



ENVIRONMENTAL STATEMENT

FOR THE FINANCIAL YEAR 2022-23

Submitted to SPCB under Rule 14 of The Environment (Protection) Act, 1986

TATA STEEL MINING LIMITED

FERRO ALLOYS PLANT

**KALINGANAGAR INDUSTRIAL COMPLEX, DUBURI, DIST-JAJPUR-755026,
ODISHA**

ENVIRONMENTAL STATEMENTS

FORM-V

(See Rule 14)

The Ministry of Environment & Forest vide its notification dated March, 1992 directed all industries which need to have consent under Water (Prevention & Control of Pollution) 1974 and Air (Prevention & Control of Pollution) 1981 to file the Environmental statement every year. This is to be filed for the period ending March by September every year. The format for the same is as follows:

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:

Mr. Pankaj Kumar Satija, Managing Director,

M/s Tata Steel Mining Limited, (Ferro Alloy Plant).

Kalinganagar Industrial Complex, Duburi, Dist- Jajpur-755026, Odisha

(ii) Industry category- Large scale industry (Ferro Alloys Plant)

Primary - (STC code):-

Secondary – (SIC Code):-

(iii) Production capacity -

Charge Chrome/ Silico Manganese/Ferro Manganese (4x16.5MVA) furnace No-I, II, III & IV-1,00,000 TPA

(iv) Year of establishment -Acquired M/s. Rohit Ferrotech Limited in 2022, NCLT Order Copy attached.

(v) Date of the last environmental statement submitted- Nil

PART-B

Water and Raw Material Consumption

(i) **Water Consumption:-** 466.83 m³/d (October-2022 to March- 2023)

Process: -326.78 m³/d

Cooling: -93.36 m³/d

Domestic: -46.68m³/d

Name of Product	Process water consumption per unit of product output (M ³ /T).	
	During the previous financial year(2021-2022)	During the current financial year(2022-2023)
1	2	3
Charge Chrome/ Silico Manganese/Ferro Manganese (4x16.5MVA) furnace No-I, II, III & IV- 1,00,000 TPA	Nil	2.28

(ii) **Raw Material Consumption**

Name of raw material	Name of products	Consumption of raw material per unit of output	
		During the previous financial year (2021-2022)	During the current financial year (2022-2023)
	Charge Chrome/ Silico Manganese/Ferro Manganese		
1. Chrome ore		Nil	2560 kg
2. Coke		Nil	553 kg
3. Coal		Nil	7.6 kg
4. Quartzite		Nil	182 kg

Polluting Industry may use codes if disclosing details of raw material would violate contractual obligations, otherwise all industries have to name the raw material used.

PART-C

Discharged to environment / unit of output specified if the consent issued.

Pollutants	Quantity of pollutants discharged (mass/day)	Concentration of pollutions in discharges (mass / volume)	Percentage of variation from prescribed standard with reasons
a) Liquid		Annexure-I	Nil
i) Domestic Effluent	(Domestic effluent of water treated by Septic tank followed by soak pit).		
ii) Cooling & Other waste water including COB Plant	No discharge allowed to outside (Cooling & Other waste water including COB Plant of water treated by recycling process).		
b) Emissions		Annexure-II	Nil
i) GCP of Furnace-I			
ii) GCP of Furnace-II			
iii) GCP of Furnace-III & IV			
c) Solid Wastes			Nil
i) Fine Dust	1106 MT	Used in Briquette Plant	

PART-D
HAZARDOUS WASTES

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

Hazardous Waste	Total Quantity (Kg)	
	During the previous financial year (2021-2022)	During the current financial year (2022-2023)
Used Oil	Nil	Nil

PART-E
SOLID WASTE

		Total Quantity	
		During the previous financial year	During the current financial year
(a)	From process (a) Slag	-----	Slag-36106.42 MT
(b)	From pollution control facility	--	--
(c)	(1) Quantity recycled or re-utilized within the unit	--	
	(2) Sold	--	--
	(3) Disposed	--	--

PART-F

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

A. Hazardous Waste- Used oil stored (Sold to registered recycler).

Solid Waste- Slag (Used as filling material).

Fine Dust-Used in Briquette Plant.

B. Characteristics (in terms of concentration and quantum) of solid waste

Ferro chrome slag which is in lumpy form dumped in dump yard designated inside plant premises.

Characteristics of Ferro Chrome Slag	
Parameter	Result (in %)
Cr ₂ O ₃	10-13
SiO ₂	27-30
MgO	25-27
FeO	3-5
Al ₂ O ₃	22-25
CaO	5-7

The slag is dumped for back filing with-in our premises. The necessary TCLP test of slag has been carried out.

Disposal practice:

Slag:-

All the four furnaces produce Cr₂O₃ slag as a by – product. The slag is mostly utilized for road construction & development and the rest is dumped at earmarked site inside the factory premises.

GCP dust:-

Individual GCPs have been provided to Furnace I & II , Furnace III & IV. Each GCP consists of gas cooler (air to air heat exchanger) and pulse jet bag filter with duct and ID fan and discharged through a stack of adequate height. The flue gas cleaning residue is properly collected with the help of pneumatic dust collection system provide with silo and stored on a concrete floor under shed and is used in briquette making process.

Waste oil:

The waste oil generated at various sources are collected in leak proof barrels and then are kept on a concrete floor with oil catch pit. It is also ensured that the caps of the barrels remain intact and in upright position. The storage area is properly fenced and caution board displayed. During transfer of waste oil to barrels, a trough is placed underneath to prevent land contamination due to oil spillage then at a fixed interval, these barrels are returned to stores for final disposal through authorized reprocessor.

Waste batteries:

Waste Batteries are generated in Electrical and IT section .These batteries with diluted acid and caps intact are kept under a shed having concrete floor. Then at a fixed interval, these batteries are returned to stores for final disposal. The UPS generated is kept inside the IT room and during purchase of new UPS it is handed over to the party under buy back policy.

Used cotton wastes:

The used cotton wastes generated at various locations are kept in designated barrels and at a fixed interval; these wastes are handed over to the Shift In-charge of the Furnace Section for incinerating in the Electric Arc Furnace at a temperature of more than 1700 degree C.

PART-G

In respect of the pollution abatement measures taken up on conservation of natural resources and on the cost of production.

M/s **TATA STEEL MINING LIMITED** has spearheaded the pursuit for Environmental Protection by implementing an effective environmental management system. To this effect, the Plant has undertaken the following measures: -

- i. Annual maintenance of both the GCPs including power consumption and GCP dust transportation
- ii. Annual maintenance of dry fog systems including power consumption
- iii. Misc. Contractual jobs for maintaining environmental management system like road development, drain development.
- iv. Zero Discharge.
- v. Optimum land use, reuse of solid waste.

PART-H

Additional measures/investment proposal during 2022-23 for environment protection including abatement of pollution prevention of pollution.

- Necessary pollution control equipment has been installed at site and steps are being taken to implement environmental protection measures. An operational environment expenditure of 4.5 Crores towards various projects for FY 2022-23 has been kept in provision. The various measures are as follows;
- Bag-filters refurbishing and updation in the system for all the GCP

- Dust Suppression, Water sprinklers dedicated Mist Canon etc. are in place to control the air pollution.
- ETP and STP planned and is in process.
- Rainwater harvesting ponds have been constructed at site to conserve and re-use the rain water post necessary treatment
- Trees have been planted at site as per the Green Belt Development Plan.
- For domestic waste septic tank and soak pit provided.
- Water spraying on haulage roads, dumping site etc. as a measure towards dust suppression system
- Continuing environmental monitoring as per the plan and monthly report of the same is submitted.
- Celebrating World Environment Day, World Ozone Day etc at site.
- Training on EMS to create awareness, mass meeting on shop floor are also being carried out.
- Effective solid wastes management is maintained and followed at site.
- 100% recycling of effluent water.
- Proper handling and management of Hazardous Wastes.

PART-I

Miscellaneous

Any other particular for improving the quality of the environment protection and abatement of pollution

- Water Sprinkling is being done on all the roads and areas of operation within the project site to control the fugitive dust emission.
- Regular monitoring of ambient air, surface water, ground water and ambient noise is being done by third party MoEF approved labs.
- Only PUC certified vehicles are engaged inside plant premise. World environment day celebrated.

- Adoption of good housekeeping practices in which proper and systematic stacking and movement of materials is ensured.
- ETP and STP are in process to treat domestic and industrial wastewater.
- New GCP with Bag filter model is being installed at Briquette plant for dust suppression and improvement in air quality.
- Internal Roads and drains are modified throughout the unit.
- We have provided adequate measures for proper handling of hazardous waste in accordance with the provisions of Rules.
- We are maintaining good housekeeping throughout the plant.
- We have adopted different energy conservation measures for conserving thermal & electrical energy.
- We have carried out third party hazardous waste audit as per the guideline of Honorable Supreme Court of India.
- We have constructed garland drain around raw material yard for collection and treatment of surface runoff during monsoon period.
- Community awareness development programmes on environmental protection are also undertaken through celebration of World Environment Day.
- We have undertaken extensive CSR activities.