

**ENVIRONMENT STATEMENT FOR THE FINANCIAL
YEAR ENDING 31ST MARCH'2018.**

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	07.08.2017

PART – B

WATER AND RAW MATERIAL CONSUMPTION

(i). WATER CONSUMPTION (Basic data)

Sl. No.	Purpose	2016-17	2017-18
1	Process/ cooling	35885 m ³ /day	39854 m ³ /day
2	Domestic	169786 m ³ /day	150866 m ³ /day

Sl. No.	Name of products	Process water consumption per unit of product output	
		<i>During the current financial year 2016-17</i>	<i>During the current financial year 2017-18</i>
1	Crude Steel	4.153 m ³ /Tonne crude steel	3.94 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	
			<i>During the current financial year</i>	<i>During the current financial year</i>
		Crude Steel	2016-17	2017-18
1	Coal		0.86313	0.84261
2	Ore fines		1.15259	1.13907
3	Ore lump		0.52710	0.56525
4	Lime Stone		0.17053	0.23461
5	Dolomite		0.25920	0.17506
6	Mn-ore		0.00000	0.00000
7	Other alloying element		0.01071	0.01039
	Total		2.98326	2.96689

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	<i>TOTAL POLLUTANT LOAD FROM PLANT FROM ALL OUTFALLS</i>			
	Suspended Solids	0.0377295	317.99	24.09	All below norm
	Oil & Grease	0.0011245	9.4776	0.718	-do-
	Phenolic Comp.	0.0000287	0.2423	0.01836	-do-
	Cyanide	0.0000139	0.1188	0.009	-do-
	BOD	0.0160543	135.3	10.25	-do-
2.	AIR				
	Particulate Matter	0.84	-	-	-do-



सेल SAIL
PART – D

DETAILS OF HAZARDOUS WASTE GENERATION & DISPOSAL DURING 2017-18

S.N.	HAZARDOUS WASTE	ANNUAL QTY (T)	SOURCE OF GENERATION	TYPE OF DISPOSAL	CATEGORY OF WASTE
1.	Acidic Tar Sludge	1106	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	107	do	do	17.1 of Schedule – I
4.	Decanter Tar Sludge	89	do	Charged with coal blend in Coke oven batteries	13.3 of Schedule – I
5.	Decanter Tar Sludge	844	do	Disposed in hazardous waste pit	13.3 of Schedule – I
6.	Tar Muck with Sand etc.	215	do	Disposed in hazardous waste pit	13.4 of Schedule – I
7.	Oil & Grease Muck	152	Mills area	do	4.1 of Schedule – I 4.4 of Schedule – I
8.	Asbestos Rope	11	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	0.516	Oil regeneration unit	Disposed in HW Pit	4.1 of Schedule – I
11.	Zinc dross	475	HDGC/CRM	Sold to Authorized parties	6.3 of Schedule – I
12.	Zinc ash	66.02	do	do	6.2 of Schedule – I, C-14 of Schedule – II
13.	Used batteries	1057	Mills/Iron zone/OG/Traffic	do	C-12.3 of Schedule – I C-14 of Schedule – II
14.	ETP sludge	1100	BOD plant of COBPP	Charged in Coke Oven batteries by mixing in coal	34.3 of Schedule – I
15.	Flue Dust	45325	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 CURRANT FINANCIAL YEAR (2016-17) (TONNE/Yr.)	DURING CURRANT FINANCIAL YEAR (2017-18) (TONNE/Yr.)
1	FROM PROCESS		
	a	Blast Furnace slag	1287079
	b	SMS Slag	346909
	c	Lime Dust	5790
	d	Mill Scale	62410
	e	Coke Breeze	322045
2	FROM POLLUTION CONTROL FACILITY		
	a	Flue dust	59387
	b	ESP dust	8100

1. RECYCLED/REUTILISED WITHIN THE UNIT			
	SOLID WASTE	QTY. (Tonne)	
		<i>2016-17</i>	<i>2017-18</i>
a	Blast furnace slag	517296	530153
b	SMS slag	309539	352187
c	Lime dust	0.00	0.00
d	Mill Scale	62410	67683
e	Coke breeze	322045	320326
f	Flue dust	59387	45325
g	ESP Dust	8100	5040

2. SOLD			
	SOLID WASTE	QTY. (Tonne)	
		<i>2016-17</i>	<i>2017-18</i>
a	Blast furnace slag	769379	993185
b	SMS slag	7921	6633
c	Lime dust	5790	8262.2
d	Mill Scale	0.00	0.00
e	Ferric Oxide	5600	5995

3. DISPOSAL			
a	Blast furnace slag	404	14126
b	SMS slag	29449	47474
c	Flue dust	NIL	NIL

PART – F

S. N.	SOLID WASTE	PERCENTAGE COMPOSITION		QTY.(YEAR)
1	BF SLAG	SiO₂	31.01-31.87	PLEASE REFER PART-E
		Al₂O₃	20.15-20.95	-do-
		CaO	34.70-35.71	-do-
		MgO	09.92-10.10	-do-
		FeO	00.32-00.82	-do-
		K₂O	00.13-00.52	-do-
		TiO₂	00.66-00.95	-do-
		MnO	00.05-00.10	-do-
		S	00.66-00.80	-do-
		Basicity	01.09-01.14	-do-
2	SMS SLAG	CaO	43.25-51.27	-do-
		FeO	17.38-21.23	-do-
		SiO₂	13.89-16.94	-do-
		MgO	11.37-15.44	-do-
		MnO	00.65-00.96	-do-
		P₂O₅	01.62-02.05	-do-
		Al₂O₃	00.62-01.26	-do-
		Basicity	02.56-03.56	-do-
3	LIME DUST	CaO	86.25-91.20	-do-
		SiO₂	01.64-02.94	-do-
		Al₂O₃	01.12-01.23	-do-
		Fe₂O₃	00.31-00.74	-do-

		FeO	Nil	--
		MgO	01.64-02.94	-do-
4	FLUE DUST	Total Fe	51.23	-do-
		SiO ₂	5.92	-do-
		CaO	4.52	-do-
		MgO	1.97	-do-
		Al ₂ O ₃	3.45	-do-
		K ₂ O	0.89	-do-

PART – G

WASTE MATERIAL RECYCLED IN SINTER PLANT DURING 2017-18

S. N.	WASTE MATERIAL	QTY (In Tonne)
1	LIME DUST/ ESP DUST	5040
2	MILL SCALE	67683
3	FLUE DUST	45325
4	L.D.SLAG DUST	135337
5	Coke Breeze	320326

PART - H
SECONDARY SCHEMES FOR AIR

S. N.	AREA	SCHEMES
1	COKE OVEN	Coke Oven Battery #7 commissioned on 26 th Dec '2017. 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 is to be installed in SMS#1 under modernization scheme.

SCIENTIFIC GREEN BELT DEVELOPMENT INSIDE AND OUTSIDE THE PLANT

TOTAL NO. OF TREES PLANTED IN TOWNSHIP TILL DATE - 3696352
TOTAL NO. OF TREES PLANTED IN WORKS TILL DATE - 725650

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

TOTAL - 4467702

(New replacement plantation is also going on)