
Sinter plant	-	• $1 \times 132 \text{ m}^2$	• $1 \times 132 \text{ m}^2$	
		• $1 \times 50 \text{ m}^2$	• $1 \times 50 \text{ m}^2$	
Blast furnace	-	• $1 \ge 1050 \text{ m}^3$	• $1 \times 1050 \text{ m}^3$	
		• $1 \times 370 \text{ m}^3$	• $1 \times 370 \text{ m}^3$	
Basic oxygen furnace	-	1 x 90 t	1 x 90 t	
Electric Arc Furnace	-	1 x 90 t, 90 MVA	1 x 90 t, 90 MVA	
Ladle furnace	-	• 1 x 90 t, 18	• 1 x 90 t, 18 MVA	
		MVA	• 2 x 90 t, 18 MVA	
		• 2 x 90 t, 18		
		MVA		
VD unit	-	1 x 90 t	1 x 90 t	
Billet caster	-	2 x 1 CCM	2 x 1 CCM	
Bloom Caster	-	1 CCM	1 CCM	
Bar mill	-	0.8 Mt/yr	0.8 Mt/yr	
Bar & Wire rod mill	-	0.53 Mt/yr	0.53 Mt/yr	
Oxygen plant		650 tpd	650 tpd	
(On BOO Basis)	-	250 tpd	250 tpd	
Captive Power Plant	• 1 x	• 1x4 MW	• 68 MW (WHRB)	
1	7.5	(BF Gas	• 4 MW (BF Gas	
	MW	based)	based)	
	(WH	• 1x42		
	RB)	(WHRB)		
	• 1 X			

	18.5 MW (WH RB)		
Lime Kiln	-	• 1 x 100 TPD	• 1x 100 TPD

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 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 MoEF&CC shall be submitted along with EIA/EMP
- v. Scheme for 100 % waste utilisation including fly ash shall be furnished.
- vi. The details of waste heat recovery system for blast furnace stoves and sinter cooler shall be furnished.
- vii. Details of secondary emissions control shall be furnished.
- viii. Coke oven battery shall be non-recovery type and stamp charged.
- ix. The scheme for Coke Dry Quenching (CDQ) shall be furnished.
- x. The details of Coal dust injection for blast furnace shall be furnished.
- xi. Scheme for water conservation including rain water harvesting and recharge shall be furnished.
- xii. The project proponent shall explore the possibility of establishment of cement plant for effective utilization of the fly ash and slag.
- xiii. The details of energy recovery from the blast furnace top recovery shall be furnished.
- xiv. The details of the gas holder for the blast furnace and BoF converter shall be furnished.

- xv. The details of Pig iron casting machine shall be furnished.
- xvi. The details of waste heat recovery system from Electric Arc Furnace shall be furnished.
- xvii. Details of all the air pollution and water pollution control systems shall be provided.
- xviii. The details of the gas balance shall be provided.
- xix. The Air Quality Modelling shall be carried out involving the terrain features of the study area under normal, abnormal and emergency conditions.
- xx. The project proponent shall plan for supplementing their energy requirement with solar energy to the maximum possible. A detailed plan for the same shall be submitted.
- xxi. Management and disposal of hazardous waste as per the Hazardous and Other Waste Management Rules, 2016 shall be addressed in the EIA/EMP
- xxii. PP shall explore the possibility of installation of Bio-gas plant using MSW alternately shall explore the possibility of converting the MSW to RDF.
- 23.16. Addition of 3rd Packer Proposal in RCL Ramasamyraja Nagar Cement Plant for improving the Despatch Schedule at Village Tulukkapatti, Taluk & District Virudhunagar, Tamil Nadu by M/s The Ramco Cements Limited [Proposal No IA/TN/IND/67801/2017; File No. J-11011/119/2009-IA-II(I)] Environmental Clearance for modernization under clause 7(ii) of EIA Notification, 2006.

1.0 **M/s The Ramco Cements Limited** has made online application vide proposal no. IA/TN/IND/67801/2017, dated 31stAugust 2017 seeking environmental clearance under the provisions of Clause 7(ii) of the EIA Notification, 2006 for the proposed addition of 3rd Packer without increase in Clinker or Cement Production capacity for improving the Despatch Schedule at Village Tulukkapatti, Taluk & District Virudhunagar, Tamil Nadu by **M/s The Ramco Cements Limited.** 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 The Ramco Cements Limited** has expanded Cement Plant during 2009-10 and obtained Environmental Clearance vide F.No. J-11011/119/2009 IA.II (I) dated 06.07.2009 for a Clinker production of 1.097 million tons per annum (MTPA) (from earlier 0.61 MTPA Clinker) and the Cement production of 2.00 MTPA @ 6200 tons per day-TPD (from earlier 1.00 MTPA @ 3102 TPD).

3.0 It was reported that the Consents to Operate (CTOs) from the Tamil Nadu Pollution Control Board (TNPCB) are obtained and renewed (RCTOs) periodically. RCTOs for the Cement Plant are 160824725855 (Air Act) & 160814725855 (Water Act) dated 02.08.2016 and for CPP are 160824727889 (Air Act) & 160814727889 (Water Act) dated 06.09.2016.

4.0 The certificate of compliance pf earlier EC was obtained vide MoEF&CC, Regional Office Letter EP 12.1/867/TN/0591 dated 12.04.2017.

5.0 It was reported that RCL is manufacturing OPC and PPC cements at RR Nagar and dispatching by two double discharge packers with the capacity of 180 TPH each. There are 4 RCC Silos for storing the cement. The existing wagon loading system for cement is sufficient for load only 5 wagons at a time and it consumes more time for loading full racks. As per new Railway Loading Norms, the full rack (40 boxes) shall be loaded within 9 hours or otherwise it attracts heavy demerge charges and hampers future allotment of wagons by the Railway. The existing packers (2 Nos.) capacity is not sufficient to load full rack within 9 hours' time and thus, it requires to add 3rd Packer of 120 TPH capacity. The addition of 3rd packer will help to manage efficiently to load different grades of Cement with different types of packing material at a time which will also reduce the Trucks' Turnaround time and improve the dispatch logistics.

6.0 Therefore, RCL is establishing a modernized Ware House at Tamil Nadu-Kerala Border to distribute cement in time to dealers in Kerala. Thus, it needs a Palletizing Unit with loading facility along with 3rd Packer proposal.

7.0 As such, RCL is proposing the addition of  $3^{rd}$  Packer of 120 TPH capacity, a dedicated 1000 Tons Steel Silo for Cement storage in addition to the existing 4 Nos. RCC Silos, the modification of extraction system in such a way that any packer can get cement from any silo, extending the existing wagon loading platform and loading shed for 700 m and a Palletizing Unit.

8.0 There is no increase in Clinker or Cement Production capacity of RR Nagar Cement Plant due to the addition of 3rd Packer Proposal.

9.0 The Proposed 3<sup>rd</sup> Packer of 120 TPH capacity will be constructed in an area of 2,536 m<sup>2</sup>, in the existing plant premises which inter alia consists of Packer Building with Bulk Loading; Truck Loading Bay; Palletize Shed; Steel Silo (12 m dia); etc.

10.0 Presently, the Cement Plant Complex requires 1,170 cu.m/day water. Permission/No objection Certificate for tapping 1,170 cum/day ground water from own borewells, dugwells & abandoned mine pit within the Complex has been obtained from the Central Ground Water Authority (CGWA) vide its Letter No. 21-4(294)/SECR/CGWA/2011-3316 dated 22.03.2012. There will not be any additional water demand for the proposed addition of 3rd Packer during Operation Phase.

11.0 Domestic Sewage of 34 cu.m/day is being generated from the Cement Plant and 9 cu.m/day from CPP. The 43 cu.m/day sewage from the Plants are treated combinedly in a 100 cu.m/day Sewage Treatment Plant. The Township generates about 170 cu.m/day sewage which is treated in a 200 cu.m/day Sewage Treatment Plant. The Treated Sewage is also used for Green Belt. CPP effluent of 16 cu.m/day is treated in a neutralizing pit and the treated effluent is pumped to the cement plant for equipment cooling. An effluent disposal pump is used for this purpose. Thus, it is a Zero Effluent Discharge Plant. There will not be any additional effluent generation due to the proposed addition of 3rd Packer during Operation Phase.

12.0 Air Pollution Control Devises viz. ESP to cooler and power plant, reverse air bag house to raw mills / kilns and bag filters to coal mills and cement mills has been installed. Online monitoring system is provided at all major stacks of the Cement Plant and CPP stack and are connected online to Care Air Centre of TNPCB. The emission levels are well within the limit

prescribed by MoEF&CC and TNPCB. Additional Bag Filters (3 Nos.) are proposed for the 3rd Packer Unit for dedusting packer silo, Packer, Bulk loading spouts, Belt Bucket elevators &Airslides. SPM emission levels will be <30 mg/Nm<sup>3</sup> from the Plant.

13.0 The entire dust collected from the air pollution control equipment are reused in the Cement Process. The entire ash generated from the CPP (0.12 MTPA) is being fully utilized in the Cement Plant for cement manufacture. The entire dust collected from the Bag Filters for 3rd Packer will be recycled in the Process. Thus, there is no solid waste generation due to the Proposal.

14.0 In the total extent of 70.96 Ha, an effective Green Belt has been developed in 25.00 Ha (35.23% Coverage) and maintained within the Plant and Township. Rain water is being harvested as Roof Top Collection in sumps and used as a raw water source. Surface Runoffs from Plant and Township are connected to a Storage Ponds and used for Green Belt development.

15.0 After detailed deliberations, the committee recommended for environmental clearance with following specific conditions in addition to any other conditions by the Ministry while considering environmental clearance:

- i. The proposed Filer bag house for the 3<sup>rd</sup> packer shall be designed for 150% of the air flow rate. The filter bag shall be PTFE dipped PPS type
- ii. The project proponent shall carry out plantation on an additional area of 8 Ha with native species *inter alia* including plantation covering entire boundary.
- iii. The PP shall take suitable measures for control of fugitive dust
- 23.17. Steel Melting Shop (MBF, IF, EAF, Rolling Mill) at Nakrajoria, PO.Salanpur, Dist: Paschim Burdwan, West Bengal by M/s. Maithan Steel & Power Ltd [online proposal no. IA/WB/IND/19116/2013; MoEFCC File No. J-11011/679/2008-IA.II(I)] Amendment in EC for installation of 4 x 15 T IF in place of 1 x 20 T & 1 X 40 T EAF and reduction in production capacity from 0.465 MTPA to 0.330 MTPA.

**M/s Maithan Steel & Power Ltd** has made online application vide proposal no. IA/WB/IND/19116/2013, dated 6<sup>th</sup> September 2017 seeking amendment in environmental clearance under the provisions of EIA Notification, 2006 for installation of Induction Furnace in place of Electric Arc Furnace. The proposed project activity is listed at S. No. 3(a) 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 Maithan Steel & Power Ltd** was obtained Environmental Clearance vide F. No. J-11011/679/20058IA.II (I) dated 27.08.2010 for Induction Furnace with matching Ladle Furnace and CCM with Billet Caster (2x15T+2x25T), Electric Arc Furnace with matching Ladle Furnace, vacuum degassing unit and CCM with Billet Caster (1x20T+1x40T), Rolling Mill with Producer gas plant (2x300 TPD).

3.0 It was reported that the Consents to Operate (CTO) from the West Bengal Pollution Control Board (WBPCB) are obtained on 17.06.2016 and present unit is operating with 3x15T

Induction Furnace with Ladle Furnace and rolling mills and producing TMT rods but EAF have not been installed due to financial and technical constraints.

4.0 The certificate of compliance of earlier EC was not obtained from Regional Office MoEF&CC, it is reported that Six-monthly point wise EC compliance for the period from October 2016 to March 2017 has been submitted to The Chief Conservator of Forests, RO (EZ), MoEFCC, Bhubaneswar on 24th June 2017.

5.0 It is reported that the plant is operating 3x15T Induction Furnace with Ladle Furnace and rolling mills and producing TMT rods and it is proposed to install 4x15 T Induction Furnace with matching Ladle Furnace and Billet Caster in place of Electric Arc Furnace(1x20T+1x40T). With the proposed amendment in configuration of the equipment, it is proposed to reduce the Billet production from 4,65,000 to 3,30,000 TPA whereas the TMT bar production will remain unchanged, i.e., 1,80,000 TPA.

6.0 The present make up water requirement shall not be exceeded 1680 m3/day as per the Environmental Clearance dated 27<sup>th</sup> August 2010 with the norms to maintain Zero Liquid Discharge. The existing water requirement will be met from Kalyaneswari Water Works which supplies water from nearby Barakar River. The Central Water Commission vide letter No.06540-274263/274214 dated 13<sup>th</sup> January 2007.

7.0 The total power requirement of 54 MW will be met from DVC.

8.0 The slag generated from process shall be utilised for road construction and filling of low laying areas.

9.0 With the proposed amendment, Flue gas emission from 1,97,325 Nm<sup>3</sup>/hr to 125563Nm<sup>3</sup>/hr, Particulate emission from 5.49gm/sec to 3.51gm/sec, SO<sub>2</sub> emission from 9.0gm/sec to 8.0gm/sec, Fresh water consumption from 1,680m<sup>3</sup>/day to 1,160 m<sup>3</sup>/day, Power consumption from 54 MW to 41 MW.

10.0 After detailed deliberations, the committee observed that the validity of the existing environmental clearance has already been expired and hence the proposed amendment as sought by the project proponent cannot be considered. Accordingly, the committee recommended that the project proponent shall submit fresh application seeking fresh ToRs.

23.18. Installation of facilities for production of 3,600 TPA Low carbon Ferro Chrome and / or Low Carbon Ferro Manganese, 1200 TPA -Ferro Molybdenum & 1200 TPA Ferro Vanadium at NS-88,VI<sup>th</sup> Phase, Adityapur Industrial Area, Gamharia, District- SeraikelaKharsawan, State-Jharkhand after dismantling of the existing hydrated lime unit at site by Jamshedpur Chlorochem Private Limited [Online proposal No. IA/JH/IND/67929/2017 MoEF&CC File No. IA-J-11011/459/2017-IA-II(I)] – Terms of reference.

1.0 The proponent has made online application vide proposal no. IA/JH/IND/67929/2017 dated **7<sup>th</sup> 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 SI.

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 Jamshedpur Chlorochem Private Limited is operating Hydrated Lime unit with capacity 15,000 TPA at NS-88, 6th Phase, Adityapur Industrial Area, Dist – Saraikela – Kharsawan, Jharkand. The CTO for existing unit has been granted by JSPCB vide letter No. JSPCB/HO/RNC/CTO-946451/2017/651 Dated- 19.05.2017 and is valid up to 31.03.2019

3.0 Now,M/s Jamshedpur Chlorochem Private Limited is proposedinstallation of Low Carbon Ferro Alloys (Ferro Chrome and/or Ferro Manganese - 3600 TPA) and Noble Ferro Alloys (Ferro Molybdenum - 1200 TPA & Ferro Vanadium - 1200 TPA), i.e. total production of 6000 TPA. All the manufacturing facilities and equipment for the existing hydrated lime production unit will be dismantled after obtaining Environment Clearance for production of Ferro Alloys. The proposed capacity for different products for new site area as below:

Name of unit	Production Capacity			
Existing Hydrated Lime	15000 TPA			
Note:-All the manufacturing facilities and equipment for the existin	g unit will be dismantled afi			
obtaining Environment Clearance for the Ferro Alloys.				
Proposed New Unit				
Low Carbon Ferro Alloys – Ferro Chrome and/or Ferro Manganese	3600 TPA			
Ferro Molybdenum	1200 TPA			
Ferro Vanadium	1200 TPA			
Total Ferro Alloys	6000 TPA			

4.0 The project site is bounded by latitudes from  $22^{0}47'$  48.870 to  $22^{0}47'$  51.690" N and longitude from  $86^{0}07'$  16.350" to  $86^{0}07'$  18.910" E. The project area is covered in Survey of India Toposheet No. 73 J/6& J/2. The existing plant is located in 0.92 acres / 0.37 Ha. The proposed Ferro alloy production unit will be established in the same premises (after dismantling of hydrated lime unit). There is no additional land requirement. Of the total area 0.105 Ha. (30%) land will be used for green belt development.

5.0 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.

6.0 Total project cost is Rs. 96.20 Lakhs. Proposed employment generation from proposed project will be 34 direct employments.

7.0 The electricity load of 133 KVA will be procured from Jamshedpur Utility and Supply Company (JUSCO) for proposed project which is already available in the existing unit.

Material	Specific consumption	Quantity Required
a) For Low Carbon Ferro Mangane	$rac{1}{1}$ $rac{1}$ $rac{1}{1}$ $rac{1}{1}$ $rac{1}{1}$ $rac{1}{1}$ $rac{1}{$	ITA
Roasted Mn Ore	1.730	6228.00
Aluminium	0.515	1854.00

8.0 Raw materials and fuel for the proposed project are given below:

Material	Specific consumption	Quantity Required
	T/T of Product	TPA
M.S. Scrap	0.118	425.00
Fluorspar	0.115	414.00
Lime	0.150	540.00
Total	2.596	9461.00
Fuel & Consumables		
Wild Babool Charcoal	0.300	1080.00
Or For Low Carbon Ferro Chro	ome – 3600 TPA (max)	
Chrome Ore	1.800	6480.00
Aluminium	0.632	2275.00
M.S.Scrap	0.118	425.00
Total	2.550	9180.00
Fuel & Consumables (Oxidizer	rs)	
Coal	0.400	1440.00
Barium Peroxide /Sodium	0.144	519.40
Nitrate	0.144	518.40
b) Ferro Molybdenum -1200 T	PA (Noble Ferro alloys)	
Molybdic Oxide	1.020	1224.00
Aluminium Powder	0.072	86.4
Mill Scale	0.388	465.6
Iron Nails	0.163	195.6
Lime	0.041	492.00
Ferro Silicon	0.408	489.6
Total	2.092	2953.2
c) Ferro Vanadium - 1200 TPA (N	Noble Ferro alloys)	
Vanadium Pentaoxide	1.030	1236.00
Mill Scale	0.010	12.00
Lime	0.070	84.00
Aluminium Powder	0.250	300.00
Aluminium Shots	0.500	600.00
M.S. Scrap	0.380	456.00
Flourspar	0.020	24.00
Total	2.260	2712.00

9.0 Water consumption for the proposed project will be 17.5 KLD and wastewater generation will be 9.8 KLD. Water requirement for the proposed plant will be met through water supply by Adityapur Industrial Area Development Authority (AIADA) or Drinking water & Sanitation Department (DW&SD) Govt. of Jharkhand. The Water Connection is already available in the Unit. Necessary permission shall be obtained. No use of water in the manufacturing process. However, water will be used for washing of chrome ore and wet scrubber for pollution control. Water will be kept in closed circuit, but on increase in impurities it will be treated in the designated Effluent treatment plant again reused for washing, scrubbing and sprinkling. The storm water drains will be routed through septic tank followed by soak pit and industrial waste water of 9 KLD will be treated in ETP and reused in plant.

10.0 There is no hazardous waste from the plant except for used oil with approx quantity of 200 Liters per annum during course of production of and is also saleable to the registered recyclers and ETP Sludge Produced will be approx. 300 TPA and will be sold to the refractory manufacturers. The solid waste management will be as follows:

S1.	Nature of solid waste	Qty (TPA)	Management
No.			
1	Slag	17 TPD	Used for relining of reactor vessel & sold.
2	Pulveriser Bag Filter	0.6 TPD	Recycle & reutilize in the manufacturing process
	& other APCD Dust		

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 along with EIA Consultant M/s Vardan Environet, Gurgaon made detailed presentation on the proposal.

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 Enterprise Social Commitment (ESC) related issues. The social impact assessment study so carried out should form part of EIA and EMP report.
- iv. The PP shall explore the possibility of sourcing of washed chrome ore instead of the washing of chrome ore at site.
- v. The PP shall plant 200 trees of native species within the proposed plant premises.
- vi. The slag shall be characterised including the TCLP test for the hazardous metals in the slag.

# Standardization of EC conditions for Integrated Steel Plants and cement plants:

1.0 In order to standardize EC conditions for Integrated Steel Plants and cement plants the proposed specific and general conditions for Integrated Steel Plants and cement plants were placed before the committee. Some of the conditions were deliberated and remaining will be taken up in the next EAC meeting.

# <u>ANNEXURE – I</u>

# **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 <u>all</u> the Environmental Clearance(s) including Amendments thereto obtained for the project from MoEF&CC/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment, Forest and Climate Change as per circular dated 30<sup>th</sup> May, 2012 on the status of compliance of conditions stipulated in <u>all</u> 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 railcum road transport or conveyor-cum-rail transport shall be examined.

- iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.
- v. Details of stack emission and action plan for control of emissions to meet standards.
- vi. Measures for fugitive emission control
- vii. Details of hazardous waste generation and their storage, utilization and disposal. Copies of MOU regarding utilization of solid and hazardous waste shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
- viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.
- ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.
- x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.
- xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.
- xii. Action plan for post-project environmental monitoring shall be submitted.
- xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.
- 8. Occupational health
  - i. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
  - ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre-designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre-placement and periodical examinations give the details of the same. Details regarding last month analysed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
  - iii. Annual report of health status of workers with special reference to Occupational Health and Safety.
  - iv. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.
- 9. Corporate Environment Policy

- i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
- iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
- iv. Does the company have system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report
- 10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
- 11. Enterprise Social Commitment (ESC)
  - i. To address the Public Hearing issues, 2.5% of the total project cost of (Rs. .....crores), amounting to Rs. ....crores, shall be earmarked by the project proponent, towards Enterprise Social Commitment (ESC). Distinct ESC projects shall be carved out based on the local public hearing issues. Project estimate shall be prepared based on PWD schedule of rates for each distinct Item and schedule for time bound action plan shall be prepared. These ESC projects as indicated by the project proponent shall be implemented along with the main project. Implementation of such program shall be ensured by constituting a Committee comprising of the project proponent, representatives of village Panchayat & District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office. No free distribution/donations and or free camps shall be included in the above ESC budget
- 12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.
- 13. A tabular chart with index for point wise compliance of above ToRs.
- 14. The ToRs prescribed shall be valid for a period of three years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material in Regional languages shall be provided.

- iv. The letter/application for environmental clearance shall quote the MOEF&CC file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report
- vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MOEF&CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 4<sup>th</sup> August, 2009, which are available on the website of this Ministry shall also be followed.
- viii. The consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (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.
- ToRs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for ix. 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.

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ANNEXURE-2

# ADDITIONAL TORS FOR INTEGRATED STEEL PLANT

- 1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
- 2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
- 3. For Large ISPs, a 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. MRL details of project site and RL of nearby sources of water shall be indicated.
- 4. Recent land-use map based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
- 5.  $PM(PM_{10} \text{ and } P_{2.5})$  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.  $PM(PM_{10} \text{ and } P_{2.5})$  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.

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# 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.

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# 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 technoenvironmental 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	Pollutant s	Qty generate d	Method used to Control/ and specifications/attac h Separate Sheet to furnish Details	Number of units planned & Capacity	Budge t	Estimated Post Control Qty of Pollutant	
						Per Unit	Per Day

# LIST OF PARTICIPANTS OF EAC (I) IN 23<sup>rd</sup>MEETING OF EAC (INDUSTRY-I) HELD ON 9<sup>th</sup> – 10<sup>th</sup> October 2017

S. No	Name and Address	Position	Attendance		ce	Signature
			9 <sup>th</sup>	10 <sup>th</sup>		. 0
1	Dr.Chhavi Nath Pandey, IFS(Retired)	Chairman	Р	Р		
Memb	ers					
2.	Dr. B.P. Thapliyal, Director Central Pulp and Paper Research Institute	Member	A	A		
3.	Director, Central Leather Research Institute	Member	A	A		
4.	Dr.Siddarth Singh, Representative of Indian Meteorological Department	Member	Р	A		
5.	Representative of Central Ground Water Board	Member	A	A		
6.	Dr. G. Bhaskar Raju	Member	Р	Р		
7.	Prof. Naresh Chandra Pant	Member	A	A		
8.	Dr. Jagdish Kishwan, IFS(Retired)	Member	А	Р		
9.	Dr.G.V.Subrahmanyam	Member	Р	Р		
10.	Prof. Arun Pandey	Member	A	A		
11.	Shri Santosh Raghunath Gondhalekar	Member	Р	Р		
12.	Shri Ashok Upadhyay	Member	Р	Р		
13	Mr. R.P. Sharma	Member	Р	Р		
14.	Shri Sharath Kumar Pallerla, Scientist 'F' / Director, MoEF&CC	Member Secretary	Р	Р		
15.	Shri RajasekharRatti, Scientist 'C', MoEF&CC	Dy. Director	Р	Р		

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