

**ANDHRA PRADESH POLLUTION CONTROL BOARD**

D. No. 33-26-14 D/2, Near Sunrise Hospital, Pushpa Hotel Centre,  
Chalamalavari Street, Kasturibaipet, Vijayawada - 520 010  
Website: www.pcb.ap.gov.in

**CONSENT ORDER FOR ESTABLISHMENT****Order No. APPCB/VSP/VSP/108/CFE/HO/2005****09/01/2020**

Sub:PCB – CFE – **M/s. Rashtriya Ispat Nigam Ltd., (Visakhapatnam Steel Plant), Kurmannapalem, Visakhapatnam District – Consent for Establishment for Expansion** under Sec.25 of Water (P&C of P) Act, 1974 and Under Sec.21 of Air (P&C of P) Act, 1981 – Issued – Reg.

- Ref: 1. EC (Expansion) Order dt. 03.06.2019  
2. CFE order dt. 30.10.2015.  
3. CFO &HWA orders dt. 27.04.2015 and 28.02.2017.  
4. Industry's CFE (Expansion) application received through APOCMMS received on dated: 10.12.2019.  
5. R.O's inspection report dt. 31.12.2020.  
6. CFE Committee meeting held on 03.01.2020.  
7. Proponent's mail dt. 07.01.2020.

\*\*\*\*\*

1. In the reference 4<sup>th</sup> cited, an application was submitted to the Board seeking Consent for Establishment (CFE) for expansion of liquid steel capacity from 6.3 MTPA to 7.3 MTPA by revamping and augmentation of existing facilities of the following capacity with an additional investment of Rs. **9544.53** crores.

Sl.No.	Production Unit	Facilities at 6.3 MTPA stage, Million Tonnes	Production at 6.3 MTPA stage, Million Tonnes	Facilities at 7.3 MTPA stage, Million Tonnes	Production at 7.3 MTPA stage, Million Tonnes
1	Coke Ovens and By-products Recovery Plant (COBP) of capacity 0.8 MTPA each	COB-1 COB-2 COB-3 COB-4	0.695 0.695 0.695 0.695	COB-1 COB-2 COB-3 COB-4 COB-5	0.775 0.775 0.775 0.775 0.800
2	Sinter Plant	SP-1 SP-2 SP-3	2.85 2.85 3.25	SP-1 SP-2 SP-3	3.64 3.64 3.25
3	Blast Furnace	BF-1 BF-2 BF-3	2.0 2.0 2.5	BF-1 BF-2 BF-3	2.5 2.5 2.5
4	Lime/dolo Plant	Kiln#1-5	0.425 0.365	Kiln#1-5 Kiln#6&7	0.425 0.365
5	<b>LD shop (total 7.30 MTPA)</b>	<b>SMS-1 SMS-2</b>	<b>3.5 2.8</b>	<b>SMS-1 SMS-2</b>	<b>3.5 3.8</b>
6		Wire Rod Mill	1.65	Wire Rod Mill	1.81
		Special Bar Mill	1.65	Special Bar Mill	1.78
		Structural Mill	1.75	Structural Mill	1.93
		Rebar	-	Rebar	0.6

				Rounds for FWP	0.08
		Semis (Bloom/Rounds/Billets)	0.66	Semis (Bloom/Rounds/Billets)	0.58
7	Captive Power	Coal Based	315 MW	Coal Based	315 MW
		Waste Gas	69 MW	Waste Gas	69 MW
		Gas Based	120 MW	Gas Based	120 MW
		Nedo Sinter cooler	20.6 MW	Nedo Sinter cooler	20.6 MW

**By products:**

S. No.	Products	Existing quantity	After expansion
1.	BF slag	5292000 TPA	6132000 TPA
2.	Coke Products	2,41,000 TPA	2,55,500 TPA

- As per the application, the above power plant is to be located within the existing plant premises located at **Visakhapatnam Steel Plant, Kurmannapalem, Visakhapatnam District**. The waste blast furnace gas liberated from the Blast Furnace is used for generation of electricity.
- The above site was inspected by the Asst. Environmental Engineer- III, Regional Office, Visakhapatnam, A.P Pollution Control Board on 12.12.2019 and found that the site is located within the existing premises of steel plant.
- The Board, after careful scrutiny of the application and verification report of Regional Officer, hereby issues **CONSENT FOR ESTABLISHMENT for Expansion** to the project under Section 25 of Water (Prevention & Control of Pollution) Act 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 and the rules made there under. **This order is issued to the activity as mentioned at para (1) only.**
- This Consent Order now issued is subject to the conditions mentioned in Schedule 'A' and Schedule 'B'.
- This order is issued from pollution control point of view only. Zoning and other regulations are not considered.

**VIVEK YADAV IAS, MS(VY), O/o MEMBER SECRETARY-APPCB  
MEMBER SECRETARY**

**To**

M/s. Rashtriya Ispat Nigam Ltd.,  
(Visakhapatnam Steel Plant), Kurmanpalem,  
Visakhapatnam District  
E mail: environment@vizagsteel.com

- Copy to:** 1. The JCEE, Z.O: Visakhapatnam for information and necessary action.  
2. The E.E., R.O: Visakhapatnam for information and necessary action.

**ANNEXURE**

1. The proponent shall obtain Consent for Operation (CFO) from APPCB, as required Under Sec.25/26 of the Water (P&C of P) Act, 1974 and under sec. 21/22 of the Air (P&C of P) Act, 1981, before commencement of the trial runs.
2. The applicant shall provide separate energy meters for Effluent Treatment Plant (ETP) and Air pollution Control equipments to record energy consumed. An alternative electric power source sufficient to operate all pollution control systems shall be provided.
3. The industry shall construct separate storm water drains and provide rain water harvesting structures. No effluents shall be discharged in to the storm water drains.

**Water:**

4.The source of water is Yeleru Canal (River Godavari) and Kaniti Balancing Reservoir (KBR). The maximum permitted water consumption, waste water generation, treatment and disposal shall be as following after expansion (as per proponent's mail dt. 07.01.2020):

S. no	Purpose	Water consumption (KLD)		Waste water discharge (KLD) at 7.3 MTPA Expansion
		Consumption as per CFO Order dated 27.04.2015 & 28.02.2017	Consumption at 7.3 MTPA Expansion	
1	Domestic	40800	17952 (Township)	<ul style="list-style-type: none"> <li>• Treated sewage from township is brought to plant. Further it is treated in U/F plant.</li> <li>• About 6000 KLD is recycled for cooling purposes in SMS &amp; Rolling mills.</li> <li>• 1200 KLD U/f reject discharged into to plant sewage network</li> </ul>
			27813 (Plant) (Total=45765KLD)	<ul style="list-style-type: none"> <li>• Treated plant sewage is further treated in RO plant.</li> <li>• RO permeate ~2000 KLD is recycled in coke ovens.</li> <li>• RO Reject of 480 KLD is disposed to marine outfall* through guard ponds.</li> </ul>
2	Process water for industrial cooling & Boiler feed	138971	152832	<ul style="list-style-type: none"> <li>• DM plant effluent from TPP and spillages, overflows, floor washings, canteens, leakages from Fire &amp; Drinking network (9600 KLD) is collected at</li> </ul>

				<p>Appikonda outfall and pumped to RO plant.</p> <ul style="list-style-type: none"> <li>• About 8400KLD is recycled in the plant after RO treatment.</li> <li>• Balance 1200KLD is sent to Ash pond for use in ash handling.</li> </ul>
3	Process water (highly contaminated)	4693	8942 (Coke oven Phenolic water)	4800 KLD treated phenolic effluent from Coke ovens & RO rejects are discharged to marine outfall* through Guard ponds.
	<b>Total (KLD)</b>	<b>184464</b>	<b>207539</b>	

Separate flow meters with totalisers to necessary pipe-line shall be provided for assessing the quantity of water used for each of the purposes mentioned above.

#### ETP Details & Mode of Disposal: (Expansion)

A new Effluent Treatment Plant (ETP) has been proposed for Coke Oven Battery -5. Around 70 m<sup>3</sup>/hr of effluent generated from COB5 and associated facilities. MBC technology has been proposed for the new ETP. The major treatment steps involved in the process are: Oil Skimming, - Equalization,- Cooling,- Chemical Dosing,- De-Nitrification,- Oxidation,- Clarification,- Activated Carbon filtration,- Equalization,- Sludge dewatering. The sludge re-circulated in De-Nitrification and Oxidation basin and the excess sludge thickened in Filter press and the thickened sludge will be blended with the coal being fed into the coke ovens. The treated water from ETP will be used in the BPP plant complex itself. Phenolic water from coke oven & coal chemical plant will be discharged through marine outfall\* after completion of guard ponds. Sewage water is now recycled after RO treatment

**\* The industry shall start construction of marine outfall, only after obtaining clearance under CRZ rules and amendment to EC order.**

#### Air:

5. The proponent shall comply with the following for controlling air pollution after expansion:

Air pollution Emission sources :

Sl. No.	Source of Pollution	Control equipment provided	Flow rate in m <sup>3</sup> /hr.	Stack height in Mts	
1	BF – I Burden Handling System		ESP	22,25,000	80
2	BF – I Cast House Exhaust Station		ESP	9,72,000	100
3	BF – II Burden Handling System		ESP	22,25,000	80
4	BF – II Cast House Exhaust Station		ESP	9,72,000	100

5	Sinter Plant Air Cleaning Plant	ESP	26,22,000	120
6	Sinter Plant Gas Cleaning Plant.	ESP	36,00,000	120
7	Rolling Mills (LMMM) Walking Beam Furnace	-	1,96,248	87
8	Rolling Mills (LMMM) Roller bearth Furnace.	-	7,893	40
9	WRM Walking Beam Furnace – I	-	1,20,709	45
10	MMSM Walking Beam Furnace – II	-	1,41,576	80
11	Thermal Power Plant Boiler – I & II	ESP	10,00,000	180.5
12	Thermal Power Plant Boiler – III & IV	ESP	10,00,000	180.5
13	Thermal Power Plant Boiler – V	ESP	5,00,000	180.5
14	CRMP Flux Kiln - I & II	Bag filter	4,16,000	80
15	CRMP Flux Kiln - III & IV	Bag filter	4,16,000	80
16	CRMP Flux Kiln- V	Bag filter	2,08,000	80
17	SMS Centralized Ventilation System (Dedusting)	ESP	5,90,000	80
18	Coke Oven Battery No. I	-	2,16,090	120
19	Coke Oven Battery No. II	-	2,16,090	120
20	Coke Oven Battery No. III	-	2,16,090	120
21	Coke Oven Battery No. IV	-	2,16,090	120
22	Sinter Plant – 3 (waste gas)	ESP	11,81,530	120
23	Sinter Plant – 3 (De-dusting)	ESP	7,32,000	120
24	Blast Furnace-3 (Cast House de-dusting)	ESP	13,40,000	100
25	Blast Furnace-3 (Stock House de-dusting)	ESP	4,70,000	80
26	SMS – 2 (material handling de-dusting system)	Bag filter	2,07,500	80
27	SMS – 2 (Secondary emission control system)	ESP	16,30,000	80
28	SMS – 2 LFRH – 1	Bag filter	1,06,900	80
29	SMS – 2 LFRH - 2	Bag filter	1,06,900	80
30	Calcining & Refractory Material Plant- stack#1	Bag filter	85,000	60
31	Calcining & Refractory Material Plant- stack#2	Bag filter	85,000	60
32	Wire Rod Mill – 2 Walking beam furnace ( fuel – by product gasses)	---	79600	80
33	Thermal Power Plant & Blower House Boiler #6	ESP	5,87,880	180.5
34	Structural Mill Walking beam furnace – fuel ( by product gasses)	----	85,000	65
35	Special bar mill Walking beam furnace (fuel – by product gasses)	----	85,800	65
36	2 X 223 TPH boilers Fuel: Blast furnace gas : 277 cum/ sec	--	1000000	103.5
37	2 x 250 KVA D.G. Sets	-	--	
38	4 x 625 KVA D.G. Sets	-	--	
39	1 x 1000 KVA D.G. Set	-	--	

<b>Proposed:</b>				
1	SMS-1 dog house Secondary emission control system(dog house)	ESP	1000000	80
2	SMS-2 dog house Secondary emission control system(dog house)	ESP	1069200	80
3	Re-bar mill Re-heating furnace	nil	70596	50
4	SMS-2 TLF Twin Laddle furnace	Bag filter	150000	70
5	Coke oven Battery – 5	nil	216090	120
6	Briquetting plant (Drier)	Bag filter	14778	30
7	Blast furnace - 1 stove	nil	385000	80
8	Blast furnace - 2 stove	nil	338800	80
9	Blast furnace - 3 stove	nil	338800	80

**6. The industry shall install / upgrade air pollution control equipment and adopt suitable mitigative measures to maintain the parameters in the ambient air and stack emissions within the standards stipulated by the MoEF&CC, Gol, New Delhi.**

7. Industry shall comply with the standards stipulated by the MoEF&CC, Gol, New Delhi from time to time.

8. The industry shall provide concrete roads in the plant and water shall be sprinkled on the roads periodically to control the fugitive dust emissions. Vacuum / pneumatic dust collection system shall be used for cleaning the internal roads.

9. The proponent shall ensure compliance of the National Ambient Air quality standards notified by MOE&F, GOI vide notification No. GSR 826(E), dated. 16.11.2009, during construction and regular operational phase of the project.

10.A sampling port with removable dummy of not less than 15 cm diameter shall be provided in the stack at a distance of 8 times the diameter of the stack from the nearest constraint such as bends etc. A platform with suitable ladder shall be provided below 1 meter of sampling port to accommodate three persons with instruments. A 15 AMP 250 V plug point shall be provided on the platform.

11.The generators shall be installed in a closed area with silencers and suitable noise absorption systems. The ambient noise level shall not exceed 75 dB (A) during day time and 70 dB (A) during night time.

**Solid/ Hazardous waste:**

12. The proponent shall comply with the following after expansion (as per proponent's mail dt. 07.01.2020):

<b>S. No</b>	<b>Name of the Waste</b>	<b>Quantity as per CFO Order dated 27.04.2015 &amp; 28.02.2017</b>	<b>After Expansion</b>	<b>Method of Disposal</b>
1.	ETP Sludge	250 - 300	6145 TPA	Shall be used as

	(MBC & ETP)	TPA. + 1825 TPA		alternate fuel in coke oven batteries.
2.	Used oil /Waste Lubricating oil/ Vaccum oil/ transformer oil / waste grease.	320 TPA. + 474.5 TPA	346 TPA	Shall be used for internal consumption after reclamation. Partly sold to the authorised agencies.
3.	Tank bottom sludge of tar and oil storage tanks.	500 TPA.	3060 TPA	Shall be stored within the premises and be used as alternate fuel in coke oven batteries.
4.	Tar Sludge from tar Decanters	2800 TPA.	279 TPA	
5.	Acid tar from Ammonium sulphate plant (ASP)	200 TPA.		
6.	Benzol sludge from Decanters of benzol distillation plant	480 TPA.	382 TPA	
7.	Containers and Containers liners of hazardous wastes & chemicals	50 TPA.	88 TPA	After detoxification, it shall be disposed to the outside agencies.
8	Oil soaked cotton waste	40 TPA	20 TPA	TSDF, Parawada, Visakhapatnam for incineration /Authorised cement Plants for co-processing.
9	Spent resin from ion exchangers of DM Plant	0.5 TPA	--	TSDF, Parawada, Visakhapatnam for Secured land filling.
10	Reactor catalyst	5 TPA	---	
11	Asbestos waste	10 TPA	17 TPA	

**Non hazardous**

S. No	Name of the Waste	Existing Quantity (TPA)	After expansion (TPA)	Method of Disposal
1.	BF Slag (shown as by-product)	5292000	6132000	100% shall be disposed to cement plants
2.	LD Slag	1323000	1533000	60% shall be re-used
3.	DE Dust	945000	1095000	100% shall be re-used in the sinter plant
4.	Sludge	945000	1095000	Shall be re-used in the sinter plant
5.	Fly ash	693000	693000	shall be disposed to cement plants & Land Reclamation
6.	Mill scale	94500	109500	100% shall be re-used in the Sinter plant

13 The following rules and regulations notified by the MoEF&CC, GoI shall be implemented.

- a) Regulation of Persistent Organic Pollutants Rules, 2018.
- b) Hazardous waste and other wastes (Management and Transboundary Movement) Rules, 2016.
- c) Plastic Waste Management Rules, 2016.
- d) Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989
- e) Fly Ash Notification, 2016.
- f) Batteries (Management & Handling) Rules, 2010.
- g) E-Waste (Management) Rules, 2016.
- h) Construction and Demolition waste Management Rules, 2016.
- i) Solid Waste Management Rules, 2016.
- j) The Public Liability Insurance Act, 1991 and its amendments thereof.

**Other Conditions:**

**14 The industry shall start construction of marine outfall, only after obtaining clearance under CRZ rules and amendment to EC expansion order dt. 03.06.2019.**

**15 The industry shall obtain necessary amendments to the EC expansion order dt. 03.06.2019 issued by the MoEF&CC, GoI, New Delhi and submit a copy at Regional Office, Visakhapatnam, before applying for CFO.**

16 The existing green belt shall not be disturbed for the proposed activity. The green belt shall be maintained in at least 33% of the total area.

17 The noise levels in and around the plant shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures, etc., on all sources of noise generation.

18 The proponent shall ensure that there shall not be any change in the process technology and scope of working without prior approval from the Board.

19 The proponent shall comply with all the directions issued by the Board from time to time.

20 Concealing the factual data or submission of false information / fabricated data and failure to comply with any of the conditions mentioned in this order attracts action under the provisions of relevant pollution control Acts.

21 Notwithstanding anything contained in this conditional letter or consent, the Board hereby reserves its right and power Under Sec. 27(2) of Water (Prevention and Control of Pollution) Act, 1974 and Under Sec.21(4) of Air (Prevention and Control of Pollution) Act, 1981 to revoke the order, to review any or all the conditions imposed herein and to make such modifications as deemed fit and stipulate any additional conditions.



22 Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules, 1982, to such authority (hereinafter referred to as the Appellate Authority) constituted under Section 28 of Water (Prevention and Control of Pollution) Act, 1974 and Section 31 of the Air (Prevention and Control of Pollution) Act, 1981.

**VIVEK YADAV IAS, MS(VY), O/o MEMBER SECRETARY-APPCB  
MEMBER SECRETARY**

**To**

**M/s. Rashtriya Ispat Nigam Ltd.,  
(Visakhapatnam Steel Plant), Kurmanpalem,  
Visakhapatnam District  
E mail: [environment@vizagsteel.com](mailto:environment@vizagsteel.com)**