



To,
The Member Secretary,
Jharkhand State Pollution Control Board,
T.A. Bhawan, H.E.C. Campus, Dhurwa,
Ranchi - 834004 Jharkhand

Ref. No. - JMB/ENV/ESSA/05/ 723 /2022

September 28th, 2022

Sub: Annual Environment Statement in Form V for the FY-22.

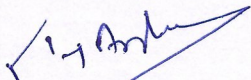
Dear Sir,

We are enclosing herewith **combined Annual Environment Statement** in Form-V for the FY-22 in respect of **Bhelatand A. Colliery and Bhelatand Washery** of M/s Tata Steel Limited, Jharia Division for your kind perusal.

Kindly acknowledge the receipt of the same.

Thanking you,

Yours faithfully,
For Tata Steel Limited


Head (Planning)

Received
Date
28/9/2022

झारखण्ड राज्य प्रदूषण नियंत्रण बोर्ड
केन्द्रीय कार्यालय
धनबाद

CC: Regional Officer, Jharkhand State Pollution Control Board, HIG.-1 Sardar Patel Nagar, Housing Colony, Hirapur, Dhanbad (Jharkhand).

TATA STEEL LIMITED

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FORM – V (See rule – 14)

**Environmental Statement for the financial year ending the 31st March -2021
Bhelatand A. Colliery & Integrated Washery**

PART – A

1.Name and address of the owner/ occupier of the : industry/ operation or process	Bhelatand A. Colliery & Integrated Washery
Manager :	Mr. Narendra Kumar Gupta Chief (Sijua Group) Tata Steel Ltd., P.O.- Bhelatand Dist.- Dhanbad, Jharkhand-828103
Nominated Owner :	Mr. T.V.Narendran CEO&MD, Tata Steel Ltd Jamshedpur, Dist- East Singhbhum Jharkhand – 831 001
2.Industry category: Primary (STC Code) Secondary (STC Code)	--
3.Production Capacity – Units	Colliery: 0.41 MTPA Raw Coal Washery: 1.5 MTPA Raw coal feed
4.Year of Establishment	Colliery: 1910 Washery: 1995
5.Date of the last environmental statement submitted	Colliery & Washery 28 th September 2021 (Vide Letter No. JMB/ENV/ESSA/05/734/2021)

PART – B

Water and Raw Material Consumption

1. Water Consumption M³ / day.

Bhelatand A. Colliery		
	Water consumption in 2020-2021	Water consumption in 2021-2022
Process	Not Applicable	Not Applicable
Industrial	6.64 M ³ /day	2.64 M ³ /day
Domestic	958.36 M ³ /day	1060.91 M ³ /day
Bhelatand Coal Preparation Plant		
Process	285.19 M ³ / day	270.01 M ³ / day
Cooling	Not Applicable	Not Applicable
Domestic*	1 M ³ / day	1 M ³ / day

**The domestic water consumption in colonies has been considered in Bhelatand A. Colliery.*

FORM – V (See rule – 14)

**Environmental Statement for the financial year ending the 31st March -2021
Bhelatand A. Colliery & Integrated Washery**

Sl. No	Name of the products	Process water consumption per unit of product output.	
		During the previous financial year 2020-2021	During the current financial year 2021-2022
Bhelatand A. Colliery			
1.	Raw Coal	Not Applicable	Not Applicable
Bhelatand Coal Preparation Plant			
1.	Clean Coal	0.31 M3/Ton	0.17 M3/Ton

2. Raw Material Consumption

Sl. No	Name of the Raw Material	Name of the product	Raw Materials consumption per unit production output.	
			During the previous financial year 2020-2021	During the current financial year 2021-2022
Bhelatand A. Colliery				
1.	Explosives	Raw Coal	0.32 Kg/Ton	0.35 Kg/Ton
2.	Detonators		0.64 Nos/Ton	0.67 Nos/Ton
Bhelatand Coal Preparation Plant				
1.	Raw Coal	Clean Coal	1.51 trc/tcc	1.57 trc/tcc
2.	Magnetite		1.20 kg/ton	0.92 kg/ton

*trc stands for Total Raw Coal & tcc stands for total clean coal

PART – C

Pollution discharged to environment / unit of output.

(Parameter as prescribed in the consent issued)

Sl. No	Pollution	Quantity of pollutants discharged (mass/ day)				Percentage of variation from prescribed standard with reason.
A.	AIR	PM ₁₀ Level : 24 Hourly Limit- 100µg/m ³	PM _{2.5} Level : 24 Hourly Limit- 60µg/m ³	SO ₂ Level: 24 Hourly Limit- 80µg/m ³	NO ₂ Level: 24 Hourly Limit- 80µg/m ³	Ambient air quality is being measured and all values are within limits as per NAAQS, 2009.
		76.06	38.70	11.37	12.37	

FORM – V (See rule – 14)**Environmental Statement for the financial year ending the 31st March -2021****Bhelatand A. Colliery & Integrated Washery**

B.	WATER	Parameter	Results (Colliery)	Results (Washery)	UOM	Limit	The quality of mine water is being measured on monthly basis. Washery is Zero water discharge (Closed water circuit system) unit. The analysis of water in the final settling tank is done monthly. Average value for FY22 is provided here.
		pH	7.4	8.0	pH	5.5-9.0	
		Total Suspended Solid	11.9	32.9	mg/ltr.	100	
		Total Dissolved Solid	746.7	817.3	mg/ltr.	2100	
		Biological Oxygen Demand	3.8	4.6	mg/ltr.	30	
		Chemical Oxygen Demand	16.0	33.3	mg/ltr.	250	
		Oil & Grease	0.7	2.6	mg/ltr.	10	

The unit does not have any single point source of air pollution. Hence, quantitative estimation of air pollutants discharged in Kg/day cannot be ascertained.

PART – D**Hazardous Wastes**

(as specified under The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016)

Sl No	Hazardous Waste	Total Quantity (Kg.)	
		During the previous financial year 2020-2021	During the current financial year 2021-2022
1.	From process Used Oil	1883.1 Ltrs	Colliery: 3987.3 Ltrs Washery: 3516.4 Ltrs
2.	From pollution control facility	-	-

PART – E**Solid Wastes**

Sl No	Solid Wastes	Total Quantity (Kg.)	
		During the previous financial year 2020-2021	During the current financial year 2021-2022
1.	Steel Scrap and other materials (conveyor belt, cable pieces waste) collected from U/G mines.	267.67 Ton	468.08 Ton
2.	From process a. Tailing	89832 Ton	146896 Ton
3.	(i) Quantity recycled or reutilized within the unit/sold/disposed	All tailings sold to institutionalized customers and scrap sold to dealers	All tailings sold to institutionalized customers and scrap sold to dealers

FORM – V (See rule – 14)

**Environmental Statement for the financial year ending the 31st March -2021
Bhelatand A. Colliery & Integrated Washery**

PART – F

Please specify the characterization (in term of composition and quantum) of hazardous as well as solid wastes and indicate disposal practices adopted for both these categories of wastes.

Category of Waste	Characteristics	Quantity	Disposal Practice
Solid Waste 1. Steel Scrap and other materials	Solid	468.08 Ton	Steel scrap and other solid wastes are sent to central scrap yard for segregation and disposal to vendors.
2. Tailings	Coal of -0.5mm size (Solid)	146896 Ton	All tailings sold to institutionalized customers
Hazardous Waste 1. Used Oil	Used Oil (Liquid)	7503.7 Ltrs	Generally, hazardous wastes are disposed off to registered recyclers according to applicable Hazardous Wastes Management Rules.

PART – G

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

Bhelatand A. Colliery:

S. No.	Environment Management Activity	Expenditure (Lakh)
1	Stowing activities i.e filling of U/G voids for surface protection and prevention of subsidence	129.39
2	Fire Control measures (Fire/Isolation Stopping and Nitrogen plant)	4.0
3	Goaf Filling activities, drain repairing and maintenance, settling tank maintenance jobs	24.0
4	Water spraying costs in underground and surface	0.5
4	Making potable water in Water Treatment Plant & Supply to colonies	36.1
5	Horticultural activities including lawn and garden maintenance	16.55
6	Plantation of saplings and maintenance	2.18
7	Environmental Monitoring and scientific studies	8.40
8	Operation and maintenance of ETP/STP	6.76
	Total Cost incurred	227.78

Total annual expenditure incurred towards environmental protection is Rs. **227.78 lakhs**

FORM – V (See rule – 14)

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

Bhelatand A. Colliery & Integrated Washery

Annual raw coal production of the plant during the year is **2.55 lakh tonnes**.

So, the impact of the pollution abatement measures, and environment protection shall be **Rs. 89.33 per ton** of raw coal production.

Bhelatand Coal Preparation Plant:

S.No.	Environment Management Activity	Expenditure (Lakh)
1	Tailings Management System including recycling	42.07
2	Dust suppression system (Dry fog system)	10.64
3	Operation and maintenance of Dust extraction system	5.00
4	Housekeeping measures includes removing spillage, improvement of roads, mechanical sweeper etc	46.87
5	Mechanical dewatering system	5.00
6	Fixing of Hosch Scraper and tru track idler for spillage control of conveyer belt	10.00
7	Water sprinkling activities	7.95
8	Any additional measures for Environment Management	2.00
9	Horticultural activities including green belt development and regular lawn and garden maintenance	16.55
10	Plantation of saplings and maintenance	2.18
11	Operation and maintenance of ETP/STP	6.76
12	Environmental Monitoring and scientific studies	7.36
	Total Cost incurred	162.38

Total annual expenditure incurred towards environmental protection is **Rs. 162.38 lakhs**.

Annual clean coal production of the plant during the year is **4.04 lakh tonnes**.

So the impact of the pollution abatement measures and environment protection shall be **40.17 Rs/ ton** of clean coal production.

PART – H

Additional measures/ investment proposals for environmental protection including abatement of pollution, prevention of pollution

Jharia Division of TATA Steel Ltd. is committed to improve safety and environment by strictly practicing Environmental Management System of company.

Various programs are arranged such as World Environmental day, Sustainability Month, Annual Flower Show, Green school Project, Tata volunteering week etc for public awareness. Also, various initiatives for biodiversity enhancement in the region have been taken such as Bird Niche Nesting, Development of Butterfly garden, Medicinal Garden, Nursery development of native species, etc. Tree plantation will be continued in the leasehold area. Water pumped out of the mine will continue to be used in washery other than use in stowing.

FORM – V (See rule – 14)

**Environmental Statement for the financial year ending the 31st March -2021
Bhelatand A. Colliery & Integrated Washery**

A Sewage Treatment Plant has been installed of 200KLD capacity for treatment of domestic sewage of Adarsh Nagri Colony at Bhelatand at a cost of Rs. 65 lakhs. Regular operation and maintenance is being done to ensure optimum performance of plant.

PART – I

Any other particulars for improving the quality of environment

1. We are providing safe drinking water from our water treatment plant & MADA to our employees.
2. We are regularly sprinkling water in an around the units, to suppress dust.
3. We provide dust mask to our employees to prevent exposure to dust in underground mines.
4. Our welfare department arranges to clean the domestic garbages from our colonies to provide better environment.
5. Regular monitoring of Air Quality & mine water analysis by our separate environment management cell.
6. We have already done the tree plantation job and this is a continuous process in company leasehold areas.
7. Regular thrust on Environment awareness conducting training classes at P.T.I., Jamadoba.
8. We are an IMS certified unit (ISO 9001:2015, 14001:2015 and 45001:2018 certified) along with SA: 8000 (Social Accountability)

Name of Unit – Bhelatand A. Colliery & Integrated Washery

NALS

**Chief Sijua Group
Tata Steel Limited**