TATA

The Regional Officer
Jharkhand State Pollution Control Board
Near PTC Chowk, Matwari Road,
Hazaribag.

WBD/EMC/4016/ 129 /16
September 21, 2016

Sub.: **Environmental Statement for the year of 2015 - 2016**

Dear Sir,

Kindly find enclosed herewith 'Environmental Statement' in duplicate for the year of 2015 – 2016 for our following unit:

- WASHERY-II

Thanking you,

Yours sincerely,

Sahabji Kuchroo
Chief (KBP & Project)

Encl.: As above.

c.c.: The Member Secretary
Jharkhand State Pollution Control Board
TA Building, Dhurwa
Ranchi.

भारतीय डाक
India Post

RL GHATOTAND SO <825314>
A RJ041451305IN
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Hazaribagh H.O, PIN:825301
From:SR MANAGER INV & ERG , TATA STEEL GHATOTND
Wt:132grams,
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To:MEMBER SECRETARY,JH S POLLUTION C BOA
Dhurwa S.O, PIN:834004
From:SR MANAGER INV & ERG , TATA STEEL GHATOTN
Wt:134grams,
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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 Mumbai 400 001
Tel 91 22 66658282 Fax 91 22 66657724
Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com

Form-V

(See Rule 14)

Environmental statement for the financial year ending 31st March 2016

(Unit- Washery-II)

PART-A

i)	Name and address of the owner/ Occupier of the industry operation or process	:	**Mr. B.V Sudhir Kumar** **Chief (Coal Beneficiation),** **West Bokaro Division,** **TATA Steel Limited, P.O.: Ghatotand** **Dist. Ramgarh, Jharkhand- 825314**
ii)	Industry category Primary- (STC-code) Secondary- (SIC code)	:	SITC -321.4, 321.5A, 321.6A ISIC -2100
iii)	Production capacity- units	:	7300 t/d Raw Coal throughput.
iv)	Year of establishment	:	1982
v)	Date of last environmental statement submitted		Letter no. WBD/EMC/4016/491/15, dated 26th Sept, 2015. For the year 2014-15.

PART-B

Water and Raw material Consumption

i) Water Consumption (m^3/d)

Process	:	737.70 m^3/d
Cooling	:	Not applicable
Domestic	:	(This is included in the Environmental Statement of West Bokaro Colliery)

Name of the Product	**Process Water Consumption per unit of product output**	
	During the current Financial year (2014-15)	**During the current Financial year (2015-16)**
Clean Coal	0.36 KL/T	0.27 KL/T

ii) Raw material consumption

***Name of raw materials**	**Name of products**	**Consumption of raw material per unit of output**	
		During the previous Financial year (2014-15)	**During the current Financial year (2015-16)**
Raw Coal	Clean Coal	2.25 t/t of clean coal Yield (45.13%)	2.07 t/t of clean coal Yield (48.21%)
Magnetite	Middling	0.69 kg/t of coarse coal	0.69 kg/t of coarse coal
Synthetic Collector		0.55 kg/t of fine raw coal	0.47 kg/t of fine raw coal
Frother		0.087 kg/t of fine raw coal	0.085 kg/t of fine raw coal
Flocculent		0.019 kg/t of fine raw coal	0.021kg/t of fine raw coal

*Industry may use codes is disclosing details of raw material would violate contractual obligation otherwise all industries have to name the raw materials used.

PART-C

Pollution discharged to environment / unit of output
(Parameter 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
a) Water	We are maintaining zero discharge plant. However, regular monitoring and analysis of final pond is being done where quality is being maintained as per norm as enclosed as **annexure-II**		
b) Air	Due to absence of stationary source, it is difficult to measure pollutants load. However, ambient air quality is being measured in the area. Results of ambient air quality monitoring report are enclosed as **annexure-I.**		

PART-D

(As specified under Hazardous Wastes
[Management, Handling and Transboundry Movement Rules, 2008])

Hazardous Waste	Total Quantity	
	During the previous financial year (2014-15)	During the current financial year (2015-16)
(a) From Process Oil soaked cotton (jute)	1200 Kg/year	2500 Kg/year
(b) From Pollution control facilities Used Oil	1690 liters	4000 liters

PART- E

Solid Wastes

	Solid Wastes	Total Quantity	
		During the previous financial year (2014-15)	During the current financial year (2015-16)
(a)	From Process Rejects (by products) Tailings	 124805 T 289880 T	 128795 T 351318 T
(b)	From pollution control facilities	-	-
(C)	(1) Quantity recycled or reutilized within the unit Coal Reject	Rejects are being used in FBC power plant, disposed off to outside agencies & stacked in specified locations.. About 2.28 lakh Ton used in captive power plant.	
	(2) Sold (to reuse as fuel) Coal Reject	3.03 lakh Ton to institutionalized customer operating power plant. The said quantity includes reject of washery -III also.	
	Tailings (3) Disposed	Brick Klin, and power plant operator. Total quantity is 7.30 lakh ton includes tailing of washery- III.	

PART-F

Please specify the characterization (in term 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. Rejects	Coal of -13mm size (*Solid*)	128795 T	Used in FBC power house and disposed off to outside parties operating power plant / stacked.
2. Tailings	Coal of -0.5mm size (*Solid*)	351318 T	Disposed off to outside agencies (Brick klin manufacturer, institutionalized customer).
Haz. Waste			
1. Used Oil	Used Oil (*Liquid*)	4000 lit	Disposed off to authorized recycler.
2. Oil soaked cotton/jute	Used Cotton (*Solid*)	2500 Kg	Safely collected and stored.

PART-G

Impact of the pollution abatement measure 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 in coal handling plant and large vacuum cleaner is installed for recovery of spillage in the circuit. In addition to above modifier has been newly introduced in froth-flotation process for additional clean coal recovery, which not only increases the yield of process but also conserves the natural resources.

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. 31.45 (Rupees thirty-one and forty-five paisa only)

PART-H

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

Dry fog dust suppression system in coal handling plants has been running well. The system is also extended to raw coal screen area to minimize fugitive emission. Fixed type water spraying system inside washery complex has been operated. In canteen areas emergency efficient LED lights are introduced.

PART-I

Any other particular for improving the quality of the environment

EMS ISO 14001 & OHSAS 18001 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 equipments. 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.

B.V. Sudhir Kumar
CHIEF (C B)
West Bokaro

Mr. B.V Sudhir Kumar, Chief (Coal Beneficiation),
West Bokaro Division, TATA Steel Limited, P.O.: Ghatotand
Dist. Ramgarh, Jharkhand- 825314

AIR QUALITY REPORT AT WORK PLACE

Name of Industry: **West Bokaro Division** No. of sampling points: **(01)**

Sampling position: **Washery-II**

Location	Date of Sampling (24 hrs.)	SO_2	NO_X	RPM	SPM
Washery Complex, (W-II)	06-07 Jan.16	19	34	130	389
	04-05 Feb.16	18	37	96	212
	04-05 Mar.16	19	48	138	360
Maximum		**19**	**48**	**138**	**389**
Average		**19**	**40**	**121**	**320**
Limit		**120 µg/ m^3**	**120 µg/ m^3**	**300 µg/ m^3**	**700 µg/ m^3**

AMBIENT AIR QUALITY REPORT

Name of Industry: **West Bokaro Division** No. of sampling points: **(03)**

Sampling position: **Washery II**

1. Banji Village

Location	Date of Sampling (24 hrs.)	SO_2	NO_X	PM_{10}	$PM_{2.5}$
Near Banjee	07-08 Jan.16	11	24	62	29
	12-13 Feb.16	16	31	60	40
	04-05 Mar.16	9.1	22	75	37
Maximum		**16**	**31**	**75**	**40**
Average		**12**	**26**	**66**	**35**
Limit		**80 µg/m^3**	**80 µg/m^3**	**100 µg/m^3**	**60 µg/m^3**

AMBIENT AIR QUALITY REPORT

Name of Industry: **West Bokaro Division**

No. of sampling points: **(03)**
Sampling position: **Washery II**

2. Pundi

Location	Date of Sampling (24 hrs.)	SO_2	NO_X	PM_{10}	$PM_{2.5}$
Near Pundi	05-06 Jan.16	13	27	42	22
	10-11 Feb.16	17	27	55	38
	02-03 Mar.16	12	24	60	27
Maximum		**17**	**27**	**60**	**38**
Average		**14**	**26**	**52**	**29**
Limit		**80 $\mu g/m^3$**	**80 $\mu g/m^3$**	**100 $\mu g/m^3$**	**60 $\mu g/m^3$**

AMBIENT AIR QUALITY REPORT

Name of Industry: **West Bokaro Division**

No. of sampling points: **(03)**
Sampling position: **Washery II**

3. Mukundabera

Location	Date of Sampling (24 hrs.)	SO_2	NO_X	PM_{10}	$PM_{2.5}$
Mukunda Bera	14-15 Jan.16	19	37	76	48
	19-20 Feb.16	14	30	81	46
	12-13 Mar.16	13	31	75	40
Maximum		**19**	**37**	**81**	**48**
Average		**15**	**33**	**77**	**45**
Limit		**80 $\mu g/m^3$**	**80 $\mu g/m^3$**	**100 $\mu g/m^3$**	**60 $\mu g/m^3$**

EFFLUENT QUALITY

SAMPLING DATE: 04th March 2016

LOCATION	LEVELS					
	pH	TSS	COD	BOD	Oil & Grease	Phenolics
Washery-II, TP-8	8.4	52	128	7.7	<1.0	<1.0
LIMIT	5.5-9.0	100 mg/L	250 mg/L	30 mg/L	05 mg/L	1.0 mg/L

AMBIENT NOISE MONITORING

LOCATION	NOISE LEVELS dB(A)			
	DURING DAY TIME		DURING NIGHT TIME	
	LIMIT	ACTUAL	LIMIT	ACTUAL
W-II (W. Complex)	75	58-60	70	53-55

Sr. Manager (Env. & Ergo.)
West Bokaro
Tata Steel