

The Sandur Manganese & Iron Ores Limited

(An ISO 9001:2015; ISO 14001:2015 and 45001:2018 certified company)
CIN: L85110KA1954PLC000759; Website: www.sandurgroup.com

REGISTERED OFFICE

'SATYALAYA', No.266
Ward No.1, Palace Road
Sandur - 583 119, Ballari District
Karnataka, India
Tel: +91 8395 260301/ 283173-199
Fax: +91 8395 260473



CORPORATE OFFICE

'SANDUR HOUSE', No.9
Bellary Road, Sadashivanagar
Bengaluru - 560 080
Karnataka, India
Tel: +91 80 4152 0176 - 79 / 4547 3000
Fax: +91 80 4152 0182

Ref: No: SMIORE/PLANT/ENV/ES/2024-25/ 43

06th August 2024

To,
The Member Secretary
Karnataka State Pollution Control Board
"Parisara Bhavan", No #49, Church Street,
Bengaluru, Karnataka-560001

Subject: Submission of Environmental Statement Report for the period 2023-2024.

Reference: 1) EC Identification No. EC22A008KA143818 dated 30/03/2022.
2)CFO No. AW-329576 PCB ID 29470 Dated 02.02.2022
3) Amendment CFO No. AW-335581 PCB ID 29470 Dated 17.01.2023

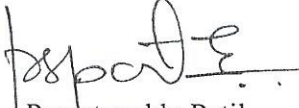
Dear Sir,

With reference to the above subject matter and references, we are submitting herewith the Environmental Statement Report of M/S The Sandur Manganese & Iron Ores Limited, (Metal & Ferroalloy Plant,) Vyasankere, Mariyammanahalli, 583222, Hosapete Taluk, Vijayanagara District for the period 2023-2024.

Kindly acknowledge receipt of the same.

Thanking you,

The Sandur Manganese & Iron Ores Limited


Parvatareddy Patil
Senior General Manager-Plant



Encl: Form V

Cc: The Environmental Officer, Regional Office & Zonal office Karnataka State Pollution Control Board Sri Sai Sharan Plaza, No. 71/A, 2nd floor, Dam Road, Hosapete- 583203, Vijayanagar District.

MINES OFFICE: Deogiri - 583112, Sandur Taluk, Ballari District
Tel: +91 8395 271025 / 28 / 29 / 40; Fax: +91 8395 271066

PLANT OFFICE: Metal & Ferroalloy Plant, Vyasankere, Mariyammanahalli - 583 222, Hosapete Taluk, Vijayanagara District
Tel: +91 8394 244450 / 244335

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ಕ.ರಾ.ಮಾ.ನಿ. ಮಂಡಳಿ
ಪ್ರಾದೇಶಿಕ ಕಛೇರಿ ವಿಜಯನಗರ ಹೊಸಪೇಟೆ
ಸಂಖ್ಯೆ/ದಿನಾಂಕ: 6/8/24 ಸಹಿ

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ENVIRONMENTAL STATEMENT

FOR THE YEAR 2023-2024

(Rule 14 of the Environment Protection 1986)



THE SANDUR MANGANESE AND IRON ORES LTD.,
(METAL AND FERRO ALLOY PLANT)

Form V

Environmental Statement for the Financial Year 2023-2024

PART-A

(i)	Name & address of the owner/occupier of the industry operation or process	Md. Abdul Saleem, Whole Time Director & Company Secretary, Metal and Ferro Alloy Plant, The Sandur Manganese and Iron Ores Ltd., Vyasanakere(P), Hanumanhalli, PIN 583222, Hosapete Taluk, Vijayanagara District Email ID: pspatil@sandurgroup.com plant.environment@sandurgroup.com
(ii)	Industry Code	Red
(iii)	Production Capacity	Production Quantities As per Approved CFO 1. Coal based power plant 32 MW. 2. MOBS (Manganese concentrate or sponge iron beneficiation) plant - 0.016 MTPA. 3. WHRB 32 MW 4. Coke Oven 0.5 MTPA 5. Ferro Alloy Plant a) Ferro Manganese 0.125 MTPA b) Ferro Silicon 0.05 MTPA c) Silico Manganese 0.095 MTPA d) Pig iron 0.135
(iv)	Year of Establishment:	1993
(v)	Date of last Environment Statement submitted:	09.06.2023

PART-B

WATER & RAW MATERIAL CONSUMPTION

i) **Water Consumption (m³/day): As per CFO approval.**

Process Water Consumption	:	65 m ³ /day
Cooling Water Consumption	:	2607 m ³ /day
Domestic Water Consumption	:	60 m ³ /day

Name of the Product	Process water consumption/ unit of products	
	During the current financial year (2022-23)	During the current financial year (2023-24)
Ferro Manganese	NIL	NIL

Ferro Silicon	NIL	NIL
Silico Manganese	1.97 m ³ /Tonne	1.86 m ³ /Tonne
Pig iron	NIL	NIL
MOBS (Manganese concentrate or sponge iron beneficiation) plant	NIL	NIL
Coal based power plant	NIL	NIL
WHRB	0.31 l/unit	0.008 l/unit
Coke	0.44 m ³ /Tonne	0.45 m ³ /Tonne

ii) **Raw Material Consumption**

Name of Raw Material	Name of Products	Consumption of raw material per unit output (Tonne/Tonne)	
		During the previous financial year (2022-23)	During the current financial year (2023-24)
Ferro Alloy Plant			
Manganese Ore	Silico Manganese	1.73	1.64
Coal		0.45	0.50
Coke		0.31	0.27
Quartzite		0.29	0.26
Limestone/Dolomite		0.12	0.11
Electrode Paste		0.020	0.016
Power		3758 Units	3593 Units
NIL	Ferro Manganese	NIL	NIL
NIL	Ferro Silicon	NIL	NIL
NIL	Pig Iron	NIL	NIL
WHRB			
Aux Power in (kWh)	Power	0.07 Units	0.08 Units

MOBS (Manganese concentrate or sponge iron beneficiation) plant (Not In operation)			
NIL	NIL	NIL	NIL
Captive Power Plant (Not In operation)			
Coal	Power	NIL	NIL
Coke Oven Plant			
Coal	Coke	1.35	1.34
Power		9.94 units/ Tonne	15.21 units/Tonne

PART-C

Pollution Discharged to Environment/Unit of Output (Parameter as specified in the consent issued)

a. Water

The facility operates as a dedicated Zero Liquid Discharge (ZLD) plant, ensuring that all waste and blowdown water from cooling towers and boilers is treated and reused within the plant's processes, as well as for gardening and dust suppression. Domestic wastewater is processed by a Sewage Treatment Plant (STP) equipped with a 50 KLD Moving Bed Biofilm Reactor (MBBR) system. This STP is designed to meet all relevant standards and regulations set by the regulatory Board. The treated domestic water is then used for greenbelt development and other related activities.

b. Air

Pollutants prescribed	During the previous financial year (2022-23)		During the current financial year (2023-24)		% of Variation from Prescribed Standards
	Quantity of Pollutants Discharged (mass/day)	Concentrations of Pollutants Discharged (mass/volume)	Quantity of Pollutants Discharged (mass/day)	Concentrations of Pollutants Discharged (mass/volume)	
	(Tonnes/day)	(mg/Nm³)	(Tonnes/day)	(mg/Nm³)	%
PM	0.407	25.95	0.38	32	

SO₂	0.197	29	0.167	45	Zero % variation
NO_x	0.287	42	0.177	52.8	

PART-D

Hazardous Wastes

As specified under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016

Hazardous Wastes	Total Quantity Generated (tonnes)	
	During the Previous Financial Year (2022-23)	During the Current Financial Year (2023-24)
From Process	0.9 -	0.9
Category 5.1: Used Spent Oil (in Kilolitres)	0.03	0.0
Category 5.2: Residues Containing Waste Oil (in Metric tonnes)		
From Pollution Control Facilities	Nil	Nil

PART-E

Solid Waste

Solid Wastes	Total Quantity Generated (Metric tonnes)	
	During the Previous Financial Year (2022-23)	During the Current Financial Year (2023-24)
a. From Process		
SiMn Slag	49720.60	21082.29
b. From Pollution Control Facility		
Bag House Dust	5132.00	1875.00

Fly ash	NIL (Coal Based Boiler is not in operation during the reporting period)	NIL (Coal Based Boiler is not in operation during the reporting period)
c. Quantity recycled or reutilised within the unit - NIL		

PART-F

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

Hazardous Waste:

During the 2023-24 following hazardous waste is disposed to the authorized recycling agencies:

Sl.No	Category	Disposed Quantity
01	5.1 Used Oil	0.9 KL/A
02	5.2 Wastes or residues containing oil	0.00 MT/A

Solid Waste:

Name of Solid Waste	Characteristics	Method of Disposal
Si Mn Slag	MgO 12.04 % , SiO ₂ 34.82%, Al ₂ O ₃ 26.40%, FeO 0.4%,	Sold to Brick Industry and construction Industry

PART-G

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

Green Energy Initiatives:

The Company has demonstrated a strong commitment to environmental sustainability through its equity-based partnerships with ReNew Green Energy Solutions Private Limited and ReNew Sandur Green Energy Private Limited. Together, they have developed a cutting-edge power plant that integrates wind and solar energy technologies. This facility began operations at the start of the fiscal year 2023-24 and has since generated a total of 7,41,96,127 kWh of green energy. This initiative represents a significant advancement in renewable energy solutions,

highlighting the Company's dedication to reducing its carbon footprint and supporting sustainable energy practices.

Clean Energy Initiatives:

WHRB (Waste Heat Recovery Boiler):

Two Waste Heat Recovery Boilers (WHRBs), each with a 60 TPH capacity, have been installed to recover heat from the waste gases of the non-recovery coke oven. These WHRBs supply steam required to generate approximately 32 MW of power.

This technology enhances energy efficiency and reduces greenhouse gas emissions. Recovering waste heat from coke oven gases minimizes the environmental impact and provides economic benefits by eliminating the need for about 700 tonnes of thermal coal per day, thus lowering energy costs and GHG emissions.

Water Consumption Initiatives:

Air cooling Condenser:

SMIORE has installed Air-Cooled Condenser (also referred to as fin-and-tube condenser) instead of conventional shell-and-tube water cooled condensers. As the name suggests, the air-cooled condenser uses ambient air to extract the sensible heat and latent heat of condensation released by the exhaust steam from the turbines. As no water is required for condensing exhaust steam the technology offers a major advantage for water usage reduction in power plant. By using ACC, we are saving approximately around 2000 m³ of water per day.

Energy Conservation Initiative Installation of Variable Frequency Drive (VFD) at Power plant and Ferro alloys plant

SMIORE has installed VFD drives for the ID fans and FD fans at Power plant and Ferro Alloy Plant

VFD type of motor controller that adjusts the speed of an electric motor by varying the frequency and voltage supplied to the motor. VFDs are commonly used in industrial applications to control the speed of pumps, fans, and other equipment, and can play a significant role in energy conservation.

One of the main benefits of using VFDs is that they allow motors to operate at a variable speed, rather than running continuously at full speed. This means that the motor only uses the energy required to meet the demands of the application, rather than running at maximum capacity all the time. By reducing the speed of the motor, VFDs can reduce the energy consumption of the equipment and save energy.

Another benefit of using VFDs is that they can help to reduce the wear and tear on motors and other equipment. By operating at a lower speed, motors and equipment are subject to less stress and are less likely to break down or require maintenance. This can lead to significant cost savings over time, as less maintenance is required, and equipment can last longer.

Overall, VFDs are an important technology for energy conservation in industrial applications. By reducing the speed of motors and other equipment, VFDs can save energy, reduce maintenance costs, and increase the lifespan of equipment. They offer a cost-effective and energy-efficient solution for industrial facilities looking to improve their energy efficiency and reduce their environmental impact.

By installing the VFDs our Power plant and Ferro alloys plant reduced electricity utilisation approximately we are saving around 2 million Units of energy per year.

- **Use Of transparent roof sheeting**

The transparent sheets were used at various locations in place of conventional GI sheets, this will provide the natural illumination inside the factory sheds and helps in energy saving during daytime.

- **Replacing burnt-out bulbs to LED lights:**

The burnt-out conventional bulbs are replaced with LED lights at all internal offices. This helps in reduction of electrical energy consumption and also LED lights can last up to 25 times longer than traditional bulbs which helps in reduction of e-waste generation.

PART-H

Additional measures/investment proposal for environmental protection including abatement of pollution.

Solid Waste & its management:

- SiMn/ FeMn Slag: The Slag generated during the process of Ferro Alloy production will be granulated and sold to construction industries. The FeMn slag will be reused in SiMn Production as Raw Material.
- The fine dust collected from the Baghouse / Dedusting Unit are Reused in SiMn Production after briquetting.

PART-I

Miscellaneous: Any other particulars in respect of environmental protection and abatement of pollution

Plastic and General Soiled and other waste management:

The use of single-use plastic items within the plant premises has been strictly prohibited. The Environment Team is actively conducting awareness programs for employees and local communities to inform them about the ban on single-use plastics and its environmental impact.

Food and wet waste from the canteen are converted into vermicompost. This compost is then used for greenbelt development, supporting sustainable waste management and reinforcing the plant's commitment to environmental stewardship.

