स्टील अथॉरिटी ऑफ इण्डिया लि0
बोकारो स्टील प्लान्ट
इस्पात भवन
बोकारो स्टील सिटी – 827 001
जिला : बोकारो (झारखण्ड)
फैक्स संख्या : 06542 242099
दूरभाष संख्या 06542 246605

सेल SAIL

STEEL AUTHORITY OF INDIA LTD.
BOKARO STEEL PLANT
ISPAT BHAWAN
BOKARO STEEL CITY - 827001
DISTRICT - BOKARO (JHARKHAND)
Ph. No. 06542 246605 Fax No. 242099
E-mail : bsl.environment@sail.in

REF NO.ECS/87/2024-356A

DATE 28/09/2024

सेवा में,

सदस्य सचिव
झारखण्ड राज्य प्रदूषण नियंत्रण पर्षद
टी ए डिविजन बिल्डिंग
एच0 ई0 सी0 कम्पलेक्स
धुर्वा
रॉची – 834 004

विषय : वर्ष 2023–24 का इन्वारमेंट स्टेटमेंट ।

महाशय,

वर्ष 2023–24 का इन्वारमेंट स्टेटमेंट आपके अवलोकनार्थ संलग्न है।

सधन्यवाद ।

संलग्न यथोपरि ।

आपका विश्वासी
वास्ते सेल / बोकारो स्टील प्लान्ट

नवीन 28/9/24

एन पी श्रीवास्तव
महाप्रबंधक / पर्यावरण संरक्षण एवं सस्टैनबिलिटी

प्रतिलिपि

क्षेत्रीय पदाधिकारी
झारखण्ड राज्य प्रदूषण नियंत्रण पर्षद
हाउसिंग कोलोनी
एच0 आई0 जी–1
बरटांड
धनबाद – 826001

ENVIRONMENT STATEMENT FOR THE FINANCIAL YEAR ENDING 31st MARCH'2024

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PART – A

1.	**Name and address of the owner of the industry operation or process**	**SHRI BIRENDRA KUMAR TIWARI DIRECTOR INCHARGE SAIL / Bokaro Steel Plant, Bokaro Steel City, Jharkhand**
2.	**Industry Category**	**Primary**
3.	**Production capacity**	**5.006 Million Tonne Crude Steel per annum**
4.	**Year of establishment**	**1972**
5.	**Date of last environment statement submitted**	**27.09.2023**

PART – B

WATER AND RAW MATERIAL CONSUMPTION

(i). WATER CONSUMPTION (Basic data)

Sl. No.	Purpose	2022-23	2023-24
1	Process/ cooling	38098m^3/day	39832 m^3/day
2	Domestic	162312 m^3/day	166992 m^3/day

Sl. No.	Name of products	Process water consumption per unit of product output	
		During the current financial year 2022-23	*During the current financial year 2023-24*
1	Crude Steel	3.38 m^3/Tonne crude steel	3.37 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 (Kg/TCS)	
			During the current financial year	*During the current financial year*
		Crude Steel	2022-23	2023-24
1	Coal		560	564
2	Ore fines		1033	1018
3	Ore lump		725	771
4	Lime Stone		386	387
5	Dolomite		246	221
6	Mn-ore		2.545	2.164
7	Other alloying element		0.6614	0.6426

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	0.007462	88.09	27.19	All below norm
	Oil & Grease	0.000279	3.294	1.017	-do-
	Phenolic Comp.	0.0000215	0.254	0.078	-do-
	Cyanide	0.0000113	0.134	0.041	-do-
	BOD	0.001557	18.382	5.673	-do-
2.	AIR				
	Particulate Matter	0.52	-	-	-do-

PART – D

DETAILS OF HAZARDOUS WASTE GENERATION & DISPOSAL DURING 2023-24

SN	HAZARDOUS WASTE	ANNUAL QTY (T)	SOURCE OF GENERATION	TYPE OF DISPOSAL	CATEGORY OF WASTE
1.	Acidic Tar Sludge	920	By product plant of coke oven	* 909.21 T Disposed in captive secured land fill on regular basis * 10.790T sold to Authorised recycler	13.4 of Schedule – I
2.	Spent Vanadium Pentoxide	0.800	do	Disposed in captive secured land fill as & when generated	17.2 of Schedule - I
3.	Sulphur Sludge	300	do	do	17.1 of Schedule – I
4.	Decanter Tar Sludge	1090	do	1070 T Charged with coal blend in Coke oven batteries 20 T Disposed in captive secured land fill	13.3 of Schedule – I 13.3 of Schedule – I
5.	Tar Muck with Sand etc.	200	do	Disposed in captive secured land fill on regular basis	13.4 of Schedule – I
6.	Oil & Grease Muck	160.20	Mills area	Disposed in captive secured land fill on regular basis	4.1 of Schedule – I 4.4 of Schedule – I
7.	Transformer oil	18 KL	DNW	Sold to authorized buyer within one month of its generation	5.1 of Schedule – I
8.	Oil sludge from oil regeneration unit	1.2	Oil regeneration unit	Disposed in captive secured landfill on monthly basis	4.1 of Schedule – I
9.	Zinc dross	588.95	HDGC/CRM	Sold to authorized buyer within one month of its generation	6.3 of Schedule – I
10.	Used batteries	3161	Mills/Iron zone/OG/Traffic	do	C-12.3 of Schedule – I C-14 of Schedule – II
11.	ETP sludge	900	BOD plant of COBPP	Charged in Coke Oven batteries by mixing in coal	35.3 of Schedule – I
12.	Flue Dust	49615	Blast Furnaces	Reuse in internal process	35.1 of Schedule – I

HAZARDOUS WASTE AUTHORIZATION REF. No.: JSPCB/HO/RNC/HWM-9174576/2021/5 *dated: 09.02.2021, valid up to 31.12.2025*

PART – E

SOLID WASTE

S. N.			DURING PREVIOUS FINANCIAL YEAR (2022-23) (TONNE/Yr.)	DURING CURRANT FINANCIAL YEAR (2023-24) (TONNE/Yr.)
1	FROM PROCESS			
	a	Blast Furnace slag	1783926	1915836
	b	SMS Slag	452844	474006
	c	Lime Dust	7076.27	9102
	d	Mill Scale	74930	64955
	e	Coke Breeze	448999.79	443264
2	FROM POLLUTION CONTROL FACILITY			
	a	Flue dust	51810	49615
	b	ESP dust	30540	31753

1. RECYCLED/REUTILISED WITHIN THE UNIT

	SOLID WASTE	QTY. (Tonne)	
		2022-23	*2023-24*
a	Blast furnace slag	0.00	0.00
b	SMS slag	450625	428125
c	Lime dust	0.00	0.00
d	Mill Scale	74930	64955
e	Coke breeze	447861	442304
f	Flue dust	59680	49615
g	ESP Dust	28734.48	31753

2. SOLD

	SOLID WASTE	QTY. (Tonne)	
		2022-23	*2023-24*
a	Blast furnace slag	1885462	2062728
b	SMS slag	9882	0.00
c	Lime dust	7076.27	9102
d	Mill Scale	0.00	0.00
e	Ferric Oxide	5042.74	6488.51

3. DISPOSAL			
a	Blast furnace slag	NIL	NIL
b	SMS slag	NIL	NIL
c	Flue dust	NIL	NIL

PART – F

S. N.	SOLID WASTE	PERCENTAGE COMPOSITION		QTY.(YEAR)
1	BF SLAG	SiO_2	34.49-37.66	PLEASE REFER PART-E
		Al_2O_3	16.42-16.88	-do-
		CaO	37.17-37.90	-do-
		MgO	8.34-8.48	-do-
		FeO	0.39-0.54	-do-
		K_2O	0.35-0.49	-do-
		TiO2	0.75-0.90	-do-
		MnO	0.10-0.18	-do-
		S	0.54-0.68	-do-
		Basicity	1.07-1.10	-do-
2	SMS SLAG	CaO	45.36-55.06	-do-
		FeO	16.61-24.81	-do-
		SiO_2	13.51-16.65	-do-
		MgO	5.31-11.49	-do-
		MnO	1.31-1.43	-do-
		P_2O_5	1.45-1.92	-do-
		Al_2O_3	0.57-1.67	-do-
		Basicity	3.04-3.60	-do-
3	LIME DUST	CaO	61.85-88.01	-do-
		SiO_2	2.13-6.48	-do-
		Al_2O_3	1.06-1.28	-do-
		Fe_2O_3	0.29-1.56	-do-
		FeO	0.50-1.75	-do-
		MgO	4.35-25.07	-do-
4	FLUE DUST	FeO	41.75-52.24	-do-
		SiO_2	8.80-10.59	-do-
		CaO	5.40-8.30	-do-
		MgO	0.97-1.24	-do-
		Al_2O_3	2.76-6.22	-do-
		K_2O	0.57-0.97	-do-
		C	18.5-23.6	-do-

PART – G

WASTE MATERIAL RECYCLED IN SINTER PLANT DURING 2023-24

S. N.	WASTE MATERIAL	QTY (In Tonne)
1	LIME DUST/ ESP DUST	31753
2	MILL SCALE	64955
3	FLUE DUST	49615
4	L.D.SLAG DUST	181921
5	Coke Breeze	442304

PART - H

SECONDARY SCHEMES FOR AIR

S. N.	AREA	SCHEMES
1	COKE OVEN	Energy Efficient, Environment friendly Battery # 8 rebuilt & being maintained properly.
2	SINTER PLANT	Installation of ESP-2 in half band of M/C-1 by replacing Battery Cyclone#2 has been completed. ESP#6 has already in operation. Work in progress for installation of rest ESPs by replacing remaining four Battery cyclones.
3	BLAST FURNACE	ESP based de-dusting system is being maintained in BF #2.
4	SMS	Secondary emission control system is being maintained in New SMS.
5.	RMP	All the Six nos. of ESPs have been refurbished in RMP.

SCIENTIFIC GREEN BELT DEVELOPMENT INSIDE AND OUTSIDE THE PLANT

TOTAL NO. OF TREES PLANTED TILL 2022-23 - 4757252
TOTAL NO. OF TREES PLANTED DURING 2023-24 - 40700

TOTAL - 4797952

(New replacement plantation is also going on)