O/C

To,
The Environmental Engineer and In-charge,
West Bengal Pollution Control Board,
Haldia Regional Office
Raghunathchak, PO- Barghasipur, PS- Bhabanipur
Dist- Purba Medinipur, Pin- 721657

W.B. Pollution Control Board * Received Date: 27/9/22 * Haldia

TSL/HMC/ENV/ 10 /FY 23
September 26, 2022

Sub: Environmental Statement for the Year 2021-22 for 1.6 MTPA Metallurgical Coke Plant at Patikhali, Haldia of Tata Steel Limited, Hooghly Metcoke Division.

Dear Sir,

We are enclosing the "Environmental Statement" duly filled in Form V, for the year 2021-2022 for 1.6 MTPA Metallurgical Coke Plant at Patikhali, Haldia of Tata Steel Limited, Hooghly Metcoke Division, For your kind consideration.

Yours faithfully,

For **Tata Steel Limited**

Mantu Patra
General Manager
TATA STEEL LIMITED
Hooghly Met Coke Division
HALDIA

Mantu Patra
General Manager
Tata Steel Ltd., HMC Division, Haldia

Encl: a/a.

TATA STEEL LIMITED
Hoogly Met Coke Division
Patikhali P.O. Haldia Oil Refinery, Purba Medinipur, Haldia 721606, West Bengal, India
Tel : 03224 251333, Fax : 03224 251305
Registered Office : Bombay House, 24 Homi Mody Street Fort, Mumbai-400 001, India
Tel : 91 22 6665 8282, Fax : 91 22 6665 7724
Corporate Identity Number L27100MH1907PLC000260, Website : www.tatasteel.com

ENVIRONMENTAL STATEMENT
FOR THE YEAR 2021-22

For

1.6 MTPA Metallurgical Coke Plant of Tata steel Hooghly Metcoke Division

Tata steel Ltd. Hooghly Metcoke Division
Patikhali, Haldia
Dist- Purba Medinipur, West Bengal -721606

ENVIRONMENTAL STATEMENT FORM-V

(See rule 14)

Environmental Statement for the financial year 2021-22 ending with 31st March

Tata Steel Limited
1.6 MTPA Metallurgical Coke Plant at Patikhali, Haldia
Dist- Purba Medinipur, West Bengal -721606

PART-A

i)	Name and address of the owner/ occupier of the industry, operation, or process	:	Mantu Patra General Manager Tata Steel HMC Division Patikhali, Haldia, Dist- Purba Medinipur, West Bengal -721606
ii)	Industry Category Primary/ (STC code) Secondary (STC code)	:	Large Scale Industry —
iii)	Production Capacity	:	1.6 MTPA Metallurgical Coke
iv)	Year of Establishment	:	December, 2007
v)	Date of Last Environmental /Audit Report submitted	:	15.09.2021

PART-B

WATER AND RAW MATERIAL CONSUMPTION

i) **Water Consumption in m^3/day -** 1184 m^3/day

Process	:	
Cooling	:	1169 m^3/day} industrial
Domestic	:	15 m^3/day

Name of the products	**Process water consumption per unit of products**	
	During the previous Financial Year 2020-2021	During the Current Financial Year 2021-2022
Metallurgical Coke	0.39 cum/ton of Coke	0.28 cum/ton of Coke

ii) Raw material consumption:

Name of Raw Material	Name of the Products	Consumption of raw material per unit of output (MT/ TGC)	
		During the previous Financial Year 2020-2021	During the Current Financial Year 2021-2022
Coaking Coal	Metallurgical Coke	1.37 Coal/Coke= (1859108/1355204)	1.37 Coal/Coke = (2081946/1520238)

PART-C

POLLUTION DISCHARGED TO ENVIRONMENT/ UNIT OF OUTPUT (PARAMETERS AS SPECIFIED IN THE CONSENT ISSUED)

Pollutants	Quantity of pollutants discharged (mass/day)	Concentrations of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons*
	Kg/day	mg/Nm^3	
a) Water	There is no discharge of effluent. ZLD is maintained.		
b) Air			
1	Chimney 1AB		
PM	187.35	28.68	-42.64
SO_2	1854.25	283.86	-64.52
NOx	1154.26	176.70	-64.66
2	Chimney 1CD		
PM	203.40	32.31	-35.39
SO_2	1724.87	273.95	-65.76
NOx	993.65	157.82	-68.44
3	Chimney 2AB		
PM	-65.76	30.84	-38.32
SO_2	-68.44	287.61	-64.05
NOx	1060.56	162.50	-67.50
4	Chimney 2 CD		
PM	203.22	31.99	-36.01
SO_2	1817.36	286.11	-64.24
NOx	1096.01	172.55	-65.49
5	Chimney 3 AB		
PM	190.95	29.68	-40.64
SO_2	1784.66	277.37	-65.33
NOx	1091.66	169.67	-66.07
6	Chimney 3 CD		
PM	182.05	28.16	-43.67
SO_2	1668.92	258.18	-67.73
NOx	937.39	145.01	-71.00
7	Chimney 4 AB		
PM	192.00	30.09	-39.82
SO_2	1879.89	294.64	-63.17
NOx	1185.40	185.79	-62.84
8	Chimney 4 CD		
PM	171.61	26.91	-46.17
SO_2	1896.94	297.48	-62.82
NOx	1102.45	172.89	-65.42

PART-D

HAZARDOUS WASTES

(**AS SPECIFIED UNDER HAZARDOUS WASTES (MANAGEMENT, HANDLING AND TRANS BOUNDARY MOVEMENT RULES, 2016)**

Hazardous Wastes	Total Quantity (Kg)			
	During the previous Financial Year 2020-2021		During the Current Financial Year 2021-2022	
1. From Process	**Generation**	**Sold/Disposed off**	**Generation**	**Sold/Disposed off**
Used or spent oil (*Schedules-I Stream-5.1)*	2.73 KL	2.56 KL	2.13 KL	2.10 KL
Empty barrels /containers/liners contaminated with hazardous chemicals/ wastes *(Schedules-I Stream-33.1)*	1040 Kg	1090 Kg	1810 Kg	1150 Kg
Contaminated cotton rags or other cleaning materials (Schedules-I Stream-33.2)	930 Kg	1040 Kg	610 Kg	780 Kg

PART-E
SOLID WASTE

Sl. No.	Solid waste	Total Quantity (Kg)	
		During the previous financial year 2020-21	During the current financial year 2021-22
a.	From process	7649000 Kg (swamp breeze)	4006000 Kg (swamp breeze)
b.	From Pollution Control facilities	-	-
c.	1)Quantity recycled/reutilised within the unit	-	-
	2) Sold	-	3524190 Kg (swamp breeze)
	3) Disposed	Nil	Nil

PART-F

Please specify the characteristics (in terms of concentration and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

Hazardous/ Solid Wastes	Characteristics	Method of disposal
Cotton contaminated with Oil & Grease	*Carbon: 60.35 %; Hydrogen: 4.73 %; Nitrogen: 1.62 %; Sulphur: 13.43 % Cyanide WLT <0.05; Fluoride WLT (<1); Nitrate WLT (< 0.1); Ammonia WLT (<5); Arsenic WLT (<0.1); Phenol WLT (<1);*	Disposed through TSDF of West Bengal Waste Management Ltd. (of M/s Ramky), Purba Medinipur, Haldia, WB.
Swamp breeze	*coke sludge with carbon content ~ 80% ash content ~ (18-20% and VM ~ < 8 %*	Auction/ Sale

PART-G

Impact of the pollution control measures taken on conservation of natural resources and consequently on the cost of production.

- For collection of roof water from buildings (like ADM building / Store / Laboratory / pump house etc.) during monsoon, a storm water pond of capacity 6500 cum (approx.) has been developed. The roof water from all the buildings are collected through common storm water drain in the storm water pond. The water is used for coke quenching and other purposes like gardening, road dust suppression, water sprinkling system etc. Necessary arrangements of pipelines (3 KM) and pumps (4 Nos.) have been made for effective utilization of storm water.
- 1 No. of Mechanised road sweeping machine are deployed to maintain housekeeping of plant roads.
- Water sprinkling for road dust suppression is done through truck mounted water tanker.
- Tree plantation is being undertaken in & around site. 27500 Nos. of trees have been planted in and around the site till the end of the FY 22.
- Renewal of ISO 14001:2015, ISO 45001: 2018 and ISO 9001:2018 certification done in Jun’2022 and certification is valid for 3 years.

PART-H

Additional measures/investment proposal for environmental protection including abatement of pollution.

- Greenery development programme will continue in the year 2023.
- The pollution abatement measure taken like minimise spillage, maximum utilisation/ reuse of spillage; reduction of burning loss by optimising the carbonisation process; maximise power generation; arresting all kind of leakages in the oven to obtain maximum flue gas temperature etc.

PART-I

MISCELLANEOUS:

Any other particulars in respect of environmental protection and abatement of pollution.

- Nearly 18.50 Ha. area is being considered as Green belt. As on date, total 27500 number of trees are surviving, and total Green Belt area is approximately 26% of the total 72.5 Ha plant area.
- 42000 sq. meter of garden landscape are being maintained inside plant.
- During World Environment Day (5th June 2022), 1200 nos. of saplings of fruit bearing trees were distributed. Environmental Awareness through different programmes like quiz competition, drawing competition, tree plantation etc. were done during June'22.
- To maintain housekeeping of plant roads, mechanised road sweeping machines is operated.
- Regular Environmental Monitoring is carried out. Please refer to **Annexure-I.**
- One No. of Online AAQM station is in operation along with Digital Display Board.
- 08 nos. of CEMS in all the stacks are in operation.
- In FY 2022, 1.88 T of e-wastes disposed through M/s Hulladek Recycling Pvt. Ltd., Kolkata, West Bengal-711102
- In FY 2022, 14.13 Kgs of Biomedical wastes generated in plant's First Aid centre were segregated & collected at source and disposed through West Bengal Waste Management limited Haldia (Ramky).

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Annexure-1

Ambient Air Quality Monitoring Report

Monitoring Location (s)	**PM_{10}** ($\mu g/m^3$)	**$PM_{2.5}$** ($\mu g/m^3$)	**SO_2** ($\mu g/m^3$)	**NO_2** ($\mu g/m^3$)	**Pb** ($\mu g/m^3$)	**Benzene** ($\mu g/m^3$)	**NH_3** ($\mu g/m^3$)	**Ozone (O_3)** ($\mu g/m^3$)	**CO** (mg $/m^3$)	**Benzo(a) Pyrene** (ng/m^3)	**As** (ng/m^3)	**Ni** (ng/m^3)
Near CCR (Centre)	79.0	41.6	8.0	38.5	<0.01	<4.2	20.7	32.1	0.7	<0.5	<1.0	<5.0
Back Side of ADM Building (South side)	85.1	47.4	10.4	39.7	<0.01	<4.2	22.7	25	0.9	<0.5	<1.0	<5.0
Near Coal Yard (East Side)	82.2	53	7.8	40.3	<0.01	<4.2	29.7	27.4	0.9	<0.5	<1.0	<5.0
Patikhali Gate (North Side)	78.5	38.7	7.4	35.6	<0.01	<4.2	20.7	26.6	0.7	<0.5	<1.0	<5.0
Near Simplex Gate (West side,)	87.9	49.4	7.2	49.1	<0.01	<4.2	21.6	68.6	1.1	<0.5	<1.0	<5.0
NAAQ Standard (CPCB)	**≤ 100**	**≤ 60**	**≤ 80**	**≤ 80**	**≤ 1**	**≤ 5**	**≤ 400**	**≤ 180**	**≤ 2**	**≤ 1**	**≤ 6**	**≤ 20**

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