The Member Secretary,
Jharkhand State Pollution Control Board,
T.A. Division (Ground Floor),
H.E.C. Dhurva, Ranchi – 834004
Jharkhand

WBD/EMC/4016/065/22
Date: 19.09.2022

Subject: Submission of Environmental Statement of Power House unit of West Bokaro Division, Tata Steel Limited for the year 2021-22

Dear Sir,

Please find enclosed herewith the duly filled "Environmental Statement" (Form-V) of **Power House** unit of West Bokaro Division, Tata Steel Ltd. for the year 2021-22.

Kindly acknowledge the same & oblige.

Thanking you,
Yours sincerely,

Head (Environment Management)
Raw Material Division
Tata Steel Ltd.

Encl: As Above

Copy to: The Regional Officer, Jharkhand State Pollution Control Board, PTC Chowk, Matwari, Hazaribagh – 825301 (Jharkhand)

TATA STEEL LIMITED
West Bokaro Division Ghatotand Jharkhand 825 314 India
Tel 91 6545 262356 (O) Fax 91 6545 262221 262172
Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001
Tel 91 22 66658282 Fax 91 22 66657724
Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com

FORM - V
(See Rule -14)

ENVIRONMENT STATEMENT FOR THE FINANCIAL YEAR ENDING THE 31st MARCH, 2022

UNIT: POWER HOUSE, WEST BOKARO DIVISION, TATA STEEL LIMITED

PART - A

1	Name and address of the owner/ occupier of the industry, operation or process	:	Mr. Soumendu Kumar Majhi Chief (Engineering & Projects), West Bokaro Division, TATA Steel Limited, P.O.- Ghatotand Dist. Ramgarh, Jharkhand-825314
2	Industry Category	:	Captive Power House
3	Production Capacity	:	2 X 10 MW Thermal Power Plat & 2x2.5MW DG Set
4	Year of Establishment	:	1994
5	Date of last Environmental Statement submitted.	:	23.09.2021

PART – B

WATER AND RAW MATERIAL CONSUMPTION

i. Water Consumption (m3/d):

Process : 2099.39
Cooling/ Spraying in mine pits : 3243.58 (Boiler Feed + Cooling)
Colony : This is included in the Environmental Statement of West Bokaro Colliery

Name of the product	Process water consumption per product output (m3/KWH)	
	During the Previous Financial Year (2020-21)	During the current Financial Year (2021-22)
Electricity	0.019	0.021

ii. Raw Material Consumption:

Name of Raw materials	Name of the product	Consumption of Raw Material per unit of output (kg/kwh)	
		During previous financial year (2020-21)	During current financial year (2021-22)
Coal (Washery Rejects)	Electricity	2.19	2.28

PART – C

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

Pollutants	Quantity of pollutants discharged (mass /day)	Concentration of pollutants in discharges (mass / volume)	Percentage of variation from prescribed standards with reason
Water	Zero Effluent Discharge is maintained.		
Air	Air quality is monitored and found within prescribed limit. Details for FY22 are as follows: **AAQ Report: Core Zone**		

Parameter	Washery Complex	Standard
SPM	349.93	700
RPM	195.46	300
SO2	26.42	120
Nox	22.81	120

All values are in (µg/m3)

Pollutants	Quantity of pollutants discharged (mass /day)	Concentration of pollutants in discharges (mass / volume)	Percentage of variation from prescribed standards with reason

AAQ Report: Buffer Zone

Parameter	Chainpur	Duni	EMC	Parsa beda	Standard
PM10	63.22	45.15	45.42	49.40	100
PM2.5	44.50	32.50	26.40	33.49	60
SO2	24.15	22.68	21.85	22.93	80
Nox	21.99	20.38	19.70	21.83	80

All values are in (µg/m3)

Due to absence of stationary source, it is difficult to measure pollutant load. So, the quantity of air pollutant discharged in Kg/day cannot be ascertained. The above data shows the average ambient air quality during FY-22.

PART–D

HAZARDOUS WASTE

[as specified under Hazardous & Other Waste (Management & Transboundary Movement) Rules, 2016]

Hazardous Waste	Total Quantity	
	During the previous financial year (2020-21)	During the current financial year (2021-22)
a) From Process: Oil soaked cotton (jute)	0.8 ton	0.8 ton
b) From Pollution control facilities: • Used lubricating Oil • Non-Ferrous scrap (Cu -Wires, Zn chips, etc.)	• 1890 litres • Nil	• 8980 litres • Nil

PART–E

SOLID WASTE

Solid Wastes		Total Quantity	
		During the previous financial year (2020-21)	During the current financial year (2021-22)
(a)	From Process • Coarse ash (from boiler)	Approx. 57773 ton	Approx. 53251 ton
(b)	From Pollution control facilities • Fly ash (from ESPs)	Approx. 86599 ton	Approx. 79876 ton
(C)	(1) Quantity recycled or reutilized within the unit (2) Sold & (3) Disposed	(1) The ash being dump for filling of low laying area created between the OB dumps.	

PART – F

THE CHARACTERISTICS (in terms of composition and quantum) **OF HAZARDOUS AS WELL AS SOLID WASTES AND INDICATE DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORIES OF WASTES**

Category of Waste	Characteristics	Quantity	Disposal Practice
Solid Waste			
1. Coarse Ash	Burnt coarse coal particles (Solid)	~53251 ton	Being used in filling low lying area between OB dumps, partially utilized in bricks making.
2. Fly Ash	Burnt fine coal particles (Solid)	~79876 ton	
Hazardous Waste			
1. Used Oil	Used Oil (Liquid)	1. 8980 litres	1. Disposed-off to authorized recycler.
2. Oil soaked cotton/ jute	Used Cotton(Solid)	2. 0.8 ton	2. Safely collected and stored.

PART – G

IMPACT OF POLLUTION ABATEMENT MEASURES TAKEN ON CONSERVATION OF NATURAL RESOURCES AND ON THE COST OF PRODUCTION

- FBC based power plant used high ash content (58-62%) reject coal as fuel and produces power in efficient way. A four field BHEL make Electrostatic Precipitator has been installed with various associated auxiliary system which limits the emission well below the permissible norm.
- Online stack monitoring system is installed for monitoring & recording of stack emission level for both the stacks and data transmission facility has been extended to JSPCB office, Ranchi.
- We have established NABL accredited & JSPCB recognised Environment Laboratory for monitoring purpose. Also Online Ambient Air Quality monitoring is being practiced.
- ₹ 100.00 lakhs have been planned to be spent towards strengthening environmental monitoring & laboratory, continuous monitoring systems and solid waste management.
- The combined impact due to implementation of pollution prevention and control measures on cost per tonne of ROM coal, of entire west Bokaro division (Washery, PH, Mines, Eng. services, Logistic, etc.) is Rs. 49.90.

In addition to the above Tata Steel Foundation, West Bokaro is engaged in peripheral developmental activities in villages around the mine. The projects of the Society include irrigation and agricultural extension projects, plantation programmes, installation of solar street lights and illuminate villages on through low cost, construction of ponds in support to provision of irrigation water and for other domestic use and in recharging groundwater by arresting the flow of rainwater in downstream, creation of SAVE FOREST groups, civic amenities development, medi-care and health education, rural sports, skill development and promotion of rural cultural activities.

PART-H

ADDITIONAL MEASURES/ INVESTMENT PROPOSAL FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT OF POLLUTION, PREVENTION OF POLLUTION

- All ESP of power house are adequately maintained and all online stacks monitoring system is smoothly working in power house. Regular maintenance of all equipment is done for enhancement of efficiency of PH.
- Zero discharge is being maintained strictly with close circuit recycling of water.
- We have established NABL accredited & JSPCB recognised Environment Laboratory for monitoring purpose. Also Online Ambient Air Quality monitoring is being practiced.
- ₹ 100.00 lakhs have been planned to be spent towards strengthening environmental monitoring & laboratory, continuous monitoring systems and solid waste management.

PART-I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF THE ENVIRONMENT

- West Bokaro Division of TATA Steel Ltd. is committed to improve safety and environment by strictly practicing Environment Management System (ISO:14001). Various programs are arranged such as Sustainability Month, Green Month, World Environmental Day, World River Day, Earth Day, Biological Diversity Day, Forestry Day, World Water Day, Van Mohotsav for public awareness. West Bokaro Division of TATA Steel Ltd. is also certified to ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018.
- EMS ISO 14001 & ISO 45001 are being monitored and practiced strictly to protect and preserve the environment by eco-friendly operations and prevent any potential hazard to become risk posing serious threat to environment in a proactive manner. Reduction in water consumption by ensuring its use in judicious manner, further, working on to reduction of power consumption by improving / replacing various energy efficient equipment.
- The Company is having a full-fledged Environmental Management Department with personnel from relevant fields to take care of all environmental aspects relating to the mines of TATA STEEL. This department has in-house capabilities for monitoring various environmental parameters and suggesting to the management for necessary abatement measures.

20/9/2021

Mr. Soumendu Kumar Majhi, Chief (Engineering & Projects)
West Bokaro Colliery, Tata Steel Limited.
P.O. - Ghatotand, Dist. - Ramgarh, Jharkhand - 825314

Chief (Engg. & Project)
TATA STEEL (West Bokaro Division)