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

Summary record of the twenty third (23rd) meeting of Re-Constituted Expert Appraisal Committee (REAC) held during 28-30th September, 2020 for environment appraisal of Industry-1 sector projects constituted under the provisions of Environment Impact Assessment (EIA) notification, 2006.

The twenty third meeting of the Expert Appraisal Committee (EAC) for Industry-1 Sector constituted as per the provisions of the EIA Notification, 2006 for Environment Appraisal of Industry-1 Sector Projects was held during **28-30th September, 2020** in the Ministry of Environment, Forest and Climate Change (MoEF&CC) through **video conferencing** in view of the ongoing Corona Virus Disease (Covid-19) issue. The list of EAC attendees is as follows.

S.No.	Name	Position	28/09/20	29/09/20	30/09/20
1.	Dr. Chhavi Nath Pandey	Chairman	Present	Present	Present
2.	Dr. Bipin Prakash Thapliyal, Director, CPPRI.	Member	Present	Present	Present
3.	Dr. Siddharth Singh, Scientist 'E' IMD.	Member	Present	Present	Present
4.	Dr. Jagdish Kishwan	Member	Present	Present	Present
5.	Dr. G.V. Subramanyam	Member	Present	Present	Present
6.	Dr. Tejaswini AnanthKumar	Member	Present	Present	Present
7.	Shri. Ashok Upadhyaya	Member	Present	Present	Present
8.	Shri. Rajendra Prasad Sharma	Member	Present	Present	Present
9.	Dr. Sanjay Deshmukh	Member	Absent	Absent	Absent
10.	Prof. S.K. Singh	Member	Present	Present	Present
11.	Dr. R. Gopichandran	Member	Absent	Absent	Absent
12.	Shri Jagannadha Rao Avasarala	Member	Present	Present	Present
13.	Shri. J.S.Kamyotra	Member	Present	Present	Present
14.	Shri. A.K. Agrawal	Member Secretary	Present	Present	Present

After welcoming the Committee Members, discussion on each of the agenda items was taken up. The minutes of 22nd meeting held during 26-28th August, 2020 were confirmed by the EAC as already uploaded on PARIVESH. However, the following corrections have been made on the uploaded minutes with respect to item no. 22.13 as below:

S.No.	For	Read as
i.	**Agenda Item No. 22.13** Recommendations of the committee: In addition to the above, the Committee also recommended that the Ministry may take action against	**Agenda Item No. 22.13** Recommendations of the committee: In addition to the above, the Committee also recommended that the Ministry may take action against the M/s. Tata Steel Limited

	the M/s. Tata Steel Limited for carrying out the construction activities beyond the expiry of the validity of the EC by sending a letter to State Government of Jharkhand with a request to initiate legal action against PP under section 15 read with section 19 of the Environment (Protection) Act, 1986. Further, PP may also be directed to stop the ongoing construction activities till the EC is obtained from MoEF&CC.	for carrying out the construction activities beyond the expiry of the validity of the EC by sending a letter to State Government of Odisha with a request to initiate legal action against PP under section 15 read with section 19 of the Environment (Protection) Act, 1986. Further, PP may also be directed to stop the ongoing construction activities till the EC is obtained from MoEF&CC.

28th September, 2020

23.1 Establishment of 1 x 9 MVA Ferro Alloys plant (Silicon Manganese–14400 TPA or Ferro Manganese–25200 TPA or Ferro Chrome–15000 TPA or Ferro Silicon–7000 TPA or Pig Iron –25200 TPA) in existing 7.5 MW Biomass based Power Plant premises (Forward Integration) in existing plant premises by **M/s. Real Power Private Limited located at Khamhardih Village, Pathariya Tehsil, Mungeli District, Chhattisgarh** [Online Proposal No. IA/CG/IND/142231/2017; File No. J-11011/347/2017-IAII(I)] – **Environment Clearance – regarding**

23.1.1 **M/s. Real Power Private Limited** has made online application vide proposal no. IA/CG/IND/142231/2017 dated 02/09/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

23.1.2 The detail of the ToR accorded is furnished as below:

Date of application	Consideration	Details	Date of accord
22/06/2017	20th meeting held on 10-12th July, 2017	Terms of Reference	20/07/2017

23.1.3 The proposed expansion of Steel Plant of M/s. Real Power Private Limited is located at Khamhardih Village, Pathariya Tehsil, Mungeli District, Chhattisgarh. Presently, the project proponent is operating 7.5 MW Biomass based power plant. It is proposed to establish 1 x 9 MVA Ferro Alloys plant (Silicon Manganese–14400 TPA or Ferro Manganese–25200 TPA or Ferro Chrome–15000 TPA or Ferro Silicon–7000 TPA or Pig Iron –25200 TPA) in existing 7.5 MW Biomass based Power Plant premises (Forward Integration) in existing plant premises over an extent of 26.82 acres of land (10.85 ha). Total Land is 26.82 acres (10.85 ha).

23.1.4 It is reported that existing plant doesn't have Environment Clearance. CTE has been obtained from CECB for existing 7.5 MW Biomass based Power Plant vide order No. 4874/TS/CECB/2004 Raipur dated 27/11/2004. CTE has been obtained prior to EIA Notification dated 14th September, 2006. As per EIA notification, 1994 greenfield project does not require Environment Clearance if the capital investment is less than Rs. 100 Crores. Hence, EC was not applicable for the existing plant as per EIA Notifications 1994 & 2006.

23.1.5 It has been reported that the Consent to Operate for existing plant was accorded by CECB, Chhattisgarh vide order no. 2724/TS/CECB/2018 dated 2nd July 2018 for7.5 MW Biomass based Power Plant which is valid up to 30th November, 2021. Certified compliance report on CTO conditions (CTO order dated 02/07/2018) has been issued by CECB, Naya Raipur, Chhattisgarh vide letter no. 5367/HO/Tech/CECB/2019dated 24/09/2019. As per the report, conditions prescribed in CTO are being adhered with.

23.1.6 The following are the existing and proposed plant configuration and production capacity:

S.No.	Unit	Existing	Proposed expansion	After expansion
1	Biomass based Power Plant	7.5 MW	-	7.5 MW
2	Ferro Alloys Plant (1 x 9 mVA)	---	Silicon Manganese (SiMn) – 14400 TPA or Ferro Manganese (FeMn) – 25200 TPA or Ferro Chrome (FeCr) – 15000 TPA or Ferro Silicon (FeSi) – 7000 TPA or Pig Iron – 25200 TPA	Silicon Manganese (SiMn) – 14400 TPA or Ferro Manganese (FeMn) – 25200 TPA or Ferro Chrome (FeCr) – 15000 TPA or Ferro Silicon (FeSi) – 7000 TPA or Pig Iron – 25200 TPA

23.1.7 Total land earmarked for the project is 26.82 acres of land (10.85 ha) which is an Industrial land. No forestland is involved. The entire land is in possession of the management**.** Maniyari River – 0.05 Kms., Agar River – 5.5 Kms., Shivnath river – 8.0 Kms. exists within 10 Km. radius of the plant site.

23.1.8 The plant area lies between latitude 21°56'27.19"N to 21°56'28.03"N and longitude 81°59'13.16"E to 81°59'12.93"E in Survey of India Topo sheet no. 64 G/13 at an elevation of 245 m AMSL. The ground water table reported from 5.14 to 8.83 mbgl during the post-monsoon season and 12.09 to 7.4 mbgl during the pre-monsoon season.

23.1.9 There are no notified National Park/ Wild life sanctuary / Biosphere reserve / Tiger Reserve/ migratory routes for Birds with in 10 Km. radius of the plant. There are no Schedule- I fauna exists in the study area.

23.1.10 The details of the raw material requirement are given as below:

S.No.	RAW MATERIAL	QUANTITY (TPA)	SOURCE	DISTANCE (w.r.t Plant)	MODE OF TRANSPORT
For Ferro Silicon					
1	Quartz	8450	Chhattisgarh / Andhra Pradesh	100 – 300 Kms.	By Road (Covered trucks)
2	LAM coke	2800	Chhattisgarh / Bihar Imported from Australia, China	~ 100 Kms. ~ 480 Kms. (from Vizag Port)	By Road (Covered trucks) From Vizag Port by Road (Covered Trucks)
3	MS Scrap	175	Raipur	~ 100 Kms.	By Road (Covered trucks)
4	Electrode paste	420	Maharashtra / West Bengal	650 – 950 Kms.	By Road (Covered trucks)
For Ferro Manganese					
1	Manganese Ore	46260	Balaghat (M.P.) Imported from South Africa	~ 500 Kms. ~ 480 Kms. (from Vizag Port)	By Road (Covered Trucks) From Vizag Port by Road (Covered Trucks)
2	LAM coke	26480	Chhattisgarh / Bihar Imported from Australia, China	~ 100 Kms. ~ 480 Kms. (from Vizag Port)	By Road (Covered trucks) From Vizag Port by Road (Covered Trucks)
3	MS Scrap	1790	Raipur	~ 100 Kms.	By Road (Covered trucks)
4	Electrode Paste	5240	Maharashtra / West Bengal	600 – 900 Kms.	By Road (Covered trucks)
For Silico Manganese					
1	Manganese Ore	15,850	Balaghat (M.P.) Imported from South Africa	~ 500 Kms. ~ 480 Kms. (from Vizag Port)	By Road (Covered Trucks) From Vizag Port by Road (Covered Trucks)
2	Mn. Slag	9,000	In house generation	---	By Conveyers
3	Quartz	3,900	Chhattisgarh / Andhra Pradesh	100 – 300 Kms.	By Road (Covered trucks)

S.No.	RAW MATERIAL	QUANTITY (TPA)	SOURCE	DISTANCE (w.r.t Plant)	MODE OF TRANSPORT
4	LAM coke	1,600	Chhattisgarh / Bihar Imported from Australia, China	~ 100 Kms. ~ 480 Kms. (from Vizag Port)	By Road (Covered trucks) From Vizag Port by Road (Covered Trucks)
For Ferro Chrome					
1	Chrome ore	40,000	Sukinda (Odisha) Import (Indonesia)	~ 400 Kms. ~ 480 Kms. (from Vizag Port)	By Road (Covered Trucks) From Port by Road (Covered Trucks)
2	LAM coke	15,750	Chhattisgarh / Bihar Imported from Australia, China	~ 100 Kms. ~ 480 Kms. (from Vizag Port)	By Road (Covered trucks) From Vizag Port by Road (Covered Trucks)
For Pig Iron					
1	Iron Ore / Sinter	46,000	Barbil, Odisha NMDC, Chhattisgarh	~ 500 Kms.	By Road (Covered trucks)
2	LAM Coke	21,500	Chhattisgarh / Bihar Imported from Australia, China	~ 100 Kms. ~ 480 Kms. (from Vizag Port)	By Road (Covered trucks) From Vizag Port by Road (Covered Trucks)
3	Limestone	3,000	Chhattisgarh	~ 300 Kms.	By Road (Covered trucks)
4	Quartz	1,500	Chhattisgarh / Andhra Pradesh	100 – 300 Kms.	By Road (Covered trucks)

23.1.11 The targeted production capacity of the plant after expansion project is SiMn (14,400 TPA) or Fe-Mn (25,200 TPA) or Fe-Cr (15,000 TPA) or Fe-Si (7,000 TPA) or Pig Iron (25,200 TPA) in the proposed 1 x 9 mVA SEAF in the existing plant premises.

23.1.12 Major raw materials will be transported to the plant site by road by in covered trucks All the trucks used for the transport of raw materials, products and wastes will be completely covered with tarpaulin and ensured no spillage during transportation. Internal roads will be made pucca as per the need during expansion also.

23.1.13 Impact on Vehicular Traffic Load due to proposed expansion

Traffic load (Baseline) :15130 PCU/day

Additional Traffic load during operation of the expansion project : 276 PCU/day

Total Traffic load during operation of existing and proposed expansion :15406 PCU/day

Traffic Capacity as per the IRC 73: 1980 for Highways :20000 PCU/day

23.1.14 The existing road is adequate to cater to the additional traffic due to expansion project.

23.1.15 Water required in the existing plant is 490 KLD and is being sourced from Khamhardih anicut of Maniyari river. Water required for the proposed expansion project will be 30 KLD and same will also be sourced from Khamhardih anicut of Maniyari river. Total water requirement after expansion will be 520 KLD. This includes Make-up water for Power Plant, Ferro Alloys plant and Domestic water. Existing plant has already obtained Water drawl permission to draw 0.182 MCM (551 KLD) of water from Khamhardih anicut of Maniyari River from Water Resource Department, Raipur, Chhattisgarh, vide letter no. 7070/354/ WR/TS/05/IWS/D-4, Raipur Dt. 13/09/2011.

23.1.16 Power required for existing plant is 0.75 MW, is being met from existing biomass power plant. Maximum Power requirement for proposed expansion of Ferro Alloys will be 11.0 MW. Power required will be sourced from Existing biomass power plant and Chhattisgarh State Power Generation Company Limited (CSPGCL).

23.1.17 Baseline Environmental Studies:

Period	1st October 2017 to 31st December 2017
AAQ parameters at 8 locations	$PM_{2.5}$ = 19.7 to 37.4 µg/m^3 PM_{10}= 32.9 to 63.2 µg/m^3 SO_2= 8.3 to 19.6 µg/m^3 NOx = 9.5 to 28.3 µg/m^3 CO = 525 to 1150 µg/m^3
AAQ modelling	PM_{10} =64.04 µg/m^3 SO_2 = 19.6 µg/m^3 NOx = 35.0 µg/m^3 CO = 1152.17 µg/m^3
Ground water quality at 8 locations	pH: 7.1 to 7.9, Total Hardness: 187 to 356 mg/l, Chlorides: 118 to 210 mg/l, Fluoride: 0.25 to 0.42 mg/l. Heavy metals are within the limits.
Surface water quality at 4 locations	pH: 7.3 to 7.9, DO: 4.2 to 5.5 mg/l, BOD: 1.5 to 2.9 mg/l & COD: 10.0 to 19.0 mg/l.
Noise levels	45to 60 dBA for day time and 36 to 49 dBA for night time.

23.1.18 It has been reported that there is no rehabilitation and resettlement required as proposed expansion will be taken up in the existing plant premises.

23.1.19 The solid wastes generation from existing, expansion proposals along with its utilization is given as below:

S.No.	Waste	Quantity (TPD)		Method of disposal
		Existing	**Proposed**	
1	Ash from Biomass Power Plant	44.0	---	Ash generated from the existing Biomass Power Plant is being utilized in the existing Brick Manufacturing unit, given to other brick manufacturing units and also is being given to M/s. Laxman Cement Pvt. Ltd.
2	Slag from Ferro Manganese Manufacturing Process	---	30.0	Will be reused in manufacture of SiMn as it contains high SiO_2 and Silicon.
3	Slag from Ferro Silicon Manufacturing Process	---	0.8	Will be given to Cast iron foundries
4	Slag from Silico Manganese Manufacturing Process	---	38.0	Will be given to M/s. Shreeji Infrastructure India Pvt. Ltd. for Road construction / will be given to M/s. Ambuja Cement for slag cement manufacturing.
5	Slag from Ferro Chrome Manufacturing Process	---	40.0	Will be processed in Zigging plant for Chrome recovery. After Chrome recovery, the left-over slag will be analysed for Chrome content through TCLP test, if the Chrome content in the slag is within the permissible limits, then it will be utilised for Road laying /brick manufacturing. It will be given to M/s. Steel Trading Corporation. If Chrome content exceeds the permissible limits, it will be sent to nearest TSDF.
6	Slag from Pig Iron manufacturing process	---	52.0	Will be given to M/s. Ambuja Cement for slag cement manufacturing.
7	Dust from Bag filters of SEAF and during tapping	---	0.05	It will be used in Briquetting Plant (Proposed now)

23.1.20 The Public Hearing for proposed expansion proposal was conducted on 8/11/2019 at 12:00 Noon at Government Primary School, Khamhardih Village, Pathariya Tehsil, Mungeli District, Chhattisgarh under the chairmanship of **Additional District Magistrate (ADM cadre**). The issues raised during public hearing are Construction of entrance gate and renovation of Mahamaya Temple at Village Rambod, potable water for drinking, Road widening & repairing, Employment & Pollution, water problem, plantation etc.

23.1.21 An amount of Rs. 20 Lakhs has been earmarked by the PP to address the concerns raised during the public consultation. The details of action plan for the same are as follows:

S.No.	Major Activity Heads	Total Expenditure to be spent in 1st Year (Rs. In Lakhs)
1.	Community & Infrastructure Development Programmes (as per Public Hearing outcome – Construction of entrance gate and renovation of temple, RO plant for drinking water (in Rambod village) with Rs. 6.0 Lakhs budget, Providing street lights in Rambod & Khamhardih village) with Rs. 1.0 Lakh budget, construction of 2 nos. of toilets in Khamhardih village school) with a budget of Rs 5 Lakhs, providing NPK fertilizer to farmers with Rs. 2.0 Lakhs.	14.0
2.	Education and Scholarship Programmes (Providing furniture, computers, library, sports kits, etc. for schools)	6.0
	Total	**20.0**

23.1.22 It is reported that during the construction, it is expected that about 135 persons will get an employment indirectly whereas during operation about 40 persons will be benefited directly.

23.1.23 The capital cost of the project is Rs.13 Crores and the capital cost for environmental protection measures is proposed as Rs. 2 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 31.6 Lakhs/annum. In addition, Rs. Rs. 20 Lakhs has been earmarked by the PP to address the concerns raised during the public consultation.

23.1.24 The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

S.No.	Item	Capital Cost (Rs.in Lakhs)	Recurring Cost / Annum (Rs.in Lakhs)
1	Air Emission Management		
	• 4th hole Extraction systems with Bag filters	65.0	10.0
	• Chimney	25.0	---
	• Water Sprinklers	5.0	0.1

S.No.	Item	Capital Cost (Rs.in Lakhs)	Recurring Cost / Annum (Rs.in Lakhs)
2	Wastewater Management • ETP (General)	5.0	1.0
3	Solid waste Management		
	• Slag Disposal	10.0	---
	• Fe-Cr recovery & its disposal	10.0	5.0
	• Municipal solid waste storage &disposal	--	2.0
	• Briquetting Plant	20.0	---
4	Greenbelt development, RWH etc.	5.0	2.5
5	Environmental Monitoring		6.0
	• AAQMS	40.0	
	• CEMS	5.0	
6	Occupational Health & Safety	10.0	5.0
	Total	**200**	

23.1.25 3.83 ha (9.46 acres) of Greenbelt is being maintained in existing plant premises which is about 33 % of the total area. Till date total no. of plants planted are 9350 no. and with survival rate of 90 %, 8490 nos. of plant exist in the plant premises. 2500 nos. of plant/hectare will be maintained in the existing plant premises, hence additionally 1500 nos. of plant will be planted within 1 year from the date of accord of EC.

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

23.1.27 Name of the EIA consultant: Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [S.No. 132, List of ACOs with their Certificate / Extension Letter no. Rev. 02, Sep. 07, 2020].

Observations of the Committee

23.1.28 The Committee noted the following:

i. Unit is located only 50 meters away from Maniyari River bank. However, the impact on the riverine ecology and its mitigation measures has not been enumerated in the EIA report.
ii. Committee also noted the provisions of River flood plain zones and other related articles and was of considered view that in any circumstances flood plain of the river should not be allowed to be encroached upon.
iii. No information has been furnished with respect to the High Flood Line of Maniyari River.
iv. Pet-coke is proposed to be used in the furnace.
v. Time bound action plan for green belt development in 3.83 ha with a density of 2500/ha has not been submitted.

Recommendations of the Committee

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

i. Impact of air pollution on riverine ecology shall be submitted.
ii. Highest Flood, 5 year & 10 year flood discharge along with flood level of the river Maniyari and its impact on the unit along with its mitigation measures shall be submitted. Spread of 5 year, 10 year and highest flood may be depicted on a map of legible scale.
iii. Undertaking shall be submitted stating that no pet coke shall be used in the furnace.
iv. Time bound action plan for green belt development in 3.83 ha with a density of 2500/ha shall be submitted.

23.2 Enhancement of production of Sponge Iron from 60,000 TPA to 90,000 TPA along with 2.0MW Waste Heat Recovery Boiler (WHRB) based Power Plant in the existing plant premises by **M/s. Hi-Tech Power and Steel Limited** located at Parsada Village, Tilda Tehsil, **Raipur District, Chhattisgarh** [Online Proposal No. IA/CG/IND/170590/2012; File No. J-11011/171/2017-IA.II(I)] – **Environment Clearance – regarding**.

23.2.1 **M/s. Hi-Tech Power and Steel Limited** has made online application vide proposal no. IA/CG/IND/170590/2012 dated 01/09/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

23.2.2 The detail of the ToR is furnished as below:

Date of application	Consideration	Details	Date of accord
27/03/2017	18th meeting held on 3-5th May, 2017	Terms of Reference	22/05/2017

23.2.3 The proposed expansion of Steel Plant of M/s. Hi-Tech Power and Steel Limited is located at Parsada Village, Tilda Tehsil, Raipur District, Chhattisgarh. Presently, the project proponent is operating Induction Furnace Unit (3 x 10 MT) to produce Billets of 90,000 TPA, Electric Arc Furnaces to produce Pig Iron -12,000 TPA and Rolling Mill (1 x 500 TPD) to produce Rolled Product of 1,50,000 TPA. It is proposed to increase the production capacity of Sponge Iron from 60,000 TPA to 90,000 TPA by establishing 1 x 100 TPD DRI Kiln (3rd Kiln) along with Waste Heat Recovery Boiler (WHRB) based power from 4 MW to 6 MW in the existing plant premises only. Existing plant is located in 20.079 ha (71.8 acres) of land.

23.2.4 It is reported that Consent to Establishment was obtained from Chhattisgarh Environment Conservation Board (CECB) for establishment of 1 x 100 TPD DRI Kiln (1st DRI Kiln) vide Board letter no. 3686/B-292/TC/CECB/2002 Raipur dated 07/10/2002. (does not attract EC as per provisions of EIA Notification 1994 as capital investment was < Rs 100 crores for new projects). Later Consent to Establishment was obtained from Chhattisgarh Environment Conservation Board (CECB) for expansion for establishment of 1 x 100 DRI Kiln (2nd Kiln) along with 10 MW Power Plant (WHRB – 4 MW & FBC - 6 MW), Ingots

/ Billets capacity 48,000 TPA and Fly ash brick plant 99,00,000 nos./year vide Board letter no. 4781/TS/CECB/2005, Raipur Dt. 07/10/2005 (does not attract EC as per provisions of EIA Notification 1994 as capital investment was < Rs 50 crores for expansion projects). Subsequently obtained Environmental Clearance for further expansion of steel plant by State Environment Impact Assessment Authority, Chhattisgarh (SEIAA-CG) for establishment of Induction Furnace Unit (3 x 10 MT) to produce Billets of 90,000 TPA, Electric Arc Furnaces to produce Pig Iron -12,000 TPA and Rolling Mill (1 x 500 TPD) to produce Rolled Product of 1,50,000 TPA vide letter no. 1253/SEIAA-CG/EC/Ind/Roll RYP/343 dated 12-12-2013.

23.2.5 It has been reported that the Consent to Operate for existing plant was accorded by CECB, Chhattisgarh vide order no. vide no. 1189 & 1190/TS/CECB/2020 which is valid till 31st May 2022.

23.2.6 The following are the existing and proposed plant configuration and production capacity:

S.No.	Units (Product)	Existing permitted capacity		Proposed Expansion	Production Capacity after Expansion
		Implemented	To be Implemented		
1.	DRI Kiln (Sponge Iron)	2 x 100 TPD (60,000 TPA)	---	1 x 100 TPD (30,000 TPA)	2 x 100 TPD & 1 x 100 TPD (90,000 TPA)
2.	Induction Furnaces (Ingots / Billets)	2 x 8 MT & 3 x 10 MT	---	---	2 x 8 MT & 3 x 10 MT (1,38,000 TPA)
3.	Electric Arc Furnaces (Pig Iron)	---	3 x 3 MVA	---	12,000 TPA
4.	Rolling Mill (Rolled Products)	1 x 500 TPD (1,50,000 TPA)	---	---	1 x 500 TPD (1,50,000 TPA)
5.	WHRB based Power Plant (Electricity)	4.0 MW	---	2.0 MW	6.0 MW
6.	FBC based Power Plant (Electricity)	6.0 MW	---	---	6.0 MW
7.	Fly ash brick plant (Fly ash bricks)	99,00,000 nos./year	---	---	99,00,000 nos./year

23.2.7 Total land earmarked for the project is 20.079 Ha / 71.8 acres which is existing Industrial land. No /forestland involved. The entire land is in possession of the management. No River / Stream passes through the proposed plant site.

23.2.8 The plant area lies between latitude 21°33'31.35"N to 21°33'35.53"N and longitude 81°45'5.61"E to 81°45'16.66"E in Survey of India Topo sheet no. 64 G/10 at an elevation

of 281 m AMSL. The ground water table reported from 0.56 to 7.86 mbgl below the land surface during the post-monsoon season and 15 to 2.75 mbgl below the land surface during the pre-monsoon season. It is reported that Ground Water Intersection will be there.

23.2.9 There are no notified National Park/ Wild life sanctuary / Biosphere reserve / Tiger Reserve/ migratory routes for Birds with in 10 Km. radius of the plant. There are no Schedule- I fauna exists in the study area.

23.2.10 The details of the raw material requirement are given as below:

S.No.	Raw Material		Quantity (in TPA)	Sources	Distance (w.r.t Plant)	Mode of Transport
1.	Iron ore (100 %)		48,000	Odisha & Open Market	~ 500 Kms.	By Rail & Road (through covered trucks)
	or					
2.	Iron ore pellets (100 %)		42,000	From M/s. Shri Bajrang Power & Ispat Ltd.	~ 20 Kms.	By Road (through covered trucks)
3.	Coal	Indian	39,000	SECL, Chhattisgarh / MCL Odisha / E auction	~ 500 Kms.	By Rail & Road (through covered trucks)
		Imported	25,000	Indonesia / South Africa / Australia	600 Kms. (from Vizag Port)	Through sea route, rail route & by road
4.	Dolomite		1,500	Raipur	~ 90 Kms.	By road (through covered trucks)
5.	Limestone		2,250	Raipur	~ 90 Kms.	By road (through covered trucks)

23.2.11 The targeted production capacity of the plant after expansion project is 2 x 100 TPD & 1 x 100 TPD (90,000 TPA) DRI Kiln (Sponge Iron), Induction Furnace Unit (2 x 8 MT & 3 x 10 MT) to produce Ingots/Billets of 1,38,000 TPA, Electric Arc Furnaces to produce Pig Iron -12,000 TPA and Rolling Mill (1 x 500 TPD) to produce Rolled Product of 1,50,000 TPAalong-with along with Waste Heat Recovery Boiler (WHRB) based power - 6 MW, FBC based Power Plant – 6 MW and Fly ash brick plant to produce 99,00,000 fly ash bricks/year in the existing plant premises.

23.2.12 Major raw materials will be transported through railway rakes up to the nearest railway station (Tilda RS – 5.0 Kms.) and then to the site through road by covered trucks. No. of trucks utilized in the existing plant are 58 trucks/day and No. of trucks that will be added to the existing traffic will be 16 trucks /day, hence total number of trucks after proposed expansion will be 74 trucks/day. Internal roads in the existing plant are pucca. Internal roads in the expansion area will be made pucca.

23.2.13 Impact on Vehicular Traffic Load due to proposed expansion

Traffic load (Baseline) :2377.5 PCU/day

Additional Traffic load during operation of the expansion project : 110.0 PCU/day

Total Traffic load during operation of existing and proposed expansion :2487.5 PCU/day

Traffic Capacity as per the IRC 73: 1980 : 5000 PCU/day

23.2.14 The existing road is adequate to cater to the additional traffic due to expansion project.

23.2.15 Water required in the existing plant is 442 KLD and same is being sourced from ground water. Water required for the proposed expansion project will be 75 KLD and which will be sourced from ground water source. This includes make up water for DRI Kiln along with WHRB Power Plant and for domestic consumption. Total water requirement after the proposed expansion will be 517 KLD. NOC from Central Ground Water Authority (CGWA) has been for obtained vide letter no. 21-4/668/CT/IND/2017-1633 dated 8th August 2018 for 1255 KLD of water and same will be sufficient for expansion also. NOC obtained was valid till 22nd July 2020, applied for renewal and same is under process.

23.2.16 Total power requirement after the present proposal will be 20.4 MW. Total captive power generation envisaged = 6 MW (WHRB) + 6 MW (FBC) = 12 MW. The Balance Power requirement of 8.4 MW will be sourced from State Grid.

23.2.17 Baseline Environmental Studies

Period	December 2017 to February 2018
AAQ parameters at 8 locations	$PM_{2.5}$ = 19.2 to 34.5 µg/m^3 PM_{10} = 32.5 to 69.5µg/m^3 SO_2 = 7.2 to 13.5µg/m^3 NOx = 7.1 to 21.4µg/m^3 CO = 354 to 947µg/m^3
AAQ modelling	PM_{10} =70.1 µg/m^3 SO_2 = 21.7 µg/m^3 NOx = 23.83 µg/m^3 CO = 948.25 µg/m^3
Ground water quality at 8 locations	pH: 7.4 to 8.1, Total Hardness: 202 to 266mg/l, Chlorides: 117 to 282mg/l, Fluoride: 0.40 to 0.81mg/l. Heavy metals are within the limits.
Surface water quality at 4 locations	pH: 7.0 to 7.8, DO: 4.1 to 7.4 mg/l, BOD: 2.4 to 2.9 mg/l & COD: 6.9 to 9.5 mg/l.
Noise levels	46 to 71 dBA for day time and 37 to 55 dBA for night time.

23.2.18 It has been reported that there is no rehabilitation and resettlement required as proposed expansion will be taken up in the existing plant premises.

23.2.19 The Solid wastes generation from existing, expansion proposals along with its utilization is given as below:

S.No.	Waste	Quantity (TPD)		Method of disposal
		Existing	Proposed	
1	Ash from DRI	36	18	Is being/will be given to Brick manufacturers [i.e. M/s. Khom Tech Traders, M/s. Shri Sai Bricks Industry & Chandra Kumar Patil (Govt. Contractor)] and the same practice will be continued after expansion also.
2	Dolochar	60	30	Is being/will be utilized in existing FBC boiler and after expansion same practice will be continued.
3	Kiln Accretion Slag	20	10	Is being/will be used in road / civil construction & being given to brick manufacturer [i.e. M/s. Khom Tech Traders, M/s. Shri Sai Bricks Industry & Chandra Kumar Patil (Govt. Contractor)] and same practice will be continued after the proposed expansion also.
4	Wet scrapper sludge	90	45	Is being/will be used in road / civil construction & being given to brick manufacturer [i.e. M/s. Khom Tech Traders, M/s. Shri Sai Bricks Industry & Chandra Kumar Patil (Govt. Contractor)] and same practice will be continued after the proposed expansion also.
5	SMS Slag	26	--	Slag from SMS is being crushed and iron is being recovered & then remaining non - magnetic material being inert by nature is used as sub base material in road construction/brick manufacturing
6	Mill scales from Rolling Mill	25	--	Mill scales from Rolling Mill is being reused in the SMS.
7	Ash from Power Plant (with Indian Coal)	50	--	Is being given to Brick manufacturers [i.e. M/s. Khom Tech Traders, M/s. Shri Sai Bricks Industry & Chandra Kumar Patil (Govt. Contractor)] and the same practice will be continued after expansion also.

23.2.20 The Public Hearing for proposed expansion proposal was conducted on 10th February 2020 at 12:00 Noon at Panchayat Bhavan area, Parsada Village, Tilda Tehsil, Raipur District, Chhattisgarh under the chairmanship of **Additional District Magistrate and Upper Collector (ADM cadre**). The issues raised during public hearing areEmployment generation, Pollution problem, Development activities, Land encroachment, Construction

of toilets in village, Drinking water arrangement, Maintenance of road in villages, Avenue plantation.

23.2.21 An amount of Rs. 18 Lakhs out of project cost has been earmarked by the PP to address the concerns raised during the public consultation. The details of action plan for the same are as follows:

S.No.	Major Activity Heads	Total Expenditure (Rs. In Lakhs)
1	Community & Infrastructure Development Programmes (renovation of school buildings, drainage facilities in nearby village, Providing LED Street lighting with solar panels in suitable placesin surrounding 2 nos. of villages, Supply of NPK to local farmers	4.5
2	Establishment of Skill Development Centre "DISHA Centre" along with necessary infrastructure for various vocational training program for employment generation in association with *National Skill Development Mission* (Automobile Repair, Welding, Electrical, Computer Hardware, Soft skills like computer programs, Industrial Sewing Operator & Coaching classes for under privilege students for various competitive exams, Defence Services etc.)	4.0
3	Education and Scholarship Programmes • Providing furniture, computers, library, sports equipment etc. for 2 nos. of schools in surrounding areas • Sponsorship for School Sport events • Providing Model Anganwadi Centres in consultations with State Women and Child Development Department	4.0
	SUBTOTAL (A)	**12.5**
1	Construction of Toilets in the village (2@ Rs 1.5 lakhs / toilet)	3.0
2	Drinking water arrangement	0.5
3	Maintenance of road in villages	1.0
4	Avenue plantation on the approach road	1.0
	SUBTOTAL (B)	5.5
	TOTAL (A + B)	**18.0**

23.2.22 It is reported that the proposed expansion project creates employment to 50 people are directly employed officials, skilled staff, semi–skilled & unskilled labour and 100 are people indirectly employed in contract works & transport.

23.2.23 The capital cost of the project is Rs.18 Crores and the capital cost for environmental protection measures is proposed as Rs. 3.80 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 75.0 Lakhs/annum. In addition, an

amount of Rs. 18 Lakhs out of project cost has been earmarked by the PP to address the concerns raised during the public consultation.

23.2.24 The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

S.No.	Particulars	Capital Cost (Rs.in Crores)	Recurring Cost / Annum (Rs.in Lacs)
1.	**Air Emission Management**		
	ESP	0.80	55.00
	Dust Extraction systems with Bag filters	0.20	
	Stacks / Chimney	1.20	
	Water Sprinklers	0.05	
2.	**Wastewater Management**		
	ETP & STP	0.10	5.00
	Septic tank	0.10	
3.	**Solid waste Management**		
	Ash Handling & Disposal	0.10	4.00
	Hazardous waste storage & disposal	0.05	
	Construction of Pucca platform for storage	0.15	
4.	Greenbelt development, Land scaping, Noise Management, RWH etc.	0.10	3.00
5.	Occupational Health & Safety (including Dispensary with Ambulance facility)	0.30	3.00
6	Environment Monitoring (AAQMS & CEMS)	0.65	5.00
TOTAL		**3.80**	**75.00**

23.2.25 9.7 ha. (24 Acres) of Greenbelt is being maintained in existing plant premises. Till date total no. of plant planted are 22750 nos. and with survival rate of 85 %, 19412 nos. of plants exists in the plant premises. 10 to 105 m wide greenbelt is developed all around the plant. Greenbelt will be developed as per CPCB guidelines. 600 plants will be maintained per acre as per CPCB norms.

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

23.2.27 Name of the EIA consultant: Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [S.No. 132, List of ACOs with their Certificate / Extension Letter no. Rev. 02, Sep. 07, 2020].

Certified compliance report of Regional Office, Nagpur

23.2.28 Certified compliance report on EC conditions (EC order dated 12/12/2013) has been issued by MoEF&CC, Regional Office (WCZ), Nagpur, vide letter no. 18-D-85/2014(SEAC)/2960dated November, 2017 wherein non-compliances have been reported

with respect to effluent treatment, rain water harvesting, establishment of Environment Management Cell, provision of garland drain and fugitive/ dust control measures. In compliance of non/partially complied conditions, Action taken report (ATR) has been submitted by PP (vide letter No. HPSL/EC-CERT/2020-21/01 dated 03.07.2020) which has been forwarded to MoEF&CC, New Delhi by Regional Office (WCZ), MoEF&CC, Nagpur vide letter no. 18-D-85/2014(SEAC)/6854dated 20th July, 2020. The Committee satisfied with the action taken report on the observed non-compliances.

Observations of the Committee

23.2.1 The Committee noted the following:

i. The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data and incremental GLC due to the proposed project are within NAAQ standards. The Committee has also deliberated on the public hearing issues and action plan was found to be addressing the issues raised during the public hearing.

ii. The action taken report submitted by the PP on the observed non-compliances are also found to be satisfactory.

Recommendations of the Committee

23.2.2 In view of the foregoing and after detailed deliberations, the committee recommended the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the following specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 pertaining to sponge iron plants, induction furnace and rolling mills based on project specific requirements:

A. Specific conditions

i. All EAFs shall have 4th hole fume extraction system.
ii. PM emission levels shall be less than 30mg/Nm^3.
iii. Dolo char produced shall be used for power generation within the plant complex. Sale of same or dumping is not permitted.
iv. Green belt shall be developed @ 2500 trees per hectare in one-year time i.e., by Sept 2021.
v. All dust generated and collected from the plant roads, floors and bag houses/ESPs shall be recycled to the Plant.
vi. After three years, only surface water shall be used and no extraction of ground water will be permitted.
vii. 100 % water consumed annually shall be recharged through rain water harvesting.
viii. All roads inside the plant shall be concreted, vacuum cleaners shall be provided to clean roads and shop floors.
ix. Water spray systems shall be included to control fugitive dust from raw material stockpiles.
x. DG set shall be equipped with acoustic enclosures.
xi. 1.378 ha land shall be allotted for truck parking.
xii. CPP heat rate of 2600 K Cal/KWh shall be achieved and maintained.
xiii. Plant CEMS monitoring station shall be in the plant control room and shall be integrated with plant alarm and Emergency Shutdown System (ESD).

xiv. PTFE bags shall be used in filter bag house and designed for 150% of normal design air flow.

xv. PP shall use Energy Efficient Motors as per NEMA Premium® Efficiency Electric Motor specification or equivalent classifications and shall use VFD for control of electric motors.

xvi. Waste heat recovery in the plant will be maximized.

xvii. Low NOx burner with three-stage combustion process controlled by automatic combustion control system.

B. General conditions

I. Statutory compliance:

i. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

iii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.

iv. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.

v. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.

vi. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.

vii. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.

viii. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.

ix. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.

x. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.

iii. Adhere to 'Zero Liquid Discharge'.

iv. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

v. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

vi. The project proponent shall practice rainwater harvesting to maximum possible extent.

IV. Noise monitoring and prevention

i. Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation And Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

V. Energy Conservation measures

i. Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.

VI. Waste management

i. Used refractories shall be recycled as far as possible.

ii. Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried, and briquetted and reused melting Furnaces.

iii. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

i. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant

ii. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

VIII. Public hearing and Human health issues

i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.

ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.

iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

IX. Corporate Environment Responsibility

i. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

ii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

X. Miscellaneous

i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

iv. The project proponent shall monitor the criteria pollutants level namely; PM_{10}, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

23.3 Proposed Installation of Sponge Iron Plant (4x100 TPD Kilns), Induction Furnaces(3x20 T), 1,40,000 TPA capacity Rolling Mill along with 16 MW capacity Captive Power Plant (8 MW WHRB based & 8 MW AFBC based, utilization waste heat &dolochar from the proposed sponge plant) and 1,00,000 TPA Cement Grinding Unit of **M/s BRGD Sponge & Iron Pvt. Ltd.** located at Village Janardandih, Mouza Erekusum and Khoar, P.S. Naturia, Dist. Purulia, West Bengal [Online Proposal No. IA/WB/IND/72262/2018; File No. J-11011/65/2018-IAII(I)] **– Reconsideration for grant of Environment Clearance based on ADS reply – regarding.**

23.3.1 The aforesaid proposal was earlier considered in 14th meeting of the Re-constituted EAC (Industry-I) held during 23-24thDecember, 2019 and reconsidered during 22ndmeeting of the Re-constituted EAC (Industry-I) held during 26 – 28th August, 2020. However, PP could not attend so the Committee deferred the consideration of the proposal and recommended to consider the same in the next EAC meeting. Accordingly, the proposal was listed for consideration before the EAC.

23.3.2 Meanwhile, PP vide email dated 25/09/2020 requested the Ministry to update their reply to the ADS (already uploaded), raised during 14th meetings of Reconstituted Expert Appraisal Committee (Industry-1) held on 23rd December 2019, which could ultimately facilitate a smooth appraisal by the EAC.

Observations of the Committee

23.3.3 The Committee noted the following:

i. PP would like to update their ADS reply.

ii. EIA consultant namely M/s. Envirotech East Private Limited has deliberately copied the several sections from EIA Report of Bravo Steel in the instant ADS reply. There is gross violation of Plagiarism Pledge of NABET Scheme.

Recommendations of the Committee

23.3.4 In view of the foregoing and after deliberations, the Committee recommended the following:

i. Proposal shall be returned in present form to facilitate the uploading of the updated ADS reply by the project proponent.

ii. The MoEFCC may issue a Show Cause notice to M/s. Envirotech East Private Limited, Kolkata for blacklisting them from participating in any EIA process in respect of Metallurgical Industries as they have deliberately copied several sections from EIA Report of another industrial Unit -Bravo Steel- in the instant ADS reply. This is not only plagiarism but also an attempt to misguide the Environment Clearance process.

23.4 Modification of Product Mix of Existing Ferroalloy Plant: 4 X 7.5 MVA and 1 X 5 MVA for production of Ferro-chrome in addition to existing product mix of Ferro-manganese, Silico-manganese and by-product Ferro-manganese Slag **by M/s. Sonic Thermal Private Limited** located at Village- Namobandh - Sitarampur Panchayat/P.O.: Ghutgoria, PS: Barjora Zilla Parishad – Bankura, **District – Bankura, West Bengal**- [Online Proposal No. IA/WB/IND/160576/2017, File No. J-11011/569/2017-IA.II.(I)] **– Reconsideration for grant of Environment Clearance based on ADS reply - regarding.**

23.4.1 The aforesaid proposal was earlier considered in 21stmeeting of the Re-constituted EAC (Industry-1) held during 30th July – 1stAugust, 2020. The relevant portion of the minute of the meeting is given as below:

Proceedings of the EAC (Industry1) held on 30th July – 1st August, 2020

M/s. Sonic Thermal Private Limited has made online application vide proposal no. IA/WB/IND/160576/2017 dated 28/06/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the project is appraised at the Central level.

The details of the ToR are furnished as below:

Date of Application	Consideration	Details	Date of accord
25/09/2017	27th meeting held on 04.01.2017	Terms of Reference	18/01/2018

M/s. Sonic Thermal Private Limited submitted the application vide proposal no. IA/WB/IND/97331/2017 dated 17/05/2019 along with copies of EIA/EMP report and Form – 2 seeking Environmental Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposal was considered during the 8th meeting of Re-Constituted Expert Appraisal Committee [EAC] (Industry-I) held on 26thJune, 2019 wherein the committee noted that project proponent does not have permission for withdrawal of 506 KLD water from Damodar river. Further, the calculation of the GLC based on the worst case scenario, scheme for rain water harvesting and ground water quality monitoring have not been adequately addressed in the EIA report. Further, CER table given in the EIA report needs to be revised. In view of this and after detailed deliberations, the Committee recommended to return the proposal in present form.

M/s. Sonic Thermal Private Limited again submitted the fresh application vide proposal no. IA/WB/IND/97331/2017 dated 28/06/2020 along with copies of EIA/EMP report and Form – 2 seeking Environmental Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above.

The project of M/s Sonic Thermal Pvt. Ltd., located in Namobandh-Sitarampur village, Barjora Tehsil, Bankura District, West Bengal State, is for modification of product mix for inclusion of Ferrochrome as a product in the existing ferroalloy plants of capacity 4 X 7.5

MVA and 1 X 5 MVA so as to produce 7150 TPM of Fe-Mn, 5060 TPM of Si-Mn and 7465 TPM of Fe-Cr. The existing project was set up prior to EIA Notification 2006 and is operating based on the CTO issued by the West Bengal Pollution Control Board CTO Ref. No. CO107863 dated 26.03.2018.

As EC was not availed from the MoEF&CC earlier, the Status of compliance of valid CTO was obtained from West Bengal Pollution Control Board vide CO107863 dated 26.03.2018. There are no non-compliances reported by WBPCB.

The Proposed capacity for different products for in the existing site area as below:

Name of unit	No. of units	Capacity of each Unit	Production Capacity
M/s Sonic Thermal Pvt. Ltd	5 Nos. of Submerged Electric Arc Furnaces for production of Ferroalloys	4 X 7.5 MVA & 1 X 5 MVA	Fe-Mn-7150 TPM Si-Mn- 5060 TPM Fe-Cr-7465 TPM

The total land required for the project is 15 acres the whole of which is industrial land allotted by West Bengal Industrial Development Corporation in the Barjora Plasto Park Area and as such it is Government Land. No forestland is involved. The entire land has been acquired. 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.

The topography of the area is flat and reportedly lies between $23^0$25'40.08" to $23^0$25'53.64" N Latitude and $87^0$15'26.31" to $87^0$15'32.57" E Longitude in Survey of India topo sheet No. 73M/7, at an elevation of 85m AMSL. The ground water table is reported to be 5.95m bgl (average of last 5years) in pre-monsoon period and 2.15m bgl (average of last 5years) below the land surface during the post-monsoon season.

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

The production of ferro alloys like Fe-Cr, Fe-Mn, Fe-Si will be carried out in submerged electric Arc furnaces in carbo-thermic reduction route.

The targeted production capacity of the Ferroalloy plant is Fe-Cr: 89,580 TPA/ Fe-Mn: 85,800 TPA/ Si-Mn: 60,720 TPA. The ore for the plant would be procured from mines in Odisha, Chhattisgarh, West Bengal and other nearby facilities. The ore transportation will be done through Rail/Road.

The water requirement of the project is estimated as 506 m^3/day, which will be entirely obtained from the water supply system of WBIDC available in the Plasto Park industrial Area. The WBIDC in turn supplies water from the river Damodar which is nearby. The permission for drawl of surface water is obtained from WBIDC vide Lr. No. PI/STPL/PSP/5/2090 dated 22nd January, 2020.

The power requirement of the project is estimated as 39MW, all of which will be obtained from the DVC grid.

Baseline Environmental Studies were conducted during pre-monsoon season i.e. from 1st March 2018 to 31st May, 2018. Ambient air quality monitoring has been carried out at eight locations and the data submitted indicated: PM_{10} (51.8µg/m^3 to 92.3µg/m^3), $PM_{2.5}$(22.3 to 48.3µg/m^3), SO_2(7.3 to 21.3µg/m^3) and NO_x (12.8to 38.1µg/m^3). The results of the modeling

study indicates that the maximum increase of GLC for the proposed project is 0.19041 µg/m^3 with respect to the PM_{10}, 0.11838 µg/m^3 with respect totheSO_2, 2.29672 µg/m^3 with respect to the NOx.

Ground water quality has been monitored in 8 locations in the study area and analyzed. pH:6.8 to7.4, Total Hardness:257 to 350mg/l, Chlorides:58to154 mg/l, Fluoride: 0.33 to 0.56mg/l. Heavy metals are within the limits. Surface water samples were analyzed from 8 locations. pH: 6.8 to 7.5.; DO:5.9 to 6.4mg/l and BOD from to 2.4mg/l to 2.8 mg/l.

Noise levels are in the range of 41.8 to 53.3 dBA for daytime and 35.6 to 43.6 dBA for nighttime in residential areas.

It has been reported that the core zone is located in an industrial area. No R&R issues are involved.

It has been reported that a total of maximum 272 tons of waste (Slag) will be generated per day due to the project, out of which Fe-Mn slag will be used in the manufacture of silico manganese; Si-Mn Slag will be used in road construction. Fe-Cr slag will be used in road construction if it is considered as non- hazardous waste by TCLP Test. If hazardous it will be given to authorized Treatment Storage & Disposal Facility (TSDF) or will be dumped in the earmarked dump yard. It has been envisaged that an area of 6 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.

It has been reported that the Consent to Establish /Consent to Operate from the West Bengal State Pollution Control Board obtained vide Letter No. CO107863, dated 26.03.2018 and consent is valid up to 31.01.2023

The Public hearing of the project was held on 21.12.2018 at Barjora Panchyat Samitee meeting Hall; under the chairmanship of Additional District Magistrate (Gen) for production 85,800 TPA of Fe-Mn /60720 TPA of Si-Mn /89,580 TPA of Fe-Cr & modification of product mix of Ferroalloy plant, under the Barjora CD Block of Bankura district, WB. The issues raised during public hearing are socio-economic development, adherence to environment norms and employment opportunities etc., An amount of Rs 80 lakhs/annum (1% of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues.

The capital cost of the project is Rs. 80.00 crores and the capital cost for environmental protection measures is proposed as Rs. 402 lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs. 40.3 lakhs. The employment generation from the proposed project is nil as the project is for product mix modification.

Greenbelt will be developed in 6 acres, which is about 40% of the total acquired area. A 100m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as green belt and green cover as per CPCB / MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 600 trees /acre. Total no. of 3604 saplings will be planted and nurtured in 6.0 acres in 3 years. Presently there are 604 plants over 1 acre of land.

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

Name of the consultant: Centre for Envotech and Management Consultancy Private Limited [S.No. 26, List of Accredited Consultant Organizations (Alphabetically) Rev. 89, July 11, 2020].

Observations of the Committee (EAC meeting held during 30th July – 1st August, 2020)

The Committee observed the following:

i. Norm for Stack emissions from BF and other units is given as 150 mg/Nm^3.
ii. Hazard Identification and Risk Assessment is not project specific.
iii. Fourth hole extraction system not provided as per TOR
iv. AAQ values for PM_{10} are as high as 95.30 µg/Nm^3 at certain places for which no explanation is available. Criteria for selecting sampling locations has not been provided.
v. Noise level is monitored at 7 Km away from the plant. Criteria for selecting sampling locations has not been provided.
vi. In Bankura area of WB, the soil carbon is reported as 0.3 %. Moisture in soil sample taken from a depth of 50 cm is only 1.1 %. This appears to be incorrect.
vii. Interpretation of physical, biological and social base line data has not been done to anticipate likely impacts of the proposed developmental activity on the site and that of site on the plant.
viii. AAQ modelling has been done only for normal operation, accidental release not considered.
ix. CER Activities have not been taken from public consultation proceeds and SIA out comes. CER calculations are wrong. The activities proposed in the table are not related to CER as per OM dated 1/05/2018.
x. RWH calculation does not include recharge being proposed which should be more than 100% of annual consumption.

Recommendations of the Committee (EAC meeting held during 30th July – 1st August, 2020)

In view of the forgoing and after deliberations, the Committee deferred the consideration of the proposal cited above and sought the following additional information:

i. Scheme to meet Stack emissions from all units at less than 30 mg/Nm^3 should be furnished.
ii. Proper HIRA should be done and presented.
iii. Fourth hole extraction system should be provided as per TOR.
iv. AAQ values are as high as 95.30 µg/Nm^3 at certain places. No explanation is available. Reasons for the higher values be given along with mitigation plan shall be furnished.
v. In Bankura area Soil carbon is 0.3 %. Moisture in soil sample taken up to 50 cm depth, as reported needs to be justified.
vi. CER Activities have not been taken from public consultation proceeds and SIA out comes. CER calculations needs to be revised. Action plan for CER shall be submitted as per the Ministry's O.M. dated 1/05/2018.
vii. Action plan for RWH more than 100% of annual water consumption shall be submitted.
viii. CEMS shall be installed in next three months and a completion report shall be made available to MoEF&CC.
ix. Scheme to manage chromium bearing waste shall be submitted.
x. Scheme for strengthening of green belt shall be submitted.

23.4.2 Project proponent has replied to ADS on 9th September, 2020 on PARIVESH portal. The reply is as given below:

i. ***Scheme to meet Stack emissions from all units at less than 30 mg/Nm^3 should be furnished.***
Reply:

Scheme to meet stack emissions standard (< 30 mg/Nm^3) from all units

Following modification to be done-

1. Bag-house chamber to be increase by 25% for better dust collection.
2. Bag house operating system to be changed from online to offline by partition of chamber.
3. Bag house outlet duct line to be installed and connected to each chamber through pneumatic damper.
4. New heat-exchanger (air cooler) to be installed for increase cooling surface area.
5. New inter connected duct to be fitted at heat-exchangers.
6. New ID. FAN to be installed for increase suction volume.
7. Electrical work to be done as per modification.
8. New dust collecting bags to be installed at each bag house.
9. New screw compressor (450 CFM) to be installed for better pressure maintains and dust cleaning.
10. Man power required as per organization chart.

It will be done by phase manner and completed end of December 2020.

ii. ***Proper HIRA should be done and presented.***
Reply:
Detail Hazard Identification &Risk Assessment (HIRA) Study is carried out by the PP and is submitted with the ADS Report.

iii. ***Fourth hole extraction system should be provided as per TOR.***
Reply:
PP is in the process to providing Fourth Hole Extraction System in the furnace. An undertaking to this effect is submitted stating that *"PP do hereby undertake that they shall engage a technology and engineering consultant and then execute the proposed 4th hole extraction system for extraction of fumes from the furnace to pre-heat the charge in a pre-heater, complete with ducting, bag house and chimney. The implementation of the scheme may take six to eight months' time."*

iv. ***AAQ values are as high as 95.30 µg/Nm^3 at certain places. No explanation is available. Reasons for the higher values be given along with mitigation plan shall be furnished.***
Reply:

a) The project site is located in an industrial estate locality namely the Plasto Steel Park, in Barjora block of Bankura which is well in the proximity of another industrial hub Durgapur. As per EIA report submitted the area is having as many as 24 numbers of industries in the vicinity i.e. within 10 Km of the radius of project location.
b) Secondly there may be higher emission load of some of the industries due to process upsets which may be transient. But this would have resulted in showing higher AAQ level in ambient air.

The above points clarify as to why the AAQ values have been high at certain places.

Mitigation Measures:

1. There are number of industries in the cluster which contribute to the ambient air quality. Many of the industries may be operating sticking to old emission standard of 150mg/m^3.

Upon enforcement of the standard emission limit of 30 mg/Nm^3 the ambient air quality will improve shall significantly.

2. M/s STPL on its part shall take up modification measures of its pollution control measures to reduce the stack emission of its Ferroalloy furnaces which has been deliberated in point No I. above. The scheme to meet 30 mg/m^3 norm of stack emission shall be completed by December 2020.It will be done by phase manner and completed end of December2020.
3. Another point for increase in particulate concentration in the ambient air is fugitive emission. The movement of vehicular traffic in the arterial roads without black topping or concreting may be contributing for high particulate level in ambient air. Regular water sprinkling shall be done on road.
4. Water spraying shall be done at unloading and loading point. In dry months water spraying shall be done on heaps of storage materials i.e. minerals and coal.

v. ***In Bankura area Soil carbon is 0.3 %. Moisture in soil sample taken up to 50 cm depth, as reported needs to be justified.***

Reply:
The organic carbon is an indicator of the fertility of soil. The organic carbon content has been checked at 8 points located in the vicinity of the plant. Out of eight points, the one at Barjora has come as 0.3 %. The location of the sampling point is found to be a patch of upland devoid of any vegetative growth. This may be the reason for low organic carbon. Except for this location other locations, the OC % is higher varying from 0.9 to 1.3. Another point at Ticker gram shows 0.4 % probably because it is a reclaimed area filled with bottom soil.

vi. ***CER Activities have not been taken from public consultation proceeds and SIA out comes. CER calculations needs to be revised. Action plan for CER shall be submitted as per the Ministry's O.M. dated 1/05/2018.***

Reply: An amount of Rs. 80 lakhs have been earmarked to address the issues raised during the public consultation.

vii. ***Action plan for RWH more than 100% of annual water consumption shall be submitted.***

Reply:

- Total Fresh Water Requirement of the project is 1,66,980 m^3 per annum. So, in order to ensure the enhanced quantum of recharge, the plant authority has planned to renovate and maintain a pond existing nearby, in Saharjora mauza with due consent of villager.

- The recharge of ground water in the pond area after pond cleaning & desilting will result into rise in water levels in the village tube-wells and increase the supply of water to the lands adjacent for irrigation purposes.

- PP has further submitted a copy of an agreement made between the company and the owner of the pond stating no objection from the owner on utilization of pond as water recharging structure. The agreement is made for a period of 6 years in India Non Judicial stamp paper.

viii. ***CEMS shall be installed in next three months and a completion report shall be made available to MoEF&CC.***

Reply:

PP has already installed CEMS. Further, copy of the Tax Invoice from party "Forbes Marshall Pvt. Ltd." w.r.t. purchase of CEMS has also been submitted.

ix. ***Scheme to manage chromium bearing waste shall be submitted.***

Reply:

- In the ferrochrome manufacture, the main contributor to solid waste are the dust collected in in the bag filters & the Fe-Cr slag after the metal recovery section.
  Management of Bag Filter Dust
- The unit shall use Chromites ore dust through briquette plant. The company envisages to install a pneumatic conveying system for transfer of dust from the bag filters of each furnace to the silo. From the silo the dust is again conveyed to the briquetting plant by pneumatic conveying.
  Management of Ferrochrome Slag
  There is a generation of 1–1.2 MT of solid waste slag for each MT of ferrochrome product. Air cooled slag is crushed in order to extract any additional metal remaining in the slag by density separation or jigging process.
- M/s Sonic Thermal Pvt. Ltd. has adopted wet jigging process.
- The slag so separated in the process is carried to slag storage shed. The generated slag is then subjected to TCLP test & if the hexavalent chromate is found below the specified hazard limit for total chromium of 2 mg/l & 0.1 mg/l for Cr-(VI), as per Indian discharge standard. It is stored in a separate heap.
- If the particular batch of slag is found to contain more than the specified limit in TCLP test, it is taken to storage shed where it is stored on impervious flooring and later transported by truck covered with suitable tarpaulin by authorised hazardous waste TSDF operator.
- There are number of options for utilisation of non-hazardous slag;
  - It is used as road base material in road construction.
  - It is used as a concrete aggregate.
  - It can be used in the manufacture of Portland cement.
  - It can be used in the manufacture of slag cement.
  - It can be used for filling of the evacuated mines

x. ***Scheme for strengthening of green belt shall be submitted***

Reply:

The tentative implementation proposal for development of green belt:

Sl. No.	Year of Plantation	Area (in acres)	No of Saplings	Cumulative Area	% of Total Area
1	Existing Plantation	2.00	1200	2.0	13.33
2	1st year of proposed Expansion	1.0	600	3.0	20
3	2nd year	1.5	900	4.5	30
4	3rd year	1.5	900	6.0	40
	Total	**6.0**	**3600**		**40**

23.4.3 Name of the EIA consultant: Centre for Envotech and Management Consultancy Private Limited [S.No. 94, List of ACOs with their Certificate / Extension Letter no. Rev. 02, Sep. 07, 2020].

Observations of the Committee

23.4.4 The Committee noted the following:

i. The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data and incremental GLC due to the proposed project within NAAQ standards.

ii. The Committee also deliberated on the public hearing issues, action plan and CER plan and found to be addressing the issues in the study area and the issues raised during the public hearing. The certified compliance report of WBPCB is also found to be satisfactory.

iii. Additional information submitted by the project proponent found to be satisfactory, and addressing the concerns of the Committee.

Recommendations of the Committee

23.4.5 In view of the foregoing after deliberations, the committee recommended the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the following specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 based on project specific requirements:

A. Specific conditions

i. 4th Hole fume extraction system shall be provided in SAF.

ii. PM levels shall be maintained less than 30 mg/Nm^3.

iii. Briquetting and Jigging facility shall be provided to recover metallics from fines and solid waste.

iv. Green belt shall be developed in additional 7% of the plant area (in addition to 33% prescribed under General conditions) and shall be completed by Sept 2021.

v. No GW abstraction is permitted. Only surface water will be used.

vi. Plant shall operate on ZLD.

vii. 100% solid waste generated shall be recycled/reused. Chrome waste shall be stored on impervious floor with runoff control and treatment.

viii. 100 % water consumed annually shall be recharged through water harvesting.

B. General conditions

I. Statutory compliance:

ii. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

iii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.

iv. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.

v. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.

vi. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.

vii. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.

viii. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.

ix. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.

x. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.

iii. Adhere to 'Zero Liquid Discharge'.

iv. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

v. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

vi. The project proponent shall practice rainwater harvesting to maximum possible extent.

IV. Noise monitoring and prevention

i. Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

V. Energy Conservation measures

i. Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.

VI. Waste management

i. Used refractories shall be recycled as far as possible.

ii. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

i. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant

ii. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

VIII. Public hearing and Human health issues

i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.

ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.

iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

IX. Corporate Environment Responsibility

i. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

ii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

X. Miscellaneous

i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of

which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

iv. The project proponent shall monitor the criteria pollutants level namely; PM_{10}, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

23.5 Modification-cum-Expansion in existing Ferro Alloys Plant of **M/s. Bihar Foundry & Casting Limited** at Notified Ramgarh Industrial Area, Survey Plot No 1405(P), Village - Marar, **Ramgarh Jharkhand** [Online Proposal No. IA/JH/IND/172815/2020; File No. J-11011/384/2010-IAII(I)] **– Prescribing of Terms of Reference (ToR) –regarding.**

23.5.1 The project proponent did not attend the meeting and no information has been received from PP in this regard.

23.5.2 The Member Secretary requested the EAC to carry out the due-diligence based on the documents circulated by the PP even in absence of PP.

23.5.3 EAC reiterated its decision taken during the meeting held on 26-28th August, 2020 which is reproduced as below:

23.5.4 EAC noted that as per the provisions of the EIA Notification, 2006 which states that *"Expert Appraisal Committee concerned in a transparent manner in a proceeding to which the applicant shall be invited for furnishing necessary clarifications in person or through an authorized representative".* In this regard, after deliberations, the EAC is of the considered view that participation of applicant in person (or) authorized representative is very much essential due to facilitate the following:

- To conduct the meetings in a transparent manner.
- To get consent of the PP while prescribing the conditions for which the proposal is considered by the EAC.
- To clarify the technical queries/concerns of EAC which might emerge during the appraisal.

23.5.5 In view of above, the Committee **deferred** the consideration of the proposal and recommended to consider the same in the next EAC meeting.

23.6 Proposed alumina refinery of 3.0 Million TPA along with co-generation power plant of 150 MW by **M/s. Aditya Aluminum Limited** at Kansarigurha village, Kashipur tehsil, **Rayagada district, Odisha** [Online Proposal No. IA/OR/IND/154572/2020; File No. J-11011/141/2004-IAII(I)] – **Prescribing of Terms of Reference (ToR)** – regarding.

23.6.1 **M/s. Aditya Aluminum Limited** has made application vide online proposal no. IA/OR/IND/154572/2020 dated 29/08/2020 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 S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

23.6.2 M/s. Aditya Aluminum Limited, proposes to install a new Alumina Refinery manufacturing unit for production of alumina. It is proposed to set up the plant for production of alumina refinery of 3.0 Million TPA along with co-generation power plant of 150 MW based on Bayer's technology.

23.6.3 The project was earlier accorded environmental clearance vide Lr.No J-11011/141/2004/ IA.II dated 18.03.2006. However, no activity was initiated at the site and the validity period of the EC was lapsed.

23.6.4 The proposed unit will be located at-Village: Kansarigurha, Taluka: Kashipur, District: Rayagada, State: Odisha.

23.6.5 The land area acquired for the proposed plant is 866.232 ha out of which 246.567 ha is an agricultural land, 575.323 ha barren land and 44.342 ha forest land (558.64 ha Private land and 263.25 ha Government Land). 44.342 ha forest land is involved. 560.659 ha of land has

been acquired and rest is in process of acquisition for the project. Of the total area 286.22 ha (33 %) land will be used for greenbelt development.

23.6.6 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. Detailed study of ecological aspects including the Schedule-I, flora and faunal species will be carried out in the environmental base line studies.

23.6.7 Total project cost is approx. Rs. 11,000.00 Crores. Employment generation from the proposed project will be 150 direct and 8,000 indirect employments during construction phase and 750 direct and 4,000 indirect employments during operation phase.

23.6.8 The targeted production capacity of the Plant is 3.0 million TPA. The ore for the plant would be sourced from nearby Kodingamali Bauxite Mines and procurement from other sources. The ore transportation will be done through environmental friendly fully covered closed conveyor.

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

Name of unit	No. of units	Capacity of each Unit	Production Capacity
Alumina Refinery	3	1 MTPA	3 MTPA
CPP : Cogeneration	5	30 MW	150 MW

23.6.10 The electricity load of 3 MW will be procured from the GRID & Company has also proposed to install 4500 KVA DG Set during construction. The electricity load of 150 MW will be met from CPP during operation.

23.6.11 Proposed raw material and fuel requirement for project are Bauxite ore, Coal, Lime, Caustic Soda and Furnace Oil. Requirement of Bauxite ore will be fulfilled from Kodingamali and nearby other Bauxite Mines, Coal from domestic and imported sources, Lime from domestic sources in Rajasthan & Madhya Pradesh, Caustic Soda from domestic suppliers and imported sources. Fuel consumption will be mainly coal and HFO. HFO will be sourced from domestic oil companies like HPCL & IOCL.

23.6.12 Water Consumption for the proposed project will be 10.41cusecs (25,470 m^3/day). 20,000 m^3/day during operation and 5,000 m^3/day during construction. Wastewater generation will be 10,000 m^3 /day. Domestic wastewater will be treated in STP and the treated water will be used for sprinkling & horticulture. Industrial wastewater generated will be recycled and reused fully.

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

23.6.14 It is reported that the proposal for the township is dropped and M/s UAIL township will be used for this project

23.6.15 Name of the consultant: Vimta Labs Limited, [S.No. 138, List of ACOs with their Certificate / Extension Letter no. Rev. 02, Sep. 07, 2020].

Observations of the Committee

23.6.16 The Committee noted the following:

i. Status of the Forest Clearance has not been made available by the PP.
ii. Alternate site analysis has not been carried out.
iii. Red mud related issues are not adequately addressed in the pre-feasibility report.
iv. Justification for earmarking a huge area for ash pond has not been furnished.

Recommendations of the Committee

23.6.17 After deliberations, the Committee deferred the consideration of the proposal and sought the following additional information:

i. Status of forest clearance of various patches of forest land totaling 44.342 ha of land within the proposed plant area.
ii. Description on Alternate site selection.
iii. R&R Plan and other welfare schemes included in the project.
iv. Note on use of red mud in time bound manner and accordingly a revised requirement of land red mud pond.
v. Explanation as to why such a large area is required for fly ash pond while Fly ash Notification calls for 100 % utilization of Fly ash in three years time.

23.7 Greenfield project for installation of production facilities for production of : Sponge Iron 245000 TPA; Mild Steel Billet 179550TPA and/or Rerolled Steel Products through Hot Charging 131970TPA; Rerolled Steel Product through Reheating Furnace 42194TPA; Ferro Alloys 75000 TPA or Pig Iron 150000TPA, Captive Power 28MW (16MW through WHRB and 12MW through AFBC) Fly Ash Brick 150000 TPA by **M/s. Kusum Smelters Private Limited** located at Village-Dhamni, Tahsil-Patharia, **District-Mungeli, Chhattisgarh** [Online Proposal No. IA/CG/IND/171131/2020; File No. J-11011/197/2020-IAII(I)] – **Prescribing of Terms of Reference (ToR)** – regarding.

23.7.1 **M/s. Kusum Smelters Private Limited** has made application vide online proposal no. IA/CG/IND/171131/2020 dated 04/09/2020 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 S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and AFBC based power plant falls under falls under S. No. 1(d) of schedule EIA Notification 2006 and appraised at Central Level.

Details submitted by the project proponent

23.7.2 M/s. Kusum Smelters Private Limited proposes to install a new (Greenfield project) Sponge Iron (245000 TPA); Mild Steel Billet (179550 TPA); Rerolled Steel products – Wire Rod, TMT bar Structure Steel, etc (Total 174163 TPA) through Hot Charging (131970 TPA); Rerolled Steel product through Reheating Furnace (42194 TPA); Ferro Alloys (75000 TPA) and/or Pig Iron (150000 TPA), Captive Power 28MW (16 MW through WHRB and 12 MW through AFBC) and Fly Ash Brick (150000 TPA).

23.7.3 The proposed green field unit will be located at Village - Dhamni, Tahsil - Patharia, District - Mungeli, State Chhattisgarh.

23.7.4 The land area required for the proposed plant is 10.69 hectare. No forest land is involved. 4.81 ha. Land will be built up, Road and Paved area will be 1.28ha, Green belt area will be 3.53 ha. and open area will be 1.07 ha.

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

23.7.6 Total project of cost is approx. Rs. 38042.21 lakhs. Direct employment will be 755 persons out of which administrative staff will be 57 and 698 will be production staff.

23.7.7 The targeted production capacity of Sponge Iron is 245000 TPA will be based on Coal based DRI kilns with WHRB, MS Billet is 179550 TPA will be produced through Induction Melting Furnaces and CCM, Rerolled Steel products through Hot Charging 131970 TPA, Rerolled Steel product through Billet Reheating Furnace (Fuel Fired – Coal Gasifier) 42194 TPA, Ferro- Alloys 75000 TPA and or Pig Iron is 150000 TPA will be produced through Submerged arc furnaces, Fly Ash products such as Fly Ash Bricks is 150000 TPA will be through Lime/Cement Gypsum slag molding process, captive power generation plant comprising of Waste Heat Recovery Boiler (WHRB) of capacity 16 MW will have no fuel and Atmospheric Fluidized Bed Combustion (AFBC) of capacity 12 MW will be based on Char Dolochar and Coal. Steam Boilers and Turbine generators will be used for Power Generation.

23.7.8 The raw materials like Iron ore, coal, limestone/dolomite, refractory materials, aluminum, manganese ore, quartz, etc. will be transported through covered trucks from local markets or mines, as per requirement. The details of facilities to be implemented are as below:

S. No.	Name of Unit	No. of unit (Proposed configuration of plant)	Product name	Production Capacity
1	DRI Kiln	350 MT X 2 Nos.	Sponge Iron	245000 TPA
2	Induction Furnaces to produce M.S. Billet	Induction Furnace, 15 Tons X 4 Nos , LRF and CCM	Mild Steel Billet	179550 TPA
3	Hot Charging Rolling Mill	Electrical driven Rolling Mill about 378 TPD	Steel Rerolled Product (Wire rod etc)	131970 TPA
3	Billet Heating based Re-rolling mills (Fuel Fired – Coal Gasifier)	Billet Reheating Furnace based Rerolling Mill will be 121 TPD	Re Rolled Steel Products like; Structural Steel	42194 TPA
4	Submerged Arc Furnace	9 MVA X 4 Nos Submerge Arc Furnace	Ferro Alloys	75000 TPA; Or
			Pig Iron	150000 TPA
5	Captive Power	WHRB based power	Power	16 MW

	Plant	generation		
		AFBC based power generation	Power	12 MW
6	Fly Ash Brick/block making	Fly Ash Brick making unit	Fly Ash Brick/ Block etc	150000 TPA

23.7.9 Total power requirement will be 56 MW out of which 28 MW will be met through captive power plant and remaining 28 MW will be source from State Grid through CSPDCL. In addition to this, 3300 KVA diesel generators will also be used as emergency power backup.

23.7.10 The total quantity of all raw material requirement for Sponge Iron Plant will be 712125.00 TPA, SMS Unit will be (Induction Furnace and Rerolling Mill – Hot charging & Reheating Furnace Based) will be 236352.66 TPA, Ferro Alloys Plant 239612.00 TPA and Captive Power Plant will be 86516.00 TPA and Fly ash Brick Plant will be 155000.00 TPA. Proposed mineral raw material requirement will be fulfilled by mines and other raw materials from open markets. Coal will be obtained from South Eastern Coal Field mines or imported coal will be used.

23.7.11 Water Consumption for the proposed project will be 2936 KLD. Source of water will be mainly surface water from the River Maniyari located 1.0 KM east direction. Only drinking water 34 KL/day will be drawn from ground water. The Area falls under safe zone as CGWB guidelines. Waste water generation will be treated in effluent treatment plant and reused in slag quenching; dust suppression. Domestic wastewater will be treated in Sewage Treatment and will be used for green belt development.

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

23.7.13 Name of the consultant: Anacon Laboratories Pvt. Ltd., Nagpur, [S.No. 65, List of ACOs with their Certificate / Extension Letter no. Rev. 02, Sep. 07, 2020].

Observations of the Committee

23.7.14 The Committee noted the following:

i. The envisaged scheme under the present proposal is as follows:
   - Installation of 4x15 T IF, CC
   - 2x350TPD DRI
   - Hot charging and RHF-coal fired.
   - Installation of 4x9 MVA SAF
   - WHRB of 16 MW and CFBC of 12 MW
   - 150000 TPA Brick Manufacturing

ii. Total land available is 10.69 ha out of which 3.53 is allocated for Green belt development.

iii. PM emission levels shall be 50 mg/Nm^3.

iv. RHF is coal fired**.**

Recommendations of the Committee

23.7.15 After 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-1 read with additional ToRs at Annexure-2:

i. PP shall maintain PM emissions less than 30 mg/N^3 for entire plant operations. Only bag filters shall be used to control air pollution. No scrubber is permitted.
ii. Surface water from Maniyari River shall only be used. No ground water abstraction is permitted.
iii. Plant shall operate on ZLD.
iv. 100 % Solid waste generated shall be reused.
v. All plant roads shall be paved and cleaned regularly using industrial vacuum cleaners. Dust collected from roads and shop floors shall be recycled.
vi. 4th hole extraction shall be provided for extraction of fumes from SAF
vii. 85-90 % billets shall be hot charged and only 10-15 % rolling shall be done through RHF that shall be operated only on liquid fuel and coal firing is not permitted.
viii. Fe-Cr shall not be manufactured without EC from MoEFCC.
ix. Briquetting and Jigging plant shall be installed.
x. 100% RWH and Recharge.
xi. Green belt shall be developed in 33 % of the plant area.
xii. Detailed traffic study shall be carried out.

29th September, 2020

23.8 Expansion, Modernization of existing facilities along with integration of existing environmental clearances [Sponge Iron Plant - 6,50,000 TPA; Capacity enhancement of Steel Melting Shop from 4,00,000 TPA to 7,00,000 TPA; Power generation – 73 MW; Ferro Alloys – 16,500 TPA; Pig iron – 33,000 TPA; H.B. Wire – 1,00,000 TPA; Oxygen & Nitrogen plants; Fly ash brick plant, Iron ore beneficiation – 10,00,000 TPA; Rolling Mill – 4,00,000 TPA; Induction Furnace for Casting in place of Arc Furnace–5,000 TPA; Iron Ore Pellet Plant – Capacity enhancement from 21,00,000 TPA to 24,00,000 TPA; Coal Gasification System - 60,000 Nm^3/hr to 92,000 Nm^3/hr; Slag Crushing Plant – 1,75,000 TPA and Mineral grinding unit – 2,00,000 TPA) by **M/s. Godavari Power and Ispat Limited** located at 428/2, Phase-I, Industrial Area, **Siltara, Raipur, Chhattisgarh** - [Online Proposal No. IA/CG/IND/4250/2005, File No. J-11011/326/2005-IA.II.(I)] **– Environment Clearance – regarding.**

23.8.1 **M/s. Godavari Power and Ispat Limited** has made online application vide proposal no. IA/CG/IND/4250/2005 dated 18/06/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the project is appraised at the Central level.

23.8.2 The aforesaid proposal was earlier considered in 21st meeting of the Re-constituted EAC (Industry-I) held during 30th July – 1st August, 2020 wherein the Committee recommended to return the proposal in present form in view of the following:

Observations of the Committee (EAC held during 30th July – 1st August, 2020)

The Committee observed the following:

i. The project site is located in a critically polluted area namely Siltara Industrial Area having CEPI score of 79.94.
ii. EIA report has not been prepared as per the requirement of Appendix III of EIA Notification 2006. The information that is required to be part of main EIA has been given in Annexures. There is a lot of repetition of data and text in several chapters. There is no mention in Chapter 2 of the solid waste generated and managed at present. The Chapter also does not describe all units installed and operated in the plant. It does not give details of pollution control systems installed with existing unit.
iii. Stack emissions norm has been reported as 35 mg/Nm^3. PM_{10} value in AAQ in Siltara, a critically polluted area, has been reported as maximum, 82.6 µg /Nm^3.
iv. Noise levels has been monitored at 4.0 KM away from the plant. Criteria for selecting sampling locations has not been provided.
v. Three soil samples have been taken without defining the basis of selecting sampling locations and the vital parameters like CEC and SAR in the soil analysis have not been reported.
vi. Interpretation of physical, biological and social base line data has not been done to anticipate likely impacts of the proposed developmental activity on the site and that of site on the plant.
vii. AAQ modelling has been done only for normal operation, accidental release not considered.
viii. Impacts Chapter 4 is all text book and not based on data and same observed in Chapter 2 and interpretation in chapter 3. The matrix on pdf page 286 of Chapter 4 is generic and can be used for EMP in any EIA for the Steel Sector. There is nothing specific to site and project in this table.
ix. Hazard Identification and Risk assessment(HIRA).
x. Summary of activities to be considered for CER from Public hearing proceeds and from SIA have not been given in Chapter 3 (SIA in Annexure XIV) and Chapter 7 (7.1.2)
xi. RO compliance dated 13.6.2019 indicates several partial noncompliance. ATR of 17.6.2020 and closure verification for the same is not available.
xii. The report on RWH is inconclusive with respect to meeting the TOR requirement of more than 100% recharge annually.
xiii. Status of phasing out of 5 Nos of 7 T IF has not been presented in EIA report.
xiv. There is no railway siding in the plant and 100 % material is being transported by road and in a few cases from stations more than 1000 KM away from the plant.
xv. There are only 7 stacks indicated and considered for modelling of air quality(pdf page 269). There are more than 7 stacks in the plant as seen by subcommittee during the plant visit.
xvi. The committee felt that EIA/EMP report submitted by M/s. PECSis not in line with the of Appendix III of EIA Notification 2006. The information which are essential for due diligence by the EAC has been given in Annexures. There is a lot of repetition of data and text in several chapters. There is no mention in Chapter 2 of the solid waste generated and managed at present. The Chapter also does not describe all units installed and operated in the plant. It does not give details of pollution control systems installed with existing unit. Earlier also, EAC has raised concern on such similar issue with the same consultant on several occasions **wherein EAC advised MoEF&CC to**

refer the matter to QCI/NABET, in case of no improvement from the consultant. Therefore, **EAC advised MoEF&CC to refer the matter to QCI/NABET as the consultant is repeatedly exhibits no improvement.**

Recommendations of the Committee (EAC during 30th July – 1st August, 2020)

In view of the foregoing and after deliberations, the Committee recommended to return the proposal in present form. Further, the Committee also recommended to **refer the matter to QCI/NABET for taking appropriate action against M/s. Pollution and Ecology Control Services** in respect of metallurgical industries as the consultant is consistently not improving the quality of the EIA/EMP report".

23.8.3 The project proponent has again submitted the updated application to the Ministry vide proposal number IA/CG/IND/4250/2005 dated 16/09/2020 to the Ministry.

Details submitted by the project proponent

23.8.4 The proposed expansion and modernization of M/s. Godawari Power &Ispat Limited located in Plot No. 428/2, Phase-I, Industrial Area, and 930,716, 722/3 & others,Siltara, Raipur-493111, Chhattisgarh.

23.8.5 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord
09/02/2019	5th meeting held on 27th to 29th March 2019	Terms of Reference	08/05/2019
16/05/2019	7th meeting held on 29th to 31st May 2019	Amendment in ToR	19/07/2019

23.8.6 The project of M/s. GPIL is located in Plot No. 428/2, Phase-I, Industrial Area Siltara, and 930,716, 722/3 & othersRaipur-493111, Chhattisgarh has submitted the proposal for setting up of Expansion/Modernization of some existing facilities and merger of all the existing ECs.

23.8.7 The details of the existing ECs and its present status are as follows: -

S.No.	EC No. & Date	Name of the Unit	Capacity (TPA)	Present Status
1.	EC No. J-11011/326/ 2005-IA-II(I) Dated 02/03/2006	Sponge Iron	2,60,000	Operational
		Steel Billet	2,00,000	Operational
		Power (AFBC/WHRB)	25 MW	Operational
		Oxygen Plant	12,00,000 Nm^3	Operational
		Nitrogen Plant	45,00,000 Nm^3	Operational
		Fly Ash Brick Plant	1,65,00,000 Nos.	Operation discontinued
2.	EC No. J-11011/179/ 2009-IA-II(I) Dated 25/08/2009	Iron Ore Beneficiation Plant	10,00,000	Consent to operate vide letter No. 9247/CECB/2020 dt 16.01.2020 from CECB, Raipur.

S.No.	EC No. & Date	Name of the Unit	Capacity (TPA)	Present Status
		Rolling Mill	3,00,000	Operational
		Arc Furnace (to be revised to Induction Furnace for Casting)	5,000	ToR granted for amendment in EC.
		Biomass based Power Plant	20 MW	Operational since 01/11/2010.
3.	EC No. J-11011/216/2014-IA-II(I) Dated 07/04/2016	Iron Ore Pellet Plant (2 Units : Kiln-1 of 6,00,000 TPA & Kiln-II of 15,00,000 TPA) along with Gasification System for Iron Ore Pellet Plant 15 x 4,000 Nm3/hr	21,00,000 TPA Pellet along with Producer Gas 60,000 Nm3/hr	Operational

EC Amendments obtained:
For EC No. : J-11011/326/ 2005-IA-II(I) Dated 02/03/2006

Sl. No.	EC Amendments	Activities	Capacity (In TPA)	Amendment	Present Status
1	Vide dated 08/02/2012	Steel Billets	2,00,000	Change for use of Electric Arc Furnace instead of Induction Furnace route.	Reversed under item No. 3 below
2	Vide dated 12/05/2012	Sponge Iron	4,95,000	Increase in production capacity from 4,95,000 TPA to 6,50,000 TPA.	Applied for Consent to Establish/ Operate to CECB, Raipur (C.G.).
3	Vide dated 30/06/2017	Steel Billets	2,00,000	Change for use from Electric Arc Furnace to original Induction Furnace route.	Reversal of item No. 1 as above

For EC No: J-11011/179/ 2005-IA-II(I) Dated 25/08/2009

Sl. No.	EC Amendment	Activities	Capacity (In TPA)	Amendment	Present Status / Remarks
1	Vide dated 17/08/2015	Rolling Mill	3,00,000	Increase in production capacity from 3,00,000 TPA to 4,00,000 TPA	Operational
2	Vide dated 21/07/2017	Iron Ore Beneficiation Plant / Rolling Mill / Arc Furnace / Biomass based Power Plant		Extension of validity of Environment Clearance up to 24/08/2019.	Biomass power plant already operational. Already applied for Consent to Operate for Iron Ore Beneficiation Plant of 10,00,000TPA and Rolling Mill of capacity 4,00,000 TPA. To be revised from arc to Induction Furnace for casting (including engineering & fabrication).

23.8.8 The details of the existing capacity as per the ECs along with the propose expansion is furnished as below:

Sl. No.	Name of the Unit	Existing Capacity (As per EC)	Proposed Amendments / Remarks	Total after approval of this proposal
1	Sponge Iron	4,95,000 (Later amended to 6,50,000)	No change	6,50,000 TPA (1x350 TPD & 3 x500 TPD)
2	Steel Billet	4,00,000	Modernization and enhancement in production capacity of Steel Melting Shop (Billets) from existing 4,00,000TPA(7T X 5, 12T X 3, 15T X2, 30TX 2) to 7,00,000 TPA(12T X 5, 12 T X 6, 15 T X 6, 30T X4 IF's) by change in configuration of induction	7,00,000 TPA (12T X 5, 12 T X 6, 15 T X 6, 30T X4 IF's)

Sl. No.	Name of the Unit	Existing Capacity (As per EC)	Proposed Amendments / Remarks	Total after approval of this proposal
			furnaces and installation of additional furnaces.	
3	Power (AFBC/WHRB) & Biomass Power Plant	73 MW	Modernization of existing power plant by change in configuration of existing 3 TG Sets [TG-1 : 9 MW, TG-2 : 9 MW, TG-4 : 30 MW (+1 standby of capacity 10 MW)] with one new energy efficient TG set of 48 MW capacity (+ 1 standby of capacity 10 MW) and all existing TG shall also be retained for abnormal situations/ in case of no change in configuration due to some unavoidable reasons.	73 MW (48 MW+25 MW) (all Existing TGs 9MW + 9MW + 10 MW (Standby) + 30MW + 25 MW to be retained for adversity)
4	Ferro Alloys	16,500	No change	16,500TPA
5	Pig Iron	33,000	No change	33,000 TPA
6	H.B. Wire	1,00,000	1,00,000	2,00,000 TPA
7	Oxygen Plant	12,00,000NM^3	No change	12,00,000 NM^3
	Nitrogen Plant	45,00,000NM^3	No change	45,00,000 NM^3
8	Fly Ash Brick Plant	1,65,00,000 Nos.	No change	1,65,00,000 Nos.
9	Iron Ore Beneficiation Plant	10,00,000	Capacity enhancement from 1000000 to 3284000 TPA	32,84,000 TPA
10	Rolling Mill	3,00,000 (Later amended to 4,00,000)	No change	4,00,000 TPA
11	Arc Furnace	5,000	(to be revised to Induction Furnace for Casting) including Engineering & Fabrication	5,000 TPA
12	Iron Ore Pelletization Plants	(Existing 2 Units : Kiln-I of 6,00,000 TPA & Kiln-II of 15,00,000 TPA) 21,00,000 TPA	Proposed enhancement in production capacity to 24,00,000 TPA without change in plant and machinery or 24,00,000 TPA Pellet.	24,00,000 TPA (within which 22,00,000 TPA will be manufacture of Pellet + 2,00,000 TPA manufacture of Magnetite Powder or 24,00,000 TPA Pellet)

Sl. No.	Name of the Unit	Existing Capacity (As per EC)	Proposed Amendments / Remarks	Total after approval of this proposal
13	Coal Gasification System for Iron Ore Pellet Plant	Existing Gasifiers of 16,000 Nm^3/hr + 1 No. standby of 4,000 Nm^3/hr& 40,000 Nm^3/hr + 1 No. standby 20,000 Nm^3/hr (Total Operational : 60,000 Nm^3/hr (1 Standby of capacity 4000 Nm3/Hr)	Proposal for regularization of standby Gasifiers of 24,000 Nm^3/hr and installation of new Gasifiers of 12,000 Nm^3/hr	92,000 Nm^3/hr
14	Slag Crushing Plant	- -	Proposed	1,75,000TPA
15	Mineral Grinding Plant	- -	Proposed	2,00,000TPA

23.8.9 The total land required for the project is 93.82 ha, which is in industrial use. Forestland is not involved. It has been reported there is a pond at 0.5 Km from the project site in village Tanda, there is no river in the 1 Km of the site and modification/diversion in the existing natural drainage pattern at any stage is not proposed. No R&R is involved.

23.8.10 The topography of the area is flat and reported to lies between 21° 22' 24.9" N to 21° 22' 38.7" N Latitude and 81° 40' 30.8" E to 81° 41' 13.0"E Longitude in Survey of India toposheet No. 64 G/11 & 64G/15, at an elevation of 282 m AMSL. The ground water table reported to ranges between 3.8 to 7.2below the land surface during the post-monsoon season and 10.5 to 5.2 below the land surface during the pre-monsoon season.

23.8.11 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve, Forest are reported to be located in the core and buffer zone of the project.

23.8.12 The raw material requirement for the proposed project is given as below:

S. N.	Name of Units	Raw Material	Quantity Required (TPA)	Source
1.	Sponge Iron	Pellet	9,42,500	Own source
		Coal	6,50,000	Coal India and its subsidiaries/open market and imported
		Dolomite	19,500	Purchase from Open market
2.	Steel Billet (SMS)	Sponge Iron	7,60,960	Own source / Purchase from Open market
		Scrap	92,030	Purchase from Open market / imported scrap
		Lime	5,954	Purchase from Open market
		Silico Manganese	10,480	Own source/ Purchase of open market

S. N.	Name of Units	Raw Material	Quantity Required (TPA)	Source
3.	Power Generation	Coal	1,13,225	Coal India and its subsidiaries / open market and imported
		Dolochar	2,678	Own source
		Rice Husk	1,67,111	Purchase from Open market
4.	Ferro Alloys / Pig Iron	Manganese Ore	34,650	Purchase from MOIL / open market and imported
		High Mn Slag	6,600	Purchase from open market
		Dolomite	495	Purchase from Open market
		Quartz	1,320	Purchase from Open market
		Coke / Steam Coal	9,900	Purchase from open market and imported
		Electrode Paste	495	Purchase from open market
		MS Item	165	Purchase from Open market
		Lancing Pipe	50	Purchase from Open market
5.	H.B. Wire	M.S. Wire Rods	2,03,000	Own source / Associate Units.
6.	Oxygen & Nitrogen Plant	Atmospheric Air	4,16,670	N/A
7.	Fly Ash Bricks Plant	Fly Ash	70,000	Own source
		Lime & Gypsum	15,000	Purchase from Open market
		Granulated Ferro Alloys Slag	7,000	Own source
		Sand	8,000	Purchase from Open market
8.	Iron Ore Beneficiation	Crushed Iron Ore	32,84,000	Captive Mines at Ari Dongri and BoriaTibbu& Open Market
9.	Rolling Mill	Steel Billets	4,25,500	Own source
10.	Induction Furnace for Casting	Steel Scrap & Borings	2511	Purchase from Open market
		Pig Iron & Silicon	277	Purchase from Open market
		Ferro Manganese	16.5	Purchase from Open market

S. N.	Name of Units	Raw Material	Quantity Required (TPA)	Source
		Ferro Silicon Magnesium	10.5	In house
		Inoculants	3.3	Purchase from Open market
		Silica Sand	250	Purchase from Open market
		Bentonoide	2.5	Purchase from Open market
		Coal Dust	15	Purchase from Open market
	Fabrication / Engineering	Following Engineering Items, Steel (Plates, Pipe, Structures etc), Bearing, Gear Box, Motor, Tools and Tackles etc	2550	Purchase from Open market
11.	Mineral Grinding	Mineral Ore	2,00,000	Own Source / Purchase from Open market
12	Iron Ore Pellet Plant Total proposed capacity – 24,00,000 TPA (within which 22,00,000 TPA will be manufacture of pellet &2,00,000 TPA manufacture of magnetite Powder or 24,00,000 TPA Pellet)			
	Manufacture of Pellets – 22,00,000 TPA	Iron Ore Fines (DRY including Return Fines) and Mill scale	22,88,000	Own source and shortfall if any will be procured from outside sources
		Bentonite/ Binder	22,000	Purchase from Open market
		Lime Stone / Dolomite	35,200	Purchase from Open market
		LDO (Calorific value balancer for gasification)	2,300 KL Ignite Oil / LDO/ Tar as and when required not exceeding 2,300 KL	Purchase from Petroleum companies / open market

S. N.	Name of Units	Raw Material	Quantity Required (TPA)	Source
	Manufacture of Magnetite Powder – 2,00,000 TPA Manufacture of Pellets – 24,00,000 TPA	Magnetite Ore	2,00,000	Own source
		Iron Ore Fines (DRY including Return Fines) and Mill scale	24,96,000	Own source and shortfall if any will be procured from outside sources
		Bentonite/ Binder	24,000	Purchase from Open market
		Lime Stone / Dolomite	38,400	Purchase from Open market
		LDO (Calorific value balancer for gasification)	2,300 KL Ignite Oil / LDO/ Tar as and when required not exceeding 2,300 KL	Purchase from Petroleum companies / open market
13	Gasification System for Pellet Plant – 92,000 Nm3/hr	Coal	2,86,364	Coal India and its subsidiaries / open market and imported

23.8.13 The targeted production capacity of the proposed expansion is as given above. The ore transportation will be one through Rail/Road

23.8.14 The water requirement of the project is estimated as 17203m^3 /day. The company has also obtained the permission from Central Ground Water Board for withdrawal of 479 KL/day for drinking & sanitation purpose vide letter No. 21-4/698/CT/IND/2017 – 305 dated 2nd February 2019.The company has an agreement for supply of 18,000 KL/day water with Chhattisgarh Ispat Bhoomi Limited for its industrial use in integrated steel facilities for post expansion requirement vide letter No. L 385536 dated 16th August 2019.

23.8.15 The power requirement of the project is estimated as 142 MW. Out of it, 73 MW power will be of captive generation and 25 MW from associate concern with captive status. Balance (shortfall) will be met through the Chhattisgarh State Electricity Board/Power Grid.

23.8.16 Baseline Environmental Studies were conducted during pre-monsoon season i.e. from15th March to 15thJune, 2019 Ambient air quality monitoring has been carried out at 8 locations during from15th March to 15th June , 2019 and the data submitted indicated: PM_{10} (43.4 μg/m^3 to 82.6 μg/m^3), $PM_{2.5}$ (23.4 to 45.6 μg/m^3), SO_2 (15.3 to 40.2μg/m^3) and NOx (16.8 to 45.4μg/m^3). The results of the modeling study indicates that the maximum increase of GLC

for the proposed project is 3.60µg/m^3 with respect to the PM_{10}, 6.33µg/m^3 with respect to the SO_2 and 3.12µg/m^3 with respect to the NOx.

23.8.17 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 7.1 to 7.8, Total Hardness: 290 to 474 mg/l, Chlorides: 40.3 to 189.5 mg/l, Fluoride: 0.3 to 0.6 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 8 locations. pH: 7.4 to 7.8; DO: 4.9 to 6.8 mg/l and BOD: <3 to 3.6 mg/l. COD from BDL to 22.4 mg/l.

23.8.18 Noise levels are in the range of 41.0 to 62.7 dBA for daytime and 39.7 to 50.4 dBA for night time.

23.8.19 It is reported that there is no R&R involved in the proposed project.

23.8.20 The solid wastes to be generated and scheme for their Management/disposal are given below:

Solid Waste generation	Existing Quantity (TPA)	Proposed Quantity (TPA)	Total Quantity (TPA)	Method of Disposal
Sponge Iron Plant				
Char &Dolochar	1,30,000	No Change	1,30,000	Used in captive power plant (AFBC) & sold to secondary users viz. power plant of our associated unit M/s. Jagdamba Power and other brick manufacturing units.
Dust from Settling Chamber	45,500	No Change	45,500	It is being used for brick manufacturing and low lying areas, making of internal & external roads.
ESP Dust	45,500	No Change	45,500	
Steel Melting Shop				
Slag	1,00,000	75,000	1,75,000	Slag Generation will be approx. @25% and total generation approx. 175000 TPA Slag will be crushed in proposed slag crusher and mag-part (approx. 25000 TPA) of slag will be sent to SMS for re-melting while granulated Non-mag (approx. 150000 TPA) will be utilized for road base making, cement manufacturing and for reclamation of low laying areas. MOU with cement industry is signed for utilization of non-mag part of slag**.**

Solid Waste generation	Existing Quantity (TPA)	Proposed Quantity (TPA)	Total Quantity (TPA)	Method of Disposal
Power Plant				
Ash (Power Plant(70 TPH BOILER)	No Change	No Change	85,071	Supply to cement plants/ brick manufacturing units, road base making and reclamation of low laying area.
Ash (Biomass based Power Plant(100 TPH BOILER)				
H.B. Wire/Rolling Mill				
Mill scale	9500	4500	14000	Will be recycled in Ferro Alloys / SMS units/ Pellet Plant.
Iron Ore Beneficiation Plant				
Tailings	1,96,000	4,48,000	6,44,000	Tailings from beneficiation plant will be used in embankments, road formation, filling of low-lying areas and as additives in cement manufacturing. The company has entered into a MOU with Ultratech Cement Limited for utilization / disposal of Tailings in their Cement plant unit at Rawan Cement Works, Village : Rawan, Dist. Baloda Bazar, Chhattisgarh.
Iron Ore Pellet Plant with Gasification System				
Ash (Sinder)	77175	11025	88200	Utilized for fly ash brick making and reclamation of low laying areas.
Tar	14,700 KL	2550 KL	17250 KL	Tar generated from coal gasification plant is being utilized in Pellet Plant and excess quantity being sold to authorized parties, Company has obtained Authorization under Hazardous and Other Wastes (Management & Transboundary movement) Rules, 2016 (as amended).

Solid Waste generation	Existing Quantity (TPA)	Proposed Quantity (TPA)	Total Quantity (TPA)	Method of Disposal
Dust collected through Sweeping Machine	182.5 T	-	182.5 T	It will be utilized for brick manufacturing, filling of low lying areas and in pellet manufacturing**.**
Entire Plant				
Waste Refractory	350	50	400	Generated only during replacement of refractory material. Sold to outside parties for reuse and for inside road base making etc.
Process ETP Sludge	141	10	151 MT	Disposal through CTSDF/sold to authorized recyclers
Sewage Treatment Plant Sludge	3.0	0.5	3.5 MT	Used as soil conditioner on-site plantation.
Misc. wastes Metal	4000	-	4000 MT	In-house consumption in SMS/Pellet plant
Electrical	0.2	0.05	0.250 MT	
wood scrap	0.5	0.5	1 MT	In-house consumption during light up of plant, reused for usable wooden items.
Canteens				
Biodegradable food wastes, paper and other wastes	5.0	2.0	7.0 MT	It is converted into compost manure through mechanical compost convertor and utilized for green belt development.

23.8.21 The Green belt of 34.35% has been developed in the existing land of 86.464 ha and additional land7.361 ha.is purchased further plantation will be developed in the additionally purchased land. GPIL has already planted about 73439 numbers of trees in the premises and proposed to plant additional 7500 no. of saplings. This includes gap filling of trees at various locations of the plant and approx. An area of 32.36 haland (known as Oxyzone) has been allotted by Chhattisgarh Industrial Development Corporation in the village Siltara Phase-2 for plantation, in which around plantation of 37,000 saplings has been done. Total existing green belt cover (including outside plantation) more than 40%.

23.8.22 The Public hearing of the project was held on 17thFebruary 2020at Plot no. 428/2, Siltara Industrial Centre Phase 1, District Raipur, Chhattisgarh under the chairmanship of District Magistrate and Additional Collector for Expansion and Modernization of existing facilities along with the merger of exiting EC. The issues raised during public hearing are employment,

pollution control & green belt development etc. An amount of 400 Lakhs has been earmarked based on public hearing issues.

23.8.23 The total capital cost of the project is Rs. 1988.87 Crores including existing Rs. 1789.22 Crores. The capital cost for environmental protection measures is proposed as Rs. 340Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs. 63.0 Lakhs**.** The total employment generation from the existing and proposed project is 3585.

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

23.8.25 Name of the EIA consultant: Pollution and Ecology Control Services [S.No. 74, List of ACOs with their Certificate / Extension Letter no. Rev. 02, Sep. 07, 2020].

Certified compliance report from Regional Office

23.8.26 The Status of compliance of earlier EC was earlier obtained from Regional Office, Nagpur vide Lr. No. EC-99/RON/2019-NGP/5396, dated 13th June 2019 wherein observations have been made with respect to dust control, density of plantation, provision of evacuation route in SMS plant, usage of PPE by workers and use of solar energy etc. The action taken report was submitted by project proponent to RO on 17/06/2020 and closure report was furnished by the RO on 15/09/2020.

Observations of the Committee

23.8.27 The Committee observed the following:

i. Traffic assessment study inter-alia including existing and proposed expansion has not been addressed in the EIA report.

ii. Energy conservation measures to be adopted in the present expansion proposal has not been enumerated.

iii. Action plan for phasing out of 10 Nos 7 T Induction Furnaces has not been furnished.

iv. Action plan for rain water harvesting needs to be revisited.

Recommendations of the Committee

23.8.28 In view of the foregoing and after deliberations, the Committee deferred the consideration and sought following additional information:

i. AAQ Values in Siltara are high. Therefore, action plan to limit the PM emissions from the plant to less than 30 mg/Nm^3 shall be submitted.

ii. Action plan for phasing out of 10 Nos 7 T Induction Furnaces shall be submitted.

iii. Action plan for Green belt development covering 40% of the total project area inside the factory premises shall be furnished.

iv. Action plan for rain water harvesting more than annual water consumption shall be submitted.

v. Fourth hole extraction system shall be installed on SAF for fume extraction.

vi. Energy conservation measures to be taken in the present proposal shall be submitted.

vii. GHG emission inventory for the entire plant shall be prepared and measures to conserve energy shall be taken as annual targets.

viii. Sludge drying beds shall be replaced by filter presses and dry disposal of sludge shall be practiced, Sludge from STP shall be recycled to biomass power plant or a sludge digester shall be used to generate energy.

ix. Action plan for 100 % Fly ash utilization shall be submitted.

x. Detail traffic study shall be conducted for the roads leading to plant gates. Details about vehicles parked on road side at day and night shall be furnished.

In addition to the above, the Committee also recommended that MoEF&CC may issue show cause notice to M/s. Pollution & Ecology Control Services, Nagpur for blacklisting from participation in any EIA process in respect of Metallurgical Industries as they have consistently not improved the quality of the EIA report despite repeated warnings given by the EAC and show cause issued by QCI/NABET. MoEF&CC has earlier also written to NABET about the M/s. PECS, Nagpur in this instant case as well.

23.9 Proposed 1.0 MTPA Integrated Steel Plant along with 225 MW Captive Power Plant by M/s. Orissa Metaliks Private Limited by **M/s. Orissa Metaliks Private Limited** located at Mouza Amba, Mathurakismat, Radhanagar & Srirampurjia, Village Gokulpur, P.O. Shyamraipur, P.S. Kharagpur (L), **Dist. Paschim Medinipur, West Bengal** - [Online Proposal No. IA/WB/IND/62536/2017, File No. J-11011/56/2017-IA.II.(I)] – Environment Clearance – regarding.

23.9.1 **M/s Orissa Metaliks Private Limited** has made online application vide proposal no. IA/WB/IND/62536/2017 dated 19/08/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

23.9.2 The detail of the ToR is furnished as below:

Date of application	Consideration	Details	Date of accord
15/02/2017	19th meeting held on 8-9th June, 2017	Terms of Reference	09/08/2017

23.9.3 The proposed 1.0 MTPA Integrated Steel Plant with 225 MW Captive Power Plant of M/s Orissa Metaliks Private Limited, is located at Mouza Amba, Math rakismat, Radhanagar & Srirampurjia, Village Gokulpur, P.O. Shyamraipur, P.S. Kharagpur (L), Dist. Paschim Medinipur in West Bengal. It is proposed for setting up of a new Integrated Steel Plant of 1.0 million tons per annum (million TPA) with 225 MW CPP using standard and proven down grade technology for production of 0.35 MTPA TMT Bar, Wire Rod & Wire; 0.35 MTPA Galvanized Sheet, H.R. Plate & Nail; 0.3 MTPA DI Pipe, Fitting & Accessories and 225 MW Power (WHRB Based 90 MW & CFBC (Coal & Dolochar Mix based) - 135 MW (3 x 45 MW)).

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

Sl. No	Name of the Unit	Configuration	Capacity	Product
1	Blast Furnace with PCM	2 x 450 m^3	0.7 Million T.P.A	Hot Metal / Pig Iron
2	Sinter Plant	1 x 105 m^2	0.6 Million T.P.A	Sinter
3	DRI	2 x 500 TPD + 2 x 350 TPD	0.5 Million T.P.A	Sponge Iron
4	SMS with matching LRF & oxygen optimizing furnace, CCM and Slag Crushing Unit	10 X 20 T I.F + 2 X 20T EAF	0.8 Million T.P.A	Billets / Slab
5	SAF (Ferro Alloy Plant) with Zigging plant	10 x 9 MVA	0.12 Million T.P.A	Ferro Alloys (FeMn, FeSi, SiMn & FeCr)
6	Chrome Briquette Plant	1 x 40 TPH	1 x 40 TPH	Chrome Briquette
7	Non-recovery type Coke Oven Plant	2 x 0.25 MTPA	0.5 Million T.P.A	Metallurgical Coke
8	Lime Dolomite Plant	1 x 200 TPD	200 TPD	Lime & Dolomite
9	Oxygen Plant	1 x 200 TPD	200 TPD	Oxygen
10	Hot Rolling Mill	****	0.35 Million T.P.A	TMT Bar, Wire Rod & Wire
11	Rolling Mill with Pickling & Galvanizing Line	****	0.35 Million T.P.A	Galvanized Sheet, H.R. Plate & Nail
12	Ductile Iron Pipe Unit	****	0.30 Million T.P.A	DI Pipe, Fitting & Accessories
13	Pellet Plant	4 X 0.9 MTPA	3.6 MTPA	Iron ore Pellet
14	I/O Beneficiation Plant	2 x 1.8 MTPA	3.6 MTPA	Iron Ore Concentrate
15	Producer Gas Plant	20 x 7500 Nm^3/hr	1,50,000 Nm^3/hr	Producer Gas
16	Captive Power Plant	• WHRB Based 90 MW (56 MW from DRI Plant+ 30 MW from Coke Oven Plant + 4 MW BF TRT) • CFBC (Coal & Dolochar Mix based)- 135 MW (3 x 45 MW)	225 MW	Power

23.9.5 The total land required for the project is 121.5 ha (300 acres) which is vacant land. No common reserve land/grazing land is acquired for the proposed project. The project land is non-cultivated. Out of the 300 acres of land, 211.34 acres of land is in acquisition by M/s Orissa Metaliks Private Limited and for rest of the land agreement made with private rayat. River Kansabati is passing at a distance of 4.2 km towards North from the Project site.

Modification / diversion in the existing natural drainage pattern at any stage have not been proposed.

23.9.6 The topography of the area is flat and reported to lies between Latitude 22°22′04.70″N to 22°22′43.65″N &Longitude 87°16′13.74″E to 87°17′17.25”E in Survey of India topo sheet No. 73 N/7 at an elevation of 35 m (115 ft.) AMSL. The depth to water as measured in the open wells is between 11 and 12 feet below the land surface. The water occurring in deeper zones is under pressure and is reported usually to rise to within 25 to 30 feet below the land surface. The total thickness of the aquifer in the study area varies from 3.1 to 17.1 m.

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

23.9.8 The raw material requirement for the proposed ISP project is given as below:

Sl. No.	**Name of the Raw Materials**	**Quantity (TPA)**	**Source**	**Distance of source from**		**Up to First Unloading point (RAIL/ PORT)**	**Plant site**	
				First Unload-ing Point (Km)	**Proje-ct site**		**Distance from first unloading point (Approx.)**	**(Mode of Transportation)**
1	Iron Ore Fines	49,55,300	Applied for captive iron ore mines Alternate source: Purchased from Barbil-Joda, Orissa	270-300	---	Train up to Nimpura Public Siding/ RML & OMPL Siding	2.0-5.0 KM	By Road NH-6 &Zilla Parishad Road (Tata Metaliks Road); Dedicated Road corridor from Railway siding to plant site
2	Iron ore Lumps	1,08,500				Train up to RML & OMPL Siding	2.0-2.5 KM	By Road NH-6 &Zilla Parishad Road (Tata Metaliks Road); Dedicated Road corridor from Railway siding to plant site
3	Non-coking coal	17,73,000	CCL, MCL & Imported Coal. Captive Coal mines (Jagnnath pur-B, Raniganj Coal	300-500	---	By vessel up to nearest port (Haldia / Paradeep / Vizag) and followed by train up to Nimpura Public Siding	5 KM	By Road NH-6 &Zilla Parishad Road (Tata Metaliks Road)

Sl. No.	Name of the Raw Materials	Quantity (TPA)	Source	Distance of source from		Up to First Unloading point (RAIL/ PORT)	Plant site	
				First Unload-ing Point (Km)	Proje-ct site		Distance from first unloading point (Approx.)	(Mode of Transportation)
			Field, West Bengal)			By vessel up to nearest port (Haldia / Paradeep / Vizag) and followed by Train up to PFT RML & OMPL Siding	2.0-2.5 KM	By Road NH-6 &Zilla Parishad Road (Tata Metaliks Road); Dedicated Road corridor from Railway siding to plant site
4	Coking Coal	6,70,000	Imported, E-Auction	150-200	---	By vessel up to nearest port (Haldia / Paradeep / Vizag) and followed by train up to Nimpura Public Siding	5 KM	By Road NH-6 &Zilla Parishad Road (Tata Metaliks Road)
						By vessel up to nearest port (Haldia / Paradeep / Vizag) and followed by Train up to RML & OMPL Siding	2.0-2.5 KM	By Road NH-6 &Zilla Parishad Road (Tata Metaliks Road); Dedicated Road corridor from Railway siding to plant site
5	Dolomite	1,26,953	From Birmitrapur, Orissa / Bilaspur, CG	270-550	---	Train up to RML & OMPL Siding	2.0-2.5 KM	By Road NH-6 &Zilla Parishad Road (Tata Metaliks Road); Dedicated Road corridor from Railway siding to plant site

Sl. No.	Name of the Raw Materials	Quantity (TPA)	Source	Distance of source from		Up to First Unloading point (RAIL/ PORT)	Plant site	
				First Unload-ing Point (Km)	Proje-ct site		Distance from first unloading point (Approx.)	(Mode of Transportation)
6	Bentonite	72,000	From Gujarat, Rajasthan	1000	---	Train up to RML & OMPL Siding	2.0-2.5 KM	By Road NH-6 &Zilla Parishad Road (Tata Metaliks Road); Dedicated Road corridor from Railway siding to plant site
7	Limestone	2,50,800	From Birmitrapur, Orissa / Bilaspur, Raipur CG / Katni MP	270-550	---	Train up to RML & OMPL Siding	2.0-2.5 KM	By Road NH-6 &Zilla Parishad Road (Tata Metaliks Road); Dedicated Road corridor from Railway siding to plant site
8	Manganese ore	3,12,000	From Balaghat, MP & Orissa	1000	---	Train up to RML &OMPL Siding	2.0-2.5 KM	By Road NH-6 &Zilla Parishad Road (Tata Metaliks Road); Dedicated Road corridor from Railway siding to plant site
9	Chromium Ore	2,64,000	Orissa, Jharkhand etc.	300	---	Train up to RML & OMPL Siding	2.0-2.5 KM	By Road NH-6 &Zilla Parishad Road (Tata Metaliks Road); Dedicated Road corridor from Railway siding to plant site
10	Quartzite	3,15,125	From Belpahar Orissa / Bilaspur, Raipur CG	500	---	Train up to RML & OMPL Siding	2.0-2.5 KM	By Road NH-6 &Zilla Parishad Road (Tata Metaliks Road); Dedicated Road corridor from Railway siding to plant site
11	Runner Coat	1,533	Local Market	---	<150	---	---	By Road
12	Slag Coagulant	416	Local Market	---	<150	---	---	By Road

Sl. No.	Name of the Raw Materials	Quantity (TPA)	Source	Distance of source from		Up to First Unloading point (RAIL/ PORT)	Plant site	
				First Unload-ing Point (Km)	Proje-ct site		Distance from first unloading point (Approx.)	(Mode of Transportation)
13	Inoculants	288	Local Market	---	<150	---	---	By Road
14	Zinc	567	Local Market	---	<150	---	---	By Road
15	Magnesium	510	Local Market	---	<150	---	---	By Road
16	Bitumen Solution	842 KL/year	WRAS* Approved Vendor	---	<150	---	---	By Road
17	Epoxy Pant	420 KL/year	WRAS* Approved Vendor	---	<150	---	---	By Road

** The above quantities are likely to vary in narrow range as the quality of inputs to have variations.

*Water Regulations Advisory Scheme (WRAS)

23.9.9 The targeted production capacity of the Integrated Steel Plant is 1.0 million TPA. The ore for the plant would be procured from Rungta Mines (linkages) and other mines from Orissa & Jharkhand. The ore transportation will be done through rail/road.

23.9.10 The daily make up water requirement for the entire project is 15,072 KLD (628 Cu.m/hr.). The raw water will be sourced from Kansabati River, Kharagpur Municipality Supply System, Rain water harvesting pond and partially from Bore Wells. Permission has already been obtained from the concerned Authorities.

23.9.11 The power requirement of the project is estimated as 306 MW, out of which 213 MW will be obtained from proposed 225 MW Captive Power Plant and the remaining 93 MW power will be obtained from WBSEDCL.

23.9.12 Baseline Environmental Studies

Period	1st October, 2017 – 31st December, 2017
AAQ parameters at 8 locations	$PM_{2.5}$ = 20 to 40 µg/m^3 PM_{10} = 58 to 87µg/m^3 SO_2 = 5 to 18µg/m^3 NOx = 11 to 39µg/m^3
AAQ modelling	PM_{10} =5.182µg/m^3 SO_2 = 4.667 µg/m^3 NOx = 4.405 µg/m^3
Ground water quality at 8 locations	pH: 7.2 to 7.6, Total Hardness: 182 – 236 mg/l, Chlorides: 88 – 140 mg/l, Fluoride: 0.31 – 0.47 mg/l. Heavy metals are within the limits.

Surface water quality at 10 locations	For 2 locations of Kangsabati River water, pH: 7.3 to 7.4; DO: 6.8 to 6.9 mg/l, BOD: 4 to 6 mg/l and COD: 12 to 16 mg/l. For 8 pond water samples, pH: 6.8 to 7.6; DO: 5.7 to 6.3 mg/l, BOD: 4 to 9 mg/l and COD: 16 to 32 mg/l.
Noise levels	55.7 – 68.1 dBA for day time and 46.8 – 57.7 dBA for night time

23.9.13 It has been reported that a total of 19,41,030 TPA of waste will be generated due to the project, out of which 2,83,500 TPA MBF slag will be used in cement making, 1,50,000 TPA Dolochar will be used in proposed CFBC Boilers, 2,44,552 TPA slag from SMS, Ferro, DIP will be used in road construction/land filling purpose/ brick making, 1,35,173 TPA dust from APC device will be used in Sinter Plant, 30,000 TPA end cuts miss rod from rolling mill to proposed SMS and Tar Sludge and Zn dust will be sold to WBPCB authorized vendors. The solid waste generation & utilization details are given as below:

Sl. No.	Type	Quantity in Tons/Year	Utilization
1.	Slag from MBF	2,83,500	To be used for Cement Making.
2.	Dust & sludge from MBF	3,55,830	To be used in proposed Sinter plant
3.	Dolo Char from DRI Plant	1,50,000	To be used in proposed CFBC Boilers.
4.	Slag/ Scale from SMS (IF & EAF)	87,266	To be used for Road construction / Land filling purpose, Paver Block Making after recovering metal from Slag Crushing unit
5.	Slag from Ferro Alloys Plant	1,50,000	➢ Slag generated during Ferro Manganese production will be used as a raw material for Silico Manganese production. ➢ Slag generated during Silico Manganese production will be used for road construction / land filling after recovering metal from Jigging Plant. ➢ After maximum recovery of Chrome, Ferro chrome slag after doing TCPL Test will be used in green concreting.
6.	Core Sand And Slag from DIP	7,286	To be used for Road construction / Land filling purpose
7.	Cement Slurry	857	To be used for Brick making and also in Captive Cement Plant
8.	Bottom Ash	1,20,570	To be used for Road construction / Land filling purpose

Sl. No.	Type	Quantity in Tons/Year	Utilization
9.	Dust from APC Devices	1,35,173	Used in Sinter Plant and also APC dust from DRI ESP will be used for Brick Manufacturing.
10.	Miss Roll/ End Cuts	30,000	To be used in Proposed S.M.S Plant.
11.	Fly Ash	2,81,340	To be used for Cement Making.
12.	Tar Sludge from Producer gas plant	15,552	To be sold to WBPCB authorized vendor
13.	Sludge from Galvanizing & Pickling Line	3,328	Sent to (CHWTSDF)
14.	Tailing from I/O Beneficiation plant	3,17,640	Use for Brick manufacturing/ Paver block making, aggregate in concrete, road construction
15.	Iron oxide Powder from ARP	1,750	To be sold to Tape & Paint manufacture
16.	Zinc Ash/ Dross	875	To be sold to WBPCB Authorized Vendors
17.	Sludge from ETP	48	Sent to (CHWTSDF)
18.	Molding Line from DIP Fitting & Accessories Unit	5	To be used for Road construction / Land filling purpose
19.	Shot Blasting from DIP Fitting & Accessories Unit	8	To be used for Road construction / Land filling purpose
20.	Fettling & Grinding from DIP Fitting & Accessories Unit	2	To be used for Road construction / Land filling purpose

23.9.14 The Public hearing of the project was held on 10th February, 2020 at Mahasakti Mahasangha, Satkui, P.O. Matkatpur (Near B.D.O. Office Kharagpur-I), Dist.: Paschim Medinipur in West Bengal under the chairmanship of Sri Uttam Adhikary, WBCS (Exe.), ADM (L.R) and DLL & RO, Dist. - Paschim Medinipur for the proposed 1.0 MTPA Integrated Steel Plant along with 225 MW Captive Power Plant. The issues raised by the public hearing are dust pollution due to the existing units of same promoter, no green belt development, dumping of solid wastes on lands destroying the adjacent agricultural lands, utilizing ground water instead of surface water and local villagers are suffering with dust allergy, skin disease etc. due to environmental pollution caused by existing units of same owners.

23.9.15 The company proposes to invest Rs. 15.50 Crores based on the issues raised during the public consultation. The action plan for the same is given as below:

Sl. No.	PROPOSED ACTIVITIES	INVESTMENT (IN LACS)					
		Year 1	Year 2	Year 3	Year 4	Year 5	Total
PUBLIC HEARING RELATED ACTIVITIES							
1	Drinking Water Infrastructure (Tube well in nearby villages – 50 nos. @ Rs. 0.70 Lakhs); ATM Water Machine 50 nos. @ Rs 0.50 Lakhs)	10	10	10	10	10	**50**
2	Development & construction of new Pond in nearby village	35	35	35	35	35	**175**
3	Construction of rain water harvesting pit in villages,(75 nos @ Rs. 1.66 lakhs)/ provide financial and technical support to State run project etc.	25	25	25	25	25	**125**
4	Development & repairing of road in nearby villages	40	40	40	40	40	**200**
5	Ambulance to nearby panchayats-03 Nos.	15	15	15	0	0	**45**
6	Providing equipment to the local hospitals, Developing/ up gradation of primary health center.	17	17	16	15	15	**80**
7	Construction of charitable Dispensary (05 nos.) with specialist doctor	15	15	15	15	15	**75**
8	Skill development to unemployed local youth through National Skill Development Corporation, Govt. of India Scheme.	25	25	25	25	25	**125**
9	Workshop centre with latest tailoring machines for training women (like tailoring, stitching, Pickle & Sauces making, Soft Toys & Gem Jeweller, and Beautician Courses and for making affordable price of Sanitary Pads.)	12	12	11	10	10	**55**
10	Vocational Training Center for Educated youth of villages	15	15	15	10	10	**65**
11	Development of parks, plantation of trees in the nearby areas.	25	25	25	25	25	**125**
NEED BASED ACTIVITIES							
1	Open Defecation free village by introducing community & Individual Toilets	12	12	12	10	10	**56**
2	Development of Community Hall	10	10	10	10	10	**50**
3	Financial Support to the Local School for extension of building / class room/ toilets/ development of school infrastructure & library facilities	15	15	15	15	15	**75**
4	Supporting schools/ club for establishment of mini outdoor sports complex or playgrounds in providing the facilities like badminton court, tennis court and levelling of ground.	12	12	12	10	10	**56**
5	Transportation facility for school students	10	-	10	-	10	**30**
6	Street Lighting (Solar/Led) provision at suitable public places & Community hall – 100 nos. @ 0.50 Lakhs per Solar Light.	10	10	10	10	10	**50**
7	Creation of irrigation infrastructure in the peripheral villages (Supply of Crop harvesting machine, Pest Control Machine), organise training programmes for the local farmers to learn the modern techniques of the agricultural practices and Drainage Development - side drains & Construction of Culvert on drainage.	15	15	10	10	10	**60**
8	Infrastructure facilities development for Welfare of the	6	6	6	5	5	**28**

Sl. No.	PROPOSED ACTIVITIES	INVESTMENT (IN LACS)					
		Year 1	Year 2	Year 3	Year 4	Year 5	Total
	local villager						
9	Provide Dustbin in Village (under Swachh Bharat Scheme)	5	5	5	5	5	**25**
TOTAL		**329**	**319**	**322**	**285**	**295**	**1550**

23.9.16 It is reported that 2500 in-direct employment & 4500 persons will get direct Employment during operational phase. Thus, the employment generation from the proposed project is around 7000.

23.9.17 The capital cost of the project is Rs 1500 Crores and the capital cost for environmental protection measures is proposed as Rs 90 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 9.0 Crores.

23.9.18 The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

Item	Capital Cost (in Crores)	Recurring Cost (in Crores)
Cost of Air Pollution Control System	40.0	4.00
Cost of Water conservation & Pollution Control	6.5	0.55
Cost of Solid Waste Management System	8.0	0.35
Green belt development	18.0	0.55
Online/ Manual Monitoring Surveillance System	3.0	1.50
Noise Reduction Systems	3.0	0.50
Occupational Health Management	4.0	0.45
Risk Mitigation & Safety Plan	4.0	0.30
Controlling measures to minimise impacts due to transportation and traffic	2.5	0.50
Environmental Lab and setup	1.0	0.30
GRAND TOTAL	**90.0**	**9.0**

23.9.19 Greenbelt will be developed in 40.1 ha which is about 33% of the total plant area of 121.5 ha. 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 1,00,250 saplings will be planted and nurtured in 40.1 hectares in 3 years.

23.9.20 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity. However, MoEF&CC has issued a show cause notice to the project proponent vide letter no. J-11011/604/2010-IA.II (I) dated 21/09/2020. PP stated that M/s. OMPL is very much part of the Rashmi Group. They have wrongly stated in their reply dated 25/09/2020 submitted to the Ministry which was categorically admitted by the project proponent during deliberations.

23.9.21 Name of the EIA consultant: Envirotech East Pvt. Ltd. [S.No. 169, List of ACOs with their Certificate / Extension Letter no. Rev. 02, Sep. 07, 2020].

Observations of the Committee

23.9.22 The Committee noted the following:

i. Cumulative Environment Impact Assessment for all the existing units as well as for the upcoming units of the other companies operating in the vicinity of the project site for all the environmental components have not been carried out.

ii. Response to the following issues raised during the public consultation is seriously lacking and failed to adequately address in the EIA report.
   (a) Existing units of same owner have not done anything about control of environmental pollution for operational units.
   (b) Local villagers residing near the existing plant boundary are suffering with dust and noise pollution.
   (c) The green belt development is not satisfactory. More Green Belt Development is required.
   (d) Solid waste dumped on lands destroying the adjacent agricultural lands.
   (e) Constructed its boundary wall adjacent to residences of village area.
   (f) Utilizing ground water instead of surface water which damages ground water level in the locality.
   (g) Local villagers are suffering with dust allergy, skin disease etc. due to environmental pollution caused by existing units of same owners.
   (h) Local people also are not getting jobs in the existing factory as the units are taking outside workers.
   (i) Water logging in rainy season from the proposed project.
   (j) Strong opposition about the construction of additional Sponge Iron units in the area as it will create pollution.
   (k) Giving priority to the land losers for employment
   (l) Dust pollution generated due to transportation of materials by the existing unit in uncovered conditions.

iii. Details of pollution control equipment with airflow, design and operating capacity and design capacity all the pollution control devices have not been provided. Further, adequacy report from 3rd party experts/institutions shall be submitted.

iv. Materials balance diagram and energy balance diagram needs to be revisited and submitted.

v. Energy conservation measures to be adopted in the instant proposal has not been enumerated in the EIA report.

vi. Action plan for no ground water abstraction for the proposed project has not been submitted.

vii. Fresh baseline data collection shall be conducted for one full season in 10 km zone, due to the following:
   (a) Data collection has been limited to the core zone of the project site i.e. 5 km radius of the project site instead of study area of the project site i.e., covering10 km radius of the project site.
   (b) The data collected for the parameters such as poly aromatic hydrocarbons,

lead, arsenic, chromium and benzo amino pyrene for the different locations are appears to be unrealistic as same values are reported for all the locations.

viii. Cumulative AAQ modeling for the worst case scenario has not been carried out.

ix. Hazard Identification and Risk Assessment is not project specific.

x. PP shall submit the EMP Matrix indicating; EMP details, Time line for implementation; Budgetary Provisions and Monitoring Schedule and monitoring methodology.

xi. Existing road conditions to be used for transportation of raw materials and finished products inter-alia including its dimensions along with photographs. Mitigation measures such as strengthening of existing road etc., if any, envisaged for transportation of raw materials and products by road.

xii. Line source modelling based on the quantity of raw materials and products to be transported different modes such as road and rail respectively shall be carried out and submitted.

xiii. In addition to the above, the Committee also taken cognizance of fact that MoEF&CC has issued a Show Cause Notice to M/s. Orissa Metaliks Private Limited on 21/09/2020. The Committee also taken note that M/s. Orissa Metaliks Private Limited is part of Rashmi Group and M/s. OMPL tried to mislead the members as well as the Ministry.

Recommendations of the Committee

23.9.23 In view of the foregoing and after deliberations, the Committee recommended the following:

i. Proposal shall be returned in present form to the project proponent.

ii. MoEF&CC may issue show cause notice to M/s. Envirotech East Private Limited, Kolkata for blacklisting from participation in any EIA process in respect of Metallurgical Industries as they have as they have failed to carry out EIA study as per the QCI/NABET norms and unrealistic baseline values have been reported without any scientific basis.

23.10 Proposed Expansion of M.S. Billets Plant from 29,000 to 2,00,000 TPA by installation of induction furnace (2x12 Ton), Re-rolling mill of 600 TPD capacity by **M/s. A-One Steel & Alloys Pvt. Ltd.** located at Plot no. IP-62 & IP-63, KIADB Industrial Area, Taluka-Gowribidanur, **District Chikkaballapura, Karnataka** [Online Proposal No. IA/KA/IND/126601/2016, File No. J-11011/244/2016-IAII(I)] – **Environment Clearance** - regarding.

23.10.1 **M/s. A-One Steel & Alloys Pvt. Ltd** has made online application vide proposal no. IA/KA/IND/126601/2016 dated 23rd December 2019 in the prescribed Form -2 along with copies of EIA/EMP report and other documents seeking Environmental Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

23.10.2 The aforesaid proposal was earlier considered in 15th meeting of the Re-constituted EAC (Industry-1) held during 16-17th January, 2020 wherein the Committee recommended to return the proposal in present form in view of the following:

Observations of the Committee (EAC during 16-17th January, 2020)

The Committee noted that EIA report is not in line with Appendix III of the EIA Notification, 2006. Besides, there are several inadequacies in the report such as no specific ToR compliance, process flow sheet, lay out, site description, ecological and biodiversity aspects etc.

Recommendations of the Committee (EAC during 16-17th January, 2020)

In view of the foregoing and after detailed deliberations, the Committee returned the proposal in present form.

23.10.3 The project proponent has again submitted the application vide proposal no. IA/KA/IND/60536/2016 dated 18/09/2020 along with the revised and updated information.

Details submitted by the project proponent

23.10.4 The detail of the ToR accorded is furnished as below:

Date of application	Consideration	Details	Date of accord
05/11/2016	15th meeting held on 3rd Feb, 2017	Terms of Reference	28/03/2017

23.10.5 The project of M/s A One Steel and Alloys Pvt. Ltd. Located Kudumalakunte Village Gowribidanur Taluk, Chikkaballapura District Karnataka State is for setting up of expansion of manufacturing of MS Billets of capacity 2,00,000 MTPA /enhancement of production of MS Billets from 29,000 TPA to 2,00,000 TPA.

23.10.6 It is reported that existing plant doesn't have any earlier Environment Clearance.

23.10.7 The following are the proposed plant configuration and production capacity:

Sl. No.	Name of the unit	Existing Configuration (Nos. of unit with production capacity)	Proposed Configuration (Nos. of unit with production capacity)	Final Configuration (Nos. of unit with production capacity)	Remarks
1.	Induction Furnace	8 Ton capacity Per Heat Per Cycle (2 nos.)	12 Ton capacity Per Heat Per Cycle (2 Nos: 1W + 1S) 25 Ton capacity Per Heat Per Cycle (1 Nos.)	24+25= 49 Ton capacity Per Heat Per Cycle	Existing furnaces will be replaced after installation of new furnaces.
2.	Billet Caster	1 No. 4/7 caster with 2 No. Strand	1 Nos. of Strand	1 No. 4/7 caster with 3 No. Strand Enhancement of production of MS Billets from 29,000 TPA to	

Sl. No.	Name of the unit	Existing Configuration (Nos. of unit with production capacity)	Proposed Configuration (Nos. of unit with production capacity)	Final Configuration (Nos. of unit with production capacity)	Remarks
				2,00,000 TPA	
3.	Re rolling mill	600 TPD	-	600 TPD	
4.	D. G. Set for lighting and temporary power supply	125 KVA and 250 KVA	500 KVA	125 KVA, 250 KVA and 500 KVA	

23.10.8 The total land required for the project is 3.29 ha. Entire land is an industrial land. The entire land has been acquired for the project. No River passes through the project area. It has been reported that no water body/ water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

23.10.9 The topography of the area is 31420 ha (flat/undulated) and reported to lies between 13°42'47.05"N to 13°42'53.40"N Latitude and 77°29'56.71"E to 77°30'3.84"E Longitude in Survey of India topo sheet No. D43 R5, D43 R6, D43 R9 and D43 R10, at an elevation of 671 m AMSL. The ground water table reported to ranges between 2 To 5 below the land surface during the post-monsoon season and 10 To 5 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 300m.

23.10.10 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc.to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. The authenticated list of flora and fauna provided through the EIA reporting presence of no schedule-I fauna in the study area.

23.10.11 The details of the raw material requirement are given as below:

Sr. No.	Raw Material Name	Requirement (TPA)			Source of Raw Material	Mode of Transportation
		Existing	Proposed	Total after Expansion		
1.	Sponge Iron	24,884	1,46,718	1,71,600	Local	By Road/Rail
2.	Iron Scrap	6,699	39,501	46,200	Local Dealer	By Road/Rail
3.	Additive alloys	319	1,881	2,200	Local Dealer	By Road/Rail

23.10.12 The targeted production capacity of the Mild steel billets and re-rolling of MS Steel is 0.2 million TPA. The ore for the plant would be procured from local market. The ore transportation will be done through Road.

23.10.13 The water requirement of the project is estimated as 72 m^3 /day, out of which 67.5 m^3 /day of fresh water requirement will be obtained from the KIADB and the remaining requirement of 4.5 m^3 /day will be met from the Recycle water from STP plant. The permission for drawl of groundwater / surface water is obtained from KIADB vide the possession letter issued by KIDB.

23.10.14 The power requirement of the project is estimated as 22 MW which will be obtained from the BESCOM.

23.10.15 Baseline Environmental Studies were conducted during Pre-monsoon season i.e. from March to May, 2017. Ambient air quality monitoring has been carried out at 8 locations during March to May, 2017.and the data submitted indicated: PM_{10} (41.15µg/m^3 to 55.05µg/m^3), $PM_{2.5}$ (12.70 to 19.00µg/m^3), SO_2 (15.7to 17.6µg/m^3) and NOx (12.70 to19.00 µg/m^3). The results of the modeling study indicate that the maximum increase of GLC for the proposed project is 53.00 µg/m^3 with respect to the PM_{10}, 16.6µg/m^3 with respect to the SO_2 17.4µg/m^3 with respect to the NOx.

23.10.16 Ground water quality has been monitored in 8 locations in the study area andanalysed. pH: 7.33 to 7.93, Total Hardness: 280 to799 mg/l, Chlorides: 54 to 122 mg/l, Fluoride: 0.45 to 2.88 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 1 location. pH: 7.32 to 7.55; DO: 9.6 to 12.8 mg/land BOD: 9.6 to 12.8 mg/l. COD from 32 to 46.3 mg/l.

23.10.17 Noise levels are in the range of 43.8 to 59.3 dBA for daytime and 29.3 to 42.7 dBA for night time

23.10.18 It has been reported that Rehabilitation and resettlement (R&R) is not applicable to proposed project as the project is located in KIADB Industrial Area, Kudumalkunte Village, Gowribidanur.

23.10.19 It has been reported that a total of 20,000 tons of waste will be generated due to the proposed project, out of which 4000 ton will be used in Induction furnace and 16,000 Tons will be utilized of base material for Road making. It has been envisaged that an area of 0.44 ha will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

23.10.20 The Hazardous Waste generation from existing proposal along with its utilization is given as below:

Sr. No.	Name of Waste	Source of Generation	Waste Category	Quantity (TPA)			Mode of Treatment/ Disposal
				Existing	Proposed	Total	
1.	Slag	Induction Furnace	Solid waste	2500	17500	20000	Collected and crushed in in-house magnet crusher. Metal particles are separated & used (15 – 20 %) in the induction furnace. Balance materials* (80 – 85%) are utilized as base material for road making.
2.	Used Oil	Plant operation	5.1	0.2	0.3	0.5	Collection, Storage, Transportation and

Sr. No.	Name of Waste	Source of Generation	Waste Category	Quantity (TPA)			Mode of Treatment/ Disposal
				Existing	Proposed	Total	
							Disposal by selling to registered recyclers.

23.10.21 It has been reported that the Consent to Establish/Consent to Operate from the Karnataka State Pollution Control Board / Pollution Control Committee obtained vide Combined Consent Order No: AW-300580.dated 29/06/2016 and consent is valid up to 30/09/2020.

23.10.22 The Public hearing of the project was held on 5/9/2019 at project site under the chairmanship of Smt. R Latha (District commissioner) for production of 0.2 million TPA of the Mild steel billets and re-rolling of MS Steel /setting up of the Mild steel billets and re-rolling of MS Steel plant. The issues raised during public hearing are related to employment to local people, rain water harvesting, green belt development providing health and education facility to school etc.

23.10.23 The company shall earmark funds of Rs. 20 lacs i.e. 1% of the proposed expansion project cost (Rs. 20.0 crore) based on the issues raised during public consultation. The action plan for the same is given as below:

No	Area	Proposed Activities	Year wise Budget (Lakhs)					
			1st Year		2nd		3rd	
			C	R	C	R	C	R
1	Education	Distribution of notebooks and school bags etc	0.8	-	0.6	-	0.2	-
		Scholarship to bright students	0.6	-	0.6	-	0.4	-
2	Health	Conduct medical camp	2	-	1.4	-	1	-
		General awareness health	0.6	-	0.4	-	0.2	-
3	Infrastructure	Contribution for drinking water facility	0.8		0.6		0.6	
		Contribution for Sanitation	1.2	-	1	-	0.6	-
4	Environment	Distribution of tree gaud, sapling and pots	0.8	0.4	0.4	0.4	0.4	0.4
		Training and awareness programme in school on Environment day and Safety Day	0.2	-	0.2	-	0.2	-
5	Agriculture	Agricultural tour & guide to farmers	1.4	-	1.2	-	0.4	-
Year wise Total			**8.4**	**0.4**	**6.4**	**0.4**	**4**	**0.4**
Grand Total			**20.00 (Capital – 18.8 and Recurring – 1.2)**					

23.10.24 The capital cost of the project is Rs. 20 Crores and the capital cost for environmental protection measures is proposed as Rs. 100 Lakhs. The annual recurring cost towards the

environmental protection measures is proposed as Rs. 20 Lakhs. The employment generation from the proposed expansion project is 35 nos.

23.10.25 Greenbelt will be developed in 0.44 ha which is about 13.36% of the total acquired area. A 100 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total 250 nos. of tree and 220 nos. of shrub/plants etc. will be planted in 0.44 ha within premises. Remaining 6.65 ha which is 9.46 % of total plat area will be developed as greenbelt at outside the plant premises. Total 3147 nos of sampling will be planted within the 5 years.

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

23.10.27 Name of the EIA consultant: Envision Enviro Technologies Pvt. Ltd. [S.No. 18, List of ACOs with their Certificate / Extension Letter no. Rev. 02, Sep. 07, 2020].

Observations of the Committee

23.2.3 The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data and incremental GLC due to the proposed project within NAAQ standards. The Committee has also deliberated on the public hearing issues, action plan to the issues raised during the public hearing and found it satisfactory.

Recommendations of the Committee

23.2.4 In view of the foregoing and after detailed deliberations, the committee recommended the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the following specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 pertaining to induction furnace and rolling mills based on project specific requirements:

A. Specific conditions

i. 100% Hot charging shall be adopted and RHF shall not be used.
ii. PM emissions shall be maintained less than 30 mg/Nm^3.
iii. Plant shall operate on ZLD.
iv. 100 % Solid waste generated shall be reused.
v. All plant roads shall be paved and cleaned regularly using industrial vacuum cleaners. Dust collected from roads and shop floors shall be recycled.
vi. 100% RWH and recharge with measuring arrangement shall be provided.

B. General conditions

I. Statutory compliance:

i. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

iii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.

iv. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.

v. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.

vi. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.

vii. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.

viii. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.

ix. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.

x. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.

iii. Adhere to 'Zero Liquid Discharge'.

iv. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

v. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

vi. The project proponent shall practice rainwater harvesting to maximum possible extent.

IV. Noise monitoring and prevention

i. Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation And Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

V. Energy Conservation measures

i. Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.

VI. Waste management

i. Used refractories shall be recycled as far as possible.
ii. Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried, and briquetted and reused melting Furnaces.
iii. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

i. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant
ii. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

VIII. Public hearing and Human health issues

i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

IX. Corporate Environment Responsibility

i. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
ii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

X. Miscellaneous

i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of

which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

iv. The project proponent shall monitor the criteria pollutants level namely; PM_{10}, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

23.11 Expansion of capacities of MS Ingots to Billets from 30,000 MT/Annum to 1,91,000MT/ Annum and TMT Rods from 60,000 MT/Annum to 1, 80,000 MT/ Annum by **M/s. Meenakshi Udyog (India) Private Limited** located at Kalugondapalli Village, Denkanikotta Taluk, **Krishnagiri District, Tamil Nadu** [Online Proposal No. IA/TN/IND/156666/2020, File No. J-11011/199/2020-IA.II(I)] – **Prescribing of Terms of Reference** - regarding.

23.11.1 **M/s. Meenakshi Udyog (India) Private Limited** has made application vide online proposal no. IA/TN/IND/156666/2020 dated 09/09/2020 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 S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "B" of the schedule of the EIA Notification, 2006. However, due to the applicability of general condition i.e., existence of inter-state boundaries within 5km radius of the project site (Tamil Nadu & Karnataka), the project is being appraised at Central Level as Category 'A'.

Details submitted by the project proponent

23.11.2 M/s. Meenakshi Udyog (India) Private Limited proposes to install an expansion of existing manufacturing unit for the manufacturing of MS Ingots 30,000 MT/Annum (Intermediate) & TMT Rods of 60,000 MT/Annum (Final Product). It is proposed to set up the plant for expansion of capacities of MS Ingots to Billets from 30,000 MT/Annum to 1,91,000MT/Annum (Intermediate product) and TMT Rods from 60,000 MT/Annum to 1, 80,000 MT/ Annum (Final product) based on Thermo Mechanical Treatment technology.

23.11.3 The existing project was accorded Consent to Operate by Tamil Nadu Pollution Control Board vide Consent Order no. 170528826199 validity of CTO is up to March 31, 2020. PP has applied for Renewal of Consent vide Application No. 32025776 on Online Consent Management & Monitoring System and it is in progress.

23.11.4 The proposed unit will be located at S.F.No. 291/1,291/2A, 291/2B, 291/3A, 291/3B, 291/4A, 292/4A, 292/4B,292/5A,292/5B Village: Kalukondapalli, Taluka: Denkanikottai, District: Krishnagiri, State: Tamil Nadu.

23.11.5 No land Acquisition has been made, Existing land of 4.87 hawill be used after the expansion).

23.11.6 Land breakup details are as follows:

Sl. No.	Land Use	Area (In Hectares)			Percentage (%)
		Existing	Expansion	After Expansion	
1.	Plant Area, Office Area (All covered area).	1.49	Same building will be used for expansion also	1.56	32.14%
2.	Paved Area (Road & Corridor).	0.50		0.50	10.27%
3.	Green Belt Area	1.65		1.65	33.88%
4.	Parking Area	0.02		0.02	0.25%
5.	Open area	0.70		0.63	13.00%
6.	Solid Waste Storage	0.51		0.51	10.47%
Total		**4.87**		**4.87**	**100.00%**

23.11.7 The Thally Reserved Forest is located at a distance of 14 KM from the site. No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to

be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna.

23.11.8 Total project cost is approx 25 Crore rupees. Proposed employment generation from proposed project will be 50 direct employment and 55 indirect employment.

23.11.9 The targeted production capacity of the TMT Rods is 1,80,000 TPA. The ore for the plant would be procured from local market based on the requirement. The ore transportation will be done through Road. The proposed capacity for different products for new site area as below.

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

S. No.	Name of Product	Capacity (MT/Annum)		
		Existing	**Proposed addition**	**Total after expansion**
1	MS Billets	30,000	1,61,000	1,91,000 (Intermediate)
2	TMT Rods	60,000	1,20,000	1,80,000 (Final)

23.11.11 The electricity load of 13000 KW will be procured from TANGEDCO and also proposed to install DG Set 320 KVA (1 No.) & 185 KVA (1 no.)

23.11.12 Proposed raw material and fuel requirement for project are given in the following table. The requirement would be fulfilled by local market as well as from Scrap Traders. Fuel consumption will be mainly for operation of Diesel generator.

FOR MS BILLET MANUFACTURING (Intermediate)				
S.No.	**Name of Raw material**	**Capacity (MT/Annum)**		
		Existing	**Proposed**	**Total after expansion**
1	MS Scrap	19,800	1,06,200	1,26,000
2	MS Graded Scrap	11,760	38,640	50,400
3	Sponge Iron	3,900	27,600	31,500
4	Ferro Alloy	300	1,800	2,100
Total		**35,760**	**1,74,240**	**2,10,000**
FOR TMT ROD MANUFACTURING (For Final Product manufacturing)				
1	MS Billets (In house)	30,000	1,61,000	1,91,000
2	Ingots (Outsource)	33,000	----	----
Total		**63,000**	**1,61,000**	**1,91,000**

23.11.13 Water Consumption for the proposed project will be 119 KLD and wastewater generation will be 8.1 KLD. Water requirement will be met through ground water. Domestic waste water

will be treated through Sewage Treatment Plant and no industrial waste water will be generated. The Treated sewage will be utilized for gardening.

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

23.11.15 Name of the consultant: Pridhvi Enviro Tech Pvt Ltd [S.No. 133, List of ACOs with their Certificate / Extension Letter no. Rev. 02, Sep. 07, 2020].

Observations of the Committee

23.11.16 The Committee noted the following:

i. Total land available is 4.87 ha with green belt developed in 1.65 Ha.
ii. 125 KLD Ground water shall be used.
iii. Project cost is 39.55 Cr (Rs. 25 Crores for expansion).

Recommendations of the Committee

23.11.17 After 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-1 read with additional ToRs at Annexure-2:

i. 100% Hot charging shall be adopted and RHF shall not be used.
ii. PM emissions shall be maintained less than 30 mg/Nm^3.
iii. Plant shall operate on ZLD.
iv. 100 % Solid waste generated shall be reused.
v. All plant roads shall be paved and cleaned regularly using industrial vacuum cleaners. Dust collected from roads and shop floors shall be recycled.
vi. 100% RWH and recharge with measuring arrangement
vii. Green Belt in 40 % of the plant area shall be developed within one year.
viii. Traffic study shall be conducted for village road leading to plant site.
ix. Village road construction shall be supported by PP including avenue plantation and maintenance of the same.

23.12 Proposed installation of the Ferro Alloy Plant through setting up of 4x9 MVA Submerged Arc Furnaces for production of Ferro Manganese (36000 TPA) and Silico Manganese (24000 TPA) & Sinter Plant (30000 TPA) by **M/s Shyam Business Solution Pvt. Limited** located at Raturia, Angadpur Industrial Area, **Durgapur, West Bengal** [Online Proposal No. IA/WB/IND/166397/2020, File No. J-11011/198/2020-IA.II(I)] – **Prescribing of Terms of Reference** - regarding.

23.12.1 **M/s Shyam Business Solution Pvt. Limited** has made application vide online proposal no. IA/WB/IND/166397/2020 dated 10/09/2020 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 S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

23.12.2 M/s Shyam Business Solution Pvt. Limited, to install a new Ferro Alloy Plant through setting up of 4x9 MVA Submerged Arc Furnaces for production of Ferro Manganese (36000 TPA)

and Silico Manganese (24000 TPA) & Sinter Plant (30000 TPA). It is proposed to set up the plant for Production of Silico-Manganese & Ferro-Manganese based on smelting technology in SAF.

23.12.3 The proposed unit will be located at Raturia, Angadpur Industrial Area, Tehsil: Durgapur, District: Paschim Barddhaman, State: West Bengal.

23.12.4 The land area acquired for the proposed plant is 2.26 ha or 22639 m^2. The total land area is industrial. No/forestland involved. The entire land has been acquired for the project. of the total area 0.9 ha (40%) land will be used for green belt development.

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

23.12.6 Total project cost is approx Rs. 75 Crores rupees. Proposed employment generation from proposed project will be 140 direct employments.

23.12.7 The targeted production capacity of the Silico-Manganese is 24000 TPA and Ferro-Manganese is 36000 TPA and sinter 30000 TPA. The ore for the plant would be procured from South Africa, Australia, Orissa, Nagpur etc., The ore transportation will be done through Sea for import and Rail/Rake for indigenous.

23.12.8 The proposed capacity for different products for new site area as below.

Name of unit	No. of units	Capacity of each Unit	Production Capacity (TPA)
Sub-merger Arc Furnace	4	9 MVA	Si-Mn: 24000 Fe-Mn: 36000
Sinter Plant	1	100 TPD	30000

23.12.9 The electricity load of 30 MVA will be procured from WBSEDCL. No DG set will be installed for proposed project.

23.12.10 Proposed raw material and fuel requirement for project are Manganese Ore, Dolomite, Coke, Quartz, Electrode paste & Ferro Manganese Slag (For Silico Manganese Production). The requirement would be fulfilled by indigenous sources as well as imported. Fuel consumption will be mainly electricity.

23.12.11 Water Consumption for the proposed project will be 225KLD (fresh water requirement 45KLD and recycled water 180 KLD) and waste water generation will be 14 KLD (10 KLD industrial and 4 KLD domestic). Domestic waste water will be disposed through septic tank followed by soak pit and industrial waste water generated will be collected in guard pond and neutralized and reused for dust suppression and greenbelt.

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

23.12.13 Name of the consultant: M/s Ultra Tech (Environment Consultancy & Laboratory), [S.No. 60, List of ACOs with their Certificate / Extension Letter no. Rev. 02, Sep. 07, 2020].

Observations of the Committee

23.12.14 The Committee noted the following:

i. The proposed land is in the industrial area having 2.26 ha with green belt to be developed in an area of 0.753 ha.
ii. The project cost is Rs. 75.00 Cr.
iii. 45 KLD make up water shall be made available by Durgapur Municipal Corp.
iv. The land earmarked for the proposed project is inadequate.

Recommendations of the Committee

23.12.15 In view of the foregoing and after deliberations, the Committee recommended to return the proposal in present form as the area envisaged for the project is grossly inadequate.

23.13 Proposed Bauxite Beneficiation Plant to extract Alumina Hydrate by **M/s. Maa Kudargarhi Alumina & Refinery Private Limited** located at Chiranga village, Batauli Block, Surguja District of Chhattisgarh [Online Proposal No. IA/CG/IND/169804/2020, File No. J-11011/201/2020-IA.II(I)] – **Prescribing of Terms of Reference** - regarding.

23.13.1 **M/s. Maa Kudargarhi Alumina & Refinery Private Limited** has made application vide online proposal no. IA/CG/IND/169804/2020 dated 09/09/2020 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 S. No. 2(b) Mineral beneficiation under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

Details submitted by the project proponent

23.13.2 M/s. Maa Kudargarhi Alumina & Refinery Private Limited proposes for Bauxite Beneficiation Plant of production capacity 200,000 TPA of Hydrate Alumina with mineral through put of 3,76,000 MT/annum.

23.13.3 The proposed unit will be located in S.F No.57/1, 70/1 & 70/77, Chiranga Village, Batauli Block, Surguja District, Chhattisgarh.

23.13.4 The land area for the proposed plant is 91.942 ha. The total land area is CG Govt. Revenue land to be acquired by Company. About 1.5 million USD has been considered in the estimate for land acquisition activities within the area. No forestland involved. Moreover, the proposed land is not an agricultural land. The land for the proposed is moderately elevated hilly terrain with elevation ranges from 635m – 745m above MSL, nearest to mine site and away from the habitations The entire land has been acquired for the project. The area for the green belt of the proposed project is allocated as more than 30 ha in the southern side of the plant

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

23.13.6 Total project cost is approx. Rs. 1146.71 Crores. The proposed Bauxite Beneficiation Plant generates direct employment to 203 skilled persons and outsourced employment of nearly 194 members.

23.13.7 The targeted production capacity of the newly proposed Bauxite Beneficiation Plant to extract Alumina Hydrate is 200,000 TPA from 376,000 MT of bauxite per annum from their own captive bauxite mines located about 16- 28 kms away in three villages such as Barima, Pathari, Narmadapur, of Mainpat, Sitapur Taluk and Surguja district. Other material will be caustic soda, coal, lime, filter cloth and synthetic flocculent. During operation of the plant the raw materials will be brought by road in covered trucks. The existing roads can handle this additional increase in vehicular traffic. Dust generated near raw material handling and transfer points will be prevented by suppression through spraying of water & dust extraction systems with bag filters.

23.13.8 The proposed capacity for different products for new site area as below.

Name of unit	**Production Capacity (TPA)**
Beneficiation Plant	200,000 TPA of alumina hydrate from bauxite ore of 376,000 MT per annum @53% recovery and 47% tailings

23.13.9 The electricity load of 7.9 MW on Normal Load and 9.5MW on Peak Load will be required. Power required for construction and operation will be supplied by Electricity board of Chhattisgarh. Power generation capability from TG (3 Nos.)- 15MW Power generation capability from DG – 1.6MW Total – 16.6 MW.

23.13.10 Proposed raw material other than bauxite for project are Coal, Lime, Caustic Soda and Synthetic flocculants.

23.13.11 Water required for operating and process is 173 KLPH (operation 59 KLPH + process 114 KLPH) Water required for design of plant is 242 KLPH. Water required will be sourced from Ghunghutta River, which is the major source of water and located about 6.9 km from the plant. There will be no effluent discharge from the process & cooling towers. No effluent will be let out of the plant premises. Hence, zero discharge concept will be implemented in the proposed project. Sanitary waste water will be treated in Septic tank followed by sub-surface dispersion trench.

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

23.13.13 Name of the consultant: M/s Aadhi Boomi Mining And Enviro Tech (P) Ltd., [S.No. 144, List of ACOs with their Certificate / Extension Letter no. Rev. 02, Sep. 07, 2020].

Observations of the Committee

23.13.14 The Committee noted the following:

i. The available land is 91.94 ha.
ii. The proposed site is 690 metre from river.
iii. Water @ 173 m^3/hr shall be extracted from Ghunghutta River.
iv. Land requirement for Red mud and Fly ash pond areas not furnished. Red mud shall be disposed at 75% Solids consistency and Fly ash shall be handled dry.

v. 30 ha area shall be developed into green belt. In addition, avenue plantation outside the factory on both sides of the 4 KM road length shall be developed and maintained. Nearly 46 % area would be under green cover.
vi. 3 Nos 15 MW CFBC boiler shall supply power and steam.
vii. ZLD has been committed.
viii. Manja village is situated 71 meters North and Kalipur 369 meters away in NW direction of the proposed plant.
ix. There is no commitment on use of Red Mud.
x. Alternate sites not explored. There are 135 corners in the proposed plot. There are two plots separated from each other.
xi. Coal requirement of 350 TPD seems to be on lower side to generate 120 TPH of Steam.
xii. Access to the project site is not shown. Highway is 4.6 Km away.
xiii. There is no description available on the type of liners for ball mills.
xiv. Total area required for Red Mud Pond and design details of pond including layout of the pond and 33 % green belt has not been submitted.
xv. Highest flood level of the river and its impact on the proposed units has not been enumerated in the pre-feasibility report.
xvi. Impact of air pollution on river ecology along within its mitigation measures has not been submitted.

Recommendations of the Committee

23.13.15 In view of the foregoing and after deliberations, the Committee recommended to return the proposal in present form for addressing the aforesaid concerns (para 23.13.14) of the Committee.

23.14 Green Field Project of Ferro Alloys (Silico Manganese, Ferro Silicon and Ferro Manganese) of total capacity 80,000 TPA or/and alternatively Pig Iron of total Capacity 1,60,000 TPA with installation of 4 No's of SAF of having 9 MVA capacity each by **M/s Avassa Ferro Alloys Private Limited** at Village: Birwat, Tehsil-Katghora **Distt.- Korba, Chhattisgarh** [Proposal No. IA/CG/IND/ 174020/2020; MoEFCC File No. J-11011/178/2020-IA.II(I)] – **Prescribing of Terms of Reference -** regarding.

23.14.1 M/s. Avassa Ferro Alloys Private Limited has made application vide online proposal no. IA/CG/IND/167971/2020 dated 19/08/2020 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 S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

23.14.2 The aforesaid proposal was earlier considered in 22nd meeting of the Re-constituted EAC (Industry-I) held during 26 – 28th August, 2020 wherein **the Committee recommended to return the proposal in present form** in view of the following:

Observations of the Committee (EAC held during 26 – 28th August, 2020)

The Committee noted the following:

i. It is a green field project to manufacture Pig Iron; SiMn; FeSi; and FeMn.

ii. 3X9 MVA furnaces shall be installed
iii. 4.419 ha land is available. It is adequate.
iv. 200 KLD water shall be required
v. Power shall be drawn from Group Company power house nearby. There is no grid connectivity.
vi. Alternate Sites have not been proposed for consideration.
vii. Present site is agriculture land and Land Use of the same has not been changed.
viii. The site is having villages and schools nearby.
ix. The plant site has approach through the plant of another company called Swastic Coal washery.

Recommendations of the Committee (EAC held during 26 – 28th August, 2020)

The committee after detailed deliberations was of the opinion that the highly polluting and noise prone industry within 200 to 500 m of sensitive receptors like dwellings, schools and hospitals is not at the right location. Hence, the proposal at present location and in present form is not environment friendly. In view of this, the Committee recommended to return the proposal in present form.

23.14.3 Project proponent has further submitted the revised/updated application vide proposal no. IA/CG/IND/174020/2020 dated 19/09/2020.

Details submitted by the project proponent

23.14.4 M/s Avassa Ferro Alloys Private Limited has proposed to establish a Ferro Alloy Plant for production of Ferro Alloys (Silico Manganese, Ferro Silicon, and Ferro Manganese) of total capacity of 80,000 TPA capacity or/and alternatively Pig Iron of total Capacity (1,60,000 TPA) at Village - Birwat, Tehsil-Katghora, District- Korba, Chhattisgarh.

23.14.5 The land area acquired for the proposed plant is 5.72 ha (14.15 Acres) No/forestland involved. The entire land is under possession of the company. 2.30 ha (5.705 Acres) (40.31 %) land will be used for green belt development of the total area.

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

23.14.7 Total project cost is approx. Rs. 109.5 Cr. Proposed employment generation from proposed project will be 271 total employment direct & indirect employments.

23.14.8 The targeted production of the plant is Ferro Alloys (Silico Manganese, Ferro Silicon, and Ferro Manganese) of total capacity of 80,000 TPA capacity or/and alternatively Pig Iron of total Capacity (1,60,000 TPA). The ore transportation will be done through Road. The proposed capacity for different products for new site area as below: -

SL.No	Product	Facility	Capacity (TPA)
1	Ferro Alloys (Silico Manganese, Ferro Silicon and Ferro Manganese)	Submerged Arc furnace (9 MVA x 4 Nos)	80,000
AND/ OR Alternatively (As Per Market Demand)			
2	Pig Iron	Submerged Arc furnace (9 MVA x 4 Nos)	1,60,000

23.14.9 Based on annual installed capacity of the plant; Total power requirement will be 37 MW which will be sourced from nearby unit Vandana Energy and Steel Pvt Ltd through private dedicated Grid through a captive dedicated feeder. In addition to this total 1,100 kVA DG sets are proposed for emergency backup.

23.14.10 The main raw materials required for manufacture are given below: -

For Ferro Alloy Plant

Raw Material	Qty(in TPA)	Source
Manganese Ore	1,68,000	MOIL; OMC; and other private mines
High Manganese Slag	32,000	Internal
Quartz	6,400	Local mines in Raipur and Raigarh District
Coke/Coal/Charcoal	48,000	Open Market
Dolomite	2,400	Local mines in Raipur and Raigarh District
Electrode Paste	2,400	Local Manufacturers
M.S. Item.	800	Local Rolling mills and fabricators
Lancing Pipe and Canister Sheet	1,200	Local Pipe Units in Bhilai; Raipur
Oxygen Gas	240	Local Industrial Gas Units in Bhilai; Raipur
Total	**2,61,440**	

For Pig Iron

Raw Material	Qty(in TPA)	Source
Iron Ore Fines & Mill Scale	2,40,000	NMDC/OMC and Local Units of Sponge Iron
Coke/Coal/Charcoal	96,000	Open Market
Dolomite/Lime/Limestone	16,000	Local mines in Raipur and Raigarh District
Electrode Paste	2,400	Local Manufacturers
M.S. Item.	1,120	Local Rolling mills andfabricators
Lancing Pipe	480	Local Pipe Units in Bhilai; Raipur
Total	**3,56,000**	

23.14.11 Project is designed as closed cooling circuit where 100% water will be recycled. The water will be sourced from ground water. The water requirement for production of Ferro alloys will be approx. 258 KL/day and in case of pig iron it will be 235 KL/day. Domestic waste will be treated in 20 KL STP and treated water will be reused in Horticulture, water sprinkling etc.

For Ferro Alloys Production: -

Input KL/day			Output KL/day		Remarks
1	Cooling water (make-up)	228	Loss to atmosphere	228	There will not be any process waste water as closed circuit cooling system will be adopted.
2	Domestic Water	22	Domestic Wastewater	18	The domestic waste water will be treated in STP and treated water will be used in green belt

Input KL/day			Output KL/day		Remarks
					and dust suppression.
			Consumption Loss	4	--
3	For Drinking	8	Consumption Loss	8	--
Total		**258**	**Total**	**258**	

For Pig Iron Production: -

Input KL/day			Output KL/day		Remarks
1	Cooling water (make-up)	205	Loss to atmosphere	205	There will not be any process waste water as closed circuit cooling system will be adopted.
2	Domestic Water	22	Domestic Wastewater	18	The domestic waste water will be treated in STP and treated water will be used in green belt and dust suppression.
			Consumption Loss	4	--
3	For Drinking	8	Consumption Loss	8	--
Total		**235**	**Total**	**235**	

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

23.14.13 Name of the EIA consultant: Grass Roots Research and Creation India (P) Ltd. [S.No. 166, List of ACOs with their Certificate / Extension Letter no. Rev. 02, Sep. 07, 2020].

Observations of the Committee

23.14.14 The Committee noted the following:

i. Plant location is now changed and the nearest village is now 2.5 KM from site.
ii. It is a green field project to manufacture Pig Iron; SiMn; FeSi; and FeMn.
iii. 4X9 MVA furnaces shall be installed
iv. 4.419 ha land is available. It is adequate.
v. 250 KLD GW shall be required
vi. Project cost is 110.63 Cr.

Recommendations of the Committee

23.14.15 After 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-1 read with additional ToRs at Annexure-2:

i. Ground water abstraction is not permitted. Only surface water shall be used.
ii. Fe-Cr will not be manufactured without prior EC from MoEF&CC.
iii. 4th hole extraction shall be used in SAFs.
iv. Plant shall operate on ZLD.

v. PM level shall be <30 mg/Nm^3.
vi. 100 % Solid waste generated shall be reused. No dumping is permitted.
vii. Briquetting and jigging plant shall be installed to recover metal from fines and solid waste.
viii. All plant roads shall be paved and cleaned regularly using industrial vacuum cleaners. Dust collected from roads and shop floors shall be recycled.
ix. 40 % area shall be developed as Green belt. This would be inclusive of 50 M wide green belt to be developed within the project area towards the village on western side.
x. Vacant land of 3 ha shall be landscaped green.
xi. RWH and GW recharge shall be carried out to recharge more than 100 % of annual water consumption.

23.15 Augmentation of Screening Plant and associated facilities at Bailadila Deposit-14/11C&11B of Bailadila Iron Ore Project of **M/s. NMDC Limited** at Kirandul complex, South Bastar **Dantewada District, Chhattisgarh** [Proposal No. IA/CG/IND/165583/2020; MoEF&CC File No. J-11015/320/2012-IA.II(M)] – **Validity extension of Environment Clearance** - regarding.

23.15.1 **M/s. NMDC Limited** has made online application vide proposal no. IA/CG/IND/165583/2020 dated 18/08/2020 along with Form 6 and sought for validity extension of the Environment Clearance accorded by the Ministry vide letter no. J-11015/320/2012-IA.II(M) dated 5/11/2013.

Details submitted by the project proponent

23.15.2 M/s. NMDC Limited has been granted Environment Clearance by the Ministry for a project titled "Augmentation of Screening plant and associated facilities for Bailadila Iron Ore Deposit-14,11C and 11B located at Kirandul in South Bastar Dantewada District, Chhattisgarh" vide letter no. J-11015/320/2012-IA.II(M) dated 5/11/2013. The proposal involves construction of new Screening Plant of 12 MTPA capacity and stacking and loading arrangements for fine ore.

23.15.3 The activity envisaged above could not be taken up within the validity period of EC in view of the time spent in obtaining the following statutory clearances which delayed the execution of the project:

1) Forest clearance was obtained from MOEF&CC vide letter no. 8-14/2011-FC dated 10.04.2015.
2) Tree felling permission was obtained on 15.12.2015 for felling of 1808 no. trees in 65.936 ha. The tree felling work commenced on 17.03.2016 and completed on 2.10.2016.
3) The tree felling permission for 901 trees in 8.30 ha was obtained on 18.2.2017 from Forest Department, Raipur. The tree felling work commenced on 5.3.2017 and completed on 18.3.2017.
4) Member Secretary, Chhattisgarh Environment Conservation Board, Raipur sought the corrigendum to environmental clearance due to area requirement mentioned as 65.936 ha instead of 74.236 ha in EC letter dated 5.11.2013. The corrigendum to EC was obtained on 28.3.2017 from MoEF&CC.

a) The permission to establish under Water and Air Acts obtained from CECB, Raipur vide letter dated 28.7.2017.

23.15.4 The project proponent has further stated that it has engaged M/s. Tata Consultancy Engineers Limited, Kolkata as EPCM consultant for the above project. For execution of the above project, the total work is planned in 8 different packages. After obtaining all the statutory clearances, NMDC commenced the package -1 i.e., site development work on 25/6/2018. The site development work was also affected due COVID-19 pandemic situation. The implementation of other packages such as construction power, dry circuit system, wet circuit system, MRSS & Power distribution system, procurement of locomotives, Rapid wagon loading system, etc., are still under progress.

23.15.5 In view of the above, the construction and commissioning of the project may not be completed within E.C validity period of 4/11/2020 due to above reasons. It is proposed to complete all the package works by 31/10/2023. Therefore, NMDC is seeking validity extension of existing Environmental Clearance for above project proposal for further period of 3 years as per clause no: 9 of EIA Notification 2006 for completion of construction and commencement of operation.

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

Observations of the Committee

23.15.7 The Committee noted the following:

i. Project proponent was unable to implement the facilities envisaged in the EC dated 05/11/2013 within seven years period due to delay in obtaining other requisite statutory permissions.

ii. Project will be completed by 31/10/2023 as per the implementation schedule.

Recommendations of the Committee

23.15.8 In view of above and after deliberations, the Committee recommended to extend the validity of the Environment Clearance for a period of three years beyond 04/11/2020, i.e., from 05/11/2020 to 04/11/2023 subject to environmental safeguards prescribed in the EC dated 05/11/2013.

23.16 Integrated Steel Plant (0.4 MTPA) with 43 MW Captive Power Plant by **M/s. Rashi Steel and Power Limited** located at village Paraghat and Beltukri, tehsil Masturi, **district Bilaspur Chhattisgarh** [Proposal No. IA/CG/IND/170628/2020; MoEFCC File No. J-11011/466/2010-IA.II(I)] – **Validity extension of Environment Clearance** - regarding.

23.16.1 **M/s. Rashi Steel and Power Limited** has made online application vide proposal no. IA/CG/IND/170628/2020 dated 31/08/2020 along with Form 6 and sought for validity extension of the Environment Clearance accorded by the Ministry vide letter no. J-11011/466/2010-IA-II(I) dated 10/09/2013.

Details submitted by the project proponent

23.16.2 M/s. Rashi Steel and Power Limited has been granted Environment Clearance by the Ministry for a project titled "Proposed integrated steel plant (0.4 MTPA capacity) with 43 MW captive power plant at village - Paraghat and Beltukri, Tehsil Masturi, District Bilaspur Chhattisgarh by M/s. Rashi Steel and Power Limited (Formerly M/s. Rashi Strips Private Limtied)" vide letter no. J-11011/466/2010-IA II (I) dated 10/09/2013 and subsequently amended on

02/08/2016.

23.16.3 Following units and production capacity were granted in EC dated 10/09/2013

1. Beneficiation plant – 1.9 MTPA
2. Pellet plant – 1.324 MTPA
3. Coal washery – 0.35 MTPA
4. DRI plant (RHF) – 0.4 MTPA
5. SAF – 0.243 MTPA
6. DI Spun Pipe Plant – 0.3 MTPA
7. Captive Power Plant – 43 MW

23.16.4 The above EC was amended on 02/08/2016 (for phase-wise implementation)

Permitted units in Phase-I (on 77 acres land already acquired)

SN	Name of Unit	Quantity	Area
1	Beneficiation of iron ore plant with all plant and facilities and green cover	1.9 MTPA	39.86 acres
2	Coal washery with all plant and facilities and green cover	0.35 MTPA	13.51 acres
3	Rotary Hearth Furnace with all plant and facilities, including WHRB and green cover	0.4 MTPA	21.08 acres
4	Producer gas as fuel source of plant	400 Nm3/h	1.82 acres
Total Land			**76.27 acres**

Permitted units in Phase-II (subject to acquisition of additional 88 acres land)

1. Pellet plant – 1.324 MTPA
2. SAF – 0.243 MTPA
3. DI Spun Pipe Plant – 0.3 MTPA
4. Captive Power Plant – 43 MW

23.16.5 The activity envisaged above could not be taken up within the validity period of EC due to the following;

1. Banks not willing to finance the project.
2. Financial problems faced by the company.
3. Land acquisition problems for 88 acres land (21 acres could be acquired till date)
4. Depressed demand of steel from 2013-2019.
5. Complete change in top management (New Board of Directors took change on dated 22.06.2020)
6. Covid -19 pandemic gripping the country since March 2020. (Chhattisgarh is witnessing sharp increase in Covid infections now with extended lockdowns days)

23.16.6 The project proponent has stated that there are no changes proposed w.r.t. Configuration and capacity change. The proposal is for extend the validity of existing EC for next 3 years.

23.16.7 The status of implementation of the earlier EC facilities and schedule of completion of balance facilities are as follows:

1. Land acquired till date: 132 acres (balance land under acquisition)
2. Beneficiation plant – 1.9 MTPA – plant construction over and is ready to operate

Other units are under planning stage and expected to be completed by December 2022.

3. Pellet plant – 1.324 MTPA – Under process to obtained for the CTE, plant and equipment order finalized.
4. Coal washery – 0.35 MTPA –CTE obtained. plant and equipment order finalized.
5. DRI plant (RHF) – 0.4 MTPA – Detailed project report and drawings under preparation.
6. SAF – 0.243 MTPA – Detailed project report and drawings under preparation.
7. DI Spun Pipe Plant – 0.3 MTPA - Detailed project report and drawings under preparation.
8. Captive Power Plant – 43 MW - Detailed project report and drawings under preparation.

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

Observations of the Committee

23.16.9 The Committee noted the following:

i. Project proponent was unable to implement the facilities envisaged in the EC dated 10/09/2013 due to delay in land acquisition, financial constraints and educed steel demand etc.,

ii. Project will be completed by December, 2022 as per the implementation schedule furnished.

Recommendations of the Committee

23.16.10 In view of above and after deliberations, the Committee recommended to extend the validity of the Environment Clearance for a period of three years beyond 09/09/2020, i.e., from 10/09/2020 to 09/09/2023 subject to environmental safeguards prescribed in the EC dated 10/09/2013.

30th September, 2020

23.17 Modernization by replacing the old machineries with latest energy efficient machineries without change in clinker production of Line-3 Kiln system up to Clinkerization (HRP Raw Mill, VRM Coal Mill and SLC to ILC PH) without change in production capacity by **M/S JK Cement Ltd** located at Nimbahera, **District Chittorgarh, Rajasthan** - [Online Proposal No. IA/RJ/IND/167846/2020, File No. J-11011/243/2016-IA-II(I)] – **Environment Clearance under para 7(ii) of EIA, 2006** – regarding.

23.17.1 M/s. **J.K. Cement Limited** has made an online application vide proposal no. IA/RJ/IND/167846/2020 dated 28/08/2020 along with Form 1 &2 and Addendum to the existing EIA report seeking Environment Clearance (EC) under para 7(ii) of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(b) Cement plants under Category "A" EIA Notification, 2006 and the project is appraised at the Central level.

Details submitted by the project proponent

23.17.2 Existing EC was obtained vide letter No J-11011/243/2016-IA. II(I) dated 23rdJuly 2018, for expansion of Integrated Cement Plant (Clinker- 2.8 Million TPA to 5.0 Million TPA, Cement

-3.6 Million TPA to 6.5 Million TPA, CPP- 22 MW to 47 MW & WHRB 13.2 MW to 15 MW).

23.17.3 Present installed capacity of J. K. Cement Works, Nimbahera for Clinker is 2.80 Million TPA, Cement production is 4.90 Million TPA, CPP is 22 MW and WHR is 13.2 MW. The status of production details in accordance with consent is as below:

a) CTO for existing production of cement 3.6 MMTPA and clinker 2.80 MMTPA was issued vide letter no F (Tech)/Chittorgarh (Nimbahera)/5(1)/2010-2011/8039-8041 dated 20.12.2017 valid upto 31.05.2022. Amendment in CTO issued on 25.01.2018 & 22.10.2018 to cement plant.

b) CTO for 1.3 MMTPA cement (clinker grinding only) vide letter no G (CPM)/1000/4000(1)/2019-2020/1718-1720 and order no 2019-2020/CPM/5486 dated 26.07.2019 valid upto31.03.2024

c) CTO for 22 MW CPP vide letter no F (Tech)/Chittorgarh (Nimbahera)/5(1)/2010-2011/1721-1723 dated 29.07.2019 valid up to 31.03.2024

d) CTO for 13.20 MW waste heat recovery plant vide letter no F (Tech)/Chittorgarh (Nimbahera)/5(1)/2010-2011/4732-4734 dated 29.10.2018 valid up to 31.07.2023

e) CTE obtained for modernisation of line-3 up to clinkerision with condition to submit clarification/ amendment in EC till 31.03.2021. CTE vide letter no. G (CPM)/ 1000/4000(1)/2019-2020/1718-1720 and order no. 2019-2020/CPM/5486 dated 26/07/2019 and Letter no. F(C-90)/CPP/154-155 dated 21.09.2020.

23.17.4 The present proposal of **M/s. J.K. Cement Limited** is for seeking Environment Clearance under the provisions of para 7(ii) of EIA Notification, 2006 for Modernization of existing Line No.3 by replacing the old machineries with latest energy efficient machineries without change in clinker production of line-3 Kiln system up to clinkerision (Coal Mill from Ball mill to VRM, Raw Mill from VRM to Horizontal Roller Press and Kiln/Clinkerision section from SLC to ILC PH) without change in production capacity.

23.17.5 There is no increase in production capacity envisaged in the project. The details of the existing production (line I to III), EC obtained from MoEF&CC on 23/07/2018 and the proposed modernization are summarized as below:

S. No.	Product	Existing (MMTPA) (Line 1, 2 & 3)	Expansion (MMTPA) EC obtained (Line 4) on 23/07/2018	Modernization Proposed (Line 3)	Total(MMTPA)
1.	Clinker	2.8	2.2	Nil	5.0
2.	Cement	3.6	2.9	Nil	6.5
Power Generation					
3.	CPP	22 MW	25 MW	Nil	47 MW
4.	WHRB	13.2 MW	1.8 MW	Nil	15.0 MW

23.17.6 The justification furnished for the proposed modernization is furnished as below:

1. Replacement of coal mill (Ball Mill to Vertical Mill of 300 TPH) to reduce power

consumption by 6/7 KWH/Tonne of Material.

2. Replacement of Kiln Section up to clinkerization (SLC to ILC) to reduce thermal energy consumption from 740 to 720 Kcal/Kg of clinker.
3. Replacement of Raw Mill (Vertical Mill to Horizontal Roller Press of 470 TPH) to reduce the power consumption by 6/7 KWH/Tonne of material.
4. The overall power consumption up to clinkerization would be reduced from 69 to 52KWH/Tonne of clinker.
5. The proposed modernization will help to achieve the PAT targets.

23.17.7 Total area of the plant is 170.27 hectare (including plant & colony), No additional land is required for the proposed modernization. Proposed plant lay out vis-à-vis with lay out with proposed modernization has been submitted.

23.17.8 Proposed resources requirement (Land/raw materials/water/power) vis-à-vis with granted Environmental Clearance:

Particulars	**As per EC (23.07.2018)**	**Proposed modernization**	**Total After modernization**	**Remarks**
Production capacity	Clinker 5.0 Cement 6.5 CPP 47 MW WHRB 15.0 MW	No change	Clinker 5.0 Cement 6.5 CPP 47MW WHRB 15.0MW	No Change
Land requirement	170.27 ha For all plants and colony	No additional land is required	170.27 ha For all plants and colony	No Change
Water Requirement	4071 KLD for all units (Ground-2545 KLD & surface 1396 KLD and 770 recycled)	No additional water is required	4071 KLD for all units	No Change
Domestic waste water generation form colony	370 KLD For all units	No additional waste water generation	370 KLD	No change. Domestic waste water is being treated in STP and reused for plantation.
Electrical Energy Consumption in Line No.3	69 KWH/Tonne of clinker	--	52 KWH/Tonne of clinker	Saving of natural resources, reduction of CO2 emission from 878.8 kg/tone of
Thermal Energy Consumption in Line No.3	740 Kcal/kg of clinker	--	720 Kcal/kg of clinker	

Particulars	**As per EC (23.07.2018)**		**Proposed modernization**	**Total After modernization**	**Remarks**
					clinker to 847.2 kg/tone of clinker.
Employment	709		No change	709	No change
Project Cost (Rs in Cr)	Existing (Line-1, 2 & 3) &1.3 MTPA Cement Grinding	1180.51 Cr	292.42 Cr	2959.93 Cr	New proposed Line-4 for clinkerization, Cement grinding, CPP and WHRS to be installed as per the EC.
	Proposed expansion (Line-4), EC Obtained	1,487.00 Cr			
Environment Protection cost (Rs in lacs) Capital	3680.65		184	3864.65	Line-4 to be installed.
Recurring (lacs)	409.06		16	425.06	Line-4 to be installed.
. • No Change in land & Water requirement. • No change in raw material requirement.					

23.17.9 Pollution load calculations (Air/Water/Solid & hazardous waste/traffic) vis-à-vis with granted Environment Clearance:

SN		**Existing EC**	**Proposed Modernization of Line No.3**	**Total**	**Impact Evaluation**	**Remarks**
1	**Water and Waste water management**					
	Water Requirement	4071 KLD for all units	No additional water is required	4071 KLD	**Nil**	No additional water is required for the proposed changes in existing EC.
	Domestic waste water generation form colony	370 KLD For all units	No additional waste water generation	370 KLD	**Nil**	Domestic waste water is being treated in Sewage Treatment

SN		Existing EC	Proposed Modernization of Line No.3	Total	Impact Evaluation	Remarks
						Plant and reused for plantation.
2	**Air Emission**	Existing emission norms for Line No.3 are PM<30 mg/Nm^3, SO_2<100mg/Nm^3 and NOx<1000 mg/Nm^3	No additional emission level is envisaged as the plant capacity is same	Emission level for Line No.3 would be PM<30 mg/Nm^3, SO_2<100mg/Nm^3 and NOx<1000 mg/Nm^3	**Nil**	No increase in emission level.
3	**Solid Waste Management**	100% dust collected in PCM is recycled in process	No additional dust generation	100% recycle in process	**Nil**	No additional dust will be generated from the proposed changes.
4	**Traffic Movement**	Existing Road and Railway	No additional material transportation is proposed as the proposed capacity is same.	Existing Road and Railway	**Nil**	No additional road traffic
5	**Plantation**	57.77 ha In all existing area of plant and colony	No change in plantation area	57.77 In all existing area of plant and colony	**Nil**	Green belt and plantation has been developed in approximately 34% of total area.

23.17.10 The proponent has mentioned that there is no court case or violation under EIAs Notification to the project or related activity. No show cause notices/direction has been issued under Air Act, Water Act and Environment (Protection) Act, 1986.

23.17.11 Name of consultant: M/s. Enkay Enviro Services Pvt Ltd Jaipur [S.No.107, List of ACOs with their Certificate / Extension Letter no. Rev. 02, Sep. 07, 2020].

Certified compliance report by Regional Office

23.17.12 The Certified compliance of existing environmental clearances Letter No. J-11011/243/2016-IA. II(I) dated 23rd July 2018 from the Regional Office of the MoEF&CC, Lucknow was obtained vide letter File No: IV/ENV/Raj/Ind- 183/993/2019/658 dated 10.02.2020 wherein

observations have been made with respect to Green House Gas inventory and CER etc. PP has submitted an action taken report to RO on 5/03/2020.

Observations of the Committee

23.17.13 The Committee noted that proposed modernization falls under clause 7(ii) b of the EIA Notification, 2006 which states that *"Any change in configuration of the plant from the environmental clearance conditions during execution of the project after detailed engineering shall be exempt from the requirement of environmental clearance, if there is no change in production and pollution load. The project proponent shall inform the Ministry of Environment, Forest and Climate Change / State Level Environment Impact Assessment Authority and the concerned State Pollution Control Board".*

Recommendations of the Committee

23.17.14 In view of the foregoing and after deliberations, the Committee recommended that the proposal falls under clause 7(ii) b of EIA Notification, 2006. The Committee, therefore, requested the Ministry to communicate the same to project proponent. The Project Proponent should adhere to the provisions made under clause 7(ii) b of EIA, 2006.

23.18 Modernization and addition in configuration of Integrated steel plant [Modernization - Cryogenic oxygen plant (0.015 MTPA) will be replaced by VPSA oxygen plant (140 TPD); Addition - Combustor installation - 9.5 MW (as an alternate to 500 TPD DRI kiln] without any change in total production of steel by **M/s Sunflag Iron & Steel Ltd.** located at Villages Warthi, Sirsi & Eklari, Tehsil Mohadi, **District Bhandara, Maharashtra** - [Online Proposal No. IA/MH/IND/163107/2020, File No. J-11011/355/2004-IA-II(I)] – **Environment Clearance under para 7(ii) of EIA, 2006** – regarding.

23.18.1 **M/s Sunflag Iron & Steel Limited** has made an online application vide proposal no. IA/MH/IND/163107/2020dated 26/08/2020along with Form 1 &2, pre-feasibility report and Addendum to the existing EIA report seeking Environment Clearance (EC) under para 7(ii) of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the project is appraised at the Central level.

Details submitted by the project proponent

23.18.2 The plant had obtained Environmental Clearance vide letter no. J-11011/355/2004-IA.II(I) dated 21.02.2006 for expansion of 0.25 MTPA to 0.5 MTPA. Thereafter, amendment in EC was obtained on 12.01.2012. The plant then obtained EC for expansion from 0.5 MTPA to 1.0 MTPA vide letter dated 02.05.2017.

23.18.3 The present status of implementation of the product slate for 1.0 MTPA ISP capacity accorded EC by the Ministry on 02.05.2017 is furnished below:

Sl.No.	Products	Production for which EC granted dt 02.05.2017	Present Status (Operational as per CTO except *)
1	Direct Reduced Iron	1.0 MTPA	0.28 MTPA
2	Pig Iron / Hot Metal	0.6 MTPA	0.45 MTPA
3	Ingots / Billets	1.025 MTPA	1.025 MTPA
4	Rolled Steel Products	1.0 MTPA	0.75 MTPA
5	Sinter	0.85 MTPA	0.45 MTPA + 0.40 MTPA*

Sl.No.	Products	Production for which EC granted dt 02.05.2017	Present Status (Operational as per CTO except *)
6	Electricity	90 MW	30 MW
7	Coke	0.25 MTPA	-
8	Oxygen Plant	15000 TPA	15000 TPA
9	Oxygen / Nitrogen / Argon Plant	45000 TPA	45000 TPA
10	Washery	750 TPD	750 TPD

* construction completed & CTO applied for

23.18.4 The present proposal is for seeking Environment Clearance under the provisions of para 7(ii) of EIA Notification, 2006 for the following units only, with no change nor increase in production:

i. Modernization - Cryogenic oxygen plant (0.015 MTPA) will be replaced by VPSA oxygen plant (140 TPD)

ii. Addition - Combustor installation - 9.5 MW (to be operated during 500 TPD DRI kiln (i.e. DRP-1) shut down to ensure WHRB operation for power generation). There will be no change nor increase in total power generation in the plant.

23.18.5 The consolidated product slate after proposal in production quantities are furnished as below:

Sl. No.	Products	Production & configuration for which EC granted dt 02.05.2017	Proposed amendment (current application)	Total
1	Direct Reduced Iron	1.0 MTPA (4x350 TPD & 4x500 TPD Kilns)	No change	1.0 MTPA (4x350 TPD & 4x500 TPD Kilns)
2	Pig Iron / Hot Metal	0.6 MTPA (1 X 0.25 MTPA existing + 0.05 MTPA existing capacity Utilization + 1 x 0.30 MTPA MBF)	No change	0.6 MTPA (1 X 0.25 MTPA existing + 0.05 MTPA existing capacity Utilization + 1 x 0.30 MTPA MBF)
3	Ingots / Billets	1.025 MTPA (2x25 TPH IF & 1x50/60 EAF + 1x50 TPH EAF, 75 TPH AOD)	No change	1.025 MTPA (2x25 TPH IF & 1x50/60 EAF + 1x50 TPH EAF, 75 TPH AOD)
4	Rolled Steel Products	1.0 MTPA (2x70 TPH, 2x60 TPH, 2x14 TPH)	No change	1.0 MTPA (2x70, 2x60, 2x14 TPH)
5	Sinter	0.85 MTPA (1 X 0.25 MTPA existing + 0.20 MTPA existing capacity	No change	0.85 MTPA (1 X 0.25 MTPA existing + 0.20 MTPA existing

Sl. No.	Products	Production & configuration for which EC granted dt 02.05.2017	Proposed amendment (current application)	Total
		Utilization + 1 x 0.40 MTPA)		capacity Utilization + 1 x 0.40 MTPA)
6	Electricity	90 MW	No change	90 MW
6.a.*	Combustor with coal crusher and coal handling plant	Nil	Hot flue gas generation for Steam generation @45 TPH for Power generation @ capacity : 9.5 MW	9.5 MW (part of 90 MW above)
7	Coke	0.25 MTPA	No change	0.25 MTPA
8	Oxygen Plant	15000 TPA	Will be dismantled	0
9	Oxygen / Nitrogen / Argon Plant	45000 TPA	No change	45000 TPA
9.a.*	VPSA Oxygen Plant	NIL	140 TPD	140 TPD
10	Washery	750 TPD	No change	750 TPD

** modernisation/ addition*

23.18.6 The layout plan has been submitted showing the location of the VPSA oxygen and combustor.

23.18.7 The location of plant can be seen in Survey of India Open Series Map No. F44N12. The coordinates of four corners of the plant including the ash dumping area (located within it) are as follow. The average ground elevation of the project area is 275 m AMSL.

Corners	Latitude	Longitude
A	21°13'30"	79°37'58"
B	21°13'45"	79°38'32"
C	21°14'16"	79°38'26"
D	21°14'05"	79°37'11"

23.18.8 There is no additional requirement of water, power, raw material and land due to proposed modernisation of oxygen plant or addition of combustor. The maximum total fresh water requirement will remain same as in EC i.e. 15,098 KLD. Power requirement will reduce from 120 MW to 118.07 MW due to reduced power consumption of VPSA oxygen plant. The maximum raw material will remain same as in EC i.e. 10.15 MTPA (both in-house & out-house) and land requirement (200 ha) will remain same.

23.18.9 It has been reported that the Kola WLS is located at a distance of 8.7 km (East) from the site. No Schedule I species is found in the study area except in Koka WLS, which are already in a protected area.

23.18.10 The existing baseline status based on the data collected during the post project monitoring for the existing EC is given below (period: October 2019 to March 2020):

Ambient air quality monitoring: PM_{10} (52.3 to 93.7 μg/m^3), PM2.5 (22.6 to 55.5 μg/m^3), SO_2 (7.04 to 14.5 μg/m^3) and NO_2 (13.5 to 33.4 to μg/m^3).

Wastewater from the project: pH (6.63 to 8.42), TSS (2.8 to 92 mg/l, BOD (3 to 64 mg/l), COD (81.6 to 240mg/l), TDS (340 to 1260 mg/l), Cl (35.8 to 286 mg/l), SO_4(23.3 to 256.2 mg/l), Fe (0.16 to 0.41 mg/l) and O&G <0.2 mg/l.
Noise level: In the range of 52.5 to 74 dBA for day time and 46.3 to 64.2dBA for night time.

23.18.11 The pollution load assessment is given below:

Air Emissions - There will be no increase in net emission due to following:

(i) Stack emissions - The overall coal combustion will decrease by 475 TPD, therefore, the net emissions will be lower than those sanctioned vide EC dated 02.05.2017. When the standby combustor will operate during shut down of DRP-1, the PM_{10} is expected to reduce by 0.01, SO_2 by 0.21 and NOx by 0.58 µg/cum.

(ii) Fugitive emissions - There is no increase in incoming raw material but decline in coal by 475 TPD during combustor operation. Thus, the overall emissions from the plant will stay within previously sanctioned capacity as per EC dated 02.05.2017.

Impact due to transportation - The coal and iron ore are both coming by rail and only dolomite comes by road. Thus, the public roads will experience a reduction of approximately 6 trucks/day of dolomite to & fro (20T).

Effluent Generation - The maximum effluent generation of plant will remain same except when combustor will be operational and reduction of effluent generation by 7 KLD will occur.

Solid Waste (For Disposal) - The solid waste generation will remain same when combustor will not be operational and there will be reduction of solid waste by 58.7 TPD will be there when combustor will be operational.

23.18.12 Environment Management Plan for the proposed units is as follows:

a) VPSA oxygen plant - there will be no polluting air emissions and no solid or hazardous waste generation. Waste water generated will be connected to the existing waste water treatment systems.

b) Combustor - The flue gas of the combustor will be connected to the existing stack and ESP of the DRP-1, because either combuster or DRP-1 will operate at any given time. The waste water will be connected to the existing waste water treatment systems.

23.18.13 The capital cost of the proposed modernization and addition is Rs 54.93 crores. Proposed Corporate Environment Responsibility will be Rs. 54.93 lakhsfor the additional investment proposed. It will be spent on health & education infrastructure and environment improvement.

23.18.14 The total green area is 72 ha, which is 36% of the total area. It is reported that the green belt equivalent to 33% of the plot area has been developed. Total 493594 trees have been planted till date.

23.18.15 The details of earlier public consultations conducted along with the compliance to the issues raised during public hearing are furnished as below:

File No.	Date	Capacity	Date of Public hearing	Remarks
J-11011/355/2004-IA.II(I)	21.02.2006	0.5 MTPA Integrated Steel Plant with Coke oven plant, MBF, CPP, Wire road block, Coal dust injection facility, DRI Plant, oxygen plant, etc.	02.09.2005	PH was conducted on 02.09.2005 at the Meeting hall, Collector office, Bhandara. The issues raised were fire tender, ambulance, drinking water, unemployment, increase in pollution, etc. Sunflag is regularly providing fire tender as social responsibility, employment to the villagers, health care, etc. Sunflag also informed that norms stipulated by CPCB and MPCB are being followed and steps taken to control and reduce pollution.
J-11011/355/2004-IA.II(I)	02/05/2017	Expansion of ISP from 0.5 MTPA to 1.0 MTPA	05/05/2016	PH was conducted on 05/05/2016 at the premises of Sunflag Iron& Steel Company Ltd., Bhandara Road, Warthi, Taluk Mohadi, Dist.Bhandara. The issues raised were employment opportunity, training, skill development, education, provision of health care, water supply facilities, pollution control measures, avenue plantation etc. Action plans with budgets were earmarked for environmental improvement, health improvement, CSR, pollution control system, community capacity building, ambulance, control of water pollution, greenbelt development and maintenance and education. The same are under implementation.

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

23.18.17 The proponent has mentioned that there is no show cause notices/direction under Air Act, Water Act and Environment (Protection) Act, 1986 to the project or related activity.

23.18.18 Name of consultant: Min Mec Consultancy Private Limited, New Delhi. The consultant is preparing and presenting reports as per the High Court of Delhi orders in LPA 110/2014 and CM No.2175/2014 (stay) and W.P.(C) 3665/2016.

Certified compliance report by Regional Office

23.18.19 Certified compliance report monitoring (plant visit) was carried out by MOEF&CC Regional Office, Nagpur on 05.12.2018 and some compliance requirements were issued vide letter no. EC-500/RON/2017-NGP/5275 dated 29.04.2019. The response was submitted vide letter no. SISCO/ENV/2019 dated 06.05.2019. Thereafter, MOEF&CC, Regional office, Nagpur issued compliance status vide letter no. EC-500/RON/2017-NGP/5563 dated 25.07.2019. The action taken report for the identified non compliances were submitted by M/s Sunflag vide letter no. SISCO/ENV/2019/2524A dated 05.08.2019. The same has now been considered and forwarded by DDGF(Central), Regional Office, Nagpur to MOEF&CC, New Delhi vide letter no. EC-500/RON/2017-NGP/5712 dated 13.09.2019 for further action.

The status of closure of the non-compliances as forwarded by the Regional Office, Nagpur to MoEF&CC, New Delhi vide letter dated 13.09.2019 is submitted by PP as below:

S. No.	Condition No.	Non Compliance identified by MoEF&CC RO, Nagpur	Action taken details
1	General-xv	PA did not inform the details of financial closure and final approval to Regional office.	Prospective lenders funding the proposed expansion have awarded part sanction and the formalities are ongoing. Therefore, financial closure for entire project is yet to be completed.
2	General- x & xi	PA did not upload the copies of EC and six monthly compliance report to company website	PP now uploaded at website of the Sunflag company as www.sunflagsteel.com
3	General-xii	Status of the expansion project was not mentioned in the report. Also compliance made in existing plant (0.5 MTPA) against the condition stipulated is not being mentioned.	As on date the expansion project is partially implemented. All the specific details of existing plant and proposed activities will be incorporated in the upcoming six monthly report. The same has been now submitted till March 2020.
4	Specific - xxi	PA did not provide any time bound action plan for the expenditure of 5% of the total cost of the project towards enterprise social commitment	Expenditure on social commitment works out as Rs 261.12 lakhs of investment made till 2018-19. The social commitment has been fulfilled for an amount of Rs. 202.26 lakhs and the action plan for the implementation of balance has been submitted for next 5 years covering health, education, sanitation, skill development, infrastructure etc.
5	Specific-xxiii	PA did not provide the copy of Environmental Policy	The copy of Corporate Environmental Policy was submitted along with EC

S. No.	Condition No.	Non Compliance identified by MoEF&CC RO, Nagpur	Action taken details
			compliance report and resubmitted

Observations of the Committee

23.18.20 The Committee noted the following:

i. PP wants to install a new boiler to support existing power generation system during shut down of DRI kilns to maintain power supply to the rest of the steel plant.
ii. This would not increase any pollution as during its operation the DRI kilns will not operate.
iii. PP also wants to change the design of Oxygen plant of 15000 TPA capacity from Cryogenic to PSA type. This also would not increase pollution as PSA technology is more environment friendly in terms of energy consumption.
iv. PP is using coal having 1.2% Sulfur.
v. As per the records made available by the project proponent, there is no increase in ISP production capacity due to the proposed modernization.
vi. The Committee noted that the addendum EIA/EMP report is found to be in order reflecting the present environmental concerns and the projected scenario for all the environmental components.
vii. The Committee satisfied with the action taken report submitted by PP with respect to the compliance status of the existing ECs.
viii. The EAC has carried out requisite due diligence of the instant proposal and considered the same under para 7(ii) (a) of the EIA Notification, 2006 and dispense with the requirement of conducting fresh public consultation in light of the observations mentioned above.

Recommendations of the Committee

23.18.21 In view of the foregoing and after detailed deliberations, the committee recommended the instant proposal for grant of Environment Clearance under para 7(ii) of EIA Notification, 2006 subject to the following specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 pertaining to integrated steel plants based on project specific requirements:

A. Specific conditions

i. PP shall use low Sulfur coal in the Combustor. Post Combustion control for SO_2 emission shall be included for coal with sulphur content of 1.2%.
ii. CEMS shall be installed on the of Combustor stack.
iii. Entire quantity of dolo char generated shall be used for power generation inside steel works itself.
iv. Combustor shall be designed to achieve PM, SO_2 and NOx emission norms notified by MoEF&CC in December, 2015.

B. General Conditions

I. Air quality monitoring and preservation

i. The project proponent shall install 24x7 Continuous Emission Monitoring System (CEMS) at process stacks to monitor stack emission as well as Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.

iii. Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.

iv. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.

v. Secondary emission control system shall be provided at SMS Converters.

vi. The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.

vii. Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility).

viii. Land-based APC system shall be installed to control coke pushing emissions.

ix. Monitor CO, HC and O_2 in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.

x. The coke oven gas shall be subjected to desulphurization if the sulphur content in the coal exceeds 1%.

xi. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.

xii. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

II. Water quality monitoring and preservation

i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and

CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.

iii. The project proponent shall provide the ETP for coke oven to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7thDecember 2015 (Thermal Power Plants) as amended from time to time as amended from time to time;

iv. Adhere to 'Zero Liquid Discharge'

v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

vi. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

vii. Tyre washing facilities shall be provided at the entrance/exit of the plant gates.

viii. CO_2 injection shall be provided in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning.

ix. Water meters shall be provided at the inlet to all unit processes in the steel plants.

x. The project proponent shall make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

III. Noise monitoring and prevention

i. Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report

IV. Energy Conservation measures

i. Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.

V. Waste management

i. An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 Kg/l shall be installed to use slag as river sand in construction industry.

ii. In case of Non-Recovery coke ovens, the gas main carrying hot flue gases to the boiler, shall be insulated to conserve heat and to maximize heat recovery.

iii. Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.

iv. Used refractories shall be recycled as far as possible.

v. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.

vi. Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.

vii. Kitchen waste shall be composted or converted to biogas for further use.

VI. Green Belt

i. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant

ii. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

VII. Public hearing and Human health issues

i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.

ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.

iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

VIII. Corporate Environment Responsibility

i. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

ii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

IX. Miscellaneous

i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

iv. The project proponent shall monitor the criteria pollutants level namely; PM_{10}, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

23.19 Enhancement of Production capacity of existing Pellet Plant from 0.6 Million TPA to 0.8 Million TPA along with Upgradation of Existing 0.7 MTPA Iron Ore Grinding Unit to 1.0 MTPA Iron Ore Grinding and Beneficiation Plant. C. Expansion by Adding: (i) Iron Ore Pellet Plant - 12,00,000 TPA (ii) 20 Nos Coal Gasifier - 54092 Nm^3 /Hr (iii) Iron Ore Grinding & Beneficiation Plant - 20,00,000 TPA (iv). Ductile Iron Pipes with Induction Furnace – 4,00,000 TPA by **M/s. Sarda Energy and Minerals Limited** located at Phase1 of Siltara Industrial Growth Center, Village–Mandhar, Tehsil – Dharsiwa, District Raipur, Chhattisgarh – [Online Proposal No. IA/CG/IND/25977/2014, File No. J-11011/45/2012-IA-II(I)] - **Environment Clearance** - regarding.

23.19.1 **M/s. Sarda Energy and Minerals Limited** has made online application vide proposal no. IA/CG/IND/25977/2014 dated 27/11/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

23.19.2 The project proponent earlier submitted an application for Environment Clearance to the Ministry online on 2nd July 2020 vide Online Application No. IA/CG/IND/101936/2020. The proposal was considered in 21st meeting of EAC (Industry- I) held on 30th July, 2020 wherein Committee observed the following:

i. The project site is located in a critically polluted area namely Siltara Industrial Area having CEPI score of 79.94.
ii. EIA report is not in line with Appendix III of EIA Notification 2006. There are 11 chapters in the report. Chapter 1 has 18 pages and carries information that is not relevant.
iii. All relevant information that is to be used as knowledge and should be in different chapters of EIA report has been given in Annexures like TOR compliance in Annexure XIII; TOR 9 compliance. Noncompliance and ATRs etc.
iv. ESPs have been designed for PM emission of 50 Mg/Nm3 (pdf page 122)
v. Details of Blast Furnace configuration with respect to environmental considerations have not been furnished (page 132).
vi. Power generation details from Non Recovery oven have not been given.
vii. Environment and energy conservation issues of 90 T EAF not available (Page140).
viii. Pollution control facilities in coke oven not provided (Page 120)

ix. AAQ values are high at several places. No explanation given.
x. BOD values in Surface water reported is 1.1, 1.4 and 1.5 (Page 193) which fall in not detection limit (NDL).
xi. Noise has been measured at 9 KM from plant.
xii. Organic matter in Soil is 0.3 % which seems to be low for land classification in Siltara Area.
xiii. SIA study reported at page 279 is not as per the norms.
xiv. Hazard Identification and Risk Assessment is not project specific.
xv. RWH harvesting details with respect to how many days of consumption is recharges is not available.
xvi. CER Activities have not been taken from public consultation proceeds and SIA out comes. CER calculations are wrong. The activities proposed in the table are not CER as per MoEF&CC O.M. dated 1/05/2018.
xvii. Only 1500 trees per ha are considered for plantation against 2500 desired.
xviii. Project proponent and the consultant has not considered the following State Government notifications regarding ban on coal-based industries in Siltara area.

Industry & Commerce Dept. Govt. of Chhattisgarh **Order No.& Date**	**Implication / Operative Part of the order**
783/205/07 dated 16/03/2007	Ban on establishment of new sponge iron plant and coal based power plant in Urla, Siltara and Borjhara area of Raipur District till further orders.
3529/205/05/11/(E) dated 12/12/2007	Ban on diversification (involving use of coal as fuel or raw material) of the existing industries of above industrial areas
F2044/2012/11/8 dated 15/05/2012	Establishment of Coal Gasifier and Coal Gasifier Based Industries are permitted

xix. In the presentation made in the EAC meeting, PP has incorporated several changes in the scope from that described in TOR. These changes required TOR amendment in advance and a revised EIA in line with revised TOR. These changes were not intimated to MOEF&CC by PP nor indicated in EIA report.
xx. as well as the consultant changed the presentation which was circulated to the Ministry and EAC members without prior notice.
xxi. The committee felt that EIA/EMP report submitted by M/s. PECS is not in line with the of Appendix III of EIA Notification 2006. The information which are essential for due diligence by the EAC has been given in Annexures. There is a lot of repetition of data and text in several chapters. Earlier also, EAC has raised concern on such similar issue with the same consultant on several occasions wherein EAC advised MoEF&CC to refer the matter to QCI/NABET, in case of no improvement from the consultant. Therefore, EAC advised MoEF&CC to refer the matter to QCI/NABET as the consultant is repeatedly exhibits no improvement in the quality of EIA/EMP prepared by them.

Recommendations of the Committee:

In view of the foregoing and after deliberations, **the Committee recommended to return the proposal in present form.** Further, the Committee also recommended to refer the matter to QCI/NABET for taking appropriate action against M/s. Pollution and Ecology

Control Services in respect of metallurgical industries as the consultant is consistently not improving the quality of the EIA/EMP report.

23.19.3 In view of the observation of the EAC during the meeting and orders dated 16.03.2007, 12.12.2007 and 15.05.2012 of Industry & Commerce Dept. Government of Chhattisgarh, PP has submitted that the company intends to partially withdraw its proposal by dropping all the projects utilizing coal as fuel or raw material except Coal Gasifiers and Coal Gasifier based projects and submitted the revised report on 11th September 2020 vide Lr. No. J-11011/45/2012-IA.II (I) for undertaking detailed EIA study for obtaining environmental clearance.

23.19.4 In view of the same, PP has again applied for Environment Clearance vide proposal no. IA/CG/IND/25977/2014 dated 11/09/2020**.** The company has revised its proposal as *"Enhancement of Production capacity of existing Pellet Plant from 0.6 MTPA to 0.8 MTPA; Upgradation of Existing 0.7 MTPA Iron Ore Grinding Unit to 1.0 MTPA Iron Ore Grinding & Beneficiation Plant and Expansion by adding: 1.2 MTPA Iron Ore pellet Plant along with Coal Gasifiers, 2.0 MTPA Iron Ore Grinding & Beneficiation Plant and 0.4 MTPA Ductile Iron Pipe with Induction Furnace."*

23.19.5 The Company proposes to establish only the following as per the revised proposal:

A. Enhancement of the production capacity of Existing operational pellet plant from 6,00,000 TPA to 8,00,000 TPA without changing any plant & machinery.
B. Upgradation of Existing 0.7 MTPA Iron Ore Grinding Unit to 1.0 MTPA Iron ore Grinding and Beneficiation Plant.
C. Expansion by Adding:
    - Iron Ore Pellet Plant - 12,00,000 TPA
    - 20 Nos Coal Gasifier (20 Nos) - 54092 Nm3/Hr
    - Iron Ore Grinding & Beneficiation Plant - 20,00,000 TPA
    - Ductile Iron Pipes with Induction Furnace – 4,00,000 TPA

Details submitted by the project proponent

23.19.6 The detail of the ToR is furnished as below:

Date of application	Consideration	Details	Date of accord
27/11/2017	27th meeting held on 3rd to 4th January 2018	J – 11011/45/2012-IA II (I)	16/01/2018 and its corrigendum dated 18/09/2018

23.19.7 The proposed expansion of Steel Plant of M/s. Sarda Energy and Minerals Limited is located at Phase 1 of Siltara Industrial Growth Center, Village – Mandhar, Tehsil Dharsiwa, District Raipur and State Chhattisgarh.

23.19.8 It is reported that the existing Pellet Plant was accorded environmental clearance vide F. No. J11011/45/2012-IA.II(I) dated 28/10/2016. Ministry of Environment, Forest & Climate Change accorded Environmental Clearance for 1.1 MTPA Integrated Steel Plant along with WHRB Power Plant (2 x 30 MW) at Siltara Industrial Growth Centre, Phase-I, Mandhar, Raipur, Chhattisgarh vide F. No. J-11011/999/2007-IA.II(I) dated 23/12/2008.

23.19.9 Consent to Operate for Pellet Plant was accorded by Chhattisgarh Environment Conservation Board vide 4616/TS/CECB/2009 (Water) & 4618/TS/CECB/2009 (Air) dated 15.09.2009 and Renewal of CTO granted vide 6522/TS/CECB/2017 (Water) & 6524/TS/CECB/2017 (Air) dated 15.03.2017 -validity of CTO is up to 30.09.2019. Further, Consent to Operate was renewed vide Lr. No8338 /TS/CECB/2019 dated 27 / 12 /2019 and consent is valid up to 30/09/2022.

23.19.10 The Production Capacity after Enhancement, Upgradation and Expansion as per the revised proposal:

S. no.	Project Details	Existing Capacity (TPA)	Capacity Enhancement / Upgradation/Proposed Capacity (TPA)	Total (TPA)
A	**Enhancement of Production capacity**			
1	Iron Ore Pellet Plant	6,00,000	2,00,000 (Capacity Enhancement)	8,00,000
B	**Upgradation**			
2	Iron Ore Grinding Unit	7,00,000		
	To Iron Ore Grinding & Beneficiation Plant		10,00,000 (Upgradation)	10,00,000
C	**Expansion**			
3	Iron Ore Pellet Plant		12,00,000	12,00,000
4	Coal Gasifiers Plant (20 Nos)		54092 Nm^3/Hr	54092 Nm^3/Hr
5	Iron Ore Grinding & Beneficiation Plant		20,00,000	20,00,000
6	Ductile pipe with Induction furnace	-	4,00,000 (4x15 Ton)	4,00,000

23.19.11 The total land in possession of SEML is 204.452 ha. Out of total land 142.645 ha is government land and 61.807 ha is private land owned by SEML. No forestland is involved. 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.

23.19.12 The topography of the area is flat and reported to lies between 21°21'39.80" North to 21°21'14.61" North Latitude, and 81°40'58.13"East to81°40'58.80"East Longitude in Survey of India topo sheet No. 64G/11, 64G/15 at an elevation of 282 m AMSL. The ground water table reported to ranges between 3.8 to 7.2m bgl below the land surface during the post-monsoon season and 10.5 to 5.2m bgl below the land surface during the pre-monsoon season.

23.19.13 No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the study area of the project. Fauna reported in the study area of *Mandharis Pavocristatus* i.e. Common Peafowl or Peacock. The authenticated list of flora and fauna by DFO, Raipur Division, Raipur reporting Peacock schedule-I fauna in the study

area is provided by PP in EIA report. PP has submitted the conservation plan approved vide letter dated 29/05/2020 by PCCF Wildlife Warden.

23.19.14 The details of the raw material requirement are given as below:

Sl. No.	Unit Name	Name	Source	Road Distance	Qty (TPD)	Rail	Road	No pf trucks per day
1	Iron Ore Beneficiation Plant	Iron Ore Fines	E-auction/Captive Iron Ore Mines/Private miners at Odisha	105 KM	10,000.00	8000	2,000.00	50
2	Iron Ore Pellet Plant	Iron Ore Concentrate	Local Market	12 KM	1400.00		1400.00	35
3		Bentonite/Lime	M.P & Rajasthan		100.00		100.00	3
4		Coal	E-Auction/ Market/ SECL's Dipika Gewra Mines	302 KM	80.00	64	16.00	1
5	Coal for Gasifiers (Alternative Fuel for Pellet Plant)	Coal	E-Auction/ Market/ SECL's Dipika Gewra Mines	302 KM	945.00	756	189.00	5
6	Ductile Iron Pipe with Induction Furnace	Pig Iron	Local Market/ SAIL	55 KM	1080.29		1080.29	28
7		Scrap steel	Local Market	12 Km	135.85		135.85	4
8		Cement	Local Market	12 Km	118.89		118.89	3
9		Core Sand	Local Market	12 Km	57.07		57.07	2
10		Cement Sand	Local Market	12 Km	33.88		33.88	1
Total No of trucks required								**132**

23.19.15 Impact on Vehicular Traffic Load due to proposed expansion

Traffic load (Baseline) : 31050 PCU/day

Total Traffic load during operation of existing and proposed expansion : 31187 PCU/day

23.19.16 Traffic survey data indicate that the existing road connecting to project site is catering to average density of traffic and that expected incremental increase in road traffic due to proposed expansion project. The incremental traffic due to expansion project would not exceed 3 trucks per day and would no significant changes on the traffic load situation at project site road. Total % of the load on the road due to the proposed expansion will be only 1.3%. Hence there will be very low impact on the traffic load due to the proposed expansion project.

23.19.17 The water requirement of the project is estimated as 7283m^3 /day, out of which 7203m^3/day will be fresh water requirement. The permission for drawl of groundwater is obtained from CGWA vide Lr. No. CGWA/NOC/IND/ORIG/2019/4739 dated 26th February 2019 for 7300 m^3/day. The company has an agreement for supply of 45,600 KL/day water with

Chhattisgarh Ispat Bhoomi Limited for its industrial use for post expansion requirement vide agreement dated 3rd July 2019.

23.19.18 The power requirement of the project will be 64.29.MW which will be sourced from the CSPDCL.

23.19.19 Baseline Environmental Studies

Period	February to May 2018
AAQ parameters at 8 locations	$PM_{2.5}$ = 24.8 to 46.7 µg/m3 PM_{10}= 41.6 µg/m^3 to 90.8 µg/m^3 SO_2= 11.3 to 38.1 µg/m^3 NOx = 19.2 to 44.7µg/m^3
AAQ modelling	PM_{10} = 3.19µg/m^3 SO_2 = 8.53µg/m^3 NOx = 4.84 µg/m^3
Ground water quality at 8 locations	pH: 7.1 to 7.7, Total Hardness: 219 to 420 mg/l, Chlorides: 42.5 to 187.8 mg/l, Fluoride: 0.3 to 0.7 mg/l. Heavy metals are within the limit
Surface water quality at 6 locations	pH: 7.1 to 7.9 ; DO: 5.4 to 6.4 mg/l and BOD: 1.0 to 2.0 mg/l and COD from<4 to 8.9 mg/l
Noise levels	39.8 to 60.8 dBA for daytime and 38.2 to 48.7dBA for nighttime.

23.19.20 It has been reported that there is no rehabilitation and resettlement required.

23.19.21 The Solid wastes generation from existing, expansion proposals along with its utilization is given as below:

Sl. No	Plant	Waste Type	Quantity (TPA)	Mode of Disposal/Utilization
1	Iron Ore Pellet Plant (Enhancement)	ESP/Bag filter Dust	19,200	Recycle as a raw material for respective plant
2	Coal Gasifiers Plant (Underway)	Ash (as Cinder)	48,900	Will be crushed with slag crusher and utilized in Fly ash bricks, blocks and tiles manufacturing plant and also sold in the market
3		Tar	2,600	Will be Sold to the market to Authorized Vendors
4	Iron Ore Grinding & Beneficiation Plant (Upgradation)	Tailing	3,00,000	Will be used for making bricks Blocks, Tiles, Pavers, etc and sold to Cement Plant.
Proposed Project				
5	Iron Ore Beneficiation Plant	Tailing	600000	Will be used for making bricks Blocks, Tiles, Pavers, etc and sold to Cement Plant.
6	Iron Ore Pellet Plant	ESP/Bag filter Dust	28800	Recycle as a raw material for respective plant
7	Coal Gasifiers Plant	Ash (as	97,800	Will be crushed with slag crusher

Sl. No	Plant	Waste Type	Quantity (TPA)	Mode of Disposal/Utilization
		Cinder)		and utilized in Fly ash bricks, blocks and tiles manufacturing plant and also sold in the market.
8		Tar	5,200	Will be Sold to the market to Authorized Vendors
9	Ductile Iron Pipe with Induction Furnace	Furnace Recycled scrap	16275	Will be recycled in back in process
10		Convertor Slag	3084	Will be utilized for Road making and filling of low lying areas.
11		IF Slag	1782	Will be Crushed With slag Crusher for recovery of metal and non metallic slag will be utilized in Fly ash bricks,
12		Waste	26861	Blocks and Tiles Manufacturing Plant and also sold in local market
13		Recycled material	735	Will be recycled in back in process

23.19.22 The Public hearing of the project was held on 10th January 2019 at Kundrapara, Gram Panchay at Mandhar, Raipur under the chairmanship of Additional District Magistrate for the proposed expansion project. The issues raised during public hearing are employment, water facilities in nearby villages, construction of community hall, toilet at Government school and training camp for youths. An amount of Rs. 915 Lakhs has been earmarked for public hearing issues.

23.19.23 The permanent employment is reported for 1165 people.

23.19.24 The capital cost of the project is Rs. 818.66 Cr and the capital cost for environmental protection measures is estimated as Rs. 29.64 Cr. The annual recurring cost towards the environmental protection measures is proposed as Rs. 5.50 Cr/annum.

23.19.25 The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

Particulars	Capital Cost (INR Lac)	Recurring Cost (INR Lac)
Air pollution Control System	2007	401.30
Wastewater Treatment System	300	45.00
Solid Waste Management	200	40.00
Green Belt Development	158	31.58
Environment Monitoring	100	30.00
Rain water harvesting project	200	2.00
Total	**2964**	**549.88**

23.19.26 Greenbelt will be developed in 81 ha which is about 40 % of the total area. Green belt will be developed as per CPCB/MoEF&CC, New Delhi guidelines. SEML will take-up massive green belt development by planting about 2500 trees per ha developing extensive green belt.

The total Plantation done is 97250 No of Saplings i.e. an area of around 64.83 ha with plantation density of about 1500 trees per ha. SEML has planned to plant another 1,05,250 Nos of Saplings including 64825 nos in the existing developed greenbelt area of 64.83 ha as gap plantation to increase the plantation density from 1500 Nos of Saplings /ha to 2500 Nos of Saplings /ha.

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

23.19.28 Name of the EIA consultant: Pollution and Ecology Control Services [S.No. 74, List of ACOs with their Certificate / Extension Letter no. Rev. 02, Sep. 07, 2020].

Certified compliance report from Regional Office

23.19.29 The Status of compliance of earlier EC was obtained from Regional Office, Nagpur vide Lr. No. EC-295/RON/2017-NGP/3778, dated 2nd June 2018. There are no non-compliances reported by Regional officer. The closure report was obtained from Regional Office, Nagpur vide Lr. No. EC-295/RON/2017-NGP/5095, dated 10th July 2019.

Observations of the Committee

23.19.30 The Committee observed the following:

i. PP shall furnish a revised project specific EMP with detailed and quantified specifications.
ii. PP shall provide details of APCDs with each stack along with specification of the devices.
iii. Review of water requirement considering minimal abstraction of ground water. Revised water balance shall be furnished.
iv. Tailing pond for IOBP shall not be permitted. Tailings are to be dewatered and disposed dry.
v. Detailed arrangement for ash disposal shall be submitted.
vi. 40% green belt details considering 50 m wide green belt between the plant and the village on NE side of the plant boundary. Installation of DI pipe in this part of the plot shall be avoided.
vii. PM in stack emission shall not exceed 30 mg/Nm^3.
viii. Coal Gasifier shall be closed circuit type and Phenolic water shall be treated in ETP for recycling back in process. No transportation of phenolic water to units outside the plant premises is permitted.
ix. ETP shall be installed to treat and recycle plant effluent water.
x. Tar sludge shall be mixed with coal and recycled to Coal Gasifier.
xi. Zinc dross shall be collected in Zn coating area and Bag filter area and recycled to registered recyclers.
xii. Zinc dust shall be monitored in AAQ in the plant premises.
xiii. Bitumen Coating area shall be ventilated to remove odor and to avoid exposure of employees to carcinogenic tar fumes.

Recommendations of the Committee

23.19.31 In view of the foregoing and after deliberations, the Committee deferred the consideration and sought following additional information:

i. PP shall furnish a revised project specific EMP with detailed and quantified specifications.
ii. PP shall provide details of APCDs with each stack along with specification of the devices.
iii. Review of water requirement considering minimal abstraction of ground water. Revised water balance shall be furnished.
iv. Tailing pond for IOBP shall not be permitted. Tailings are to be dewatered and disposed dry.
v. Detailed arrangement for ash disposal shall be submitted.
vi. 40% green belt details considering 50 m wide green belt between the plant and the village on NE side of the plant boundary. Installation of DI pipe in this part of the plot shall be avoided.
vii. PM in stack emission shall not exceed 30 mg/Nm3.
viii. Coal Gasifier shall be closed circuit type and Phenolic water shall be treated in ETP for recycling back in process. No transportation of phenolic water to units outside the plant premises is permitted.
ix. ETP shall be installed to treat and recycle plant effluent water.
x. Tar sludge shall be mixed with coal and recycled to Coal Gasifier.
xi. Zinc dross shall be collected in Zn coating area and Bag filter area and recycled to registered recyclers.
xii. Zinc dust shall be monitored in AAQ in the plant premises.
xiii. Bitumen Coating area shall be ventilated to remove odor and to avoid exposure of employees to carcinogenic tar fumes.

In addition to the above, the Committee also recommended that MoEF&CC may issue show cause notice to M/s. Pollution and Ecology Control Services, Nagpur for blacklisting from participation in any EIA process in respect of Metallurgical Industries as they have consistently not improved the quality of the EIA report despite repeated warnings given by the EAC and show cause issued by QCI/NABET. MoEF&CC has earlier also written to NABET about the M/s. PECS, Nagpur in this instant case as well.

23.20 Proposed Cement Plant capacity 1.6 MTPA Clinkerisation & Captive Power Plant 30 MW by **M/s. Canis Mines & Minerals LLP** located at Village: Thangskai, P.O: Lumshnong, **Dist: East Jaintia Hills, State: Meghalaya** [Online Proposal No. IA/ML/IND/139569/2020, File No. J-11011/46/2020-IA.II(I)] – **Prescribing of Terms of Reference** - regarding.

23.20.1 The aforesaid proposal was earlier considered in 16thmeeting of the Re-constituted EAC (Industry-I) held during 24th-25thFebruary, 2020. The relevant portion of the minute of the meeting is given as below:

Proceedings of the EAC meeting held on 24-25th February, 2020

M/s. Canis Mines & Minerals LLP submitted an online proposal No. IA/ML/IND/139569/2020 on 29.01.2020 application in the prescribed format Form-1 and Pre-Feasibility Report along with proposed Terms of Reference to undertake detailed EIA study for proposed cement manufacturing. The proposed project activity is listed at Sl. No. 3(b) Cement Plants under Category "A" in EIA Notification, 2006 and appraised at the Central Level.

M/s Canis Mines & Minerals LLP proposes to install a new manufacturing unit for cement manufacturing. It is proposed to set up the plant for 1.6 MTPA Cement plant along with 6 MW Capacity WHRS & 25 MW Capacity Captive Power Plant based on latest technology.

The proposed unit will be located at Village: Thangskai, Taluka: P.O: Lumshnong, District: Jaintia Hills, State: Meghalaya.

The land area acquired for the proposed plant is 49.552 ha. No forestland involved. The entire land has been acquired for the project. Of the total area 16.312 ha (33%) land will be used for green belt development.

No National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve etc. are reported to be located in the study area of the project. The area also does not report to form corridor for Schedule-I fauna.

Total project cost is approx ₹ 570.63 Cr. Employment generation from proposed project will be 60 nos of people through direct employment and 140 through indirect employment.

The targeted production capacity of the Clinker is 1.6 MTPA. The ore for the plant would be procured from (linkages Canis mines). The ore transportation will be done through Road. (Rail/Road/Conveyor/Slurry Pipeline). The proposed capacity for different products are as given below.

Name of unit	No. of units	Capacity of each Unit	Production Capacity
Clinker	1	1.6 MTPA	1.6 MTPA
Cement (OPC) (PPC)	2	1.6 MTPA 0.5 MTPA (OPC) 1.1 MTPA (PPC)	1.6 MTPA 0.5 MTPA (OPC) 1.1 MTPA (PPC)
Captive Power Plant	1	25 MW	25 MW
Waste Heat Recovery based PP	1	6 MW	6 MW

The electricity load of 30 MW will be met by proposed Captive Power Plant (CPP).

Proposed raw material and fuel requirement for project are Limestone, Clay, Gypsum, Coal. The Requirement would be fulfill by Local sources.

Water Consumption for the proposed project will be 4950 KLD and waste water generation will be 300 KLD (From CPP). Domestic waste water will be treated in Sewage Treatment Plant and industrial waste water generated will be treated in ETP and reused for mill spray and ash quenching.

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

23.20.3 Name of the consultant: ABC Techno Labs India Pvt Ltd., Chennai.

Observations and Recommendations of the Committee (EAC Meeting during 24-25th February, 2020)

23.20.4 In view of the foregoing, and after detailed deliberations, the Committee deferred the proposal and sought the following additional information.

i. Form-1 is to be revised.

ii. Layout drawing is not to the scale. Engineering drawing of proposed plant layout shall be furnished.

iii. Project Proponent shall explore the possibility of drawl of required water 4950 /day from nearby Um Lunal River.

iv. Green Belt development shall be included in the layout plan.

v. Prefeasibility Report (PFR) shall be revised with APCD to achieve particulate matter emissions of less than 30 mg/Nm^3 from stacks, and traffic management study shall be included in the proposed ToR.

vi. PFR shall be designed to achieve Zero Liquid Discharge and 100 % waste utilization.

23.20.5 Project proponent has replied to ADS on 04/09/2020 on PARIVESH portal.

Observations of the Committee

23.20.6 The Committee noted the following:

i. The project proponent has revised the project cost, raw material requirement and water requirement for the project.

ii. Residential colony is proposed to be built inside the plant complex. However, requisite Form 1A is not submitted.

iii. Plant is coming up in lush green surroundings.

iv. Form 1 format has been changed by introducing a disclaimer note by the consultant in the form which is not legally allowed.

Recommendations of the Committee

23.20.7 In view of the foregoing and after deliberations, the Committee recommended the following:

i. Proposal shall be returned in present form to the project proponent with a request to submit the fresh application along with the requisite documents.

23.21 Installation of 3,00,000 TPA Pellet Plant, Expansion of Sponge Iron Plant 72,000 TPA (2 x 100 TPD) to 1,87,500 TPA (by addition of 1 x 350 TPD), Installation of Induction Furnace to manufacture 1,98,000 TPA M.S. Billets (4 x 15T), Rolling Mill to manufacture 1,94,000 TPA TMT Bars, 30 MW Power Plant (12 MW WHRB and 18 MW AFBC) and 2 x 6 MVA Submerged Arc Furnace to manufacture Ferro Alloys (39,204 TPA Ferro Manganese OR 18,669 TPA Silico Manganese OR 39,204 TPA Pig Iron OR 9801 TPA Ferro Silicon by **M/s. Chaman Metallics Limited** located at Plot No. A-26, MIDC, Chandrapur (Tadali) Growth Centre, Survey No. 183 & 184, Tadali, **District Chandrapur, Maharashtra** [Online Proposal No. IA/MH/IND/169169/2020, File No. J-11011/212/2020-IA.II(I)] – Prescribing of Terms of Reference - regarding.

The project proponent submitted a request to the Ministry stating that they wish to increase the capacity of Iron ore Pellet Plant from 3,00,000 TPA to 6,00,000 TPA. In view of this, they have requested the Ministry to withdraw the proposal. The Committee taken note of the said request of PP and recommended for the withdrawal of the instant proposal.

23.22 Expansion and modernization of 1.2 MTPA Iron ore crushing, screening plant to 1.50 MTPA Iron ore Crushing, Screening and 1.50 MTPA Beneficiation plant by **M/s. Godavari Natural Resources Limited** located at Village-Gidhali, Tehsil: Dondi, Dist. Balod, Chhattisgarh [Online Proposal No. IA/CG/IND/168762/2020, File No. J-11011/48/2020-IA.II(I)] – **Amendment in Terms of Reference (ToR)** – regarding.

23.22.1 **M/s. Godavari Natural Resources Limited** has made application vide online proposal no. IA/CG/IND/168762/2020dated 19/08/2020 along with the Form 3, revised Form-I, copy of pre-feasibility report and sought for amendment in the ToR accorded by the Ministry vide letter no. J-11011/48/2020-IA. II (I) dated 6th April, 2020.

Details submitted by the project proponent

23.22.2 M/s. Godavari Natural Resources Limited was accorded Terms of Reference vide letter no. J-11011/48/2020-IA. II (I) dated 6th April, 2020 for the project titled "Expansion and modernization of 1.2 MTPA Iron ore crushing, screening plant to 1.50 MTPA Iron ore Crushing, Screening and 1.50 MTPA Beneficiation plant located at Village-Gidhali, Tehsil: Dondi, Dist. Balod, Chhattisgarh." Draft EIA/EMP Report is already prepared.

23.22.3 The amendment sought by the project proponent has reported that the work of baseline data generation was initiated by NABL & MoEF&CC approved laboratory from 26th February 2020 and continued till 21st March 2020. The monitoring was discontinued from 22nd March 2020 to 20th April 2020 due to the lockdown by Government of India. Nationwide lockdown was ordered for 21 days, as a preventive measure against the COVID-19 pandemic in India. After the relaxation in lockdown the monitoring was again restarted from 21st April 2020 and continued till 13th June 2020. As per this, PP has monitored the baseline data for 26 days in first spell and 54 days in second spell i.e. they have covered 12 weeks for data generation. There are no source of secondary data during lockdown period as all activities including mining activities in study area are also closed. In view of the same, PP has requested to permit use of above mentioned monitoring period for EIA Report.

23.22.4 No changes are proposed in the configuration & capacity of units.

23.22.5 The total land is reduced from 28.45 ha to 27.53 ha by excluding Government land in between. The land requirement for Beneficiation plant is increased to 1.966 ha from 1.7479 ha.

23.22.6 The project cost is revised from Rs. 23.50 Crores to Rs.25.50 Crores.

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

23.22.8 Name of the EIA consultant: M/s. Pollution and Ecology Control Services (S.No. 74, List of ACOs with their Certificate / Extension Letter no. Rev. 02, Sep. 07, 2020).

Observations of the Committee

23.22.9 The Committee noted the following:

i. TOR was granted on 6.4 2020 for iron ore crushing and beneficiation plant of 1.5 MTPA capacity.
ii. Base line data due to Covid-19 were collected for 80 days in two phases i.e. Feb. 26 to March 21, 2020 and April 21 to June 13, 2020.
iii. PP requests the committee to accept data for EIA.

Recommendations of the Committee

23.22.10 In view of the foregoing and after deliberations, the Committee recommended for amendment in the ToR dated 06/04/2020 as given below:

i. Reduction in the requirement of total land from 28.45 ha to 27.53 ha.
ii. Additional 4 weeks base line data shall be collected for preparation of EIA report.

23.23 Expansion of Iron Ore Beneficiation plant from 10.7 MTPA(throughput) capacity to 16.0 MTPA (throughput), Relocation of tailing Dam at village Sankari, (Gram Panchayat Phuljhar), District Keonjhar, laying of Tailing Pipeline and Return Water Pipeline from Beneficiation Plant to Tailing Dam and laying of water pipeline and slurry pipeline from Beneficiation Plant to Ghoraburhani-Sagashi Iron Ore Block by **M/s. Essar Steel India Limited** located at village Dabuna & Sankari,District Keonjhar, **Odisha** [Online Proposal No. IA/OR/IND/170872/2020, File No. J-11011/222/2016-IA.II(I)] – **Validity extension of Terms of Reference (ToR)** – regarding.

23.23.1 **M/s. Essar Steel India Limited** has made online application vide proposal no. IA/OR/IND/170872/2020 dated 03/09/2020 along with Form 5 and sought for validity extension of Terms of Reference accorded by the Ministry vide letter no. J-11011/222/2016-IA-II(I) dated 20/07/2017.

Details submitted by the project proponent

23.23.2 M/s. Essar Steel India Limited has been granted ToR by the Ministry for a project titled "Expansion of Iron Ore Beneficiation plant from the existing capacity of 10.7 MTPA (throughput) to 16.0 MTPA (throughput), Relocation of Tailing Dam at Malda, Laying of Tailing Pipeline and Return Water Pipeline from Beneficiation Plant to Tailing Dam & laying of Water Pipeline and Slurry Pipeline from Beneficiation Plant to Ghoraburhani- Sagasahi Iron Ore Block by M/s Essar Steel India Ltd. at Dabuna, Tehsil Barbil. District Kendujhar Odisha" vide letter no.J-11011/222/2016-IA-II(I) dated 20/07/2017. Subsequently, ToR amendment was accorded by MoEF&CC on 23/01/2020.

23.23.3 It was requested to extend the validity of the ToR till 19/07/2021 due to the following:

i. The company was under the process of CIRP (Corporate Insolvency Resolution Process).
ii. EIA Work stalled due to ongoing COVID-19 Pandemic since March 2020.
iii. Draft EIA Report has been prepared in the month of July' 2020 and submitted for conduct of Public Hearing to Odisha SPCB. However, the process cannot be taken up further as the validity of TOR for 3 years (from the date of issue), has expired on 19th July 2020.

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

23.23.5 Name of the EIA consultant: M/s Visiontek Consultancy Services Pvt Ltd, Bhubaneswar (S.No. 95, List of ACOs with their Certificate / Extension Letter no. Rev. 02, Sep. 07, 2020).

Observations of the Committee

23.23.6 The Committee noted the following:

i. Due to CIRP process, the project implementation got delayed.
ii. Project proponent has not obtained transfer of Terms of Reference dated 20/07/2017 from M/s. Essar Steel India Limited to M/s. ArcelorMittal Nippon Steel India

Limited.

iii. The ToR is valid for a period of four years as per the Ministry's Notification S.O. 751 (E) dated 17/02/2020.

iv. The Committee noted that the instant expansion project will be catering to their Steel Plant at Paradeep for which Separate EC was accorded by MoEF&CC. The Project Proponent informed that the project is under implementation in phase-wise manner. However, the status of implementation of Steel Plant at Paradeep has not been furnished by the PP.

Recommendations of the Committee

23.23.7 In view of above and after deliberations, the Committee recommended for the extension of validity of ToR for a period of further one year i.e., up to 19/07/2021. All other terms and conditions mentioned in the ToR accorded vide letter of even no. dated 20/07/2017 and its subsequent amendment dated 23/01/2020 shall remain unchanged. The baseline data and the public consultation shall not be older than 3 years at the time of submission of the proposal for Environmental Clearance, as per ToRs prescribed.

In addition to this, the Committee also suggested that the MoEF&CC shall obtain the implementation status of the Steel Plant at Paradeep from the concerned Regional Office. This is because the instant expansion project will be catering to the Paradeep Plant. The implementation status should also be furnished by the PP along with the EIA report.

23.24 Proposed Expansion of Dariba Smelter Complex- Zinc Smelter (2,50,000 TPA to 5,00,000 TPA + Fumer Plant) Lead Smelter (1,25,000 TPA to 1,50,000 TPA) and Captive Power Plant (170 MW PF Boiler (2*85 MW) and 15 MW WHRB) to 374 MW (325 MW PF Boiler (2*95 MW+1*135 MW) and 34 MW WHRB) along with Cadmium (4000 TPA) & Cobalt (70 TPA) metal recovery by **M/s. Hindustan Zinc Limited**, Dariba Smelter Complex, **Rajsamand, Rajasthan** [Online Proposal No. IA/RJ/IND/171214/2020, File No. J-11011/380/2008-IA. II(I)] – **Amendment & validity extension of Terms of Reference (ToR)** – regarding.

23.24.1 **M/s. Hindustan Zinc Limited** has made application vide online proposal no. IA/RJ/IND/171214/2020dated 05/09/2020 along with the Form 5, revised Form-I, copy of revised pre-feasibility report and sought for amendment & validity extension in the ToR accorded by the Ministry vide letter no. J-11011/380/2008.IA-II.(I) dated 28/02/2018.

Details submitted by the project proponent

23.24.2 M/s. Hindustan Zinc Limited was accorded Terms of Reference vide letter no. J-11011/380/2008.IA.II(I) dated 28/02/2018 for the project titled "Proposed capacity expansion from 0.25 to 0.50 Million TPA of Zinc Smelter, from 0.125 Million TPA to 0.150 Million TPA of Lead Smelter, from 170 MW to 255 MW of Captive Power Plant and Fumer Plant in the Zinc Smelter at Dariba Smelter Complex of M/s Hindustan Zine Limited located at Village Panchayat — Mahenduriya, P.O. Dariba, District Rajsamand, Rajasthan."

23.24.3 M/s. Hindustan Zinc Limited has applied for Amendment &Extension of Validity of ToR dated 28/02/2018.

23.24.4 Following are the reasons for seeking amendment and validity extension in ToR:

- Expansion in existing CPP from 2x85MW to 2X95MW through modification in the turbine internals only to increase efficiency of the system without any additional fuel.

- Configuration of proposed Thermal Power Plant revised considering improved efficiency /heat rate of the plant.
- Maximization of power generation through waste heat recovery boiler.
- As per the ToR dated 28.02.2018, Ann.2 condition no.12 : Trace metal recovery plan was to be prepared. With recent Technological & cost-effective developments in minor metal sector, recovery has become feasible and same has been incorporated in the proposed expansion with integration of Minor Metal Complex.
- Unavailability of concentrate from mines to support the proposed expansion capacity.
- Due to outbreak of pandemic COVID-19, local regulatory restrictions on social gathering, due to which Public Hearing couldn't be planned.

23.24.5 Following are the Configuration & capacity change granted in ToR vis-a-vis with the proposed changes in configuration & capacity of units.

Unit	**Existing Status**	**Additional Proposed Capacity as per ToR issued on 28.02.2018**	**Additional proposed Capacity/amendments sought**	**Total Capacities After Proposed Expansion**	**Remarks**
Zinc Smelter	2,50,000 TPA	2,50,000 TPA	2,50,000 TPA	500,000 TPA	No change in ToR
Lead Smelter	1,25000 TPA	25000 TPA	25000 TPA	1,50,000 TPA	No Change in ToR
Captive Power Plant	PF Boiler-170 MW WHRB-15MW	**PF Boiler -105 MW**	***PF Boiler- 155 MW WHRB- 34 MW***	***PF Boiler- 325 MW*** ***WHRB- 49 MW***	***Through modification in the turbine internals to increase efficiency of the system in existing 2x85MW to 2x95MW and change of configuration from 1x85 MW to 135 MW for better efficiency/ Heat Rate. Maximization of power generation through waste heat recovery boiler.***
Fumer Plant	-	Associated with Zinc Smelter	Associated with Zinc Smelter	Associated with Zinc Smelter	No change in ToR

Unit	**Existing Status**	**Additional Proposed Quantity as per ToR dtd 28.02.2018**	**Proposed additional Quantity/Amendment sought**	**Total Quantity After Proposed Expansion**	**Remarks**
	B	**C**	**D**	**E=B+D**	
Zinc Smelter					
SHG Zinc Cathode/Ingot (Special High Grade)	2,50,000 TPA	2,50,000 TPA	2,50,000 TPA	5,00,000 TPA	No Change in ToR

Unit	Existing Status	Additional Proposed Quantity as per ToR dtd 28.02.2018	Proposed additional Quantity/Amendment sought	Total Quantity After Proposed Expansion	Remarks
	B	**C**	**D**	**E=B+D**	
Zinc Alloys and Compounds (out of 500, 000 TPA SHG Zinc)	***40,000 TPA***	***40,000 TPA***	***50,000 TPA***	***90,000 TPA***	***Increase due to alloy market demand scenario***
Lead Smelter					
Lead Cathode/Ingot	1,25,000 TPA	25000 TPA	25000 TPA	1,50,000 TPA	No Change in ToR
Lead Alloy (Pb-Sb & Pb-Ca, Pb-Bi) (out of 150, 000 TPA Lead)	50,000 TPA	10,000 TPA	10,000 TPA	60,000 TPA	No Change in ToR
Captive Power Plant					
Power	***PF Boiler-170 MW*** ***WHRB-15MW***	***PF Boiler-85 MW*** ***WHRB-20 MW***	***PF Boiler-155 MW*** ***WHRB- 34 MW***	***PF Boiler-325 MW*** ***WHRB- 49 MW***	***Through modification in the turbine internals to increase efficiency of the system in existing 2x85MW to 2x95MW and change of configuration from 1x85 MW to 135 MW for better efficiency/ Heat Rate. Maximization of power generation through waste heat recovery boiler.***

Unit	Existing Status	Additional Proposed Quantity as per ToR dtd 28.02.2018	Proposed additional Quantity/Amendment sought	Total Quantity After Proposed Expansion	Remarks
	B	**C**	**D**	**E=B+D**	
By Products (TPA)					
Sulphuric Acid	744000	90,000	90,000	8,34,000	No Change in ToR
Lead – Silver Compound	40000	40000	40000	80000	No Change in ToR
Cadmium metal / Sponge (equivalent metal)	800	***800***	***3200***	***4000***	***Recovery of Minor Metal***
Calomel	44	26	26	70	No Change in ToR
Silver	400	400	400	800	No Change in ToR
Copper as Copper cement/ sulphate/ matte/ concentrate /Compound(equivalent metal)	1400	1400	1400	2800	No Change in ToR
Antimony as Antimony concentrate (equivalent metal)	850	170	170	1020	No Change in ToR
Waste Heat power	***15 MW***	***20 MW***	***34 MW***	***49 MW***	***Increased waste heat recovery***
Bismuth as Bismuth concentrate (equivalent metal)	16	30	30	46	No Change in ToR
Zinc Oxide compound	20000	16000	16000	36000	No Change in ToR
Lead concentrate (Oxide)	5000	1000	1000	6000	No Change in ToR
Anode Slime	***4000***	***800***	***1000***	***5000***	***Process Improvement***
Lead Bullion	-	20000	20000	20000	No Change in

Unit	Existing Status	Additional Proposed Quantity as per ToR dtd 28.02.2018	Proposed additional Quantity/Amendment sought	Total Quantity After Proposed Expansion	Remarks
	B	**C**	**D**	**E=B+D**	
					ToR
Sodium Sulphate	-	7500	7500	7500	No Change in ToR
Sodium Chloride	-	750	750	750	No Change in ToR
Cobalt as Cobalt oxide/compound (equivalent metal)	***-***	***70***	***-***	***70***	***Recovery of Minor Metal***
Potassium Antimony Tartrate (PAT)	***-***	***100***	***-***	***100***	***Value Added Product***

23.24.6 The basic raw materials – Smelters & CP will be as follows:

Raw Material	Existing Requirement(TPA)	Additional Requirement (TPA) as per approved ToR dtd 28.02.2018	Proposed additional requirement (TPA) /Amendment Sought	Total Requirement After Proposed Expansion(TPA)	Remarks
	B	**C**	**D**	**E=B+D**	
Zinc concentrate	6,48,000	25000	25000	6,73,000	No Change in ToR
Calcine (ZnO)	-	2,80,000	2,80,000	2,80,000	No Change in ToR
Aluminium metal	***80***	***80***	***2000***	***2080***	***Increase in Alloying requirement***
Lead concentrate	2,60,000	90,000	90,000	3,50,000	No Change in ToR
Coal for Lead Smelter	***26,000***	***14,000***	***20,000***	***46,000***	***Process modification***
Coke for Lead Smelter	***27,000***	***11,000***	***8,000***	***35,000***	***Process modification***
Coal for Fumer Plant	-	2,50,000	2,50,000	2,50,000	No Change in ToR
Cu2SO4 for Fumer plant	-	600	600	600	No Change in ToR
Coal for power plant	**7,74,667**	**4,94,735**	**11,19,697**	**18,94,364**	**Change in plant configuration from**

Raw Material	Existing Requirement(TPA)	Additional Requirement (TPA) as per approved ToR dtd 28.02.2018	Proposed additional requirement (TPA) /Amendment Sought	Total Requirement After Proposed Expansion(TPA)	Remarks
					1X85 MW to 1X135 MW
Lead Silver Compound *	40,000	40,000	40,000	80,000	No Change in ToR
Zinc Dross/ Ash/ Zinc bearing waste*	30,000	-	-	30,000	No Change in ToR
Battery/Lead Scrap and secondary *	80,000	-	-	80,000	No Change in ToR
Antimony Dust/ Slag/ Compounds	-	-	***3500***	***3500***	***Waste from other HZL smelters will be treated***
Cadmium Sponge	-	-	***3500***	***3500***	***Waste from other HZL smelters will be treated***

CONSUMABLES

Consumables	Unit	Quantity Proposed as per ToR granted	Quantity proposed/ Amendment sought	Remarks
Flocculants	**Tons**	**266**	**566**	**Flocculant consumption for Fumer considered**
Lime	Tons	68,500	68,500	No change in ToR
SiO_2	Tons	13,000	13,000	No change in ToR
H_2FiS_6 (Silico Fluoric Acid)	Tons	3,000	3,000	No change in ToR
LDO/LSHS/HSD/LNG/FO	KL	14,000	14,000	No change in ToR
Sulphuric acid (internal)	Tons	27,500	27,500	No change in ToR
MnO_2 (internal)	Tons	6,375	6,375	No change in ToR
Caustic Soda Solution	M3	1,500	1,500	No change in ToR
Ammonium Chloride	Tons	638	638	No change in ToR
Limestone	**Tons**	**189600**	**195320**	Due to FGD installation in PP
Aqueous Ammonia	Tons	1423	1423	No change in ToR
Iron Ore	Tons	18,000	18,000	No change in ToR
Cement	**Tons**	**2000**	**20,000**	**Typographical**

23.24.7 The Solid wastes generation from existing, expansion proposals along with its utilization is given as below:

Unit	Existing Status (Tonnes)	Additional proposed as per granted ToR	Additional Proposed Quantity/amendment sought (Tonnes)	Total Quantity After Proposed Expansion (Tonnes/Annum)	Remarks
ETP Cake	15000	12500	12500	27500	No change in ToR
Purification Cake	9500	9500	9500	19000	No change in ToR
Cooler Cake	3000	3000	3000	6000	No change in ToR
Anode Mud	1600	1600	1600	3200	No change in ToR
Cobalt cake	700	700	700	1400	No change in ToR
Used Oil	75 KL/Year	25 KL/Year	25 KL/Year	100 KL/Year	No change in ToR
Waste Oil	50 KL/Year	25 KL/Year	25 KL/Year	75 KL/Year	No change in ToR
Spent Catalysts(V205)	35KL/Year	45 KL/Year	45 KL/Year	80 KL/Year	No change in ToR
Chemical Sludge (MEE Salt)	15000	-	-	15000	No change in ToR
Discarded Containers	1500 nos.	1000 nos.	1000 nos.	2500 nos.	No change in ToR
Jarosite	200000	-	-	200000 #	No change in ToR
Geothite	-	36000	36000	36000	No change in ToR
Fly ash	*271134*	*341858*	*341858*	*612992*	No change in ToR
Gypsum	***-***	***1,90,000***	***2,10,000***	***2,10,000***	**Due to FGD installation**
Process Residue (Dross etc. from Lead plant)	12000	8000	8000	20,000	No Change in ToR
Slag from Fumer plant (Zinc & Lead)	125000	315000	315000	4,40,000	No Change in ToR

Shall be discontinued after the installation of Fumer

23.24.8 The fresh water requirement will be as follows:

Unit	Existing Requirement	Additional Requirement as per ToR granted	Additional proposed requirement	Total Requirement After Proposed Expansion	Remarks
Zinc Smelter	8,010	2,990	2990	11,000	No change in ToR
Fumer Plant	***-***	***10,000***	***8,200***	***8,200***	No change in ToR
Lead Smelter	2,800	1,500	1,500	4,300	**Due to FGD installatio**

					n
Captive Power Plant	***11,000***	***9,400***	***11,200***	***22,200***	No change in ToR
Domestic	600	400	400	1,000	No change in ToR
Total	**22,410**	**24290**	**24290**	**46,700**	No change in ToR

23.24.9 The wastewater generation from existing, expansion proposals along with its utilization is as follows:

Units	**Existing Generation**	**Additional Generation as per ToR granted**	**Additional generation proposed /Amendment sought**	**Total Generation After Proposed Expansion**	**Remarks**
Zinc Smelter	3600	2800	2800	6400	No change in ToR
Lead Smelter	800	400	400	1200	No change in ToR
Captive Power Plant	**3200**	**2200**	**2700**	**5900**	**Due to FGD installation**
Fumer	**-**	**2000**	**1500**	**1500**	**Optimized**
Domestic	380	300	300	680	No change in ToR
Total	**7980**	**7700**	**7700**	**15680**	No change in ToR

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

23.24.11 Name of the EIA consultant: Vimta Labs Limited, [S.No. 138, List of ACOs with their Certificate / Extension Letter no. Rev. 02, Sep. 07, 2020].

Observations of the Committee

23.24.12 The Committee noted the following:

i. PP has requested for validity extension till 27.2.2022.
ii. Amendment in TOR dated 28/02/2018 is also requested as per revised scope.

Recommendations of the Committee

23.24.13 In view of above and after deliberations, the Committee recommended for the amendment in the ToR dated 28/02/2018 as mentioned above and extended the validity of ToR for a period of further one year i.e. up to 27/02/2022. All other terms and conditions mentioned in the ToR accorded vide letter of even no. dated 28/02/2018 shall remain unchanged. The baseline data and the public consultation shall not be older than 3 years at the time of submission of the proposal for Environmental Clearance, as per ToRs prescribed.

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ANNEXURE –1

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

1. Executive Summary
2. Introduction
   - i. Details of the EIA Consultant including NABET accreditation
   - ii. Information about the project proponent
   - iii. Importance and benefits of the project
3. Project Description
   - i. Cost of project and time of completion.
   - ii. Products with capacities for the proposed project.
   - iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
   - iv. List of raw materials required and their source along with mode of transportation.
   - v. Other chemicals and materials required with quantities and storage capacities
   - vi. Details of Emission, effluents, hazardous waste generation and their management.
   - vii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)
   - viii. The project proponent shall furnish the requisite documents from the competent authority in support of drawl of ground water and surface water and supply of electricity.
   - ix. Process description along with major equipment and machineries, process flow sheet (Quantitative) from raw material to products to be provided
   - x. Hazard identification and details of proposed safety systems.
   - xi. Expansion/modernization proposals:
     - a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MoEF&CC/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment, Forest and Climate Change as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB/PCC shall be attached with the EIA-EMP report.
     - b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.
4. Site Details
   - i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.

ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places)
iii. Co-ordinates (lat-long) of all four corners of the site.
iv. Google map-Earth downloaded of the project site.
v. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.
vi. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.
vii. Landuse break-up of total land of the project site (identified and acquired), government/private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)
viii. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area
ix. Geological features and Geo-hydrological status of the study area shall be included.
x. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects)
xi. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.
xii. R&R details in respect of land in line with state Government policy.

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

i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable).
ii. Land use map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (*in case of projects involving forest land more than 40 ha).*
iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.
iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon.
v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area.
vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife.

6. **Environmental Status**

i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
ii. AAQ data (except monsoon) at 8 locations for PM_{10}, $PM_{2.5}$, SO_2, NO_X, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
iv. Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC.
vi. Ground water monitoring at minimum at 8 locations shall be included.
vii. Noise levels monitoring at 8 locations within the study area.
viii. Soil Characteristic as per CPCB guidelines.
ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
xi. Socio-economic status of the study area.

7. **Impact Assessment and Environment Management Plan**

i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.
ii. Water Quality modelling – in case, if the effluent is proposed to be discharged in to the local drain, then Water Quality Modelling study should be conducted for the drain water taking into consideration the upstream and downstream quality of water of the drain.
iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.
iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme

of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.

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

vi. Measures for fugitive emission control

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

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

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

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

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

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

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

8. **Occupational health**

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

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

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

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

9. **Corporate Environment Policy**

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

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

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

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

10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
11. Corporate Environment Responsibility (CER)
    i. To address the Public Hearing issues, an amount as specified under Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1st May 2018 amounting to Rs. .....crores, shall be earmarked by the project proponent, towards Corporate Environment Responsibility (CER). Distinct CER projects shall be carved out based on the local public hearing issues. Project estimate shall be prepared based on PWD schedule of rates for each distinct Item and schedule for time bound action plan shall be prepared. These CER projects as indicated by the project proponent shall be implemented along with the main project. Implementation of such program shall be ensured by constituting a Committee comprising of the project proponent, representatives of village Panchayat& District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office. No free distribution/donations and or free camps shall be included in the above CER budget
12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.
13. A tabular chart with index for point wise compliance of above ToRs.
14. The ToRs prescribed shall be valid for a period of three years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

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

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

vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MOEF&CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry shall also be followed.

viii. The consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (QCl)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. Name of the Consultant and the Accreditation details shall be posted on the EIA-EMP Report as well as on the cover of the Hard Copy of the Presentation material for EC presentation.

ix. ToRs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCBshall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The Public Hearing shall be chaired by an Officer not below the rank of Additional District Magistrate. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in a separate chapter and summarised in a tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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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} 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
14. Details of proposed layout clearly demarcating various units within the plant.
15. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs and outputs (material and energy balance).
16. Details on design and manufacturing process for all the units.
17. Details on environmentally sound technologies for recycling of hazardous materials, as per CPCB Guidelines, may be mentioned in case of handling scrap and other recycled materials.
18. Details on requirement of energy and water along with its source and authorization from the concerned department. Location of water intake and outfall points (with coordinates).
19. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
20. Details on toxic content (TCLP), composition and end use of slag.

ADDITIONAL ToRS FOR PELLET PLANT

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

ADDITIONAL ToRs FOR CEMENT INDUSTRY

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

ADDITIONAL ToRs FOR PULP AND PAPER INDUSTRY

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

ADDITIONAL ToRs FOR LEATHER/SKIN/HIDE PROCESSING INDUSTRY

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

ADDITIONAL ToRs FOR COKE OVEN PLANT

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

ADDITIONAL ToRs FOR ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS

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

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

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

Executive Summary

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

i. Project name and location (Village, Dist, State, Industrial Estate (if applicable)
ii. Products and capacities. If expansion proposal, then existing products with capacities and reference to earlier EC.
iii. Requirement of land, raw material, water, power, fuel, with source of supply (Quantitative)
iv. Process description in brief, specifically indicating the gaseous emission, liquid effluent and solid and hazardous wastes. Materials balance shall be presented.
v. Measures for mitigating the impact on the environment and mode of discharge or disposal.
vi. Capital cost of the project, estimated time of completion
vii. Site selected for the project – Nature of land – Agricultural (single/double crop), barren, Govt/private land, status of 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

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