

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

WBD/EMC/4016/104/25

Date: 26.09.2025

Subject: Submission of Environmental Statement of Washery-III unit of West Bokaro Division, Tata Steel Limited for the year 2024-25

Dear Sir,

Please find enclosed herewith the duly filled "Environmental Statement" (Form-V) **Washery-III** unit of West Bokaro Division, Tata Steel Ltd. for the year 2024-25.

Kindly acknowledge the same & oblige.

Thanking you, Yours faithfully,

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)

### FORM - V

### (See Rule -14)

# ENVIRONMENT STATEMENT FOR THE FINANCIAL YEAR ENDING THE 31st MARCH, 2025

# UNIT: WASHERY - III, WEST BOKARO DIVISION, TATA STEEL LIMITED

# PART - A

1 Name and address of the owner/occupier of

the industry, operation or process

Mr. B.V. Sudhir Kumar

Chief (CB),

West Bokaro Division,

TATA Steel Limited, P.O.- Ghatotand Dist. Ramgarh, Jharkhand-825314

2 Industry Category

Major (Coal Beneficiation)

3 Production Capacity

4.5 MTPA Raw Coal Throughput

Year of Establishment

1994

Date of last Environmental Statement

27,09,2024

submitted...

### PART - B

#### WATER AND RAW MATERIAL CONSUMPTION

#### ì. Water Consumption (m3/d):

**Process** 

:1155.07

Cooling/ Spraying in mine pits

: Not Applicable

Colony

\* This is included in the Environmental Statement of West Bokaro Colliery

| Name of the product D | Process water consumption pe                    | Process water consumption per product output (m3/ton) |  |
|-----------------------|---|---|--|
|                       | During the previous Financial Year<br>(2023-24) | During the current Financial Year<br>(2024-25)        |  |
| Clean Coal            | 0.56  | 0.23  |  |

#### **Raw Material Consumption:**

| 11. 01. miles   | Name of the | Consumption of Raw Material per unit of output  |   |  |
|---|-------------|---|---|--|
| Name of Raw materials                                     | product     | During previous financial year (2023-24)  | During current financial year (2024-25)   |  |
| Raw Coal  | Clean Coal  | 2.22 t/t of clean coal  | 1.96 t/t of clean coal  |  |
| Magnetite<br>Synthetic Collector<br>Frother<br>Flocculent | Middling    | 0.0020 t/t of coarse coal 0.0003 t/t of fine raw coal 0.0001 t/t of fine raw coal 0.0001 t/t of fine raw coal | 0.0022 t/t of coarse coal 0.0003 t/t of fine raw coal 0.0000 t/t of fine raw coal 0.0001 t/t of fine raw coal |  |

Since Magnetite, Synthetic Collector, Frother and Flocculant are being maintained combined for Washery-II and Washery-III so consolidate value for both washeries is given.

### PART - C

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

| Pollutants | Quantity of pollutants<br>discharged (mass /day) | Concentration of pollutants in discharges (mass / volume) | Percentage of variation from<br>prescribed standards with<br>reason |
|------------|--|---|---|
| Water      | Zero Effluent Discharge is maintain              | ed.   |   |

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Air quality is monitored and found within prescribed limit. Details for FY-25 are as follows:

# **Fugitive Dust Monitoring:**

| Parameter | Washery Complex | Standard |
|-----------|-----------------|----------|
| SPM.      | 238             | 700      |
| RPM       | 172             | 300      |
| SO2       | 28.83           | 120      |
| Nox       | 25.79           | 120      |

All values are in (µg/m3)

# **AAQ Report:**

| Parameter | Makundabe<br>da | Housing<br>Complex | Banji | Pundi | Standard |
|-----------|-----------------|--------------------|-------|-------|----------|
| PM10      | 73.16           | 72.12              | 68.08 | 68.82 | 100      |
| PM2,5     | 43.03           | 41,26              | 48.24 | 42.42 | 60       |
| SO2       | 21.19           | 23.28              | 21.79 | 22.49 | 80       |
| Nox.      | 20.78           | 21.17              | 21.54 | 20.95 | 80       |

All values are in (µg/m3)

Due to absence of stationary source, it is difficult to measure pollutants load. So, the quantity of air pollutants discharged in Kg/day cannot be ascertained. The above data shows the average ambient air quality during FY-25.

### PART-D

### **HAZARDOUS WASTE**

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

|   | Total Quantity                               |   |  |
|---|--|---|--|
| Hazardous Waste   | During the previous financial year (2023-24) | During the current financial year (2024-25) |  |
| a) From Process:<br>Oil soaked cotton (jute)                  | 0.50 ton                                     | 0.05 ton                                    |  |
| b) From Pollution control facilities:<br>Used lubricating Oil | 4.81 KĽ                                      | .8,97 KL                                    |  |

# PART-E

# **SOLID WASTE**

|     |  | Total Quantity   |  |  |  |
|-----|--|--|--|--|--|
|     | Solid Wastes   | During the previous financial year (2023-24)   | During the current financial year (2024-25)  |  |  |
| (a) | From Process:  Rejects (by products)                             | • 567048 ton   | • .508260 tön  |  |  |
|     | Tailings   | • 683979 ton   | • 749968 ton   |  |  |
| (b) | From pollution control facilities                                | Nil.   | Nil.   |  |  |
| (c) | I. Quantity recycled or reutilized within the unit.  Coal Reject | 2:14 lakh ton used in captive power plant.     (Rejects are being used in FBC power plant, disposed-off to outside agencies & stacked in specified locations). | 1.82 lakh ton used in captive power plant.     (Rejects are being used in FBC power plant, disposed-off to outside agencies & stacked in specified locations). |  |  |
|     |  | (Above quantity includes coal reject and tailing of washery-III also).   | (Above quantity includes coal reject and tailing of washery-III also).   |  |  |
|     | II. Sold (to reuse as fuel)                                      |  |  |  |  |
|     | ◆ Coal Reject  | <ul> <li>9.27 lakh ton to institutionalized customer operating power plant.</li> <li>11.08 lakh ton to Brick Kiln, and</li> </ul>                              | <ul> <li>6.81 lakh ton to institutionalized customer operating power plant.</li> <li>10.61 lakh ton to Brick Kiln, and</li> </ul>                              |  |  |
|     | • Tailings   | power plant operator. (Above quantity includes coal reject and tailing of washery-II also).  | power plant operator. (Above quantity includes coal reject and tailing of washery-II also).  |  |  |
|     | ill. Disposed  | Nil,   | Nil  |  |  |

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

| Ca    | tegory of Wa          | ste  | Characteristics                | Quantity   | Disposal Practice  |
|-------|-----------------------|------|--------------------------------|------------|--|
| Solid | Waste                 |      |                                |            |  |
| 1.    | Rejects               |      | Coal of -13mm size (Solid)     | 508260 ton | Used in power house and disposed-off to outside parties operating power plant / stacked. |
| 2     | Tailings              |      | Coal of -0.5mm size<br>(Solid) | 749968 ton | Disposed-off to outside agencies (Brick kiln manufacturer, institutionalized customer).  |
| Haza  | rdous Waste           |      |                                |            |  |
| 1.    | Used:Oil              |      | Used Oil<br>( <i>Liquid</i> )  | 8.97 KL    | Disposed-off to authorized recycler.   |
| 2.    | Oil so<br>cotton/jute | aked | Used Cotton<br>(Solid)         | 0.05 ton   | Safely collected and stored.   |

#### PART - G

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

- Adequate fixed type dust suppression arrangement is working inside Washery roads.
- Dry fog system is operational in coal handling plant.
- In addition to above, modifier has been introduced in froth-flotation process for additional recovery of clean coal, which is not only increases the yield of process reduces the raw coal quantity for the same quantity of clean coal thus conserves the natural resources.
- Fixed type water spraying system inside washery complex are being used for dust suppression.
- We have established Environment Laboratory for monitoring purpose. Online Ambient Air Quality monitoring is being practiced.
- One Sewage Treatment Plant (STP) of capacity 5 KLD is installed for canteen liquid waste.
- 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. 86.30 Crore.

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 streetlights 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, 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

- Dry fog dust suppression system is also extended to raw coal screen area to minimize fugitive emission.
- Efficient LED lights are introduced in canteen areas.

### 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 ecofriendly 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. Mechanical Tailing dewatering plant is in operation to recover tailings and ensure recycling of water to wash plant. This has reduced the use of tailing ponds, a commitment towards continual improvement of environmental performance.
- 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.

s. Sudhi Luna West Bokaro Mr. B. V. Sudhir Kumar, Chief (Coal Beneficiation)

-CHIEF (CB)

West Bokaro Colliery, TATA Steel Limited, P.O. - Ghatotand, Dist.- Ramgarh, Jharkhand - 825314