Form-V
(See Rule 14)
Environmental statement for the financial year ending 31st March 2013.

(Unit- Washery-II)

PART-A

i)	Name and address of the owner/ Occupier of the industry operation or process	:	**Mr. P. K. Dhall** **Chief (Coal Beneficiation),** **West Boakro 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. EMC/IMS/4016/569/12, dated 15th Sept, 2012. For the year 2011-12.

PART-B
Water and Raw material Consumption

i) Water Consumption (m^3/d)

Process	:	787 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 previous Financial year (2011-12)	**During the current Financial year (2012-13)**
Clean Coal	0.26 KL/T	0.29KL/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 (2011-12)	**During the current Financial year (2012-13)**
Raw Coal	Clean Coal	2.59 t/t of clean coal	2.54 t/t of clean coal
Magnetite		2.50 kg/t of coarse coal	0.69 kg/t of coarse coal
Diesel / Synthetic Collector	Middling	0.55 lit/t of fine raw coal	0.63 kg/t of fine raw coal
Frother		0.10 kg/t of fine raw coal	0.086 kg/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 (2011-12)	During the current financial year (2012-13)
(a) From Process Oil soaked cotton (jute)	2480 kg/year	1240 Kg/year
(b) From Pollution control facilities Used Oil	8736 liters	4360 liters

PART- E
Solid Wastes

	Solid Wastes	Total Quantity	
		During the previous financial year (2011-12)	During the current financial year (2012-13)
(a)	From Process		
	Rejects (by products)	204094 T	190485 T
	Tailings	616286 T	616670 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 2.38 lakh used in captive power plant.	
	(2) Sold (to reuse as fuel) Coal Reject	6.54 lakh to institutionalized customer operating power plant. The said quantity includes reject of washery -III also.	
	Tailings	Brick Klin, and power plant operator. Total quantity is 13,68,853 ton includes tailing of washery- III.	
	(3) Disposed		

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*)	190485 T	Used in FBC power house and disposed off to outside parties operating power plant / stacked.
2. Tailings	Coal of -0.5mm size (*Solid*)	616670 T	Disposed off to outside agencies (Brick klin manufacturer, institutionalized customer).
Haz. Waste			
1. Used Oil	Used Oil (*Liquid*)	4360 lit	Disposed off to authorized recycler.
2. Oil soaked cotton/jute	Used Cotton (*Solid*)	1240 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

Washery-II of West Bokaro Colliery of TATA Steel Ltd. is an ISO 9001, 14001 and OHSA 18001 unit, entire coal washing is done by eco-friendly way by using standard practice. 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.

The combined impact due to implementation of pollution prevention and control measures cost per tonne of ROM coal, of entire west Bokaro division (Washery, PH, Mines, Eng. services, Logistic, etc.) is Rs. 26.51 (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 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. Further extend to branch road.

PART-I

Any other particular for improving the quality of the environment

EMS ISO 14001 & OHSMS 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

Annexure-I

Air Quality Report At work place

Name of Industry: **West Bokaro Division**

No. of sampling points: **(01)**

Date of Sampling: **04.04.2013 to 19.04.2013**
06.05.2013 to 21.05.2013
06.06.2013 to 21.06.2013

Sampling position: **Washery-II**

1. Control, Room

Location	Time	SO_2	NOX	RPM	SPM
Washery Complex, (W-II)	09.00 AM to 05.00 PM on 04.04.2013	3.4	55	173	511
	05.00 PM on 04.04.2013 to 09.00 AM on 05.04.2013	2.4	45	151	462
	09.00 AM to 05.00 PM on 18.04.2013	2.9	52	156	472
	05.00 PM on 18.04.2013 to 09.00 AM on 19.04.2013	2.4	43	144	447
	09.00 AM to 05.00 PM on 06.05.2013	3.5	60	171	529
	05.00 PM on 06.05.2013 to 09.00 AM on 07.05.2013	3.0	48	158	468
	09.00 AM to 05.00 PM on 20.05.2013	3.6	61	178	546
	05.00 PM on 20.05.2013 to 09.00 AM on 21.05.2013	3.2	48	158	474
	09.00 AM to 05.00 PM on 06.06.2013	3.0	46	153	468
	05.00 PM on 06.06.2013 to 09.00 AM on 07.06.2013	2.8	43	130	414
	09.00 AM to 05.00 PM on 20.06.2013	2.9	43	149	454
	05.00 PM on 20.06.2013 to 09.00 AM on 21.06.2013	2.6	36	131	381
Maximum		**3.6**	**61**	**178**	**546**
Average		**3.0**	**48**	**154**	**469**
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**

Date of Sampling: **18.04.2013 to 19.04.2013**
15.05.2013 to 16.05.2013
01.06.2013 to 02.06.2013

1. Banjee

Location	**Time**	**SO_2**	**NO_X**	**PM_{10}**	**$PM_{2.5}$**
Banjee	09.00 AM to 05.00 PM on 18.04.2013	3.4	39	76	42
	05.00 PM on 18.04.2013 to 09.00 AM on 19.04.2013	2.0	26	58	35
	8.30 AM to 04.30 PM on 15.05.2013	4.0	42	78	45
	4.30 PM on 15.05.2013 to 08.30 AM on 16.05.2013	2.0	33	51	40
	8.30 AM to 04.30 PM on 01.06.2013	1.9	26	48	40
	4.30 PM on 01.06.2013 to 08.30 AM on 02.06.2013	2.0	29	51	35
Maximum		**4.0**	**42**	**78**	**42**
Average		**2.5**	**32**	**60**	**39**
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**

Date of Sampling: **19.04.2013 to 20.04.2013**
16.05.2013 to 17.05.2013
04.06.2013 to 05.06.2013

2.Pundi,

Location	Time	SO_2	NO_X	PM_{10}	$PM_{2.5}$
Pundi	09.00 AM to 05.00 PM on 19.04.2013	2.7	29	66	40
	05.00 PM on 19.04.2013 to 09.00 AM on 20.04.2013	2.0	23	50	33
	09.30 AM to 05.30 PM on 16.05.2013	2.0	42	60	44
	05.30 PM on 16.05.2013 to 09.30 AM on 17.05.2013	2.0	35	55	41
	09.30 AM to 05.30 PM on 04.06.2013	1.2	22	46	37
	05.30 PM on 04.06.2013 to 09.30 AM on 05.06.2013	1.9	27	41	32
Maximum		**2.7**	**42**	**66**	**44**
Average		**2.0**	**30**	**53**	**38**
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**

Date of Sampling: **20.04.2013 to 21.04.2013**
17.05.2013 to 18.05.2013
05.06.2013 to 06.06.2013

3. Mukundabera

Location	Time	SO_2	NO_X	PM_{10}	$PM_{2.5}$
Mukudabera	09.00 AM to 05.00 PM on 20.04.2013	2.6	52	79	56
	05.00 PM on 20.04.2013 to 09.00 AM on 21.04.2013	2.4	47	71	50
	10.30 AM to 06.30 PM on 17.05.2016	3.1	45	88	57
	06.30 PM on 17.05.2016 to 10.30 AM on 18.05.2016	1.9	32	56	46
	08.30 AM to 04.30 PM on 05.06.2013	2.1	36	57	42
	04.30 PM on 05.06.2013 to 08.30 AM on 06.06.2013	2.1	27	46	38
Maximum		**3.1**	**52**	**88**	**57**
Average		**2.3**	**40**	**66**	**48**
Limit		**80 µg/ m^3**	**80 µg/ m^3**	**100 µg/ m^3**	**60 µg/ m^3**

Annexure-II

Effluent Quality

SAMPLING DATE: 06.06.2013

LOCATION	LEVELS					
	pH	TSS	COD	BOD	Oil & Grease	Phenolics
Washery-II, TP-8	7.4	42	50	6.2	1.0	Nil
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-II (W. Complex)	75	60-63	70	58-60

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