



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/ 734 /2021

September 28th, 2021

Sub: Annual Environment Statement in Form V for the FY-21.

Dear Sir,

We are enclosing herewith **combined Annual Environment Statement** in Form-V for the FY-21 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)

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

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: 28 th September 2020 (Vide Letter No. JMB/ENV/ESSA/05/889/2020) Washery: 28 th September 2020 (Vide Letter No. JMB/ENV/ESSA/05/893/2020)

PART – B

Water and Raw Material Consumption

1. Water Consumption M³ / day.

Bhelatand A. Colliery		
	Water consumption in 2019-2020	Water consumption in 2020-2021
Process	Not Applicable	Not Applicable
Industrial	33.59 M ³ /day	6.64 M ³ /day
Domestic	1184.56 M ³ /day	958.36 M ³ /day
Bhelatand Coal Preparation Plant		
Process	241.47 M ³ / day	285.19 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 2019-2020	During the current financial year 2020-2021
Bhelatand A. Colliery			
1.	Raw Coal	Not Applicable	Not Applicable
Bhelatand Coal Preparation Plant			
1.	Clean Coal	0.19 M3/Ton	0.31 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 2019-2020	During the current financial year 2019-2020
Bhelatand A. Colliery				
1.	Explosives	Raw Coal	0.23 Kg/Ton	0.32 Kg/Ton
2.	Detonators		0.42 Nos/Ton	0.64 Nos/Ton
Bhelatand Coal Preparation Plant				
1.	Raw Coal	Clean Coal	1.64 trc/tcc	1.51 trc/tcc
2.	Magnetite		0.94 kg/ton	1.20 kg/ton

*Industries may use codes if disclosing details of raw materials would violate contractual obligation, otherwise all industries have to name the raw materials used.

FORM – V (See rule – 14)

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

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)		Concentration of pollutants discharges (Mass/Volume)		Percentage of variation from prescribed standard with reason.	
		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		
A.	AIR	84.21	46.14	11.46	11.95	Ambient air quality is being measured and all values are within limits as per NAAQS, 2009.	
B.	WATER	Parameter	Results (Colliery)	Results (Washery)	Unit of measure	Limit	The quality of mine water is being measured on monthly basis.
		pH	7.7	8.1	pH	5.5-9.0	
		Total Suspended Solid	11.2	20.8	mg/ltr.	100	Washery is Zero water discharge (Closed water circuit system) unit. The analysis of water in the final settling tank is done monthly.
		Total Dissolved Solid	718.7	896.5	mg/ltr.	2100	
		Biological Oxygen Demand	3.5	4.3	mg/ltr.	30	
		Chemical Oxygen Demand	16.0	36.0	mg/ltr.	250	
		Oil & Grease	0.9	3.1	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.

FORM – V (See rule – 14)**Environmental Statement for the financial year ending the 31st March -2021
Bhelatand A. Colliery & Integrated Washery****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 2019-2020	During the current financial year 2020-2021
1.	From process Used Oil Used cap lamp battery	4428 Ltrs 26 Nos	1883.1 Ltrs 0 Nos
2.	From pollution control facility	-	-

PART – E**Solid Wastes**

Sl No	Solid Wastes	Total Quantity (Kg.)	
		During the previous financial year 2019-2020	During the current financial year 2020-2021
1.	Steel Scrap and other materials (conveyor belt, cable pieces waste) collected from U/G mines.	261.31 Ton	267.67 Ton
2.	From process a. Tailing	128408 Ton	89832 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

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	267.67 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)	89832 Ton	All tailings sold to institutionalized customers

FORM – V (See rule – 14)

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

Hazardous Waste 1. Used Oil	Used Oil (Liquid)	1883.1 Ltrs	Generally, hazardous wastes are disposed off to registered recyclers according to applicable Hazardous Wastes Management Rules. Battery wastes are sold off to authorized recycler
2. Used Cap Lamp Battery	Battery (Solid)	0 Nos	

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 in Lakhs
1	Stowing activities i.e filling of U/G voids for surface protection and prevention of subsidence	114.8
2	Fire Control measures (Fire/Isolation Stopping and Nitrogen plant)	3.50
3	Goaf Filling activities, drain repairing and maintenance, settling tank maintenance jobs	11.66
4	Water spraying costs in underground and surface	12.01
4	Making potable water in Water Treatment Plant & Supply to colonies	53.02
5	Horticultural activities including green belt development and regular lawn and garden maintenance	19.23
6	Plantation of saplings and maintenance	5.30
	Total Cost incurred	221.22

Total annual expenditure incurred towards environmental protection is Rs. **221.22 lakhs**

Annual raw coal production of the plant during the year is **2.45 lakh tonnes**.

So the impact of the pollution abatement measures and environment protection shall be **Rs. 90.19 per ton** of raw coal production.

Bhelatand Coal Preparation Plant:

S.No.	Environment Management Activity	Expenditure in Lakhs
1	Tailings Management System including recycling	34.96
2	Dust suppression system (Dry fog system)	8.75
3	Dust extraction system	5.00
4	Housekeeping measures includes removing spillage,	40.14

FORM – V (See rule – 14)

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

	improvement of roads	
5	Mechanical dewatering system	6.00
6	Fixing of Hosch Scraper and tru track idler for spillage control of conveyer belt	9.00
7	Water spraying on roads for dust control	6.71
8	Replacement of reciprocating type air compressor by screw compressor for noise reduction	0.00
9	Any additional expenditure incurred such as constructing the rainwater harvesting structure	0.00
10	Horticultural activities including green belt development and regular lawn and garden maintenance	18.94
11	Plantation of saplings and maintenance	3.71
	Total Cost incurred	133.21

Total annual expenditure incurred towards environmental protection is **Rs. 133.21 lakhs**.

Annual clean coal production of the plant during the year is **3.37 lakh tonnes**.

So the impact of the pollution abatement measures and environment protection shall be **39.57 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, 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.

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

FORM – V (See rule – 14)

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

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).

Name of Unit – Bhelatand A. Colliery & Integrated Washery

NALS

h **Chief Sijua Group
Tata Steel Limited**

**Chief Sijua Group
Tata Steel Ltd.**