

# JAYASWAL NECO INDUSTRIES LTD

CIN : L28920MH1972PLC016154

(STEEL PLANT DIVISION)

SILTARA GROWTH CENTRE, BILASPUR ROAD, SILTARA, RAIPUR - 493111 (C.G.) - INDIA

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o/c

JNIL/ENV/2024/ 51

Date: 18.09.2024

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 2023 to March 2024 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 2023-2024 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 1<sup>st</sup> April-23 to 31<sup>st</sup> March-2024

CC:

The Regional Officer  
Chhattisgarh Environment Conservation Board  
New Office Building, Ring Road no. 02,  
Tatibandh, Raipur (C.G.)

- For kind Information please.





**ENVIRONMENT STATEMENT  
FOR  
YEAR 2023-2024**



**BY  
JAYASWAL NECO INDUSTRIES LIMITED,  
SILTARA GROWTH CENTER,  
SILTARA, RAIPUR, CHHATTISGARH**

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# ENVIRONMENT STATEMENT YEAR 2023-2024

## FORM-V

(See rule 14)

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

### PART - A

I	Name and address of the owner/occupier of the industry, operation or process	Sangram Keshari Swain Executive Director- Steel Plant Division Jayaswal Neco Industries Limited, Siltara Growth Centre, Siltara, Raipur, Chhattisgarh – 493111.
II	Industry Category - Code	18CG004
	Primary – (STC Code)	Metallurgical Industry
	Secondary- (STC Code)	Integrated Iron & Steel Plant
III	Production capacity	
	Blast Furnace	750 M <sup>3</sup>
	Electricity	08 MW BF Gas 06 MW TG Set) 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
	Sponge Iron	2,70,000 TPA
	Electricity (WHRB)	19.5 MW
	Electricity (AFBC)	7.5 MW
	Pellet	15,00,000 TPA
IV	Year of Establishment	1996
V	Date of the last environmental statement submitted	26.09.2023

### PART - B

#### Water and Raw Material Consumption

##### (I) Water consumption (m3/day)

Process/Boiler	:	532.2
Cooling	:	9720.5
Domestic	:	184.4
Total	:	10437.1

Name of Product	Water Consumption per unit of product output		
	Unit	During the previous financial year (2022-23)	During the current financial year (2023-24)
Specific Water Consumption	M3/Ton of product	4.47	5.02

##### (ii) Raw material consumption



# ENVIRONMENT STATEMENT YEAR 2023-2024

Name of Raw Material	Name of product	Consumption of Raw Material per unit of Output (kg/ton of crude steel)	
		During the Previous Financial year	During the Current Financial year
Iron Ore/ Pellet	Crude Steel	2467.94	2285.46
Coking Coal		481.90	391.54
Coke Fines		87.92	52.88
Lime Stone		214.14	169.76
Dolomite		133.87	119.71
PCI/Anthracite		162.18	137.64
Coal		763.31	624.67
Coke Purchased		215.99	203.89
Quartzite		16.70	20.16
Scrap		72.97	170.56
Ferro Alloys		22.98	28.19

## 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	0.16	24	Nil
2	Power Plant-1 Main Stack	0.17	29	
3	Sinter Plant Main Stack	0.34	41	
4	SMS-1 EAF Stack	0.04	34	
5	SMS-2	0.94	36	
6	Rolling Mill-1 (Bar Mill)	0.005	29	
7	Rolling Mill-1 (WRM)	0.004	28	
8	Rolling Mill-2	0.081	36	
9	DRI-1 Main Stack	0.25	36	
10	7.5 MW AFBC Power Plant	0.12	35	
11	DRI-2 Main Stack	0.21	36	
12	Coke Oven Main Stack	0.08	44	
13	Pellet Plant Main Stack	0.50	27	



# ENVIRONMENT STATEMENT YEAR 2023-2024

## 2. Waste Water

Sr. No.	Pollution	Quantity of pollutants discharged ( mass / day)	Concentration of pollutants in discharges (mass/volume)	% variation from standard*
1.	Pollutants	<p style="text-align: center;">Nil</p> <p>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.</p>	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.	pH	--	5.5-9.0	7.79
2.	Total Suspended Solids	Mg/L	100	5
3.	BOD	Mg/L	30	4
4.	COD	Mg/L	250	22
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	37	65	51	None
2	PM 2.5	26	44	34	None
3	SO <sub>2</sub>	5.23	11.08	7.80	None
4	NO <sub>x</sub>	7.18	14.12	10.40	None

Location 2:- MRSS (Near Security Porch)

Sr. No	Pollutant	Concentration of pollutants in discharges ( mass / volume )			% variation from standard*
		Min.	Max.	Avg.	
1	PM 10	34	58	48	None
2	PM 2.5	23	40	32	None
3	SO <sub>2</sub>	4.03	8.25	6.21	None
4	NO <sub>x</sub>	6.07	10.19	8.25	None



## ENVIRONMENT STATEMENT YEAR 2023-2024

### Location 3:- Near Pellet Plant

Sr. No	Pollutant	Concentration of pollutants in discharges (mass / volume )			% variation from standard*
		Min.	Max.	Avg.	
1	PM-10	38	68	52	None
2	PM 2.5	25	45	33	None
3	SO <sub>2</sub>	5.59	10.57	8.05	None
4	NO <sub>x</sub>	7.50	13.60	10.23	None

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

Sr. No	Pollutant	Concentration of pollutants in discharges (mass / volume )			% variation from standard*
		Min.	Max.	Avg.	
1	PM 10	36	62	50	None
2	PM 2.5	24	40	32	None
3	SO <sub>2</sub>	4.87	7.94	6.34	None
4	NO <sub>x</sub>	6.93	10.48	9.01	None

## PART - D

### Hazardous Waste

[Hazardous and Other Wastes (Management & Trans boundary Movement) Rules, 2016 & 2022 ]

Hazardous Wastes	Total Quantity	
	During the previous Financial year (2022-23)	During the Current Financial year (2023-24)
Used Oil *	24.085 KL	23.355 KL
Wastes Residue Containing Oil	Nil	Nil
Spent Ion exchange resin containing toxic metals	Nil	Nil

A. From process	:	23.355 KL
B. From Pollution control facilities	:	Nil
C. Utilization		
1. Quantity recycled or re-utilized within the unit	:	Nil
2. Sold to authorized recycler	:	23.100 KL
3. Disposed	:	Nil
4. In stock	:	8.849 KL



# ENVIRONMENT STATEMENT YEAR 2023-2024

## PART E

### Solid Wastes

	Total Quantity	
Solid Wastes	During the previous financial year (2022-23)	During the current financial year (2023-24)
a) From process	413168	453178.36
b) From pollution Control facility	162750	154035.255
c) 1.Quantity recycled or reutilized within the unit	193205	113130.95
2. Sold	202195	367294.01
3. Disposed	180518	126788.655

Sr. No.	Name of Solid Waste	Generation During the previous Financial year (22-23) (MT)	Generation During the current Financial year (23-24)	Utilization/Disposal
1	Granulated Slag from BF	202195	213287.01	Sold to Cement Plants
2	Flue dust from BF	8655	5573.42	Consumed in Sinter and Pellet Plant
3	GCP Sludge from BF	9841	6058.18	Consumed in Sinter and Pellet Plant
4	Fly ash from Power Plants	79172	75971	Used in Brick manufacturing Inside/ outside and land filling.
5	Slag from SMS	129091	154007	After metal recovery, used for concreting of Road & Road Compacting.
6	Flue dust from SMS	14155	16880	Consumed in Pellet and Sinter Plant
7	Mill Scale from SMS & Rolling Mill	16318	18178.35	Consumed in Sinter Plant
8	ESP Dust from DRI	50927	49552.655	Low lying area filling within premises and Brick manufacturing.
9	Dolachar from DRI	65064	66441	Consumed in Power Plant.
10	Kiln Accretion from DRI	500	1265	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-10.4 PPM	Used Oil is sold to the CPCB



## ENVIRONMENT STATEMENT YEAR 2023-2024

	As-ND PPM Cr, Cd & Ni- 6.8 PPM	registered recyclers/ re-processors.
Blast Furnace Slag	Pb-2.24 (mg/l) Cr- 1.54 (mg/l) As-ND (mg/l) Ni-ND (mg/l)	Sold to Cement Manufacturers.
Flue dust from FES (SMS)	Pb-0.51 (mg/l) Cr- ND (mg/l) As-ND (mg/l) Ni- ND (mg/l)	Consumed in Sinter Plant and Pellet Plant
Slag from SMS	Pb-2.20 (mg/l) Cr- 1.40 (mg/l) As-ND (mg/l) Ni- ND (mg/l)	After metal recovery used for road compacting and inside low lying area is filling.
Fly Ash from Power Plants	Pb-1.37 (mg/l) Cr- 0.48 (mg/l) As-ND (mg/l) Ni-ND (mg/l)	We have 3 nos. brick plant for utilization of Fly Ash if balance Supplied to bricks manufacturers/ low lying area filling.
Kiln Accretion	Pb-0.28(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-1.38 (mg/l) Cr- 1.10 (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).**

All the measures adopted to mitigate the pollution and to conserve the natural resources. Polluting control devices i.e. Electrostatic Precipitator, Venturi scrubber, Gas cleaning plant, Fume extraction system, attached in all process to collect the dust and reuse it other process. Dust extraction and dust suppression system provided to control the secondary/fugitive emission. The generated solid wastes 100% reused and recycled. 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 SMS slag used for road making, GCP sludge, Sinter ESP dust and Pellet ESP dust reused in process back. 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 2023-2024 are given below:

Sr. No.	Description	Expenses in Lacs	Details
1.	Air Pollution	246.22	Running and maintenance of APCD,
2.	Environment Management, Monitoring Facility	103.9	Cost of Man Power, Spare parts of online AAQMS and Opacity Meter Expenses in Environment Laboratory, Procurement of SO <sub>2</sub> & NO <sub>x</sub> Analyzers. Fee paid for CTO
3.	Solid Waste Management	33.3	Fly Ash / ESP Dust Handling/Dust Suppression
4.	Green Belt Development within the premises.	48.9	Cost of Man Power, Running of water taker, Plantation. New Water Tanker purchased.
5.	CSR Expenses	157.13	Healthcare, Education, Sports, Rural Development etc.
<b>Total</b>		<b>589.45</b>	

**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, dedicated water tank deployed for water spraying on 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



## ENVIRONMENT STATEMENT YEAR 2023-2024

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, 13 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. Real time online Effluent quality monitoring is done through 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.
- PUC certificate has been made compulsory for vehicle deployment at plant.
- Raw material transportation is being done thru covered vehicle only.
- 5 Lacs trees have been planted inside the premises covering 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 Heat 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 (CO<sub>2</sub>) emission reduction by installed WHRB plant and CO<sub>2</sub> sequestration by the plant 5.0 Lacs tree plantation inside the premises

