JAYASWAL NECO INDUSTRIES LT

CIN: L28920MH1972PLC016154 (STEEL PLANT DIVISION) SILTARA GROWTH CENTRE, BILASPUR ROAD, SILTARA, RAIPUR - 493111 (C.G.) - INDIA PH.: +91-7721-264241, 264263 FAX: +91-7721-264279, 264240 Email: spd@necoindia.com



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JNIL/ENV/2023/ 129 Date: 26.09.2023

The Member Secretary Chhattisgarh Environment Conservation Board Paryavas Bhawan, Sector-19 Naya Raipur (C.G.)

Sub: Submission of Environmental Statement in Form - V for the Period from April 2022 to March 2023 for various units of M/s Jayaswal Neco Industries Ltd, Siltara Raipur(C. G.).

Sir,

Please find enclosed herewith Environment Statement in Form-V for the financial year 2022-2023 of M/s Jayaswal Neco Industries Limited (Steel Plant Division), Siltara Raipur, (C.G.) as per Rule 14 of the Environment (Protection) Rules, 1986.

This is for your information & record please.

Thanking you,

Yours Faithfully, For, Jayaswal Neco Industries Limited.

Susanta Kumar Moitra Associate Director

Enclosed: Environment Statement (Form-V) Period 1st April-22 to 31st March-2023

CC:

The Regional Officer Chhattisgarh Environment Conservation Board Kabir Nagar, Housing Board Colony Raipur (C.G.)

:- For kind Information please

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JAYASWAL NECO INDUSTRIES LIMITED, (STEEL PLANT DIVISION) SILTARA GROWTH CENTER, SILTARA, RAIPUR, CHHATTISGARH

FORM-V

(See rule 14)

Environmental Statement for the financial year ending the 31st March 2023

PART - A

1	Name and address of the	Meghpal Singh	
	owner/occupier of the industry,	Executive Director- Steel & COO	
	operation or process	Jayaswal Neco Industries Limited,	
		Siltara Growth Centre, Siltara, Raipur,	
		Chhattisgarh – 493111.	
11	Industry Category - Code	18CG004	
	Primary – (STC Code)	Metallurgical Industry	
	Secondary- (STC Code)	Integrated Iron & Steel Plant	
III	Production capacity		
	Blast Furnace	750 M ³	
		08 MW BF Gas	
	Electricity	<u>06 MW TG Set)</u>	
		Total - 14 MW	
	Sinter	8,00,000 TPA (2400 TPD)	
	Coke	2,00,000 TPA	
	Electricity (Coke Oven)	12 MW WHRB	
	Steel from SMS	3600 TPD	
	Oxygen	510 TPD	
	Steam	30 TPH Boiler	
	Rolling Mill	3600 TPD	
	DRI -1	Sponge Iron 1,20,000 TPA	
	Electricity (DRI Plant)	15 MW	
		(7.5 MW AFBC+7.5 MW WHRB)	
	DRI -2	Sponge Iron 1,50,000 TPA	
	Electricity (DRI Plant)	12 MW WHRB	
	Pellet	15,00,000 TPA	
IV	Year of Establishment	1996	
V	Date of the last environmental	27.09.2022	
	statement submitted		

PART - B

Water and Raw Material Consumption

(I) Water consumption (m3/day)

Process/Boiler	:	1132.4
Cooling	:	11675.3
Domestic	:	185.6
Total	:	12993.2

Name of Product	Water C	Water Consumption per unit of product output			
	Unit	During the previous financial year (2021-22)	During the current financial year (2022-23)		
Specific Water Consumption	M3/Ton of product	5.96	4.47		

(ii) Raw material consumption

Name of Raw Material	Name of product	Consumption of Raw Output (kg/ton of cruc	Material per unit of de steel)
		During the Previous Financial year	During the Current Financial year
Iron Ore/ Pellet		2466.91	2467.94
Coking Coal		477.74	481.90
Coke Fines		83.47	87.92
Lime Stone	Crude Steel	204.91	214.14
Dolomite		33.59	133.87
PCI/Anthracite		194.91	162.18
Coal		579.60	763.31
Coke Purchased		123.80	215.99
Quartzite		5.80	16.70
Scrap		46.67	72.97
Ferro Alloys		18.36	22.98

PART - C

Pollution discharged to environment/unit of output (Parameters as specified in the consent issued).

1. Stack emission (Particulate matter)

Sr. No	Pollutant from	Quantity of pollutants discharged (mass/day)	Concentration of pollutants in discharges (mass / volume)	% variation from Prescribed standard*
	Unit	MT/ day	mg/Nm3	
1	Blast Furnace Main Stack	0.17	24	
2	Power Plant-1 Main Stack	0.14	27	
3	Sinter Plant Main Stack	0.34	42	Nil
4	SMS-1 EAF Stack	0.09	38	
5	SMS-2	0.58	36	
6	Rolling Mill-1 (Bar Mill)	0.004	27	
7	Rolling Mill-1 (WRM)	0.004	27	
8	Rolling Mill-2	0.20	39	
9	DRI-1Main Stack	0.23	36	
10	7.5 MW AFBC Power Plant	0.11	36	
11	DRI-2 Main Stack	0.18	36	
12	Coke Oven Main Stack	0.07	43	
13	Pellet Plant Main Stack	0.60	29	

2. Waste Water

Sr. No.	Pollution	Quantity of pollutants discharged (mass / day)	Concentration of pollutants in discharges (mass/volume)	% variation from standard*	
1.	Pollutants	Nil All the waste water treated by waste water treatment plant (WWTP/ETP) and reused in the power plant and DRI plants as makeup and reject waste water being used for ash handling for dust suppression and green belt.	No discharge outside plant premises	Values are well within the prescribed norms	

• Average waste water quality report for common outlet of JNIL is given below

Sr. No.	Parameter	Unit	Prescribed Limit	Composite Effluent Water
1.	рН		5.5-9.0	7.88
2.	Total Suspended Solids	Mg/L	100	5
3.	BOD	Mg/L	30	2
4.	COD	Mg/L	250	26
5.	Oil &Grease	Mg/L	10	ND

3. Ambient Air Quality: - Yearly Average

Location 1:- Shiv Temple (Near Orchid)

Sr. No	Pollutant	Concentration of pollutants in discharges (mass / volume)			% variation from standard*
		Min.	Max.	Avg.	
1	PM 10	38	64	51	None
2	PM 2.5	27	44	35	None
3	SO ₂	6.45	13.39	10.37	None
4	NO _x	4.53	9.49	7.13	None

Location 2:- MRSS (Near Security Porch)

Sr. No	Pollutant	Concentration discharges (on of po mass / volum	% variation from standard*	
		Min.	Max.	Avg.	
1	PM 10	34	59	47	None
2	PM 2.5	25	40	32	None
3	SO ₂	4.80	10.00	7.37	None
4	NO _x	4.40	8.11	6.26	None

Location 3:- Near Pellet Plant

Sr. No	Pollutant	Concentration of pollutants in discharges (mass / volume)			% variation from standard*
		Min.	Max.	Avg.	
1	PM-10	40	66	52	None
2	PM 2.5	28	45	36	None
3	SO ₂	5.53	12.25	8.70	None

			ENVIRONMENT STATEMENT YEAR 2022-2023			
4	NO _x	4.42	9.73	7.00	None	

Location 4:- DRI 500 TPD (Near Cooling Tower)

Sr. No	Pollutant	Concentration of pollutants in discharges (mass / volume)			% variation fro standard*	om
		Min.	Max.	Avg.		
1	PM 10	39	60	49	None	
2	PM 2.5	27	41	34	None	
3	SO ₂	5.37	10.12	7.79	None	
4	NO _x	4.11	8.51	6.88	None	

PART - D

Hazardous Waste

[Hazardous and Other Wastes (Management & Trans boundary Movement) Rules, 2016]

	Total Quantity				
Hazardous Wastes	During the Previous Financial year (2021-2022)During the Current Fi(2022-23)		the Current Financial year (2022-23)		
Used Oil	15.346 KL		24.085 KL		
Wastes Residue Nil Nil		Nil			
Spent Ion exchange resin containing toxic metals	Nil		Nil		
 A. From process B. From Pollution contr C. Utilization Quantity recycle Sold to authorize Disposed 	ol facilities d or re-utilized within the unit ed recycler	:	24.085 KL Nil 38.240 KL Nil Nil		
4. In stock	:	8.594 KL			

PART E

Solid Wastes

	Total Quantity	
Solid Wastes	During the previous financial year (2021-22)	During the current financial year (2022-23)
a) From process	474199	413168
b) From pollution Control facility	109206	162750
c) 1.Quantity recycled or reutilized within the unit	105523	193205
2. Sold	236691	202195
3. Disposed	241191	180518

Sr. No.	Name of Solid Waste	Generation During the previous Financial year (21-22) (MT)	Generation During the current Financial year (22-23)	Utilization/Disposal
1	Granulated Slag from BF	236691	202195	Sold to Cement Plants
2	Flue dust from BF	8640	8655	Consumed in Sinter and Pellet Plant
3	GCP Sludge from BF	9228	9841	Consumed in Sinter and Pellet Plant
4	Fly ash from Power Plants	73236	79172	Used in Brick manufacturing Inside/ outside and land filling.
5	Slag from SMS	131295.21	129091	After metal recovery, used for concreting of Road & Road Compacting.
6	Flue dust from SMS	14401.13	14155	Consumed in Pellet and Sinter Plant
7	Mill Scale from SMS & Rolling Mill	15873.13	16318	Consumed in Sinter Plant
8	ESP Dust from DRI	35970	50927	Low lying area filling within premises and Brick manufacturing.
9	Dolachar from DRI	57381	65064	Consumed in Power Plant.
10	Kiln Accretion from DRI	690	500	Used for low lying area filling within premises.

PART - F

(Please specify the characteristics (in terms of composition of quantum) of Hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.)

Name of Wastes	Composition	Disposal Method	
Used Oil	Pb-12.8 PPM	Used Oil is sold to the CPCB	
	As-ND PPM	registered recyclers/ re-	
	Cr, Cd & Ni- 9.2 PPM	processors.	
Blast Furnace Slag	Pb-2.01 (mg/l)	Sold to Cement	
_	Cr- 1.82 (mg/l)	Manufacturers.	
	As-ND (mg/l)		
	Ni-ND (mg/l)		
Flue dust from FES (SMS)	Pb-0.64 (mg/l)	Consumed in Sinter Plant	
	Cr- ND (mg/l)	and Pellet Plant	
	As-ND (mg/l)		
	Ni-ND (mg/l)		
Slag from SMS	Pb-2.68 (mg/l)	After metal recovery used for	
	Cr- 1.46 (mg/l)	road compacting and inside	
	As-ND (mg/l)	low lying area is filling.	
	Ni-ND (mg/l)		
Fly Ash from Power Plants	Pb-1.2 (mg/l)	We have 3 nos. brick plant for	
-	Cr- 0.68 (mg/l)	utilization of Fly Ash if	

	As-ND (mg/l) Ni-ND (mg/l)	balance Supplied to bricks manufacturers/ low lying area filling.
Kiln Accretion	Pb-0.36(mg/l) Cr- ND (mg/l) As-ND (mg/l) Ni-ND (mg/l)	Used for road compacting and inside low lying area filling
Dolochar &	Pb-1.58 (mg/l) Cr- 1.22 (mg/l) As-ND (mg/l) Ni-ND (mg/l)	Consumed in Power Plant.

PART - G

(Impact of pollution abatement measures taken on conservation of natural resources and on the cost of production).

S.N.	Installation of pollution Abatement devices	Conservation of Natural Resources
1.	Sewage Treatment Plant	Treated sewage water is used for green belt resulting reduction in raw water consumption.
2.	Installation of Fume Extraction System	Reduction in Particulate Matter emission in environment.
3.	Green belt Development	We have plated approx. 5000 nos. sapling within the plant premises and also developed a fruit orchard in approx. 8 Hectare area.

In addition to above we are recycling all the solid waste materiel generated from the plant. Solid waste like Blast Furnace Slag is sold to the Cement plants. Other waste like Fly Ash, ESP Dust is used for Brick making and low lying area filling. All generated waste water is being treated in WWTP/ETP and reused in process as make up water. The company insures always to maintain zero discharge. The company has constructed 05 nos. ponds and 05 nos. roof top rain water harvesting system to recharge ground water level.

PART - H

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

The expenses on Pollution Control measures for the year 2022-2023 are given below:

Sr.	Description	Expenses	Details
No.		in Lacs	
1.	Air Pollution	448.54	Running and maintenance of APCD,
2.	Installation of STP	36.40	7 Nos. STP installed for treatment of sewage
			effluent water.
2.	Environment Management,	52.12	Cost of Man Power, Spare parts of online
	Monitoring Facility		AAQMS and Opacity Meter Expenses in

			Environment Laboratory, Procurement of SO2 & NOx Analyzers. Fee paid for CTO
3.	Solid Waste Management	14.4	Fly Ash / ESP Dust Handling/Dust Suppression
4.	Green Belt Development within the premises.	38.69	Cost of Man Power, Running of water taker, Plantation.
5.	CSR Expenses	64.47	Healthcare, Education, Sports, Rural Development etc.
Tota		654.61	

PART - I

(Any other particulars for improving the quality of the environment):

JNIL is committed to protect the environment and ensure 100% compliance of statutory condition imposed by regulatory bodies. Following major steps taken towards the environment protection:

- Adequate capacity of air pollution control devices (ESP, Fume Extraction System, Dust catcher, 2-stage wet venturi scrubber with Gas cleaning plant).
- To control the fugitive emissions bag filters and dry fogging system provided in all conveyor belts, transfer points. All internal roads have been made pucca, regularly cleaning of roads by sweeping machine, water sprinkling arrangements provided beside the roads, all vehicle speed restricted up to 20 KM/H inside the plant, all the raw material and solid wastes transported through covered vehicles only, thick green belt has been developed all along the boundary wall.
- To conserve the water all the waste water generated from the process has been treated in ETP and completely recycled and utilized in Cooling, dust suppression and green belt development. "Zero Discharge" Condition maintained always.
- Solid wastes generated from various process is 100% utilized i.e. Blast Furnace slag is sold to cement industries, Blast furnace dust and Blast furnace sludge is reused for sinter making, Sinter plant dust is 100% recycled, SMS slag is used for concrete road making after metal recovery, SMS dust 100% reused in sinter making, Coke fines 100% reused in sinter making, DRI Char/Dolochar used for Power Generation, Pellet Plant ESP & Bag Filter Dust Completely recycled back in the process, Mill Scale 100% reused in Sinter Plant. Ash used for Fly Ash Brick Making.
- Hazardous wastes i.e. used/spent oil generated from process is sold to authorized recycler. Generated E-wastes recycled/sent to authorized recycler, Bio-Medical wastes is being lifted daily by authorized party.
- Air quality is maintained well within the prescribed limit, 14 nos. Continuous emission monitoring systems have been installed in all process stacks, the online real time data of same is being transferred to CPCB and CECB and 4 nos. Ambient air quality monitoring systems have installed at four directions of plant premises, the online real time data of same is being transferred to CPCB and CECB.
- Effluent quality is maintained well within the prescribed standard and 100% effluent is being recycled for cooling and dust suppression after treatment in ETP. Zero discharge

condition is maintained. Effluent quality is monitored thru online continuous effluent quality monitoring system.

- Rain water harvesting system has been implemented to conserve the rain water, 5 nos. reservoir and 5 nos. roof top rain water harvesting system is provided.
- Additional bag filter has been installed recently in sinter plant and SMS unit to minimize the fugitive emissions.
- > PUC certificate has been made compulsory for vehicle deployment at plant.
- Raw material transportation is being done thru covered vehicle only.
- The Approx 5.0 Lacs trees have been planted inside the premises 40% of total plant area.
- An oxy-zone has been developed in seven hectare of area.
- In house nursery has been developed to replace the casualties and maintain 90% of survival.
- The Company has installed Pellet Plant for utilization of low grade iron ore fines.
- The Company has installed Non Recovery type Coke Oven Plant which is considered to be eco-friendly.
- The Company has installed Waste Head Recovery Power Plant which is line with Govt. Policy to use waste heat.
- Environment Awareness campaign through celebration of World Environment Day, Earth Day and Ozone Day etc.
- To create awareness among the employees by imparting training on environment and pollution control.
- GHG (CO2) emission reduction by installed WHRB plant and CO2 sequestration by the plant 5.0 Lacs tree plantation inside the premises