

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

SUMMARY RECORD OF THE FIFTH(5th) MEETING OF RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE HELD DURING 27-29th MARCH, 2019 FOR ENVIRONMENTAL APPRAISAL OF INDUSTRY-I SECTOR PROJECTS CONSTITUTED UNDER THE PROVISIONS OF ENVIRONMENTAL IMPACT ASSESSMENT (EIA) NOTIFICATION, 2006.

The fifth meeting of the Re-Constituted Expert Appraisal Committee (EAC) for Industry-I Sector as per the provisions of the EIA Notification, 2006 for Environmental Appraisal of Industry-I Sector Projects was held during **27-29th March, 2019** in the Ministry of Environment, Forest and Climate Change. The list of participants is annexed.

2.0 After welcoming the Committee Members, discussion on each of the agenda items was taken up ad-seriatim. The minutes of 4th meeting held during **20-22nd February, 2019** were circulated and confirmed by the EAC.

29th March, 2019

5.23 Expansion of Integrated Iron & Steel Plant – DRI Kilns (Sponge Iron from 1,80,000 TPA to 5,26,500 TPA), Induction Furnace (MS Ingots / Billets/ Hot Charging from 2,17,800 TPA to 6,13,800 TPA), New Electric Arc Furnace (1,98,000 TPA), Expansion of Rolling Mill (Hot Rolled TMT / Structural / Cold Rolled Bars/Wire Rod - 2,00,000 TPA to 6,29,000 TPA), Expansion of Ferro Alloys (FeSi/FeMn/SiMn/FeCr from 32,400 TPA to 64,800 TPA), Expansion of WHRB based Power Plant from 8 MW to 34 MW, Expansion of CFBC based Power Plant from 7 MW to 32 MW, New Oxygen Plant (4000 TPA), New Briquette Plant (1,00,000 TPA) **by M/s. Shyam Steel Manufacturing Limited** at J.L.No. 11, Jemua Mouza, Mejia Block, Bankura District, West Bengal [Online proposal No. IA/WB/IND/6258/2007; MoEF&CC File No. J-11011/724/2007-IA-II(I)] – **Environmental Clearance.**

M/s. Shyam Steel Manufacturing Limited has made an online application vide proposal no. IA/WB/IND/6258/2007 dated 2nd January, 2019 along with copies of EIA/EMP report and Form – 2 seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the project proponent

2. The proposed expansion of Integrated Steel Plant of M/s. Shyam Steel Manufacturing Limited located at J.L.No. 11, Jemua Mouza, Mejia Block, Bankura District, West Bengal-722143 was initially received in the Ministry on 16th August 2018 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised in 29th EAC (Industry – 1) meeting held during 12th – 14th March 2018 & 32nd EAC (Industry-1) meeting

held during 11th to 13th June 2018 for prescribing ToR to the expansion project for undertaking detailed EIA study for obtaining Environmental Clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToR to the project on vide Lr. No.J-11011/724/2007-IA II (I) dt. 16th August 2018.

3. Based on the ToR prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry online on 2nd January 2019 vide Online Application No. IA/WB/IND/6258/2007.

4. The project of M/s. Shyam Steel Manufacturing Limited located at J.L.No. 11, Jemua Mouza, Mejia Block, Bankura District, West Bengal-722143, has received Environment Clearance from MoEF&CC vide F.No. J-11011/724/2007 – IA II (I) dated 4th August 2008 (in the name of M/s. Sova Ispat Ltd.) for steel plant. Subsequently EC has been transferred in the name of M/s. Shyam Steel Manufacturing Limited by the Ministry vide letter dated 27/02/2017.

5. Now as a part of proposed expansion, it has been proposed to expand the DRI Kilns (Sponge Iron production from 1,80,000 TPA to 5,26,500 TPA), Induction Furnace (MS Ingots / Billets/ Hot Charging production from 2,17,800 TPA to 6,13,800 TPA), New Electric Arc Furnace (1,98,000 TPA), Rolling Mill (Hot Rolled TMT / Structural / Cold Rolled Bars/Wire Rods - 2,00,000 TPA to 6,29,000 TPA), Ferro Alloys (FeSi/FeMn/SiMn/FeCr from 32,400 TPA to 64,800 TPA), WHRB based Power Plant from 8 MW to 34 MW, FBC based Power Plant from 7 MW to 32 MW (establishment of CFBC power plant of 25 MW capacity), New Oxygen Plant (4000 TPA), New Briquette Plant (1,00,000 TPA) and Dropping Sponge Iron Briquette, Mini Blast Furnace, Sinter Plant.

6. The existing project has been accorded Environmental Clearance vide order No. F.No. J-11011/724/2007 – IA II (I) dated 4th August 2008. The Status of compliance of earlier EC has been obtained from the Regional Office, MoEF&CC, Bhubaneswar vide F.No. 102-240/EPE/274 6th September 2018. Few partial non-compliances were reported in the Certified Compliance Report of the Regional Office. Action taken report on partial non-compliances has been submitted to MoEF&CC, Bhubaneswar for obtaining closure report. Accordingly, closure report was issued by the Regional Office vide letter no. 102-240/EPE/3215, dated 9th October 2018.

7. The following are the existing EC permitted units & Proposed units:

S N	Unit (Product)	Configuratio n for which CTE / EC Granted	Existing units commissione d as per EC	Proposed Expansio n	Final Configuration after Proposed Expansion
		[1]	[2]	[3]	[4] = [2] + [3]
1.	DRI Kilns (Sponge Iron)	3,60,000 TPA (3X300 TPD	1,80,000 TPA (1X300 TPD	3,46,500 TPA (3 x 350 TPD)	5,26,500 TPA (1 x 300 TPD + 3 x 100 TPD +

S N	Unit (Product)	Configuratio n for which CTE / EC Granted	Existing units commissione d as per EC	Proposed Expansio n	Final Configuration after Proposed Expansion
		[1]	[2]	[3]	[4] = [2] + [3]
		+ 3X100 TPD)	+ 3X100 TPD)		3 x 350 TPD)
2.	Induction Furnace (MS Ingot/Billet/ Hot Charging)	3,56,000 TPA	2,17,800 TPA (6 X 11 T)	3,96,000 TPA (8 x 15T)	6,13,800 TPA (6 x 11 T + 8 x 15 T)
3.	Electric Arc Furnace with 30 T Ladle Refining Furnace and AOD Converter (Bloom)	Nil	Nil	1,98,000 TPA (1 x 30 T)	1,98,000 TPA
4.	Rolling Mill (Hot Rolled TMT / Structural / Cold Rolled Bars / Wire Rod)	3,15,000 TPA	2,00,000 TPA	4,29,000 TPA (2 x 650 TPD)	6,29,000 TPA
5.	Ferro Alloy Plant (FeSi/FeMn/SiMn/Fe Cr)	55,000 TPA	2 x 9 MVA (FeMn 32,400 TPA / SiMn 32,400 TPA / FeCr – 27,000 TPA / FeSi – 15,600 TPA)	2 x 9 MVA (FeMn 32,400 TPA / SiMn 32,400 TPA / FeCr – 27,000 TPA / FeSi – 15,600 TPA)	4 x 9 MVA (FeMn 64,800 TPA / SiMn 64,800 TPA / FeCr – 54,000 TPA / FeSi – 31,200 TPA)
6.	Power Plant (WHRB)	32 MW	8 MW	26 MW (24 MW + 2 MW)	34 MW
7.	Power Plant (FBC)	20 MW	7 MW	25 MW (CFBC -1 x 25 MW)	32 MW
8.	Galvanization plant	Nil	Nil	Nil	Nil
9.	Oxygen Plant	4,000 TPA	Nil	4,000 TPA	4,000 TPA
10.	Cement Plant	75,000 TPA	75,000 TPA	Nil	75,000 TPA
11.	Sponge Iron Briquette	60,000 TPA	Nil	Nil	Dropped
12.	Coal / Coke / Chrome fines Briquette	90,000 TPA	Nil	1,00,000 TPA	1,00,000 TPA

S N	Unit (Product)	Configuration for which CTE / EC Granted	Existing units commissioned as per EC	Proposed Expansion	Final Configuration after Proposed Expansion
		[1]	[2]	[3]	[4] = [2] + [3]
13	Mini Blast Furnace-165 M ³ (Pig iron)	1,20,000 TPA	Nil	Nil	Dropped
14	Sinter Plant -15M ² (Sinter)	80,000 TPA	Nil	Nil	Dropped

Note: Units for which EC accorded on 04-08-2008 & which are not commissioned within 10 years period from EC issued date are deemed dropped.

8. Existing plant is located in 150 acres (60.7 Ha.) of land. Proposed expansion will be taken up partly in the Existing plant (i.e. 150 acres / 60.7 Ha.) and partly in the additional land of 13.3 acres (5.4 Ha.) adjacent to the existing plant & has been purchased from the sister concern unit namely M/s Vaikuntha Tradecom (P) Ltd. Total land after proposed expansion will be 163.3 acres (66.1 Ha.). The entire 163.3 acres (66.1 Ha.) of land is in possession of the management. Existing land is private land and diverted for industrial purpose. No River / stream passes through the plant area. It has been reported that no natural water body / stream exists in the plant area and any modification / diversion in the existing natural drainage pattern at any stage has not been proposed.

9. The topography of the area is flat with undulations and reported that the site lies between 23°34'5.46"N to 23°33'34.14"N Latitude and 87° 5'42.42"E to 87° 4'52.33"E longitude in Survey of India Topo sheet no. 73 M/2 at an elevation of 85m AMSL. The ground water table reported to ranges between 2.0 to 5.0 m bgl below the land surface during the post-monsoon season and 5.0 to 10.0 m bgl below the land surface during the pre-monsoon season.

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

11. The list of raw material for the proposed expansion project is given below:

S.No.	Raw Material		Quantity	Sources	Distance (w.r.t Plant)	Mode of Transport
1.	For DRI Kilns (Sponge Iron) – 3,46,500 TPA (3 x 350 TPD)					
a)	Iron Ore		5,54,400	Barbil, Orissa, Chhattisgarh	300 - 500 Kms.	By rail
b)	Pellets		4,85,100	West Bengal & Orissa	100 - 300 Kms.	By rail
c)	Coal	Indian	4,50,450	ECL, West Bengal	~ 100 Kms.	By rail
		Imported	3,12,000	South Africa	~ 300 Kms.	Through sea route, rail route

S.No.	Raw Material	Quantity	Sources	Distance (w.r.t Plant)	Mode of Transport
				(from Haldia Port)	
d)	Dolomite	17,325	Chhattisgarh	~ 700 Kms.	By rail & road (through covered trucks)
2.	For Steel Melting Shop (MS Ingots / Billets/Hot Charging) – 396000 TPA				
a)	Sponge Iron	3,30,000	Own generation	---	---
b)	MS Scrap	1,41,000	Local area & West Bengal	50 - 300 Kms.	By road (through covered trucks)
c)	Mill scales	21,450	Own generation	---	---
d)	Ferro Alloys	6,000	Own generation	---	By road (through covered trucks)
3.	For Electric Arc Furnace (Bloom) – 198000 TPA				
a)	Hot metal	1,07,000	Own generation	---	----
b)	DRI	87,000	Own generation & Local Market, West Bengal	100 - 300 Kms.	By road (through covered trucks)
c)	MS Scrap	4,400	Own generation & Local Market, West Bengal	100 - 300 Kms.	By road (through covered trucks)
d)	Calcined Lime & Dolomite	24,000	Chhattisgarh	~ 700 Kms.	By road (through covered trucks)
e)	Ferro Alloys	2,000	Own generation	---	----
f)	Electrode paste	500	Jharkhand	~ 300 Kms.	By road (through covered trucks)
4.	For Rolling Mill (Hot Rolled TMT / Structural / Cold Rolled Bars/Wire Rod) – 4,29,000 TPA				
a)	MS Billets / Ingots/Bloom	4,60,000	Own generation	---	-----
b)	Furnace Oil	14,586 KL	IOCL, West Bengal	100 - 300 Kms.	By road (through Tankers)

S.No.	Raw Material		Quantity	Sources	Distance (w.r.t Plant)	Mode of Transport
5.	For FBC Boiler [Power Generation 25 MW]					
a)	Dolochar		1,03,950	In plant generation	---	through covered conveyors
b)	Coal	Indian	1,48,500	ECL, West Bengal	~ 100 Kms.	By rail
		Imported	80,850	South Africa	~ 300 Kms. (from Haldia Port)	Through sea route / rail route / by road
6.	For Ferro Alloys (2 x 9 MVA)					
6 (i)	<i>For Ferro Silicon – 15,600 TPA</i>					
a)	Quartz		24,960	Chhattisgarh / Andhra Pradesh	700 - 900 Kms.	By Rail & Road (covered trucks)
b)	Coke/Coal		18,720	Dhanbad & ECL	~ 100 Kms.	By Road (covered trucks)
c)	Mill Scales		4,370	Inhouse Generation	---	---
d)	Electrode paste		310	Jharkhand	~ 300 Kms.	By Road (covered trucks)
6 (ii)	<i>For Ferro Manganese – 32,400 TPA</i>					
a)	Manganese Ore		68,040	MOIL / OMC	700 - 900 Kms.	By Rail
b)	Coke/Coal		19,440	Dhanbad & ECL	~ 100 Kms.	By Road (covered trucks)
c)	Dolomite		8,100	Chhattisgarh	~ 700 Kms.	By Road (covered trucks)
d)	Mill Scale		7,450	Inhouse Generation	---	-----
e)	Electrode Paste		650	Jharkhand	~ 300 Kms.	By Road (covered trucks)
6 (iii)	<i>For Silico Manganese – 32,400 TPA</i>					
a)	Manganese Ore		48,600	MOIL / OMC	700 - 900 Kms.	By Rail
b)	Fe-Mn Slag		30,000	In house generation	---	-----
c)	Coke/Coal		16,200	Dhanbad & ECL	~ 100 Kms.	By Road (covered trucks)
d)	Quartz		7,740	Chhattisgarh / Andhra Pradesh	700 - 900 Kms.	By Rail & Road (covered trucks)

S.No.	Raw Material	Quantity	Sources	Distance (w.r.t Plant)	Mode of Transport
e)	Dolomite	7,450	Chhattisgarh	~ 700 Kms.	By Road (covered trucks)
f)	Electrode Paste	650	Jharkhand	~ 300 Kms.	By Road (covered trucks)
6 (iv)	<i>For Ferro Chrome - 27,000 TPA</i>				
a)	Chrome Ore	56,700	Orissa	300 - 600 Kms.	By Rail & Road (covered trucks)
b)	Coke/Coal	19,980	Dhanbad & ECL	~ 100 Kms.	By Rail & Road (covered trucks)
c)	Quartz	8,100	Chhattisgarh / Andhra Pradesh	700 - 900 Kms.	By Rail & Road (covered trucks)
d)	Mill Scale	2,700	Inhouse Generation	---	----
e)	Magnetite/Bauxite	5,400	Orissa	300 - 600 Kms.	By Rail & Road (covered trucks)
f)	Electrode Paste	540	Jharkhand	~ 300 Kms.	By Road (covered trucks)

12. The targeted additional production capacity of the plant after expansion project is Hot Rolled TMT / Structural / Cold Rolled Bars / Wire Rod – 0.429 million TPA.

Iron ore & Iron ore pellet will be supplied by M/s. Planet PR Private Limited. Imported Coal would be supplied by M/s. Avani Resources PTE Ltd. Imported Coal transportation will be done through Ship from Haldia port and from there directly into the site by Rail. Iron Ore & Iron Ore pellet will be transported by rail directly into the site. Project proponent submitted during the presentation that 78.8% of total raw materials would be transported by rail only and they are in the process of obtaining railway siding approval from Indian Railways. However, railway siding approval is yet to be obtained by the project proponent.

Impact on Vehicular Traffic Load due to proposed expansion

Traffic load during the operation of the existing plant (Baseline) : 17387 PCU/day

Additional Traffic load during operation of the expansion project : 571 PCU/day

Total Traffic load during operation of existing and

proposed expansion load : 17958 PCU/day

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

13. Water requirement for the expansion project will be 1750 KLD. Total water requirement after the proposed expansion will be 2800 KLD, which will be sourced from Damodar River. Water permission from Damodar Valley Corporation has already been obtained for 1.3 MGD

(i.e. 5850 KLD) vide agreement dated 25/06/2007. The same existing water approval will be adequate for expansion also. Hence no separate water approval will be required.

14. Total power required for the existing units & for the proposed expansion units will be 127 MW which will be partly met from the captive power generation to the tune of 66 MW & Balance 61 MW will be sourced from the Damodar Valley Corporation (DVC).

15. Baseline Environmental Studies were conducted during summer season i.e. from 1st March 2018 to 31st May 2018. Ambient air quality monitoring has been carried out at 8 locations and the data submitted indicated:

PM_{2.5} (22.1 to 45.5 µg/m³), PM₁₀ (38.1 to 79.8 µg/m³), SO₂ (7.8 to 13.7 µg/m³), NO_x (8.5 to 26.4 µg/m³) & CO (425 to 1382 µg/m³).

The results of the modeling study indicates that the maximum increase of GLC due to the proposed units & Vehicular emissions will be 2.3 µg/m³ with respect to the PM₁₀, 13.7 µg/m³ with respect to the SO₂, 14.2 µg/m³ with respect to the NO_x & 2.7 µg/m³ with respect to the CO.

16. Ground water quality has been monitored in 8 locations in the study area are analysed and the data submitted indicated pH: 6.9 to 7.6, Total Hardness: 177 to 302 mg/l, Chlorides: 194 to 284 mg/l, Fluoride: 0.48 to 0.83 mg/l. Heavy metals are within the limits.

17. Surface water samples were analysed from 3 locations in the study area and analysed and the data submitted indicated pH: 7.8 to 8.2, DO: 4.8 to 6.1 mg/l, BOD: 2.2 to 4.5 mg/l & COD: 3.4 to 9.0 mg/l.

18. Noise levels are in the range of 48.00 dBA to 68.86 dBA during the study period.

19. It has been reported that there is no R & R involved, as it is an expansion project.

20. It has been reported that the following Solid wastes will be generated due to the proposed expansion project which will be stored in storage yard above the ground level.

S.No.	Waste	Quantity (TPD)		Method of disposal
		Existing	Proposed	
1.	Ash from DRI	108	189	Ash will be used in the existing cement plant, whenever the plant is in operation. In the existing plant, ash being given to M/s. BMR, who is supplier of ash to M/s. Ultratech Cement Ltd., Durgapur. In the proposed expansion project, ash will be given to M/s. Srijan Build Work, which is supplier of ash to Brick manufacturing unit and Cement plant.
2.	Dolochar	180	315	Is being utilized in the existing FBC boiler-based power plant. The same practice will be continued after expansion also.
3.	Kiln Accretion Slag	5.4	9.5	Is being utilized in road construction & given to brick manufacturer and same practice will be continued after the proposed expansion.

S.No.	Waste	Quantity (TPD)		Method of disposal
		Existing	Proposed	
				Will be given to M/s. S.N. Bricks Manufacturers.
4.	Wet Scraper Sludge	8	15	Is being utilized in road construction & given to brick manufacturer and same practice will be continued after the proposed expansion. Will be given to M/s. S.N. Bricks Manufacturers.
5.	Slag from SMS (IF + EAF)	36	97	Slag generated is being utilized in the Slag Crusher unit of M/s. Shyam Steel Industries Ltd. (Sister Concern unit) at Bamunara Industrial Estate, where it shall be processed for metal recovery. The remaining material after the recovery process will be further be used as Raw material for Brick manufacturing unit at M/s. Shyam Steel Industries Ltd. and same practiced will be followed in the proposed expansion.
6.	Mill scales from Rolling Mill	30	65	Mill scales from Rolling Mill will be reused in the SMS & Ferro Alloy units.
7.	Slag from SiMn	93	93	Is being utilized in road construction & being given to road contractor for road construction and same practice will be continued after expansion also.
8.	Slag from FeMn	91	91	Is being used in manufacture of Silico manganese as it contains high MnO ₂ and same practice will be continued after expansion also.
9.	Slag from FeSi	3	3	Is being given to cast iron foundries and same practice will be continued after expansion also.
10.	Slag from FeCr	84	84	Will be further processed in Zigging plant for Chrome recovery. TCLP test will be conducted for the remaining material. If chrome content is within the permissible level it will be utilized in green concrete making / used as base material in road laying. If it exceeds the limits, then it will be sent to the nearest TSDF facility. Disposal of slag will be in accordance with the permissible norms.
11.	Ash from Power Plant (when Indian coal	124	320	In the existing plant, ash being given to M/s. BMR, which is supplier of ash to M/s. Ultratech Cement Ltd., Durgapur. In the proposed expansion project, ash will be given

S.No.	Waste	Quantity (TPD)		Method of disposal
		Existing	Proposed	
	+ Dolochar is used)			to M/s. Shyam Steel Industries Ltd. (Sister Concern unit) at Bamunara Industrial Estate, where it shall be used as Raw material for its Brick manufacturing unit.

21. It has been reported that an area of 50.0 Acres (20.23 Ha.) has already been developed with greenbelt out of total plant area 150 acres (60.7 Ha.) in the existing plant premises and additional 4.0 acres (1.62 Ha.) of greenbelt will be developed in additional land 13.3 acres (5.4 Ha.) to attenuate the noise levels and trap the dust generated due to the project development activities. Hence total greenbelt will be 54.0 acres (21.85 Ha.).

22. The Public hearing for the proposed Expansion project was held on 30th November 2018, Mejia Panchayat Samity Meeting Hall, Mejia, PS Mejia, Bankura District, West Bengal under the chairmanship of **Additional District Magistrate** for proposed expansion. The issues raised during public hearing are local employment, Socio economic related, drinking water supply, development of Greenbelt, etc.

The following are the issues raised during PH & commitment of the Project Proponent.

S.No.	Issue raised	Management Response	Time schedule	Budgetary allocation
1.	Socio economic development activities in the village	<ul style="list-style-type: none"> Socio economic development activities will be carried out under CER and budget for same has been allocated under CER as per MOEF&CC norms which will be carried out in consultation with the village panchayat. 	1 to 5 years	Rs. 6.45 Crores
2.	Proper functioning of pollution control devices & air pollution and safety measures of employees	<p>Proper functioning of Pollution Control devices</p> <ul style="list-style-type: none"> • ESPs have been installed to Sponge Iron kilns with WHRB based boilers, FBC boiler and Cement Plant. Ferro Alloys and Induction Furnaces are equipped with fume extraction systems and bag filters. • Online Stack monitoring system to all stacks and data transmission system 	Before commencement of operation of expansion	Rs. 34.3 Crores for EMP

S.No.	Issue raised	Management Response	Time schedule	Budgetary allocation
		<p>in all stacks as per CPCB guidelines 4 and keep a vigilant observation of the readings. In existing plant, if the emissions exceed 50 mg/Nm³, then raw material feed will be cut-off. However, in the expansion if the PM value exceeds 30 mg/Nm³ then Raw material feed will be stopped.</p> <ul style="list-style-type: none"> • Programmed Logic Control (PLC) based Interlocking system has been provided to Air Pollution Control System (APCS) in such a way that whenever the APCS fails, then Raw material feed will be stopped. Same will be continued in the proposed expansion also. • Existing plant is having valid Consent to Operate from WBPCB and is following all the norms stipulated. <p><u>Safety measures for Workers</u></p> <ul style="list-style-type: none"> • OHS is being carried out regularly for the workers as per Factories Act & records are maintained and same will be continued in the proposed expansion also. • Regular Job orientation for workers and employees. • All the workers are equipped with Personnel Protective equipment's. 		

S.No.	Issue raised	Management Response	Time schedule	Budgetary allocation
		<ul style="list-style-type: none"> • Safety training for all the workers is carried at regular intervals and same will be continued in the proposed expansion also. 		
3.	Treatment facility for wastewater generation from the process activities and plan for utilization of treated wastewater	<ul style="list-style-type: none"> • There will be no effluent discharge from the DRI kilns, Induction Furnace, Electric Arc Furnace, Ferro Alloys, etc. as closed-circuit cooling system will be adopted. In Rolling Mill, the wastewater will be taken to a settling tank and clear water will be recycled. • The effluent generated from the existing plant is 136 KLD and that from the expansion will be 204 KLD. The total wastewater generation after the expansion will be 340 KLD. • In the existing plant ZLD is being maintained. Similarly, after expansion also Zero Liquid Discharge will be adopted. • Effluent from power plant will be treated and after ensuring compliance with WBPCB norms, it will be utilized for dust suppression, ash conditioning and for greenbelt development. • Sanitary waste water will be treated in STP. 	Before commencement of operation of expansion	Rs. 2.7 Crores for Wastewater Management
4.	Employment to local people shall be provided	<ul style="list-style-type: none"> • Out of total 1884 permanent & contractual employees, 1118 (60 %) are from local area. 	Continuous Process	---

S.No.	Issue raised	Management Response	Time schedule	Budgetary allocation
		<ul style="list-style-type: none"> It is confirmed that top priority will be given to the local youth in providing employment and will be based on their qualification & experience and the requirement for a particular vacancy. 		
5.	Air pollution caused by the process activities	<p>In the existing plant following environment protection measures have been provided and are duly complying with norms stipulated by MoEF&CC / WBPCB.</p> <ul style="list-style-type: none"> ESPs have been provided to DRI & FBC Power Plant to bring down the particulate emission less than 50 mg/Nm³. Fume extraction & Cleaning system with bagfilters (Glass fibre) has been provided to SMS Unit & Ferro Alloys Unit to bring down the particulate emission less than 50 mg/Nm³ All the conveyors are covered with GI sheets to control the dust emission. Online Stack monitoring system to all stacks and data transmission system in all stacks as per CPCB guideline and keep a vigilant observation of the readings. All online stack emissions in existing plant are within the norms. In case of PM value exceeds 30 mg/Nm³ for Power Plants & 50 mg/Nm³ for other stacks, then Raw 	Before commencement of operation of expansion	Rs. 34.3 Crores for EMP

S.No.	Issue raised	Management Response	Time schedule	Budgetary allocation
		<p>material feed will be stopped.</p> <ul style="list-style-type: none"> • Programmed Logic Control (PLC) based Interlocking system has been provided to Air Pollution Control System (APCS) in such a way that whenever the APCS fails, then Raw material feed will be stopped. <p>Ash is stored in silos only. In expansion also ash will be stored in silos and there will not be any open storage of ash.</p> <p>1/3rd of the total area (including expansion) will be covered under greenbelt. Existing plant is having valid Consent to Operate from WBPCB and is following all the norms stipulated.</p> <p>The Certified Compliance report issued by RO, MoEF&CC also confirms about the Industry compliance on Environment Protection measures.</p> <p>Similar Environmental Protection measure will be continued ever after expansion project also with PM in flues gases of proposed power plant less than 30 Mg/Nm³. in the expansion also Glass fibre/PTFE bags will be provided and will be designed for 50% excess volumetric flow rate. Hence there will not be any significant impact on</p>		

S.No.	Issue raised	Management Response	Time schedule	Budgetary allocation
		School residents & local residents.		
6.	Supply of purified water through pipeline for the local villages	<ul style="list-style-type: none"> Water pipeline distribution has already been provided in the nearby villages at Ardhagram More to Bhului Shiva Temple, Gorai para, Ghosh para. It is hereby confirmed to provide purified water through pipeline for local villages under CER program. 	Continuous	Rs. 1.15 Crores
7.	Extensive plantation on both side of local roads to reduce air pollution caused due the movement of heavy vehicles	<ul style="list-style-type: none"> Extensive plantation will be provided on the both side of the local road connected to the existing plant under CER program. 	1 st year of operation	Rs. 0.7 Crores
8.	Water sprinkling on roads outside the plant premises	<ul style="list-style-type: none"> Water sprinkling on both sides of roads will be taken up. 	Continuous	Rs. 0.35 Crores

23. An amount of Rs.6.45 Crores out of project cost of Rs 990 Crores (as per Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1st May 2018) has been earmarked for Corporate Environment Responsibility (CER) based on public hearing issues. The details of CER proposed are as follows:

S.No.	Major Activity Heads	Years (Rs. In Crores)					Total Expenditure (Rs. In Crores)
		1 st	2 nd	3 rd	4 th	5 th	
A	Based on Need Based & SIA Study						
1	Community & Infrastructure Development Programmes (construction of 10 nos. of toilets in nearby local schools in Mejia, Parbatipur, Ardhgargram, Jemua & Shyamapur village under Swachh Bharat (10@ Rs 4 lakhs / toilet), renovation of school buildings (Rs 20 Lakhs), drainage facilities in	0.4	0.4	0.4	0.4	0.35	1.95

S.No.	Major Activity Heads	Years (Rs. In Crores)					Total Expenditure
		1 st	2 nd	3 rd	4 th	5 th	(Rs. In Crores)
	nearby village(Rs 20 Lakhs), Providing LED Street lighting with solar panels in suitable places in surrounding 5 nos. of villages (Rs 35 lakhs), Development of village road (0.80 lakhs)						
2	Establishment of Skill Development Centre “DISHA Centre” along with necessary infrastructure for various vocational training program for employment generation in association with <i>National Skill Development Mission</i> (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.)	0.3	0.3	0.3	0.2	0.15	1.25
3	Education and Scholarship Programmes <ul style="list-style-type: none"> • Providing furniture, computers, library, sports equipment etc. for nearby local schools in Mejia, Parbatipur, Ardhgargram, Jemua & Shyamapur village. • Sponsorship for School Sport events • Providing Model Anganwadi Centres in consultations with State Women and Child Development Department 	0.1	0.1	0.1	0.1	0.1	0.50
4	Medical & health related activities (like Ambulance facilities to villagers etc.)	0.15	0.15	---	---	---	0.30
5	RWH pits in the surrounding villages	0.05	0.05	0.05	0.05	0.05	0.25
	<i>SUBTOTAL (A)</i>	<i>1.00</i>	<i>1.00</i>	<i>0.85</i>	<i>0.75</i>	<i>0.65</i>	<i>4.25</i>
B	Based on Public Consultation / Hearing						

S.No.	Major Activity Heads	Years (Rs. In Crores)					Total Expenditure (Rs. In Crores)
		1 st	2 nd	3 rd	4 th	5 th	
1	Drinking Water supply to the villages through pipeline	0.25	0.25	0.25	0.25	0.25	1.25
2	Plantation on both sides of road outside the plant premises and its maintenance (2.5 Kms.)	0.2	0.2	0.1	0.1	---	0.6
3	Water Sprinkling on roads outside the plant premises	0.1	0.1	0.05	0.05	0.05	0.35
	SUBTOTAL (B)	0.55	0.55	0.4	0.4	0.3	2.2
	TOTAL (A + B)	1.55	1.55	1.25	1.15	0.95	6.45

24. The capital cost of the project is Rs.990 Crores and the capital cost for environmental protection measures is proposed as Rs. 34.3 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 3.2 Crores/annum. The employment generation is 1300 people during operation of the proposed expansion and 500 people during construction of the proposed units.

25. 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 Crores)
1.	Air Emission Management		
	Electro Static Precipitators (ESP)	12.5	1.80
	4 th Hole & Fume Extraction system with bag filters	4.5	
	Stacks	4.0	
	Water Sprinklers	0.2	
2.	Wastewater Management		
	for ETP & STP	2.5	0.50
	for Garland drains	0.2	
3.	Solid waste Management		
	Fly Ash Handling & disposal	2.0	0.30
	Slag Handling & Disposal	0.3	
	Hazardous waste storage & disposal	0.3	
	Municipal solid waste storage & disposal	0.1	
4.	Greenbelt development, Land scaping, Noise Management, RWH etc.	0.6	0.10
5.	Fire Safety Systems	3.2	0.05
6.	Environmental Monitoring		

S.No.	Particulars	Capital Cost (Rs.in Crores)	Recurring Cost / Annum (Rs.in Crores)
	Online AAQMS	1.8	0.10
	Continuous Emission Monitoring System (CEMS)	1.8	
	Monitoring (Outsourced)	---	0.20
7.	Occupational Health & Safety		
	Personal Protective Equipment's (PPEs)	0.2	0.15
	Ambulance (additional)	0.1	
TOTAL		34.3	3.20

26. Greenbelt has already been developed in 50.0 Acres (20.23 Ha.) in the existing plant premises comprising of 150 acres (60.7 Ha.), which is about 33% of the total area, additional 4.0 acres (1.62 Ha.) of greenbelt will be developed in additional land 13.3 acres (5.4 Ha.). Hence total greenbelt will be 54.0 acres (21.85 Ha.). Greenbelt width varying from 10 m to 140 m is being developed all around the plant. 32,000 nos. of plants have already been developed in the existing plant premises. Project proponent has now proposed to plant another 3,000 nos. of saplings as part of expansion project.

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

29. Name of the consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd, Hyderabad [S.No. 118, List of Accredited Consultant Organizations (Alphabetically) Rev. 74, March 07, 2019].

Observations and recommendations of the Committee: -

30. After detailed deliberation, the Committee recommended for environmental clearance under the provisions of EIA Notification, 2006 for the project cited above subject to following specific and general conditions:

A. Specific Conditions

- i. As committed by the Project Propoent, 78.8% of the total raw materials required shall be transported by rail only, and status report of compliance shall be regularly furnished to the Regional Office of the MoEF&CC.
- ii. Corporate Environment Responsibility (CER) related activities as envisaged shall be carried out within a time frame of three years from the date of environment clearance and the progress report shall be submitted to the Regional Office of the MoEF&CC along with the six monthly compliance report.
- iii. Green belt development shall be carried out in an area of 60 acres in two years from the date of environment clearance, and the implementation status shall be submitted to the Regional Office of the MoEF&CC along with the six monthly compliance report.
- iv. Project proponent should maximise the power generation from DRI plant to harness maximum energy potential and the progress report thereof shall be furnished to the Regional Office of the MoEF&CC.

- v. Electric Arc Furnace provided shall have fourth hole extraction system and waste heat recovery system.
- vi. Air cooled condenser shall be provided for captive power plant.
- vii. 100% dolochar shall be utilized for power generation within the plant premises.
- viii. Dust emissions from all vents shall be restricted to 30 mg/Nm³.
- ix. Project proponent should ensure more than 80% Hot charging and compliance report shall be furnished to the Regional Office of the MoEF&CC.

B. General conditions

I. Statutory compliance:

- i. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/Committee.
- ii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of withdrawal of ground water AND/OR from the competent authority concerned in case of withdrawal of surface water.
- iii. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time

II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission 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 fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.
- iii. The project proponent shall install system to carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM₁₀ and PM_{2.5} in reference to PM emission, and SO₂ and NO_x in reference to SO₂ and NO_x emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.

- iv. The cameras shall be installed at suitable locations for 24X7 recording of battery emissions on the both sides of coke oven batteries and videos shall be preserved for at least one-month recordings.
- v. Sampling facility at process stacks shall be provided as per CPCB guidelines for manual monitoring of emissions.
- vi. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with half yearly monitoring report.
- vii. 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.
- viii. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.
- ix. Secondary emission control system shall be provided at SMS Converters.
- x. Pollution control system in the steel plant shall be provided as per the CREP Guidelines of CPCB.
- xi. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- xii. 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.
- xiii. The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.
- xiv. Facilities for spillage collection shall be provided for coal and coke (Chain conveyors, land based industrial vacuum cleaning facility).
- xv. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
- xvi. Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.
- xvii. The project proponent shall install Dry Gas Cleaning Plant with bag filter for Blast Furnace and SMS converter.

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 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 submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- iv. The project proponent shall provide the ETP 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 7th December 2015 (Thermal Power Plants) as amended from time to time as amended from time to time;
- v. Adhere to 'Zero Liquid Discharge'.
- vi. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- vii. Garland drains and collection pits shall be provided for each stockpile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
- viii. Tyre washing facilities shall be provided at the entrance of the plant gates.
- ix. CO₂ 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.
- x. The project proponent shall practice rainwater harvesting to maximum possible extent.
- xi. Water meters shall be provided at the inlet to all unit processes in the steel plants.
- xii. 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.

IV. Noise monitoring and prevention

- i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

V. Energy Conservation measures

- i. The project proponent shall provide TRTs to recover energy from top gases of Blast Furnaces.
- ii. Waste heat shall be recovered from Sinter Plants coolers and Sinter Machines.
- iii. Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.
- iv. Use hot charging of slabs and billets/blooms as far as possible.
- v. Waste heat recovery systems shall be provided in all units where the flue gas or process gas exceeds 300°C.
- vi. Explore feasibility to install WHRS at Waste Gases from BF stoves; Sinter Machine; Sinter Cooler, and all reheating furnaces and if feasible shall be installed.
- vii. Restrict Gas flaring to < 1%.
- viii. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
- ix. Provide LED lights in their offices and residential areas.
- x. Ensure installation of regenerative type burners on all reheating furnaces.

VI. 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. Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.
- iii. Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.
- iv. Used refractories shall be recycled as far as possible.
- v. SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway track ballast and other applications. The project proponent shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.

- vi. 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.
- vii. 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.
- viii. The waste oil, grease and other hazardous waste like acidic sludge from pickling, galvanising, chrome plating mills etc. shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016. Coal tar sludge / decanter shall be recycled to coke ovens
- ix. 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. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- iv. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

IX. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. 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.

- iii. 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.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- v. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- vi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Iron and Steel plants shall be implemented.

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; PM₁₀, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- 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.
 - iv. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
 - v. 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.
 - viii. 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).
 - ix. 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.
 - x. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
 - xi. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
 - xii. 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.
 - xiii. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
 - 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.
- 5.24 Expansion of 4×100 TPD DRI Unit by addition of 2×12 T (245 TPD) Induction Furnaces, 240 TPD Billet Caster, 16 MW CPP based on 4x9 TPH WHRB & 50TPH AFBC by **M/s. Sri Venkatesh Iron & Alloys (India) Limited** located at village

Lapanga, P.O. Bhadaninagar, District Ramgarh, Jharkhand [Online proposal No. IA/JH/IND/83979/2004; MoEF&CC File No. J-11011/417/2007-IA.II(I)] – **Environmental Clearance.**

M/s. Sri Venkatesh Iron & Alloys (India) Limited has made an online application vide proposal no. IA/JH/IND/83979/2004 dated 24th January, 2019 along with copies of EIA/EMP report and Form – 2 seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the project proponent

2. The proposed expansion project of M/s Sri Venkatesh Iron & Alloys (India) Limited is located at Village: Lapanga, P.O. Bhadaninagar, Dist: Ramgarh, Jharkhand initially applied in the Ministry on 17.08.2017 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry-1) during its 22nd meeting held on 11th September, 2017 and accordingly, the MoEF&CC had prescribed ToR to the project on 19.09.2017 vide Lr.No. J-11011/417/2017-IA. II (I).

3. The project of M/s Sri Venkatesh Iron & Alloys (India) Limited located in Village: Lapanga, P.O. Bhadaninagar, Dist: Ramgarh, Jharkhand is for setting up of a new unit for production of 72,000 TPA Billets through 2 nos. of 12 Ton Induction Furnaces & 2x6/11 m Continuous Casting Machine (CCM) along with Captive Power Plant (CPP) of 16 MW. The existing project for production capacity of 120,000 TPA sponge iron through 4x100 TPD DRI Kiln was installed in 2005 (prior to the EIA Notification 2006), environmental clearance as per EIA Notification, 1994 was not required as the project cost was less than 100 crores and the plant was setup after obtaining CTE from JSPCB vide letter No. N-432 dated 16.07.2005 and subsequently CTO from JSPCB. The compliance of CTO was submitted to the Jharkhand State Pollution Control Board (JSPCB), Ranchi. The proposed capacity for different products for site are as below:

Units	Facilities	Production (TPD)	No. of days of operations	Production (TPA)
Existing Units				
Sponge Iron unit	4x100 T DRI Kiln	400	300	1,20,000
Proposed Units				
Steel Melting Shop (SMS)	2x12 T Induction Furnace	245	300	73,500
	Billet Caster (2 strand)	240	300	72,000
Captive Power Plant (CPP)	WHRB AFBC	8 MW 8 MW	300	16 MW

4. No additional land shall be acquired for the project and the entire project shall be installed within existing plant area of 5.82 ha. No forestland is involved. It has been reported that no water stream/ water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

5. The topography of the area is Gently undulating and reported to lie between 23°38'25.235" to 23°38'33.062"N Latitude and 85°23'45.472" to 85°23'56.318"E Longitude in Survey of India topo sheet 73 E/6 at an elevation of 338 m AMSL. The ground water table reported to range between 1.6 to 5.9 mbgl during the post-monsoon season and 2.25 to 11.19 mbgl during the pre-monsoon season.

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. List of flora & fauna issued by Ramgarh Forest Division mentions that there are no endangered flora and fauna or Schedule-1 species in the region.

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

Basic Raw Material Used

Raw Material Used	Quantity in TPA	Source
For the Existing Plant		
Iron Ore	192,000	From mines in Odisha-by rail rake & then by road
Non-coking Coal	156,000	From various mines of CCL and e-auction – by Rail rake and/or road
Dolomite	3,600	From Uttar Pradesh-by road
For the proposed Project		
Non-coking Coal for Power Plant	45,000	From various mines of CCL

Process involved

Sponge iron production through Coal based DRI Kiln (Existing), Billet Production through Induction Furnace & Billet Caster and generation of 15 MW Power through 3 nos. of WHRB and 1 no. of AFBC Boiler.

Waste Generated in the proposed project

Item	Generation	Utilisation	
		Recycled / Reused	Sold
<i>Steel Making Shop</i>			
Bag Filter Dust	2,730	-	2,730
Slag	13,200	1,320	11,880
Scale from Billet Caster	500		500
<i>Power Plant</i>			
Fly-Ash	41,400	-	41,400
Bottom Ash	5,100	--	5,100
Coal Fines	4,000	4,000	-
Total	66,930	5,320	61,610

8. The targeted saleable capacities of Billets and Sponge Iron are 72,000 and 46,500 TPA respectively. The Iron ore & Coal for the plant would be procured from the mines in Odisha. The raw material transportation will be done through rail and road.
9. The water requirement of the project is estimated as 1410 m³/day requirement will be obtained through Damodar River. The permission for drawl of water is yet to be obtained from Damodar Valley Corporation.
10. The power requirement of the project is estimated 15.80 MW out of which 14.4 MW will be obtained from the Captive power plant and remaining balance power of 1.4 MW will be sourced from the Power Grid.
11. Baseline Environmental Studies were conducted during Post Monsoon Season i.e. from 01.10.2017 to 31.12.2017. Ambient air quality monitoring has been carried out at 8 locations during study period indicates: PM₁₀ (52.00 to 87.60 µg/m³), PM_{2.5} (22.10 to 48.70 µg/m³), SO₂ (10.20 to 26.90 µg/m³) and NO_x (4.60 to 11.30 µg/m³). The results of the modeling study indicate that the maximum increase of GLC for the proposed project is 3.80 µg/m³ with respect to the PM₁₀, 22.31 µg/m³ with respect to SO₂ and 1.37 µg/m³ with respect to the NO_x.
12. Ground water quality has been monitored in 8 locations in the study area and analyzed. pH: 7.46 to 8.08, Total Hardness: 198.20 to 332.20 mg/l, Chlorides: 75.53 to 143.00 mg/L, Fluoride: 0.82 to 1.43 mg/L. Heavy metals are within the limits. Surface water samples were analyzed from 5 locations. pH: 7.75 to 8.10, DO: 5.30 to 7.60 mg/l and BOD: <5 to 21.57 mg/l. COD from 10.63 to 81.14 mg/l.
13. Noise levels are in the range of 51.35 to 64.63 dB (A) for day time and 41.45 to 54.27 dB (A) for night time.
14. No R&R is involved as no land has been acquired for the project.
15. It has been reported that a total of approx. 66,930 TPA waste will be generated due to the project, out of which 5,320 TPA will be reused and 61,610 TPA remaining will be sold. It has been envisaged that an area of 1.93 ha will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.
16. It has been reported that the latest Consent to Operate from the Jharkhand State Pollution Control Board was obtained vide Lr. No. JSPCB/HO/RNC/CTO-2618475/2018/1663 dated 25.10.2018 and consent is valid up to 31.12.2019.
17. The Public hearing of the project was held on 09.06.2018 at Middle School of Bhadaninagar, District- Ramgarh, Jharkhand under the supervision of Mrs. Jyotsana Singh (Director-DRDA Ramgarh, an ADM Rank officer) for the expansion proposal. The issues raised during public hearing are regarding employment, pollution, CSR activities by the plant, potable drinking water, land requirement for the project. An amount of Rs 87 Lakhs (1% of Project cost) has been earmarked for CER based on public hearing / Socio-economic issues.

S. No.	Name & Village of Participant	Issues Raised	Action Plan		
			Commitment	Time Frame	Budget
1	Sri JagdishBedia, Bhadaninagar	Installation of Power Plant using dolo-char is welcome proposal. Plant to work in the benefit of villagers	--	--	--
2	Sri Sanjay Kumar Sinha, Bhadaninagar, Smt. Leela Xess, Bhadaninagar Sri Shankar Bedia, Lapanga Sri Raju Prasad, Lapanga (Board Member- Ward I) Sri Baldev Singh, Bhadaninagar Sri Joba Debgharia, Lapanga Pachayat, Ward Member Sri Baldev Singh, Bhadaninagar	Employment for the local people <ul style="list-style-type: none"> – How 250 persons will get employment – Local should get employment, particularly women – Women to get vocational Training on Pickle making, candle making, ‘Aggarbatti’ making, sewing etc. – Women should also get employment – Only SC/ST are being considered for employment. Poor should be considered first and will be given preference – Percentage of employment to women 	<ul style="list-style-type: none"> • Expansion project will be generating around 250 direct employments. • Preferences will be given to the locals on the basic of their Qualification. • SVIAIL Management explained that there will be requirement for 3 types of labours, skilled, semi-skilled and un-skilled. Women will also be given employment based on requirement • Employment will be given irrespective of their caste and creed. 	6 month	A budget of Rs. 12 lakhs has been kept for opening Vocational Training Institute at Lapanga, Chikor, Hehal, Bhurkunda and Chaingara villages for providing training for self - employment

S. No.	Name & Village of Participant	Issues Raised	Action Plan		
			Commitment	Time Frame	Budget
3	Sri Rampal Bedia, Chikor Sri Anil Kumar Bedia, Lapanga	<ul style="list-style-type: none"> – How much environmental standards have been followed – SVIAIL to reduce pollution 	<ul style="list-style-type: none"> • 10 nos. of Bag Filter systems and 4 nos. of ESPs have been installed to control pollution. Pollution from operation of the existing plant is within the norms. • Monthly monitoring reports are regularly being submitted to the JSPCB, showing compliance. 	24 months	Budget of Rs. 552 lakhs has been kept for installation of pollution control facilities and Rs. 44 lakhs recurring cost per year and Rs. 13.5 lakhs for greenbelt development.
4	Sri Rampal Bedia, Chikor	CSR Activities undertaken <ul style="list-style-type: none"> • What work has been done under CSR and how many benefitted by providing water tankers and installation of hand pumps • Management to provide facilities during marriages 	<ul style="list-style-type: none"> • CSR activities are being carried out at nearby villages by organising health camps, providing mid-day meals in schools, providing blankets to poor villagers 	24 months	5% of the Profit of the company has been proposed for CSR activities in the surrounding villages and providing facilities as per the requirements.
5	Md. Irfan Ansari, Bhadaninagar	Management to provide drinking water within 10 km. area.	<ul style="list-style-type: none"> • Drinking water facilities and water tankers will be provided to the Lapanga, Bhadaninagar, Hehal, Sirka etc. under CSR activities. • Hand Pumps shall be installed at villages Lapanga, 	18 months	<ul style="list-style-type: none"> • Activities will be undertaken from CSR budget of the company • Under CER Rs. 12 lakhs has been proposed for installation

S. No.	Name & Village of Participant	Issues Raised	Action Plan		
			Commitment	Time Frame	Budget
			Bhadaninagar, Sirki and Chikor		of Hand Pumps
6	Sri Nishant Pandey, Bhadaninagar Sri Rampal Bedia, Chikor	How much power we will get from the Power Plant being installed	Power generated from the CPP will be fed to the grid and from there it will be supplied to the plant and villages.	---	---
7	Sri Anil Kumar Bedia, Lapanga Pachayat	How much land will be required for the proposed Power Plant? We will not give any additional land	No additional land shall be required for installation of Power Plant. The CPP will be installed within the existing plant premises	---	---

18. The capital cost of the project is Rs 86.67 Crores and the capital cost for environmental management is proposed as Rs 593.50 Lakhs. The annual recurring cost towards the environmental management is proposed as Rs 61 Lakhs/year. An amount of Rs 87 Lakhs (1% of Project cost) has been earmarked for CER based on public hearing issues and need based assessment. The employment generation from the proposed project of expansion is 150.

19. Greenbelt will be developed in 1.93 Ha which is about 33% of the total acquired area. A 10 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt 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 numbers of plants required to cover 1.93 ha area is 4,800.

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

21. Name of Environment Consultant – **M/s Vardan Environet**. [S.L. No. 154, List of Accredited Consultant Organizations (Alphabetically) Rev. 74, March 07, 2019]

Observations of the Committee: -

23. The Committee noted that the details regarding transportation of raw materials, impact assessment on existing traffic load, and CER action plan has not been submitted. Further, the Committee also noted that unit has not obtained water drawl permission for the existing as well as for the expansion project from the Competent Authority.

Recommendations of the Committee: -

24. After detailed deliberations, and in view of the aforesaid shortcomings, the Committee sought the following additional information from the project proponent for further re-consideration of the proposal.

- i. Ground water withdrawal permission from the Competent Authority for the existing plant shall be submitted by the project proponent with an undertaking stating that no ground water shall be utilized for the expansion project.
- ii. Permission from Damodar Valley Corporation for withdrawal of water from Damodar River shall be submitted.
- iii. Scheme for rain water harvesting shall be submitted.
- iv. Action plan for implementation of CER activities shall be submitted.
- v. Action plan for briquetting of dust collected from plant shall be submitted.
- vi. Existing conditions of the road to be used for transportation of raw materials and finished products inter-alia including its dimensions along with photographs shall be furnished.
- vii. Exact quantity of raw materials and products to be transported by different modes such as road and rail respectively shall be furnished.

5.25 Green field Steel plant at Silpahari Industrial Area (Notified Industrial Area), **by M/s. Nachiketa Power and Steel Private Limited** at Village Silpahari, Tehsil & District Bilaspur, Chhattisgarh [Online proposal No. IA/CG/IND/98335/2019; MoEF&CC File No. J-11011/141/2013-IA-II(I)] – **Environmental Clearance for change in product mix under para 7(ii) of EIA Notification, 2006.**

M/s. Nachiketa Power and Steel Private Limited has made an online application vide proposal no. IA/CG/IND/98335/2019 dated 11th March, 2019 seeking environmental clearance 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 proposal is appraised at Central level.

Details submitted by the project proponent

2. M/s. Nachiketa Power & Steel Private Limited obtained Environmental clearance from MoEF&CC under the provisions of the EIA notification, 2006, vide letter no. J-11011/141/2013-IA 11(I) dated 29th Feb, 2016 for setting up of the following units at Silpahari Industrial Area, Bilaspur District of Chhattisgarh.

Sr. No.	Particulars	Capacity
1.	DRI plant	4,50,000 TPA
2.	Steel melting shop (Induction furnace/LRF /CCM)	3,10,000 TPA
3.	Oxygen plant	19,800 TPA
4.	WHRB plant	2 x 8 MW

3. The status of implementation of existing environmental clearance is given as below:

Sr.No.	Name & Capacity of Unit as per EC	Month&year of Installation	Grant of CTE&validity
1	DRI Plant (2x2,25,000TPA)	Construction not yet started	CTE for all units granted from CEC Board vide Letterno.1495/TS/CECB/2017 dtd.29.06.2017 and valid up to 5 years from date of issue.
2	Steel Melting Shop (6x15T)	Construction of 2x15T Induction Furnace Steel Melt Shop started in November 2018. Expected completion by June2019.	
3	Oxygen Plant (9800TPA)	Construction not yet started	
4	WHRB Based PowerPlant(2x8MW)	Construction not yet started	

4. The present of proposal is for change in product mix by adding Direct Charging Hot Billet Rolling Mill of capacity 100000 TPA without change in the total production capacity. The Hot Billets ~ 101000 TPA from the SMS section will be directly charged into the high speed rolling mill. The capacity as granted in EC for Billets – 3,10,000 TPA, will change to Billets – 2,09,000 TPA and Rolled Products – 1,00,000 TPA. The details are furnished in the table given below:

Existing Capacity as per EC		Proposed Capacity after Product-Mix Change	
DRI Plant	4,50,000 TPA	4,50,000 TPA	No change
Steel Melt Shop: Induction Furnace – (saleable – Billets)	3,10,000 TPA	2,09,000 TPA	Reduction due to in-house consumption of Hot billets for direct rolling
Rolling Mill	-	1,00,000 TPA	
Oxygen Plant	19,800 TPA	19,800 TPA	No change
WHRB Power Plant	2 x 8 MW	2 x 8 MW	

5. The status of compliance of conditions stipulated in the environment clearance was obtained from Regional Office, MoEF&CC at Nagpur vide letters date 28.01.2019 and 12.02.2019. As per the compliance report, only the construction of steel melt shop has commenced on November, 2018 and likely to be commisioned by June,2019. The project proponent has consented to comply all the conditions of existing EC.

6. The overall changes due to the proposed change in product mix is furnished as below:

Resource	Existing quantity	After Change in product mix	Remark
Total Raw materials	Total RM – 1067600 TPA HSD/LDO – 3150 KLPA (Emergency Power backup - only)	Total RM – 1067600 TPA HSD/LDO – 3150 KLPA (Emergency Power backup - only)	No change in total quantity of RM. Marginal decrease
Total Products	DRI – 4,50,000 TPA Billets – 3,10,000 TPA Oxygen Plant – 19,800 TPA WHRB Power Plant – 16 MW	DRI – 4,50,000 TPA Billets – 2,09,000 TPA Rolled Prod. – 1,00,000 TPA Oxygen Plant – 19,800 TPA WHRB Power Plant – 16 MW	No change in total quantity of production
Transportation of Raw materials & Products	By Rail/Road	By Rail/Road	No change in total quantity or mode of transportation
Total water requirement	107.29 m ³ /hr	107.29 m ³ /hr	No additional water is required for proposed Rolling Mill.
Total effluent generation & Treatment	70 m ³ /day & will be treated in STP	70 m ³ /day & will be treated in STP	No Change
Total Power requirement	40 MW	41.2 MW	Additional 1.2 MW of power is required for proposed Rolling Mill.
Total Manpower requirement	300 Nos.	344 Nos.	Additional 44 nos. of manpower required for proposed Rolling Mill.
Total Stacks and Emissions	6 Nos. PM < 50 mg/Nm ³ PM < 30 mg/Nm ³ for power plant	6 Nos. PM < 30 mg/Nm ³ all stacks except DRI ESP	-
Total Land requirement	57.62 Acres (23.33 ha.)	57.62 Acres (23.33 ha.)	No change in land requirement

7. The pollution load details due to the proposed change in product mix is given as below:

Parameter	As per EC	As per proposed change in product mix	Remark
Production Capacity	Saleable Billets – 3,10,000 TPA	Saleable Billets – 2,09,000 TPA Rolled products – 1,00,000 TPA	0.3 % decrease
Transportation of Raw materials & Products – IF & Rolling Mill	By Rail/Road	By Rail/Road	Reduced transportation (40 – 50 trucks/year) due to less raw materials and product. Reduced distance as rolled products sold to market directly
Water requirement for IF & Rolling Mill	32 KLD	Induction – 24 KLD + Rolling Mill – 8 KLD	Overall reduction per ton of finished product and No addition in make-up quantity
Waste water generation & Treatment for IF & Rolling Mill	Waste water from RWTP in form of Back wash will be treated in settling pond.	Oils separator and Settling tank will be provided as ETP to treat the wastewater generated. Closed circuit cooling system will be adopted	No waste water discharge. ZLD will be maintained.
Stacks and Emissions for IF & Rolling Mill	3Nos. PM < 50 mg/Nm ³	3Nos. PM < 30 mg/Nm ³ . No new stack for Rolling Mill addition	Reduction PM due to improved APCD and efficiency
Solid waste generation for IF & Rolling Mill	15440 TPA IF slag crushed and after metal recovery , balance sent to construction use /material manufacturers	15440 TPA IF slag crushed and after metal recovery, balance sent to construction use/material manufacturers. Rolled End cuttings will be recycled in-house in the IF.	No increase in solid waste disposal.
Energy Conservation	Billets cooled and the dispatched	Latent heat of Billets used in Hot Charging Rolling Mill. Replacement of lighting with LED Lights	Better energy conservation

8. Name of the consultant: Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar is the consultant accredited by NABET, QCI with accreditation no. NABET/EIA/1720/RA0090, dtd-30.04.2018. And sl. no. in the QCI list is 160 as on March 07, 2019.

Observations and recommendations of the Committee: -

9. After detailed deliberations, the committee recommended for environmental clearance for change in product mix by adding Direct Charging Hot Billet Rolling Mill of capacity 100000 TPA without change in the total production capacity under para 7(ii) of the EIA Notification, 2006 subject to following additional conditions:

- i. No ground water shall be abstracted.
- ii. Dust emissions from all vents shall be restricted to 30 mg/Nm³.
- iii. No reheating furnace shall be used.
- iv. All other terms and conditions mentioned in the earlier EC letter no. J-11011/141/2013-IA 11(I) dated 29th February 2016 shall remain unchanged.

5.26 Expansion from 0.6 MTPA Non-Recovery coke Oven Plant with 40 MW Power Plant to 1.0 MTPA Integrated Steel Plant, 1.2 MTPA Non-Recovery Coke Oven Plant with 205 MW Power Plant by **M/s. Bengal Energy Limited** at Dauka, Tentulmuri, District West Medinipur, West Bengal [Online proposal No. IA/WB/IND/98718/2017; MoEF&CC File No. J-11011/28/2008-IA.II(I)] – **Environmental Clearance.**

M/s. Bengal Energy Limited has made an online application vide proposal no. IA/WB/IND/98718/2017 dated 9th March, 2019 along with copies of EIA/EMP report and Form – 2 seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the Project Proponent

2. The expansion project of M/s. Bengal Energy Limited located at Dauka, P.O-Tentulmuri, PS-Naraingarh, in Paschim Medinipur district of West Bengal. was initially received in the Ministry on 15.05.2017 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] in their 19th meeting held 8th-9th June 2017 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on 21.06.2017 vide Lr. No. J-11011/28/2008-IA-II (I)].

3. Based on the ToRs prescribed to the project, the project proponent submitted an application for environmental clearance to the Ministry on 15.03.2019 vide Online Application No. IA/WB/IND/98718/2017.

4. The project of M/s Bengal Energy Ltd located at-Dauka, P.O-Tentulmuri, PS-Naraingarh, in Paschim Medinipur district of West Bengal is for expansion from 0.6 MTPA Non-Recovery Coke Oven and 40 MW power plant to 1.0 MTPA Integrated Steel Plant, 1.2

MTPA Non-Recovery Coke Oven and 205 MW power plant. Existing project was accorded environmental clearance vide Ir.no J-11011/28/2008-IA II (I) dated 2nd January 2009. The Status of compliance of earlier EC was obtained from Regional Office, Bhubaneswar vide Lr. No.102-279/EPE/438, dated 28.11.2018, in which minor non-compliances were pointed out for immediate action. Subsequently, project proponent submitted action taken report and received closure report on 06.03.2019. The proposed capacity for different products for new site area as below:

Facility	Existing Configuration	Existing capacity in TPA	Proposed configuration	Proposed capacity in TPA	Final capacity In TPA	Product	End use
Non-Recovery CO Plant	1x0.6 MTPA	6,00,000	1x0.6 MTPA	6,00,000	12,00,000	Lam Coke	MBF
CPP(Coke Oven gas)	1x40 MW	40 MW	1x40 MW	40 MW	80 MW	Elec. Power	Internal use/Sale
DRI Kiln	-	Nil	4x500 TPD 4x350 TPD	6,40,000 4,48,000	10,88,000	Sponge Iron	EAF & IF
CPP (DRI)	-	Nil	68 MW		68 MW	Elec. Power	Internal use/Sale
MBF, 2.7T/m ³ day	-	Nil	2x320m ³	5,96,000	5,96,000	Hot Metal	EAF & IF
Sinter Plant 1x60m ² 2T/m ² .hr, 340days	-	Nil	1x60m ²	10,00,000	10,00,000	Sinter	MBF
EAF with LF, 16H/day, 325days	-	Nil	2x80T	8,32,000	8,32,000	Liq. Steel	LF
LF	-	Nil	1x25T			Holding Liq. steel	CCM
C C M	-	Nil	2,500 TPD	8,15,000	8,15,000	Steel Billet	Sale
IF 15H/day, 325 days	-	Nil	3x20T	2,92,500	2,92,500	Liq. Steel	CCM
C C M	-	Nil	1,000 TPD	2,80,000	2,80,000	Steel Billet	Sale
CPP (BF gas fired)	-	Nil	1x22 MW	22 MW	22 MW	Elec. Power	Internal use/Sale
AFBC	-	Nil	1x35 MW	35 MW	35 MW	Elec. Power	Internal use/Sale
A S U	-	Nil	120 TPD	1,200 m ³ /hr	1,200 m ³ /hr	Oxygen Nitrogen	Use in MBF & EAF

5. The total land required for the project is 161.87 ha industrial land. No forestland is involved. The entire land has been acquired for the project. No River passes through the project area. It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

6. The topography of the area is flat and reported to lie between 22° 14' 25.92" N to 22° 15' 27.68" N Latitude and 87° 22' 53.37" E to 87° 23' 34.69" E Longitude in Survey of India topo sheet No. F45 J8 at an elevation of 32m AMSL. The ground water table reported to

ranges between 1.85m to 3.90m below the land surface during the post-monsoon season and 4.29m to 8m 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 75m. Further, the stage of groundwater development is reported to be 50.25% for both core and buffer zone and thereby these are designated as safe areas.

7. Project area does not fall in any national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. or the core and buffer zone thereof. The area also is not reported to form part of corridors for Schedule-I fauna.

8. Imported coking coal will be used to make LAM coke in 1.2 MTPA non-recovery coke oven for use in MBF. Dry quenching of coke by Nitrogen will prevent water pollution and waste heat recovered will produce steam for generation of about 8MW power. Waste heat recovery of coke oven gas will generate 80MW power. Using iron ore fines and dust of lime stone, dolomite, IF/EAF flue dust, BF dust & sludge as well as coke dust iron ore agglomerate sinter will be produced, which will be used along with lumpy iron ore, Oxygen & coke in MBF to produce 0.596 MPTA hot metal, part of which will be casted to pig iron and both these products will be utilised in EAF & IF. Top pressure recovery Turbine will generate 2.5 MW power.

9. Sponge Iron will be manufactured in 4x500 TPD & 4x350 TPD DRI kilns and used in 3x20T IF & 2x80T EAF with LF along with hot metal/Pig iron to produce liquid steel, which will be casted in CCM and thus 1.0 MTPA steel billets will be manufactured for sale. AFBC boiler will be set up to generate 35 MW power fully utilising dolchar generated from DRI kilns with fresh coal support. This generation will be reduced to 24.5 MW as and when power is generated from Coke Dry Quenching & TRT of MBFs.

10. EAF & IF slags after iron recovery will be used as construction material for road construction and filling of low lying land. Granulated Blast Furnace slag and Power plant Fly & bottom ash will be sold to Cement plants. DRI dust to be dumped in abandoned coal mines with due permission, to be used in filling low lying land.

11. An Air separation unit will be set up to produce Oxygen & Nitrogen by liquefaction of air and fractional distillation. Both will be utilised in process.

12. The targeted production capacity of the project is 1.0 MTPA Steel billet. The Iron ore for the plant would be procured from Banspani mines of Barbil Odisha and Coking coal to be imported from Canada through Dhamra port, non-coking coal from Talcher coal mines of Odisha and Dolomite from Katni. The ore transportation will be done through Rail & Road through Environment compatible vehicle and fully covered.

13. The fresh water requirement of the project is estimated as 13,165 m³/day, the required water will be drawn from Kangsabati river. The permission for drawl of 600m³/hour has been taken from Irrigation & water ways Department, Govt. of WB as per recommendation of WBIDC, vide Lr. No-17/1-4 m-26(06)Pt, dated 23/03/2010.

14. The power requirement of the project is estimated as 153 MW, and captive generation will be 205 MW, hence balance power will be sold.

15. Baseline Environmental Studies were conducted during Post-Monsoon season i.e. from 1st November, 2017 to 31st January 2018., Ambient air quality monitoring has been carried out at 8 locations during 01.11.2017 to 31.01.2018, and the data submitted indicated: PM₁₀ (61.9 µg/m³ to 92.3 µg/m³), PM_{2.5} (27.2 to 43.5 µg/m³), SO₂ (6.1 to 9.6 µg/m³) and NO_x (10.5 µg/m³ to 18.9 µg/m³), CO 342-473 µg/m³. The results of the modelling study indicate that the maximum increase of GLC for the proposed project is 2.53 µg/m³ with respect to the PM₁₀, 1.49 µg/m³ with respect to PM_{2.5}, 34.11 µg/m³ with respect to the SO₂ and 44.65 µg/m³ with respect to the NO_x.

16. Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 7.1 to 7.5, Total Hardness 88 to 116 mg/l, Chlorides: 26.4 to 36 mg/l, Fluoride: 0.08 to 0.32 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 8 locations. pH: 7.23 to 7.64; DO: 4.8 to 6.8 mg/l and BOD: 5.0 to 8.8 mg/l & COD 18-32 mg/l.

17. Noise levels are in the range of 43.6 to 49.6 dBA for day time and 30.2 to 49.3 dBA for night time.

18. It has been reported that there are no settlement in the core zone of the project. No R&R is involved.

19. It has been reported that a total of 29,66,830 TPA of solid waste will be generated due to the project, out of which 2,72,000 TPA dolchar will be used in Power Plant for generation of power, 3,17,670 TPA will be consumed in Sinter plant and 4,36,010 TPA will be supplied/sold to cement plant, 1,20,000 TPA will be used as construction material and balance 18,21,150 TPA DRI ash & dust will be dumped in abandoned mines with due permission from authority. It has been envisaged that an area of 6.22 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.

20. It has been reported that the Consent to Operate from the West Bengal. State Pollution Control Board has been renewed vide Memo. N0-5899-2359/WPB (HRO).K/2009, dtd. 05.05.2017 up to 31.3.2022.

21. The Public hearing of the project was held on 15.05.2018 at Dauka, under the chairmanship of Sri S.K. Mina, IAS, Addl. District Magistrate (G) DLLRO, Paschim Medinipur for expansion of 0.6 MTPA Non-Recovery Coke oven and 40 MW power plant to 1.0 MTPA Integrated steel, 1.2 MTPA Non-Recovery Coke-Oven & 205 MW power plant. Points raised in hearing by public and reply & commitment of Sri Navin Maheshwari, Director of M/s BEL, who represented the management have been given below.

S.N	Name of Public	Issues raised by Public	Commitment of P P
1	Sri Sarat Pramanik, Tentulmuri	Source of water for the plant and concern on pollution due to expansion	Water requirement will met from nearby river for which the company has requisite permission. Pollution control norms of statutory authorities will be followed & proper control measures will be

S.N	Name of Public	Issues raised by Public	Commitment of P P
			taken for abatement of pollution. Green belt will be further strengthened.
2	Sri Subod Dey, Khorigaria Sri Sukumar Das, Khorigaria	Concern on pollution due to expansion, its control so as to provide a better environment for local village.	Pollution control norms of statutory authorities will be followed & proper control measures will be taken for abatement of pollution. Green belt will be further strengthened.
3	Sri Mantu Behari Patra	Enquired about development of the area due to expansion	CSR activities are being carried out regularly and will also continue on regular basis.
4	Sri Anil Singh, Banspukuria Sri Dipak Pal, Tentulmuri	Employment provision for local people and their safety aspects.	The issue will be addressed.
5	Sri Badal Patra, Tentulmuri	Requested the proponent to assist local people for health protection and provide food like gur and channa to the labours.	The issue will be addressed.
6	Sri Durgapada Das, Khorigaria Sri Dhananjoy Bhuiya, Khorigaria Sri Bhadreswar Singh, Nangunia	Provision of training programs for skill development to local and employment opportunities.	The issue will be addressed.
7	Sri Sujit Khara, Malka	Concern about control of pollution and employment opportunities for locals.	Pollution control norms of statutory authorities will be followed & proper control measures will be taken for abatement of pollution. Green belt will be further strengthened.

22. An amount of Rs. 1810.00 lakhs of the project cost have been earmarked to be spent towards the sustainability of project as well benefit of the public as per issues raised during public hearing and SIA study of the project area. Fund allocation and time of completion are as given below.

S.No.	Item	Description		Ist Yr (lacs)	2nd Yr (lacs)	3rd Yr (lacs)	Total
1	Refreshers course to technical persons, on advanced industrial training and practical exposure to industries, like process, safety, disaster etc.	Rent Establishment + Training Material + Stipend+ faculty		60	60	60	180
2	Development of water shed and renovation of water bodies in Banspukuria, Tentulmuri villages	12 Nos of New & Existing water bodies @ 4 Nos/Yr. @ Rs 400000	Digging, Paving, de-siltation & removal of Aquatic weeds	16	16	16	48
3	Construction of village community center and its renovation	3500000/ Village	3 Villages with community hall, recreational and study centers	35	35	35	105
4	Strengthening of approach roads	Proposing 4 km CC Approach & Village Roads	Rs 1200000./Km for widening & strengthening	48	48	48	144
5	Adoptation of primary schools and Anganwadi Centres	3 Schools & 3 Anganwadi centres	Renovation of the school building, construction of toilets, provide bench & desk	25	25	25	75
6	Technical and Infrastructural aid to farmers.	Providing deep irrigation points with electricity, supply of high yield seeds, fertilizer to poor farmers. The villages will be decided in consultation with local administration.		35	30	65	130
7	Promote artisans	Hand loom and Dhokra metal casting are famous cottage industries of the		15	22	18	55

S.No.	Item	Description	Ist Yr (lacs)	2nd Yr (lacs)	3rd Yr (lacs)	Total
		area are in ruined condition to be resumed with modernisation				
8	Swatch Bharat Mission	Providing Tractors, Back Hoe cum toploader, dust bins and development of the dump yard	300	300	225	825
9	Energy efficient street light	Electrification of the village with energy efficient LED bulbs.	77	78	76	231
10	Plantation and distribution of saplings in and around the villages	Adoptation of 5 villages for plantation and distribution of saplings	5.4	7.2	4.4	17
11	Total expenditure		1810			

23. The capital cost of the project is Rs.4943 Crores and the company will invest 155 Crore (about 4 % of total project cost) as capital investment towards implementation of Environmental Management Plan. The Annual recurring cost will be about 18 crore details are as follows.

Category	Capital Cost (INR Cr)	Recurring Cost (INR Cr)
Air pollution Equipments	111.65	8
Water Pollution Control Machinery & Construction	28	3
Rainwater Harvesting	2.5	0.8
Occupational Health	1.5	1
Green Belt Development	0.10	0.03
Environmental Monitoring	1.1	0.5
Solid Waste management	3.2	1.5
Safety & Disaster Management	5.3	2.5
EMS & Capacity Development	1.75	1
Total	155.1	18.33

24. Greenbelt has already been developed in 56 Ha of land which is about 34.5% of the total acquired area. A wide greenbelt, consisting of at least 3 tiers around plant boundary

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

26. Name of the consultant: GLOBALTECH Enviro Experts Pvt. Ltd. [S.No. 77, List of Accredited Consultant Organizations (Alphabetically) Rev. 74, March 07, 2019].

Observations of the Committee: -

27. The Committee noted that the issues regarding air quality modelling and emission control from waste heat recovery boiler have not been adequately addressed, and the project proponent needed to provide complete information in the matter. Further, the Committee also noted that dedicated environment cell at the plant site has not been established.

Recommendations of the Committee: -

28. After detailed deliberations, and in view of the aforesaid shortcomings, the Committee sought the following additional information from the project proponent for further re-consideration of the proposal.

- i. Dedicated environment management cell shall be established at the plant site and details shall be submitted.
 - ii. Revised Corporate Environment Policy inter-alia including reporting mechanism for non-compliances/deviations/emergencies shall be submitted.
 - iii. Scheme for emission control by way of waste heat recovery boiler to meet the statutory norms shall be submitted.
 - iv. Confirmation regarding provision of fourth hole extraction system and waste heat recovery system in the Electric Arc Furnaces shall be furnished.
 - v. Present level of emissions from existing coke oven batteries as prescribed in G.S.R.No. 277(E) dated 31/03/2012 shall be submitted.
 - vi. The Air quality modelling data needs to be reviewed to assess the worst case scenario and provide control measures required to address such occurrences.
 - vii. Quantity of raw materials and products to be transported by different modes such as road and rail respectively shall be submitted by the project proponent.
- 5.27 Expansion of ingot/billet production from 90 TPD (2x2 TPH Induction furnace) to 300 TPD by establishing 12 TPH Induction furnace by **M/s. Sri Mahavir Steel** located at Survey No. 562, 562A, 562AA, Veerlapally village, Kothur mandal, Mahbubnagar district, Telangana – [Online proposal No. IA/TG/IND/95159/2019; MoEF&CC File No. IA-J-11011/68/2019-IA-II(I)] - **Terms of Reference.**

M/s. Mahavir Steel made an application vide online proposal no. IA/TG/IND/95159 dated 20th February 2019 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

2.0 The proposed unit will be located at Veerlapally village, Kothur mandal, Mahbubnagar district, Telangana.

3.0 The project land is owned by the proponent Sunil Agarwal. It is an Orange category industry that comes under the Industrial area of Kothur Mandal in Telangana. The industry is existing with Shed, Two induction furnaces of capacity 2TPH and a Re-rolling mill. The

industry is now proposing production of additional 12 TPH with one more additional induction furnace in the same premises.

4.0 The total land area available is 7 Acres and 9 Guntas. This area is earmarked as industrial area by the Govt. of industries and commerce department as per GO MS No. 49 dated 1st February 1992.

5.0 There is no National Park or Wild life sanctuary within 15 KM radius of the industry. The area also does not report to form corridor for Schedule-I fauna.

6.0 The cost of the project is Rs. 4-5 crores along with all the accessories. This project will require around 190 Members to be employed directly and around 120 people may be employed indirectly for the project.

7.0 The mode of transport for raw materials and finished products is by road.

Existing Induction Furnace	Existing production capacity	Proposed additional Furnace	Capacity of proposed Furnace	Total production after expansion
2x2 TPH	90 TPD ingots/billets	12 TPH	210 TPD ingos/billets	300 TPD billets/ingots

8.0 The electricity load of 9.9 MW and will be supplied by Telangana Electricity supply board from a nearby electrical H.T. line. Company has also proposed to install 325 and 165 KVA DG Sets.

9.0 Raw material required for the project are Pig iron, Sponge iron and Iron scrap.

10. The water will be supplied by gram panchayat. Water requirement for the project is approx. 60 KLD. Water is recycled for cooling of the furnaces regularly. Drinking water is supplied to the industry by various marketing agencies. For sewerage system water is supplied by the gram panchayat.

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

Observations and Recommendations of the Committee: -

After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at **Annexure-1 read with additional ToRs at Annexure-2:**

- One additional gate shall be provided to facilitate ease of accessibility during any emergency. Accordingly, the layout plan, *inter alia*, incorporating the provision of additional gate shall be furnished in the EIA report.
- Rainwater harvesting for water collection amounting to more than or equal to the water requirement of the unit shall be ensured.
- Greenbelt shall be developed in an area of 2.5 acres within the time frame of one year from the date of environment clearance.
- Bag filter(s) shall be used to control particulate emissions. No wet scrubbing is allowed.
- No ground water shall be abstracted.

- 5.28 Proposed expansion in production of MS Ingots from 2500 MT/M to 7500 MT/M; Twisted and ribbed bars from 4000 MT/M to 10000 MT/M by **M/s.Prime Gold International Limited** located at S.F.Nos. 284/2B, 289/2A2, 289/2A3, 290/1B, 289/2C, 283/3, 284/1B2, 289/2B3, 282/1B, 283/4, 290/1A, 285/1C, 284/1B1, 289/2B1, 289/2B2, 282/2A at Kalugondapalli Village Denkanikotta Taluk, Krishnagiri District, Tamil Nadu. [Online proposal No. IA/TN/IND/96729/2019; MoEF&CC File No. IA-J-11011/78/2019-IA-II(I)] - **Terms of Reference.**

M/s. Prime Gold International Limited has made online application vide proposal no. IA/TN/IND/96729/2019 dated 12th March, 2019 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “B” EIA Notification, 2006. However, due to the applicability of general condition i.e., existence of interstate boundary within 5km radial distance of the site, the project is being appraised at the Central level as Category ‘A’.

Details submitted by the project proponent

2. M/s. Prime Gold International Limited has proposed to expand the existing Steel Rolling Mill to enhance the production of TMT bars & rods and M.S. Billets from 48000 TPA to 120000 TPA and 30000 TPA to 120000 TPA at S.F Nos. 284/2B, 289/2A2, 289/2A3, 290/1B, 289/2C, 283/3, 284/1B2, 289/2B3, 282/1B, 283/4, 290/1A, 285/1C, 284/1B1, 289/2B1, 289/2B2, 282/2A, Kalukondapalli Village, Denkanikotta Taluk, Krishnagiri District, Tamil Nadu.

3. The existing capacity of induction of furnace is 30000 TPA and steel bars & Rods with a capacity of 48000 TPA was established in the year of 2005 and does not come under the purview of the EIA Notification, 2006. The existing and the proposed product slate is given as below:

Product	Quantity (TPA)		
	Existing	Proposed	After Expansion
Steel Bars and Rods	48,000	72,000	1,20,000
M.S.Ingots	30,000		
(M.S.Billet)		90,000	1,20,000

4. The land requirement for the project is 7.98 Ha. No forestland is involved in the project. The entire land has been acquired for the project. Of the total area 7.98 ha, 33 % land will be used for green belt development. The latitude and longitude of the project site is given as below:

Latitude	Longitude
12°38'58.42"N	77°44'51.46"E
12°38'56.89"N	77°44'55.79"E
12°38'47.31"N	77°44'56.28"E
12°38'48.07"N	77°44'54.55"E

Latitude	Longitude
12°38'47.69"N	77°44'52.09"E

5. Project does not fall in any national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc., or the core and buffer zone thereof. The project area also is not reported to form part of a corridor for Schedule-I fauna.

6. Total project cost is approx Rs. 45 Crores [Existing: Rs 35 Crores and Expansion: Rs 10 Crores].

7. The raw materials requirement for the proposed expansion is given as below:

S.No	Name of Raw material	Capacity (MT/Annum)		
TO MANUFACTURE MS INGOTS/ BILLETS (To increase capacity from 30,000 TPA to 1,20,000 TPA)				
		Existing	Proposed addition	Total After expansion
1	M.S.Scrap	25800	70200	96000
2	Sponge Iron	6300	27300	33600
3	Ferro Alloys	390	1170	1560
			Total: 131160	
TO MANUFACTURE TWISTED & RIBBED BARS (To increase capacity from 48,000 to 1,20,000 TPA)				
1.	MS INGOTS/BILLETS (In house)	30000	90000	120000
	MS INGOTS/ BILLETS (Outsourced)	21, 600	-	9600
	TOTAL	51,600	-	129600

8. The fresh water requirement is 25 KLD which will be met from local panchayat. Total Power load requirement after expansion will be 13000 KVA and will be sourced from TNEB.

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

10. Name of the consultant: M/s. Pridhvi Envirotech (P) Ltd. [S.No. 123, List of Accredited Consultant Organizations (Alphabetically) Rev. 74, March 07, 2019].

Observations and recommendations of the Committee: -

11. After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at **Annexure-1 read with additional ToRs at Annexure-2:**

- i. Project proponent shall use only bag filter(s), and shall not use wet scrubber.
- ii. Water withdrawal permission of the competent authority shall be submitted.
- iii. Project proponent shall explore the possibility to switch over from solid fuel to liquid fuel in the existing reheating furnace.
- iv. New furnace shall be equipped with hot charging facility.
- v. Certified copy of CTO compliance from the Regional Office of the SPCB shall be submitted.
- vi. Public Hearing shall be conducted by the concerned State Pollution Control Board.
- vii. The issues raised during public hearing and commitment of the project proponent to address the same along with time bound action plan to implement the commitment with matching financial allocation shall be provided.
- viii. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018.

5.29 Expansion of existing plant [MS ingots from 90 TPD to 711 TPD; MS skelp from 165 TPD to 699 TPD; Pipes through tube mill from 165 TPD to 1000 TPD; Scaffolding – 50 TPD; Galvanized strips/coils – 300 TPD and Hot dip galvanizing of MS ERW tubes – 300 TPD] by **M/s. Mahalaxmi Profiles Private Limited** located at survey No. 287, 288 & 289 of Kallakal Village, Manoharabad Mandal, Medak District– [Online proposal No. IA/TG/IND/96524/2019; MoEF&CC File No. IA-J-11011/76/2019-IA-II(I)] - **Terms of Reference.**

M/s. Mahalaxmi Profiles Private Limited made an application vide online proposal no. IA/TG/IND/96524/2019 dated 8th march 2019 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

2. The proposed Expansion [Ms ingots from 90 TPD to 711 TPD; MS skelp from 165 TPD to 699 TPD; Pipes through tube mill from 165 TPD to 1000 TPD; Scaffolding – 50 TPD; Galvanized strips/coils – 300 TPD and Hot dip galvanizing of MS ERW tubes – 300 TPD] will be within the existing plant premises at survey No. 287, 288 & 289 of Kallakal Village, Manoharabad Mandal, Medak District, Telangana

3. The existing plant is having land measuring 8.30 acres. Now, an additional 10 Acres 27 Guntas of land is acquired for the proposed expansion which is adjoining the existing plant. Total after expansion is about 19 Acres 17 Guntas. This area is earmarked as industrial area by the Govt. of industries and commerce department as per GO MS No. 49 dated 1st February 1992.

4. There is no National Park or Wild life sanctuary within 15 KM radius of the proposed project. The area also is not reported to form part of corridor for Schedule-I fauna.

5. The expansion Project Cost has been estimated at Rs. 150 Crores.

6. The proposed expansion project creates employment to 500 people during construction and 500 people during operational phase of the project.

7. The following are the details of production capacities of existing and proposed expansion project:

S. No.	Product	Capacity		
		Existing	Expansion	After Expansion
1.	MS Billets through Induction Furnace	90 TPD	621 TPD	711 TPD
2.	MS Skelp through Strip mill	165 TPD	534 TPD	699 TPD
3.	Pipes through Tube Mill	165 TPD	835 TPD	1000 TPD
4.	Scaffolding	--	50 TPD	50 TPD
5.	Galvanized Strips/Coils	--	300 TPD	300 TPD
6.	Hot Dip Galvanizing of MS ERW Tubes	--	300 TPD	300 TPD

Existing Induction furnace	Existing Production	Proposed Additional Induction furnaces	Proposed Production capacity	Total Capacity after expansion
12 TPH (1 active and 1 Stand-by)	90TPD Ingots/ billets	12 TPH: 6 No.s (3 Active 3 Stand-by)	621 TPD Ingots/ billets	711 TPD Ingots/ billets

8. The electricity load of 15500 KVA and will be supplied by Telangana Electricity supply board from a nearby electrical H.T. line. Company has also proposed to install 750 and 380 KVA DG Sets.

9. Raw material required for the project are Pig iron, Sponge iron and Iron scrap. Raw material and finished products will be transported via road.

10. The water will be supplied by gram panchayat. Water requirement for the project is:

Industrial: 21KLD; Domestic: 3 KLD (Existing)

Industrial: 55KLD; Domestic: 10 KLD (Proposed)

Water is recycled for cooling of the furnaces regularly. Drinking water is supplied to the industry by various marketing agencies. For sewerage system water is supplied by the gram panchayat.

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

Observations and Recommendations of the Committee: -

After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at **Annexure-1 read with additional ToRs at Annexure-2:**

- i. Details of process and process equipment shall be furnished including generation of hazardous waste such as zinc dross.
 - ii. Rainwater harvesting for collection of water amounting to more than or equal to water requirement of the unit shall be ensured.
 - iii. No ground water shall be abstracted.
- 5.30 Expansion of induction furnace from 2x2.5 TPH to 9TPH; new induction furnace of 25TPH capacity; expansion of re-rolling mill from 72000 TPA to 159000 TPA by **M/s. Dilip Re-rolling Private Limited** located at Survey No. 21 to 24, Gunded Village, Balanagar Mandal, Mahbubnagar District Telangana – [Online proposal No. IA/TG/IND/96173/2019; MoEF&CC File No. IA-J-11011/67/2019-IA-II(I)] - **Terms of Reference.**
- M/s. Dilip Re-rolling Private Limited** made an application vide online proposal no. IA/TG/IND/96173/2019 dated 8th march 2019 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.
2. The proposed Expansion induction furnace from 2x2.5 TPH to 9TPH; new induction furnace of 25TPH capacity; expansion of re-rolling mill from 72000 TPA to 159000 TPA will be within the existing plant premises at Survey No. 21 to 24, Gunded Village, Balanagar Mandal, Mahbubnagar District Telangana
 3. The project land is owned by the proponent Goverdhan Das Agarwal. The total land area available is 14 Acres and 2.6 Guntas.
 4. There is no National Park or Wild life sanctuary within 15 KM radius of the industry. The area also does not report to form corridor for Schedule-I fauna.
 5. The cost of the project is Rs. 7 crores along with all the accessories. This project will require around 350 Members to be employed directly and around 150 people may be employed indirectly due to the project.
 6. The industry is existing with two induction furnaces with a total production of 99.6 TPD (29880 TPA) and a re-rolling mill of the capacity 72000 TPA. Now the industry is proposing expansion of the existing induction furnace unit to produce 180 TPD and addition of another induction furnace unit with a production capacity of 25 TPH (350 TPD) in the same premises.

Existing Induction furnace	Existing Production capacity	Proposed Expansion	Total Production capacity after expansion
2 x 2.5 TPH	99.6 TPD Ingots and billets	9 TPH x 2 Induction furnace (one Operational; One Standby)	180 TPD Ingots and billets

Unit 2: Proposed new unit

Proposed capacity of New induction furnace	Production Capacity of the induction furnace
25 TPH x 2 (One Operational; One stand-by)	350 TPD Ingots and billets

Re-Rolling Mill:

Existing Capacity	Total Production after expansion
72000 TPA (TMT Bars)	159000 TPA (530 TPD) with additional production of TMT bars, rounds, flats, angles, channels, beams

7. The electricity load of 15000 KVA and will be supplied by Telangana Electricity supply board from a nearby electrical H.T. line. Company has also proposed to install 325 and 265 KVA DG Sets.

8. Raw material required for the project are Pig iron, Sponge iron and Iron scrap. Raw material and finished products will be transported via road.

10. The water will be supplied by gram panchayat. Water requirement for the project is approx. 60 KLD. Water is recycled for cooling of the furnaces regularly. Drinking water is supplied to the industry by various marketing agencies. For sewerage system water is supplied by the gram panchayat.

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

Observations and Recommendations of the Committee: -

After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at **Annexure-1 read with additional ToRs at Annexure-2:**

- i. Details of process and process equipment shall be furnished.
 - ii. Rainwater harvesting for collection of water amounting to more than or equal to water requirement of the unit shall be ensured.
 - iii. Project proponent shall use bag filter(s) only for PM emission control and shall not use any wet scrubber.
 - iv. No ground water shall be abstracted by the project proponent.
- 5.31 Proposed Expansion of existing Steel Plant by installation of Sponge Iron Plant (1x400 TPD), Induction Furnaces (2x15 T), Rolling Mill (0.15 MTPA) along with 19 MW capacity Captive Power Plant, utilising waste heat & dolochar from existing & proposed Sponge Iron Plant **by M/s. Mark Steels Limited** located at Village – Jagannathdihi, Mouza – Rakta & Balitora, P.O. Murulia, P.S. Santuri, Dist. – Purulia, West Bengal [Online proposal No. IA/WB/IND/98690/2019; MoEF&CC File No. IA-J-11011/79/2019-IA-II(I)] - **Terms of Reference.**

M/s. Mark Steels Limited has made online application vide proposal no. IA/WB/IND/98690/2019 dated 9th March, 2019 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category “A” EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the project proponent

2. M/s. Mark Steels Limited proposes an expansion of Steel Plant by installation of Sponge Iron Plant (1x400 TPD), Induction Furnaces (2x15 T), Rolling Mill (0.15 MTPA) along with 19 MW capacity Captive Power Plant (12 MW WHRB based & 7 MW AFBC based, utilising waste heat & dolochar from existing & proposed Sponge Iron Plant) at the existing premises located at Village – Jagannathdihi, Mouza – Rakta & Balitora, P.O. Murulia, P.S. Santuri, Dist. – Purulia, West Bengal.

3. The Company obtained Consent to Establish from WBPCB vide Memo No. 1798-2N-2365/2001 dated 28.05.2002 for Rotary Kiln-1 of 100 TPD capacity, Consent to Establish from WBPCB vide Memo No. 7089-2N-502/2003 dated 24.06.2004 for Rotary Kiln-2 of 100 TPD capacity, Consent to Establish from WBPCB vide Memo No. 1736-III/WPB/SEE(KO)-GEN/2003 dated 13.09.2004 for Induction Furnaces of 2x7 T capacity, Consent to Operate from WBPCB vide Consent Letter No. CO87493 Memo. No. 892-WPBA/Red(Prl)/Cont(96)/03 dated 08.03.2016 for 2 Rotary Kilns & 2 Induction Furnaces. Extension of validity of Consent to Operate from WBPCB valid till 31.03.2019 has been obtained vide letter No. 1964/WPBA/Red (Prl)/Cont(96)/03 dated 29.11.2017. Now, the Company is planning to set up few new units in the existing plant premises.

4. The proposed unit is located at Village – Jagannathdihi, J.L. No. 10, Mouza – Rakta, J.L. No. 13, Mouza – Balitora, P.O. Murulia, P.S. Santuri, Dist. – Purulia, Pin – 723121, West Bengal. The geographical co-ordinates are Latitude 23°37'04.72"N to 23°37'16.42"N and Longitude 86°51'38.22"E to 86°51'51.03"E with Above Mean Sea Level (AMSL) of 133 m.

5. The proposed expansion project will be installed on the available land within the existing plant premises, comprising total 21.5 acres (8.7 hectares) of land. No forest land involved. The entire land has been acquired for the project.

6. Project area does not fall in any national park / wildlife sanctuary / biosphere reserve / tiger reserve / elephant reserve, etc. or in the core and buffer zone thereof.. The area also is not reported to form part of corridor for Schedule-I fauna.

7. Total project cost is approx. Rs. 229 Crores. Manpower, to the tune of 400 persons will be required for the plant operations.

8. The targeted production capacity of the proposed Sponge Iron Plant (1x400 TPD DRI Kiln) is 1,20,000 TPA, Induction furnaces (2x15 T) is 90,000 TPA, Rolling Mill is 500 TPD & 19 MW capacity Captive Power Plant (12 MW WHRB based & 7 MW AFBC based, utilising waste heat & dolochar from existing & proposed Sponge Iron Plants) The raw material transportation will be done through Rail and road.

9. The existing as well as proposed capacity for different products are presented as given below:

Sl. No.	Unit	Existing Units Capacity	Proposed Units Capacity	Total Units	Product
1	Sponge Iron Plant	2x100 TPD (72,000 TPA)	1x400 TPD (1,20,000 TPA)	2x100 TPD + 1x400 TPD (1,92,000 TPA)	Sponge Iron
2	Induction Furnaces (with matching LRF)	2x7 T (50,400 TPA)	2x15 T (90,000 TPA)	2x7 T + 2x15 T (1,40,400 TPA)	Liquid Steel
3	Continuous Casting Machine (CCM)	-	89,000 TPA	1,39,400 TPA	Billets
4	Rolling Mill	-	500 TPD (1,50,000 TPA)	500 TPD (1,50,000 TPA)	TMT Bars
5	Captive Power Plant	-	19 MW (12 MW WHRB based & 7 MW AFBC based)	19 MW (12 MW WHRB based & 7 MW AFBC based)	Power

10. The estimated power requirement of the proposed expansion project is about 22 MW. The above power requirement for the plant is proposed to be met from proposed 19 MW captive power plant and from DVC.

11. Proposed raw materials and fuel requirement for major products of the project are as follows.

SL. NO.	RAW MATERIALS	ANNUAL REQUIREMENT (IN TPA)	SOURCE
SPONGE IRON PLANT (1x400 TPD)			
1.	Iron Ore	2,30,000	Orissa
2.	Imported Coal	1,87,200	South Africa
3.	Lime Stone	4,608	Market
INDUCTION FURNACES (2x15 T)			
1.	Sponge Iron	80,000	In House DRI Plant
2.	Scraps	13,000	In House Plant & Market
3.	Pig Iron	15,000	Market
4.	Ferro Alloys	775	Market
CAPTIVE POWER PLANT - 7 MW BASED ON AFBC BOILER			
1.	Imported Coal	42,500	South Africa
2.	Dolochar	42,500	In House DRI Plant

12. The total requirement of make-up water to meet process make-up and drinking needs of the proposed new facilities will be 368 m³/day, to be sourced from DVC water supply facilities. Domestic wastewater will be treated in septic tank-soak pit system and industrial waste water generated will be treated in water treatment facility and reused completely.

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

14. Name of the consultant: M/s. Envirotech East Pvt. Ltd. [S.No. 54, List of Accredited Consultant Organizations (Alphabetically) Rev. 74, March 07, 2019].

Observations and recommendations of the Committee: -

15. After detailed deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at **Annexure-1 read with additional ToRs at Annexure-2:**

- i. No ground water shall be abstracted.
- ii. No reheating furnace shall be used.
- iii. Action plan for 100% waste utilization shall be submitted.
- iv. Certified copy of CTO compliance from the Regional Office of the SPCB shall be submitted by the project proponent. Public Hearing shall be conducted by the concerned State Pollution Control Board.

- v. The issues raised during public hearing and commitment of the project proponent to address the same along with time bound action plan to implement the commitment with matching financial allocation shall be provided by the project proponent.
 - vi. The project proponent should carry out social impact assessment of the project and submit the Corporate Environment Responsibility Plan as per the Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1/05/2018.
- 5.32 Expansion of existing unit of 1x50 TPD (15,000 TPA) DRI by 3x100 TPD DRI (1,05,000 TPA of sponge iron), 2x15T IF, 1x30T LF (1,05,000 TPA of MS Billets), 310 TPD Rolling mill (1,00,000 TPA of Rods/bars/light structurals), 1X9 MVA SAF (15,000TPA of Fe-Mn/Si-Mn), 1x5 TPH, 2 X 10TPH WHRB & 1X32 TPH FBC Boiler, and 16 MW Captive Power Plant (7 MW of WHRB and 9 MW of FBC) **by M/s. Damodar Ispat Limited** at Jamuria Industrial Estate, Village- Ikra, PO.- Mondalpur, Tehsil Jamuria, District Paschim Bardhaman, West Bengal – [Online proposal No. IA/WB/IND/99016/2012; MoEF&CC File No. J-11011/366/2010- IA.II (I)] – **Validity extension of environmental clearance.**

M/s. Damodar Ispat Limited has made online application vide proposal no. IA/WB/IND/99016/2012 dated 12th March, 2019 along with Form I sought for validity extension of the environmental clearance accorded by the Ministry vide letter no. F.No. J-11011/366/2010- IA-II(I) dated 2nd April, 2012.

Details submitted by the project proponent

2. Environment Clearance was obtained from MoEFCC, New Delhi vide letter no. J-11011/366/2010- IA II (I) dated 02nd April, 2012 for Expansion of existing unit of 1x50 TPD (15,000 TPA) DRI by 3x100 TPD DRI (1,05,000 TPA of sponge iron), 2x15T IF, 1x30T LF (1,05,000 TPA of MS Billets), 310 TPD Rolling mill (1,00,000 TPA of Rods/bars/light structurals), 1X9 MVA SAF (15,000TPA of Fe-Mn/Si-Mn), 1x5 TPH, 2 X 10TPH WHRB & 1X32 TPH FBC Boiler, and 16 MW Captive Power Plant (7 MW of WHRB and 9 MW of FBC) at Jamuria Industrial Estate, Village- Ikra, PO.- Mondalpur, Tehsil Jamuria, District Paschim Bardhaman, West Bengal.
3. Due to paucity of fund by the erstwhile promoters/ management, the expansion project could not take off and the existing plant could only operate intermittently. After taking over of the said plant by the new management, it has decided to implement the expansion project for which environmental clearance was accorded by the Ministry on 02/04/2012. Now, the new management has already tied up with equipment suppliers, appointed consultants for civil, structures and installation of equipment as informed.
4. Subsequently, the company has obtained Consent to Establish from West Bengal Pollution Control Board vide memo no. 211-2N-51/2003 dated 15.02.2019 for Sponge Iron - 120000 TPA, MS Billets - 105000 TPA, MS rods/ Bars/ Light Structures - 100000 TPA, Ferro Manganese/ Silico Manganese- 15000 TPA, Power (Captive) - 16 MW at existing unit premises at Jamuria Industrial Estate District Paschim Bardhaman, West Bengal. The company has already started construction activities and the project is expected to be completed in 24 months.

5. The details of the plant with existing operating capacity, capacity as per granted EC, status of implementation and expected completion time is tabulated as below: -

S. No.	Plant	Existing Operating Capacity	Capacity as per granted EC dated 2nd April, 2012	Status of Implementation	Expected Completion Time
1.	Sponge Iron	50 TPD DRI Plant (15000 TPA)	3 X 100 TPD & 1X 50 TPD (120000 TPA)*	Under Construction	Nov., 2020
2.	MS Billets	Nil	2X15 Ton IF (Induction Furnace) & 1X30 Ton LF (Ladle Furnace) (105000 TPA)	Order Placed. Construction to begin from May, 2019.	Dec., 2020
3.	Rolling Mill	Nil	310 TPD (100000 TPA of rolled/bars/light structure)	Order Placed. Construction to begin from August, 2019.	Dec., 2020
4.	SAF	Nil	1X9 MVA (15000 TPA of Fe-Mn/ Si-Mn)	Under Planning.	Jan., 2021
5.	WHRB	Nil	7 MW (1X5 TPH & 3X 10 TPH)	Under Construction	Nov., 2020
6.	Captive Power Plant	Nil	9 MW (1X 32 TPH FBC boiler)	Under Construction	Nov., 2020

* Instead of 3 X 100 TPD & 1X 50 TPD, 1X 350 TPD will be installed. Also, existing 50 TPD will be dismantled after commissioning of 1X350 TPD. Consent to Establish has also been obtained for 1X350 TPD only.

Observations and recommendations of the Committee: -

6. After detailed deliberations, the Committee recommended to extend the validity of the Environmental Clearance for a period of three years beyond 01/04/2019, i.e., from 02/04/2019 to 01/04/2022 subject to environmental safeguards. All other terms and conditions stipulated in the environmental clearance accorded vide letter no. J-11011/366/2010- IA-II(I) dated 2nd April, 2012 shall remain unchanged.

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 (Quantative) from raw material to products to be provided
 - x. Hazard identification and details of proposed safety systems.
 - xi. Expansion/modernization proposals:
 - a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MoEF&CC/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment, Forest and Climate Change as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB/PCC shall be attached with the EIA-EMP report.
 - b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.
4. Site Details
 - i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.

- ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places)
- iii. Co-ordinates (lat-long) of all four corners of the site.
- iv. Google map-Earth downloaded of the project site.
- v. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.
- vi. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.
- vii. Landuse break-up of total land of the project site (identified and acquired), government/private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)
- viii. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area
- ix. Geological features and Geo-hydrological status of the study area shall be included.
- x. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects)
- xi. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.
- xii. R&R details in respect of land in line with state Government policy

5. **Forest and wildlife related issues (if applicable):**

- i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable).
- ii. Land use map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (*in case of projects involving forest land more than 40 ha*).
- iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.
- iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon.
- v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area.
- vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife

6. Environmental Status

- i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
- ii. AAQ data (except monsoon) at 8 locations for PM₁₀, PM_{2.5}, SO₂, NO_x, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
- iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
- iv. Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
- v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC.
- vi. Ground water monitoring at minimum at 8 locations shall be included.
- vii. Noise levels monitoring at 8 locations within the study area.
- viii. Soil Characteristic as per CPCB guidelines.
- ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
- x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
- xi. Socio-economic status of the study area.

7. Impact Assessment and Environment Management Plan

- i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.
- ii. Water Quality modelling – in case, if the effluent is proposed to be discharged in to the local drain, then Water Quality Modelling study should be conducted for the drain water taking into consideration the upstream and downstream quality of water of the drain.
- iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.

- iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.
- v. Details of stack emission and action plan for control of emissions to meet standards.
- vi. Measures for fugitive emission control
- vii. Details of hazardous waste generation and their storage, utilization and disposal. Copies of MOU regarding utilization of solid and hazardous waste shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
- viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.
- ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.
- x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.
- xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.
- xii. Action plan for post-project environmental monitoring shall be submitted.
- xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

8. Occupational health

- i. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
- ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre-designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre-placement and periodical examinations give the details of the same. Details regarding last month analysed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
- iii. Annual report of health status of workers with special reference to Occupational Health and Safety.

- iv. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.
9. Corporate Environment Policy
- i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
 - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
 - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
 - iv. Does the company have system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report
10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
11. Corporate Environment Responsibility (CER)
- i. To address the Public Hearing issues, an amount as specified under Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 1st May 2018 amounting to Rs.crores, shall be earmarked by the project proponent, towards Corporate Environment Responsibility (CER). Distinct CER projects shall be carved out based on the local public hearing issues. Project estimate shall be prepared based on PWD schedule of rates for each distinct Item and schedule for time bound action plan shall be prepared. These CER projects as indicated by the project proponent shall be implemented along with the main project. Implementation of such program shall be ensured by constituting a Committee comprising of the project proponent, representatives of village Panchayat & District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office. No free distribution/donations and or free camps shall be included in the above CER budget
12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.
13. A tabular chart with index for point wise compliance of above ToRs.
14. The ToRs prescribed shall be valid for a period of three years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

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

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 (PM₁₀ and P_{2.5}) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM₁₀ to be carried over.
6. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
7. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
8. Plan for slag utilization
9. Plan for utilization of energy in off gases (coke oven, blast furnace)
10. System of coke quenching adopted with justification.
11. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
12. Trace metals in waste material especially slag.
13. Trace metals in water
14. Details of proposed layout clearly demarcating various units within the plant.
15. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs and outputs (material and energy balance).
16. Details on design and manufacturing process for all the units.
17. Details on environmentally sound technologies for recycling of hazardous materials, as per CPCB Guidelines, may be mentioned in case of handling scrap and other recycled materials.
18. Details on requirement of energy and water along with its source and authorization from the concerned department. Location of water intake and outfall points (with coordinates).
19. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
20. Details on toxic content (TCLP), composition and end use of slag.

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ADDITIONAL ToRS FOR PELLET PLANT

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
3. Recent land-use map based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for

the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.

4. PM(PM₁₀ and P_{2.5}) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM₁₀ to be carried over.
5. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
6. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
7. Plan for slag utilization
8. Plan for utilization of energy in off gases (coke oven, blast furnace)
9. System of coke quenching adopted with justification.
10. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
11. Trace metals in waste material especially slag.
12. Trace metals in water

ADDITIONAL ToRs FOR CEMENT INDUSTRY

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

ADDITIONAL ToRs FOR PULP AND PAPER INDUSTRY

- i. A note on pulp washing system capable of handling wood pulp shall be included.
- ii. Manufacturing process details for the existing and proposed plant shall be included. Chapter on Pulping & Bleaching shall include: no black liquor spillage in the area of pulp mill; no use of elemental chlorine for bleaching in mill; installation of hypo preparation plant; no use of potcher washing and use of counter current or horizontal belt washers. Chapter on Chemical Recovery shall include: no spillage of foam in chemical recovery plant, no discharge of foul condensate generated from MEE directly to ETP; control of suspended particulate matter emissions from the stack of fluidized bed recovery boiler and ESP in lime kiln
- iii. Studies shall be conducted and a chapter shall be included to show that Soda pulping process can be employed for *Eucalyptus/Casuarina* to produce low kappa (bleachable) grade of pulp.

- iv. Commitment that only elemental Chlorine-free technology will be used for the manufacture of paper and existing plant without chemical recovery plant will be closed within 2 years of issue of environment clearance.
- v. A commitment that no extra chlorine basebleaching chemicals (more than being used now) will be employed and AOx will remain within limits as per CREP for used based mills. Plan for reduction of water consumption.

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
INDUCTION/ARC FURNACES/CUPOLA FURNACES 5TPH OR MORE**

1. Details of proposed layout clearly demarcating various units within the plant.
2. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs and outputs (material and energy balance).
3. Details on design and manufacturing process for all the units.
4. Details on environmentally sound technologies for recycling of hazardous materials, as per CPCB Guidelines, may be mentioned in case of handling scrap and other recycled materials.
5. Details on requirement of raw materials, its source and storage at the plant.
6. Details on requirement of energy and water along with its source and authorization from the concerned department. Location of water intake and outfall points (with coordinates).
7. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
8. Details on toxic content (TCLP), composition and end use of chrome slag. Details on the recovery of the Ferro chrome from the slag and its proper disposal.

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

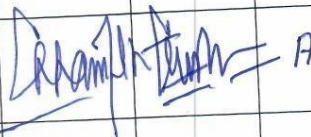




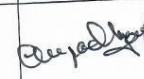
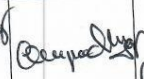


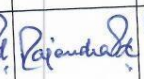
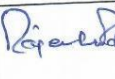



1. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs & outputs (material and energy balance).
2. Emission from sulphuric acid plant and sulphur muck management.
3. Details on installation of Continuous Emission Monitoring System with 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

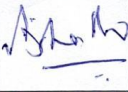
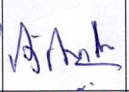
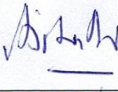
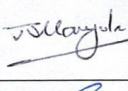
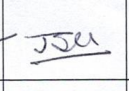
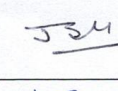



Executive Summary

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 gaseousemission, liquid effluent and solid and hazardous wastes. Materials balance shall be presented.
- v. Measures for mitigating the impact on the environment and mode of discharge or disposal.
- vi. Capitalcost of the project, estimated time of completion
- vii. Site selected for the project – Nature of land – Agricultural (single/double crop), barren, Govt/private land, status of is acquisition, nearby (in 2-3 km.) water body, population, with in 10km other industries, forest, eco-sensitive zones, accessibility, (note – in case of industrial estate this information may not be necessary)
- viii. Baseline environmental data – air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population
- ix. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.
- x. Likely impact of the project on air, water, land, flora-fauna and nearby population
- xi. Emergency preparedness plan in case of natural or in plant emergencies
- xii. Issues raised during public hearing (if applicable) and response given
- xiii. CSR plan with proposed expenditure.
- xiv. Occupational Health Measures
- xv. Post project monitoring plan

**LIST OF PARTICIPANTS OF EAC (I) IN 5th MEETING OF EAC (INDUSTRY-I) HELD
ON 27th to 29th MARCH, 2019**

SL. No.	NAME AND ADDRESS	POSITION	ATTENDANCE SIGNATURE		
			27 th	28 th	29 th
1	Dr. Chhavi Nath Pandey, IFS(Retired) Email: pandeychhavinath55@gmail.com	Chairman			
Members					
2.	<u>Dr. B. P. Thapliyal</u> , Representative of Central Pulp and Paper Research Institute, Saharanpur.	Member	A		A
3.	, Representative of Indian Meteorological Department, New Delhi.	Member	A	A	A
4.	Dr. G. Bhaskar Raju Email: gbraju55@gmail.com	Member	A	A	A
5.	Dr. Jagdish Kishwan, IFS (Retd.) Email: jkishwan@gmail.com	Member			
6.	Dr. G.V. Subramanyam Email: sv.godavarthi@gmail.com	Member	A	A	A
7.	Shri. Ashok Upadhyaya Email: ahupadhy@rediffmail.com	Member			
8.	Shri. R.P. Sharma Email: rpsh2@hotmail.com	Member			
9.	Shri. Sanjay Deshmukh docsvd@yahoo.com Email: sanjaydeshmukh@mu.ac.in	Member		A	A
10.	Prof. S.K. Singh Email: sksinghdee@gmail.com singhsk@email.com	Member			A

SL. No.	NAME AND ADDRESS	POSITION	ATTENDANCE SIGNATURE		
			27 th	28 th	29 th
11.	Dr. R. Gopichandran Email: r.gopichandran@vigyanprasar.gov.in	Member	A	A	A
12.	Shri. Jagannath Rao Avasarala Email: avasaraajagan@gmail.com	Member			
13.	Shri. J.S. Kamyotra Email: kamyotra@yahoo.co.in	Member			
14.	Shri. Aravind Kumar Agrawal Director, MoEF&CC	Member Secretary			

15. DR. Ashwani K. Dixit
Sr Scientist & Incharge
Chemical Recomp
C P P R I

Invited

X



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