

Ref.: -NSPL/EMD/2023/108

Date: - 04.09.2023

To  
Member Secretary,  
Paryavas Bhavan,  
North Block Sec.19  
NAYA RAIPUR  
Chhattisgarh - 490099.

**Subject: Submission of Environmental Statement for the Financial Year (2022-23) ending 31<sup>st</sup> March 2023 For DRI, WHR & AFBC based power plant, Steel Melting Shop, Coal Washery, Oxygen plant, Rolling Mill and Producer Gas Plant.**

Dear Sir,

Please find enclosed herewith the Environmental Statement for the Financial Year (2022-23) ending 31<sup>st</sup> March 2023 duly filled in the form (V) for DRI, WHR & AFBC based Power Plant, Steel Melting shop, Coal Washery, Oxygen plant, Rolling Mill and Producer Gas Plant.

This is for your information and Record please.

Thanking you.

With Regards,  
For, Nalwa Steel and Power Limited

S.S.Rathi  
Director  
DIN No.06986371

Copy to: The Regional Officer  
Chhattisgarh Environment Conservation Board  
T.V. Tower Road Raigarh (C.G.)

**Nalwa Steel And Power Limited**

[Corporate identity number (CIN): U74899DL1989PLC035212]

P.B. No.7, Gharghoda Road, Taraimal, Raigarh-496001, Chhattisgarh

T +91 7762- 304700-9, F +91 7762- 261489-90, E info@nalwa.com, W www.nalwa.com

Registered Office 28, Najafgarh Road, New Delhi-110015

## FORM – V

Environment Statement for the financial year ending the 31<sup>st</sup> March 2023

(DRI, WHRB & AFBC Based Power Plant, Coal Washery, Steel Melting Shop,  
Oxygen plant, Rolling Mill and Producer Gas Plant)

### PART - A

- (i) Name and address of the owner / Occupier of the industry / Operation or process. **Shri S. S. Rathi (Occupier),**  
Nalwa Steel And Power Limited,  
P.B. No. 7, Gharghoda Road, Taraimal  
Dist.-Raigarh, (Chhattisgarh) 496001
- (ii) Industry category - **Large**
- (iii) Production capacity- Units -

Sr. No.	Product	Installed Capacity
01	Sponge Iron	2,50,000 TPA
02	Washed Coal	13,20,000 TPA
03	Ingot/ Billet	2,50,000 TPA
04	WHR based Power	08 MW
05	AFBC based Power	16 MW
06	wire rods / re-bar	3,60,000 TPA
07	Oxygen	100 Nm <sup>3</sup> / Hour
08	Producer Gas	12,000 Nm <sup>3</sup> /Hour

- (iv) Year of establishment - **2001**
- (v) Date of the last environment Statement submitted. - **17.08.2022**

### PART - B

#### Water and Raw Material Consumption

- (1) Water consumption m<sup>3</sup>/day

Current year 2022-2023

Process	:	244.801 m <sup>3</sup> /day
Cooling	:	3081.76 m <sup>3</sup> /day
Domestic	:	246.00 m <sup>3</sup> /day

Name of products	Water consumption per unit of product output.	
	During the current financial year (2021-22))	During the current financial year (2022-23)
Sponge Iron	0.1617 m <sup>3</sup> /T	0.332 m <sup>3</sup> /T
Ingot / Billet	1.113 m <sup>3</sup> /T	1.227 m <sup>3</sup> /T
Washed Coal	0.00 m <sup>3</sup> /T	0.00 m <sup>3</sup> /T
WHRB based Power	0.00585 m <sup>3</sup> /KWH	0.03528 m <sup>3</sup> /KWH
AFBC based Power		
Rolling Mill	0.3690 m <sup>3</sup> /T	0.3828 m <sup>3</sup> /T
Oxygen	0.0124 m <sup>3</sup> / Nm <sup>3</sup>	0.0218 m <sup>3</sup> / Nm <sup>3</sup>
Producer Gas	0.00077 m <sup>3</sup> / Nm <sup>3</sup>	0.00074 m <sup>3</sup> / Nm <sup>3</sup>

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**(2) Raw material consumption**

Name of raw materials	Name of products	Consumption of raw material per unit of output	
		During the current financial year (2021-22)	During the current financial year (2022-23)
Iron Ore	Sponge Iron	1.693 T/T	1.698 T/T
Iron ore Pallet		1.469 T/T	1.468 T/T
Coal		0.870 T/T	1.109 T/T
Dolomite		0.081 T/T	0.185 T/T
Pig Iron (PI + Panthor shot+PCM fines)	Billet/Ingot	0.1533 T/T	0.172 T/T
Sponge Iron		0.5577 T/T	0.550 T/T
Scrap		0.4180 T/T	0.4220 T/T
CPC		0.0010 T/T	0.0010 T/T
Silico Magnise		0.0125 T/T	0.0024 T/T
End Cut		0.000037 T/T	0.000028 T/T
Skull		0.0147 T/T	0.0042 T/T
Plant/slag proc. scrap		0.0051 T/T	0.0108 T/T
Mill scale		0.000035 T/T	0.006770 T/T
Ferro Mangnise		000.00 T/T	0.0088 T/T
'F' Grade COAL	Washed Coal	0.00 T/T	0.00 T/T
Billets	Wire Rod	1.053 T/T	1.0424 T/T
Coal	Producer Gas	0.000338 T/NM3	0.000404 T/NM <sup>3</sup>
Coal middling	Power	0.0012 T/KWH	0.0000 T/KWH
Ash Char		0.00041 T/KWH	0.00033 T/KWH
Coal fines		0.0000006 T/KWH	0.00 T/KWH
Washery Pond fines		0.00 T/KWH	0.00 T/KWH
F & G grade Coal		0.00115 T/KWH	0.001172 T/KWH

**PART - C****Pollution discharge to environment per unit of output**

Pollutants	Quantity of pollutants discharged (mass/day)	Concentration of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons
Waste Water	Zero discharge	No discharge	No violation Within the prescribed standards
Air (Stack emission)	45.1 kg/day	36.2 mg/Nm3	Dust conc. Variation (-) 27.0 % No violation of against standard 50 mg/Nm3

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**PART - D**  
**Hazardous Wastes**

(As specified under Hazardous Wastes/ Management and Handling Rules, 1989)

Hazardous waste	Total Quantity (kg)	
	During the current financial year (2021-22)	During the current financial year (2022-23)
Used Oil (Cat. 5.1)	3470.00 LTR	2780.00 LTR
Decanter Tank Tar Sludge (Cat 13.3)	606.00 MT	000.00 MT
<b>SOLD : MOEF Authorized Party</b>		
Used Oil (Cat. 5.1)	3470.00 LTR	2780.00 LTR
Decanted Tar Sludge (Cat 13.3)	556.52 MT	000.00 MT

**PART - E**

**SOLID WASTE**

Solid waste	Total Quantity	
	During the current financial year (2021-22)	During the current financial year (2022-23)
<b>a. From process</b>		
Char	43380.60 MT	47177.39 MT
Iron Ore Dust (Fine)	26174.14 MT	24739.478 MT
Slag	31050.00 MT	29309.00 MT
Coal Rejects	000.00 MT	000.00 MT
Coal washery fine	000.00 MT	000.00 MT
Mill Scale	4704.75 MT	5316.034 MT
PGP Ash	10548.00 MT	12059.00 MT
Kiln Accretion	3290.00 MT	2665.00 MT
Kiln ABC dust	1062.00 MT	931.00 MT
<b>b. From pollution control facility</b>		
DRI –ESP dust	26390.00 MT	22863.00 MT
Bag filter Dust	13047.10 MT	11817.00 MT
AFBC - Fly Ash	59647.00 MT	74381.00 MT
<b>c.</b>		
<b>1. Quantity recycled or reutilized within the unit</b>		
Char	33248.20 MT	30854.20 MT
Coal Rejects	000.00 MT	000.00 MT
Coal washery fine (dust)	000.00 MT	000.00 MT
Mill Scale	7.01 MT	1371.40 MT
Fly Ash	2904 MT	6630.00 MT
PGP Ash	0.00 MT	00.00 MT

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<b>2. Sold</b>		
Char	11995.61MT	11576.13 MT
Iron Ore Dust (Fine)	37142.39 MT	43556.85 MT
Slag(Magnetic)	8015.87 MT	3308.46 MT
Coal Rejects	000.00 MT	000.00 MT
Coal washery fine (dust)	000.00 MT	000.00 MT
Mil Scale	5272.65 MT	2673.88 MT
PGP Ash	7993.81 MT	12227.06 MT
Bag Filter Dust	10956.88 MT	6624.32 MT
<b>3. Disposed</b>		
Char	000.00 MT	000.00 MT
Slag (Non-magnetic part)	6124.00 MT	4705.00 MT
ESP Dust	26390.00 MT	22863.00 MT
Bag filter dust	000.00 MT	000.00 MT
Fly Ash	56743.00 MT	67751.00 MT
PGP Ash	2554.19 MT	00.00 MT
Kiln Accretion	3290.00 MT	2665.00 MT
Kiln ABC dust	1062.00 MT	931.00 MT

#### PART – F

Please specify the characterizations (in term of composition of quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

Solid wastes are not hazardous category. (Report already submitted to Board) Ash Char generated from DRI production process which is using in AFBC Boiler for power generation and extra was sold to others CFBC Power Plant.

#### PART – G

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

Upgraded pollution control equipment's like as ESP and bag filters to achieve Particulate matter below 50Mg/Nm<sup>3</sup>.

1. 03 bag filter installed at Steel Melting Shop of discharge limit is below 50 Mg/Nm<sup>3</sup>.
2. 02 bag filters installed at DRI Kiln Cooling discharge area and 01 for Product Hopper to reduce fugitive emission from the Product Hopper. Swing hood has been provided above induction furnace and connected with fugitive emission system.
3. Zero liquid discharge has been maintained by recycling of industrial effluent. All Industrial effluent are collected in cooling cum settling tank and recycled to process and road washing work.
4. Separate ash silo provided for WHRB ESP dust, AFBC Boiler ash and for Kiln area bag filters.
5. Mist fogging system provided at all the conveyor belt of raw material handling area.
6. Manual sprinkler (movable) provided at raw material storage area.

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## PART – H

### Additional measures / investment proposal for environmental protection including abatement of pollution, prevention of pollution

- (i) Coal Stored in covered shed as well as RCC flooring in the area.
- (ii) One No. additional Bag filter installed at Steel melting shop of discharge limit is below 20Mg/Nm<sup>3</sup> (Make – Neatherman) for new 2 X 12 ton Induction Furnace in September 2018.
- (iii) CAAQMS and CEMS both are installed and data connected with CECB Raipur & CPCB Delhi on 22<sup>nd</sup> July 2015. Annual maintenance contract has been provided to third party for regular monitoring maintenance and data transmission.
- (iv) Cooling cum settling pond has been made for storage of Industrial waste water & after settling clean water recycled in the process, road cleaning and spray on raw materials etc.
- (v) 20,000 KL capacity effluent settling cum cooling tank made for industrial effluent collection and recycle.

## PART – I

### Any other particulars for improving the quality of the environment

- (i) Thick Green Belt developed in the factory campus and surrounding the boundary and nearest village total 2, 56,215 nos. saplings plantation up to 31<sup>st</sup> March 2023.
- (ii) Inside Plant premises more than 34% Plantation.
- (iii) Good Housekeeping practice has been adopted and also neat & clean maintained all internal Roads of the plant area are made pucca.
- (iv) Three nos. Road sweeping machine and Water tanker provide for fugitive dust control regularly. In summer season, we hire water tankers for irrigation in the plantation area as well as for outside road & Solid waste storage area..
- (v) Two Drain Cleaning machine (TMX-20), Two Bobcat m/c and Three no. Tractor provide for the Maintaining Good Housekeeping regularly basis in plant & colony Area.
- (vi) SMS slag are using for road making after crushing (Slag crusher is installed inside the plant premises) and non-magnetic fine slag using for the civil construction work.
- (vii) At present solid waste is being filled up at own low laying area under guidance of IIT(ISM), Dhandbad, Jharkhand and covering with soil layer by layer.
- (viii) STP – 350-m<sup>3</sup>/day capacity of Sewage Treatment Plant installed in the Factory premises for colony and plant domestic waste water treatment. Treated water are using in irrigation of our garden, lawn & plantation area in the plant premises.
- (ix) 03 nos. Rain water harvesting pond & 3 nos. dead bore well are converted into harvesting pit.
- (x) Two no Rain water harvesting pond provided in the plant and all garland are connected with settling pond.
- (xi) All environmental precautions are adopted like as during transportation of vehicles like as tarpaulin covered all the vehicles. Inside plant premises all road has been make pucca.

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