

Form-V
(See Rule 14)
Environmental statement for the financial year ending 31st March 2014.
(Unit- Washery-III)

PART-A

- i) Name and address of the owner/ Occupier of the industry operation or process : **Mr. P.K Dhall**
Chief (Coal Beneficiation)
West Bokaro Division,
TATA Steel Limited, P.O.: Ghatotand
Dist. Ramgarh, Jharkhand- 825314
- ii) Industry category Primary- (STC-code) : SITC -321.4, 321.5A, 321.6A
Secondary- (SIC code) : ISIC -2100
- iii) Production capacity- units : 15,000 T/day Raw Coal throughputs.
- iv) Year of establishment : 1994
- v) Date of last environmental statement submitted : Letter no. WBD/EMC/4016/108/13, dated 15th Sept, 2013. For the year 2012-13.

PART-B

Water and Raw material Consumption

- i) Water Consumption (m³/d)
- Process : 2040 m³/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 previous Financial year (2012-13)	During the current Financial year (2013-14)
Clean Coal	0.36 KL/T	0.44 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 (2012-13)	During the current Financial year (2013-14)
Raw Coal	Clean coal	2.42 t/t of clean coal (Yield . 41.2%)	2.05 t/t of clean coal (Yield . 48.71%)
Magnetite	Middling	0.72 kg/t of coarse coal	0.78 kg/t of coarse coal
Diesel/ Synthetic collector		0.54 lit/t of fine raw coal	0.58 lit/t of fine raw coal
Frother		0.10 kg/t of fine raw coal	0.10 kg/t of fine raw coal
Modifier		-	0.04 kg/t of coarse 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 Transboundary Movement Rules, 2008])

Hazardous Waste	Total Quantity	
	During the previous financial year (2012-13)	During the current financial year (2013-14)
(a) From Process a) Oil soaked cotton (jute)	2480 Kg/y	1860 Kg/y
(b) From Pollution control facilities a. Used oil	5007 liters	6050 liters

PART- E

Solid Wastes

Solid Wastes	Total Quantity	
	During the previous financial year(2012-13)	During the current financial year (2013-14)
(a) From Process Rejects (by products) Tailings	289826 T 810729 T	409940 T 632607 T
(b) From Pollution control facilities	-	-
(C) (1)Quantity recycled or reutilized within the unit Reject (2)Sold (to reuse as fuel) Rejects Tailings (3)Disposed	Rejects are being used in FBC power plant, disposed off to outside agencies & stacked in specified locations. About 2.24 lakh used in captive power plant. 9.70 lakh to institutionalized customer operating power plant, the said quantity includes reject of Washery -II also. Brick Klin, and power plant operator. Total quantity is 10,82,672 ton includes tailing of Washery- II.	

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 2. Tailings	Coal of -13mm size (<i>Solid</i>) Coal of -0.5mm size (<i>Solid</i>)	409940 T 632607 T	Used in FBC power house and disposed off to outside parties operating power plant / stacked.
Haz. Waste 1. Used Oil 2. Oil soaked cotton/jute	Used Oil (<i>Liquid</i>) Used Cotton(<i>Solid</i>)	6050 lit 1860 Kg	Disposed off to outside agencies (Brick klin manufacturer, institutionalized customer). Disposed off to authorized recycler. Safely collected and disposed off.

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. 26.27 (Rupees twenty six and fifty one paisa only).

PART-H

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

Dry fog dust suppression system in both coal washeries are running well. Dry fog system has been extended at raw coal circuit. Synthetic collector is used in place of diesel to conserve natural resources. Fixed type of water sprinkling system in Washery area are installed and operated regularly.

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.

**Mr. P. K. Dhall, Chief (Coal Beneficiation),
West Boakro Division, TATA Steel Limited, P.O.: Ghatotand
Dist. Ramgarh, Jharkhand- 825314**

AIR QUALITY REPORT AT WORK PLACEName of Industry: **West Bokaro Division**No. of sampling points: **(01)**Date of Sampling: **06-07 Jan.2014**
06-07 Feb.2014
06-07 Mar.2014Sampling position: **Washery-III**

Location	Date of Sampling (24 hrs.)	SO ₂	NO _x	RPM	SPM
Washery Complex, (W-III)	06-07 January 2014	<10	54	160	488
	06-07 February 2014	12	25	100	258
	06-07 March 2014	<10	32	132	274
Maximum		12	54	160	488
Average		<10	37	130	340
Limit		120 µg/ m³	120 µg/ m³	300 µg/ m³	700 µg/ m³

AMBIENT AIR QUALITY REPORTDate of Sampling: **16-17 Jan.2014**
06-07 Feb.2014
06-07 Mar.2014Sampling position: **Washery III****1. Banjee**

Location	Date of Sampling (24 hrs.)	SO ₂	NO _x	PM ₁₀	PM _{2.5}
Near Banjee	16-17 January 2014	<10	30	62	48
	06-07 February 2014	<10	<10	52	34
	06-07 March 2014	<10	11	52	34
Maximum		<10	30	62	48
Average		<10	20.5	55	38
Limit		80 µg/m³	80 µg/m³	100 µg/m³	60 µg/m³

AMBIENT AIR QUALITY REPORT

Name of Industry: **West Bokaro Division**

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

Date of Sampling: **28-29 Jan.2014**
18-19 Feb.2014
06-07 Mar.2014

2.Pundi

Location	Date of Sampling (24 hrs.)	SO ₂	NO _x	PM ₁₀	PM _{2.5}
Near Pundi	28-29 January 2014	<10	22	46	29
	18-19 February 2014	16	<10	51	35
	06-07 March 2014	<10	<10	55	35
Maximum		16	22	55	35
Average		12	14	50	33
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 III**

Date of Sampling: **26-27 Jan.2014**
18-19 Feb.2014
11-12 Mar.2014

3. Mukundabera

Location	Date of Sampling (24 hrs.)	SO ₂	NO _x	PM ₁₀	PM _{2.5}
Mukunda Bera	26-27 January 2014	<10	40	54	44
	18-19 February 2014	16	<10	51	44
	11-12 March 2014	<10	11	53	41
Maximum		16	40	54	44
Average		12	20	52	43
Limit		80 µg/m ³	80 µg/m ³	100 µg/m ³	60 µg/m ³

EFFLUENT QUALITY

SAMPLING DATE: 20.03.2014

LOCATION	LEVELS					
	pH	TSS	COD	BOD	Oil & Grease	Phenolics
Washery-III, Effluent Pond	7.9	94	89	8.6	<10	-
LIMIT	5.5- 9.0	100 mg/L	250 mg/L	30 mg/L	10 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-III (W. Complex)	75	64-72	70	54-56

Head (Env. & Forests) RMP
West Bokaro
Tata Steel