ENVIRONMENT STATEMENT FOR THE FINANCIAL YEAR ENDING 31ST MARCH'2019.

PART – A

1.	**Name and address of the owner of the industry operation or process**	**SRI PAWAN KUMAR SINGH** **Chief Executive Officer** **SAIL / Bokaro Steel Plant, Bokaro Steel City, Jharkhand**
2.	**Industry Category**	**Primary**
3.	**Production capacity**	**4.0 Million Tonne crude steel per annum**
4.	**Year of establishment**	**1972**
5.	**Date of last environment statement submitted**	**03.09.2018**

PART – B

WATER AND RAW MATERIAL CONSUMPTION

(i). WATER CONSUMPTION (Basic data)

Sl. No.	Purpose	2017-18	2018-19
1	Process/ cooling	39854 m^3 /day	36810m^3 /day
2	Domestic	150866 m^3 /day	147164 m^3 /day

Sl. No.	Name of products	Process water consumption per unit of product output	
		During the previous financial year 2017-18	*During the current financial year 2018-19*
1	Crude Steel	3.94 m^3/Tonne crude steel	3.50 m^3/Tonne crude steel

(ii). RAW MATERIAL CONSUMPTION

Sl. No.	Name of Raw Material	Name of products	CONSUMPTION OF RAW MATERIAL PER UNIT OUTPUT	
			During the previous financial year	*During the current financial year*
		Crude Steel	2017-18	2018-19
1	Coal		0.84261	0.84612
2	Ore fines		1.13907	1.14731
3	Ore lump		0.56525	0.59019
4	Lime Stone		0.23461	0.24471
5	Dolomite		0.17506	0.19120
6	Mn-ore		0.00000	0.00000
7	Other alloying element		0.01039	0.00558
	Total		2.96689	3.02511

PART – C

POLLUTION DISCHARGE TO ENVIRONMENT/UNIT OF OUTPUT

(Parameters as specified in the consent order)

S. N.	PARTICULARS	QUANTITY POLLUTANTS DISCHARGED PER UNIT OF OUT PUT(KG/T OF CRUDE STEEL	QTY. OF POLLUTAN -TS DISCHAR-GED (kg/Day)	CONC. OF POLLUTAN-TS DISCHAR-GED MASS/ VOL. (Unit : mg/Lit.)	% FROM PRESCRIBED STANDARDS REASON
1.	WATER	*TOTAL POLLUTANT LOAD FROM PLANT FROM ALL OUTFALLS*			
	Suspended Solids	0.043261	454.344	34.42	All below norm
	Oil & Grease	0.0008232	8.646	0.655	-do-
	Phenolic Comp.	0.000050149	0.52668	0.0399	-do-
	Cyanide	0.000025130	0.26400	0.0200	-do-
	BOD	0.011707686	122.958	9.315	-do-
2.	AIR				
	Particulate Matter	0.838	-	-	-do-

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PART – D

DETAILS OF HAZARDOUS WASTE GENERATION & DISPOSAL DURING 2018-19

S.N.	HAZARDOUS WASTE	ANNUAL QTY (T)	SOURCE OF GENERATION	TYPE OF DISPOSAL	CATEGORY OF WASTE
1.	Acidic Tar Sludge	1150	By Product plant of Coke Ovens	Disposed in hazardous waste pit	13.4 of Schedule – I
2.	Spent Vanadium Pentoxide	0.100	do	do	17.2 of Schedule - I
3.	Sulphur Sludge	215	do	do	17.1 of Schedule – I
4.	Decanter Tar Sludge	92	do	Charged with coal blend in Coke oven batteries	13.3 of Schedule – I
5.	Decanter Tar Sludge	877	do	Disposed in hazardous waste pit	13.3 of Schedule – I
6.	Tar Muck with Sand etc.	205	do	Disposed in hazardous waste pit	13.4 of Schedule – I
7.	Oil & Grease Muck	152.5	Mills area	do	4.1 of Schedule – I 4.4 of Schedule – I
8.	Asbestos Rope	04	Coke oven area	do	15.2 of Schedule – I
9.	Transformer oil	30 KL	DNW	Sold to authorized buyer	5.1 of Schedule – I
10.	Oil sludge from oil regeneration unit	0.435	Oil regeneration unit	Disposed in HW Pit	4.1 of Schedule – I
11.	Zinc dross	383.39	HDGC/CRM	Sold to Authorized parties	6.3 of Schedule – I
12.	Zinc ash	0.00	do	do	6.2 of Schedule – I, C-14 of Schedule – II
13.	Used batteries	902	Mills/Iron zone/OG/Traffic	do	C-12.3 of Schedule – I C-14 of Schedule – II
14.	ETP sludge	1050	BOD plant of COBPP	Charged in Coke Oven batteries by mixing in coal	34.3 of Schedule – I
15.	Flue Dust	53357	Blast furnace	Internal Recycling	34.1 of Schedule – I

HAZARDOUS WASTE AUTHORIZATION REF. No.: HW/D-2219 DATED. 11.11.2016 and is valid up to 31.03.2020

PART – E

SOLID WASTE

S. N.			DURING PREVIOUS FINANCIAL YEAR (2017-18) (TONNE/Yr.)	DURING CURRANT FINANCIAL YEAR (2018-19) (TONNE/Yr.)
1	FROM PROCESS			
	a	Blast Furnace slag	1537464	1588872
	b	SMS Slag	406294	421668
	c	Lime Dust	8262.2	18821.21
	d	Mill Scale	67683	57362
	e	Coke Breeze	320326	356217
2	FROM POLLUTION CONTROL FACILITY			
	a	Flue dust	45325	43357
	b	ESP dust	5040	9780.11

1. RECYCLED/REUTILISED WITHIN THE UNIT			
	SOLID WASTE	QTY. (Tonne)	
		2017-18	*2018-19*
a	Blast furnace slag	530153	414520
b	SMS slag	352187	360490
c	Lime dust	0.00	0.00
d	Mill Scale	67683	57362
e	Coke breeze	320326	356217
f	Flue dust	45325	43357
g	ESP Dust	5040	9780.11

2. SOLD			
	SOLID WASTE	**QTY. (Tonne)**	
		2017-18	***2018-19***
a	**Blast furnace slag**	**993185**	**1174427**
b	**SMS slag**	**6633**	**13966**
c	**Lime dust**	**8262.2**	**18821.21**
d	**Mill Scale**	**0.00**	**0.00**
e	**Ferric Oxide**	**5995**	**5763.54**

3. DISPOSAL			
a	**Blast furnace slag**	**14126**	**NIL**
b	**SMS slag**	**47474**	**47212**
c	**Flue dust**	**NIL**	**NIL**

PART – F

S. N.	SOLID WASTE	PERCENTAGE COMPOSITION		QTY.(YEAR)
1	BF SLAG	SiO_2	32.71-33.34	PLEASE REFER PART-E
		Al_2O_3	18.88-19.30	-do-
		CaO	34.94-36.29	-do-
		MgO	9.28-9.46	-do-
		FeO	0.13-0.24	-do-
		K_2O	0.33-0.60	-do-
		TIO2	0.64-0.87	-do-
		MnO	0.10-0.16	-do-
		S	0.67-0.78	-do-
		Basicity	1.05-1.10	-do-
2	SMS SLAG	CaO	41.29-51.35	-do-
		FeO	16.54-25.90	-do-
		SiO_2	13.55-15.60	-do-
		MgO	9.31-14.91	-do-
		MnO	0.61-1.11	-do-
		P_2O_5	1.01-1.79	-do-
		AL_2O_3	0.66-1.65	-do-
		Basicity	2.83-3.78	-do-
3	LIME DUST	CaO	87.24-59.27	-do-
		SiO_2	2.12-2.70	-do-
		Al_2O_3	0.91-1.10	-do-
		Fe_2O_3	0.52-1.29	-do-

		FeO	Nil	--
		MgO	1.98-2.20	-do-
4	FLUE DUST	Fe_2O_3	40.88-43.12	-do-
		SiO_2	8.66-10.27	-do-
		CaO	3.11-3.38	-do-
		MgO	1.07-1.09	-do-
		Al_2O_3	6.24-7.52	-do-
		K_2O	0.59-0.92	-do-

PART – G

WASTE MATERIAL RECYCLED IN SINTER PLANT DURING 2018-19

S. N.	WASTE MATERIAL	QTY (In Tonne)
1	LIME DUST/ ESP DUST	9780.11
2	MILL SCALE	57362
3	FLUE DUST	43357
4	L.D.SLAG DUST	135410
5	Coke Breeze	320326

PART - H
SECONDARY SCHEMES FOR AIR

S. N.	AREA	SCHEMES
1	COKE OVEN	The rebuilding of Battery #8 is in progress. Coke Oven Battery#6 has been shut down for rebuilding.
2	SINTER PLANT	Installation of ESP in half band of M/C-3 completed. The order has been placed for installation of ESPs in the remaining bands of Sinter Machines.
3	BLAST FURNACE	ESP based de-dusting system has been installed in BF #2.
4	SMS	Secondary emission control system has been installed in SMS#1.
5.	RMP	The ESPs of Kiln-1, Kiln-3 & Kiln6 has been refurbished.

SCIENTIFIC GREEN BELT DEVELOPMENT INSIDE AND OUTSIDE THE PLANT

TOTAL NO. OF TREES PLANTED IN TOWNSHIP TILL DATE - 3746352
TOTAL NO. OF TREES PLANTED IN WORKS TILL DATE - 730950
TOTAL NO. OF TREES PLANTED INSIDE BSL QUARTERS IN VARIOUS SECTORS TILL DATE - 45700

TOTAL - 4523002

(New replacement plantation is also going on)