



TSL/SPCB/BS-30/2023-07/376

September 27, 2023

**The Member Secretary**

State Pollution Control Board, Odisha  
Parivesh Bhawan, A/118,  
Nilakantha Nagar, Unit-VIII,  
**Bhubaneswar-751 012**

**Subject:** Environmental Statement for the financial year 2022-23 for Residential Township of Tata Steel Ltd. Meramandali, Dhenkanal.

**Reference:** Consent Order No.5425/IND-I-CON-6826 dated 31.03.2022

Dear Sir,

In reference to the captioned subject and letter cited above, we are submitting here with **“Annual Environmental Statement (Form-V)”** duly filled in the prescribed format for the Residential Township of Tata Steel Ltd. Meramandali At: Narendrapur, Po: Kusupanga, Dist.: Dhenkanal, Odisha, for the financial year 2022-23.

This is for your kind information and necessary record please.

Thanking you,

Yours faithfully,

**For Tata Steel Limited**

*Anoop Srivastava*

**Anoop Srivastava  
Chief Environment, TSM**

**Encl:** As above

**Copy to:** 1. The Regional Officer, Odisha State Pollution Control Board, Angul, Odisha.  
2. Deputy Director General, MoEF&CC, Integrated Regional Office (EZ), A/3, Chandrashekarapur, Bhubaneswar-751023.

**TATA STEEL LIMITED**

Narendrapur Kusupanga Meramandali Dhenkanal 759 121 Odisha India Tel 91 6762 352000  
Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001 India Tel 91 22 66658282 Fax 91 22 66657724  
Corporate Identity Number L27100MH1907PLC000260 Website [www.tatasteel.com](http://www.tatasteel.com)

[FORM-V]  
 (See rule 14 of The Environment Protection Act, 1986)  
**Environment Statement for the financial year ending 31 March 2023**

PART – A

General Information		
	Name of the Company	<b>Tata Steel Limited, Meramandali</b>
1.	Name & Address of the owner/occupier of the industry, operation, or process	Sri Thachat Viswanath Narendran CEO & MD Tata Steel Limited, Meramandali At: Narendrapur, PO: Kusupanga Via: Meramandali, Dist.: Dhenkanal, Pin: 759121, Odisha
2.	Industry Category	B (As per EIA Notification 2006)
	Primary (STC Code)	-
	Secondary (STC Code)	-
3.	Production capacity-Units	Township
4.	Year of establishment	2021
5.	Date of last environment statement submitted	September 30, 2022, vide letter no. TSL/SPCB/BS-30/2022-06/250

PART – B

Water & Raw material Consumption		
<b>1: Total Water Consumption (m<sup>3</sup>/d)</b>		
<b>Water Consumption</b>	<b>During the previous Financial Year (2021-22)</b>	<b>During the current Financial Year (2022-23)</b>
Domestic Consumption	1631	1868
<b>2: Water Consumption per unit of the product</b>		
<b>Name of the Products</b>	<b>Process Water Consumption per unit of product</b>	
-	2021-22	2022-23
It is a Residential complex.		

3: Raw Material Consumption (Residential Township):			
<b>Name of Raw materials</b>	<b>Name of Products</b>	<b>Consumption of raw material per unit of product</b>	
		<b>During the previous Financial Year (2021-22)</b>	<b>During the current Financial Year (2022-23)</b>
There are no products as it is a Residential complex.			

**PART – C**

**Pollution discharged to Environment per unit of Output  
(Parameters as specified in the Consent issued)**

Pollutants	Quantity of pollutants discharged (mass/day)	Concentrations of pollutants discharged (mass/volume)	% of variation from prescribed standards with reasons
<b>(a) Water</b>			
TSS	Zero discharge is maintained. 100% of treated STP water is reused in horticulture, landscaping and low-end application of Integrated Steel Plant.		
COD			
Ammonia as N			
BOD			
Phenols			
Cyanide as CN <sup>-</sup>			
<b>(b) Air</b>			
It is a residential complex. There are no sources of release of air pollutants in residential township. Ambient Air Quality report is hereby attached below.			

**1. Surface Water Quality**

Parameter	Unit	Kisinda Nalla	
		U/S	D/S
pH Value	-	6.95 - 8.11	6.82 - 8.21
Colour	Hazen	BDL (DL:1.0)	BDL (DL:1.0)
Temperature	Deg C	25 - 31	25 - 33
Total Suspended Solids	mg/l	3.2 - 20.4	2 - 26.8
Arsenic as As	mg/l	BDL (DL:0.005)	BDL (DL:0.005)
BOD, 3days at 27°C	mg/l	BDL (DL:2.0)	< 3.4
Boron as B	mg/l	BDL (DL:0.25)	BDL (DL:0.25)
Cadmium as Cd	mg/l	BDL (DL:0.001)	BDL (DL:0.001)
Calcium as Ca	mg/l	40 - 110.88	11.88 - 54.88
Chlorides as Cl	mg/l	24.74 - 89.97	14.7 - 146.4
COD	mg/l	7.2 - 16.7	6.98 - 15.4
Copper (as Cu)	mg/l	BDL (DL:0.02)	BDL (DL:0.02)
Cyanide as CN	mg/l	BDL (DL:0.01)	BDL (DL:0.01)
Fluoride as F-	mg/l	0.35 - 4.7	0.22 - 2.4
Hexa Chromium as Cr <sup>+6</sup>	mg/l	0 - 0.052	< 0.088
Iron as Fe	mg/l	0.09 - 0.89	0.06 - 2.01
Lead (as Pb)	mg/l	BDL (DL:0.005)	BDL (DL:0.005)
Manganese (as Mn)	mg/l	BDL (DL:0.02)	BDL (DL:0.02)
Mercury (as Hg)	mg/l	BDL (DL:0.0002)	BDL (DL:0.0002)

Nickel (as Ni)	mg/l	BDL (DL:0.01)	BDL (DL:0.01)
Nitrate as N	mg/l	0.52 - 1.02	0.61 - 1.01
O&G	mg/l	BDL (DL:1.4)	BDL (DL:1.4)
Phenolic Comp	mg/l	BDL (DL:0.001)	BDL (DL:0.001)
Phosphate as P	mg/l	0.09 - 0.46	0.07 - 0.62
RFC	mg/l	BDL (DL:0.1)	BDL (DL:0.1)
Selenium (as Se)	mg/l	BDL (DL:0.005)	BDL (DL:0.005)
TKN	mg/l	BDL (DL:0.3)	BDL (DL:0.3)
Zinc (as Zn)	mg/l	BDL (DL:0.02)	BDL (DL:0.02)

## 2. Township Sewage Treatment Plant -Treated outlet quality

Parameter	UOM	Standard	Township STP		
			Min	Max	Avg
pH Value	-	5.5-9.0	7.0	8.3	7.5
TSS	mg/l	100	22.0	74.0	39.6
BOD	mg/l	30	7.2	22.0	15.0

## 3. Ambient Air Quality

Parameters	UoM	Norm	CAAQMS-1		
			Min	Max	Avg
PM <sub>10</sub>	µg/m <sup>3</sup>	100	15.4	128.5	71.7
PM <sub>2.5</sub>	µg/m <sup>3</sup>	60	6.6	78.2	37.8
SO <sub>2</sub>	µg/m <sup>3</sup>	80	11.5	14.2	12.6
NO <sub>2</sub>	µg/m <sup>3</sup>	80	5.5	16.1	13.6
CO	mg/m <sup>3</sup>	2	0.2	0.7	0.55

CAAQMS 1: Near Township

Values are derived from 24 hourly average data except CO values are derived from 8 hourly average data.

## PART – D

Hazardous Wastes (As specified under The Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016)		
Hazardous waste	Total Quantity (MT)	
	During the previous Financial Year (2021-22)	During the current Financial Year (2022-23)
No Hazardous Waste Generated		

**PART – E**

**Solid Wastes**

**Total Quantity Generated**

Name of the Waste	Total Quantity Generated (MT)	
	During the previous Financial Year (2021-22)	During the current Financial Year (2022-23)
Municipal Solid Waste (Wet & Dry)	1277	1460

**PART – F**

Chemical Composition of majority of waste as produced in process of Tata Steel, Meramandali operation is given below:

Municipal Solid Wastes	Characteristics	Method of disposal
Municipal Solid Waste (Wet & Dry)	Carbon: 21.2% Nitrogen: 1.1% Moisture Content: 20-25% Hydrogen: 17.2% Oxygen: 67.6% Sulfur: 9.3% VM: 35.5% Ash: 72.1	Bio-degradable & non-biodegradable wastes are being segregated at source of generation and collected in colour dust bin. The collected Bio-degradable waste is being transported to disposal site by covered trucks. Bio-degradable waste is being treated in organic waste composter and used as manure for plantation. Non-biodegradable waste is being segregated and disposed to recyclers.

**PART – G**

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

SN	Pollution abatement measures taken in 2022-23	Impact of pollution control measure on conservation of natural resources and cost of production
1	Green Belt Development	25% of the township area has been covered with green belt. Vacant area and all along the roadside have been developed into lawns (except pathway).
2	Rainwater Harvesting at Colony	Rainwater harvesting structure of capacity 25000 m <sup>3</sup> at colony has been constructed.
3	Ambient Air Quality	Roads have been concreted/ paver blocked to eliminate fugitive emission and also mechanical sweeping has been adopted to keep the road neat and clean. Installed Continuous Ambient Air Quality Monitoring System (CAAQMS) for continuous monitoring of PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>2</sub> & CO in Ambient Air.

4	Water Quality	STP of 1000 KLD capacity have been installed to treat sewage water generated from township.
5	Reducing of carbon in the environment	All CFL light have been replaced with LED light.
6	Construction and Demolition Waste Management	The construction and demolition wastes generated from the project site are being managed and disposed of as per the provision under "construction & Demolition Wastes Management Rules 2016"
7	Sanitary and Hygienic Measures	<ul style="list-style-type: none"> <li>• All building roads and drains are being cleaned on regular interval.</li> <li>• Mosquito control programme is being carried out at the colony.</li> <li>• Modular toilet blocks have been constructed for workers and is maintained.</li> <li>• Zimmedaar Nagrik app has been adopted to serve the resident for any kind of repairing and sanitary services.</li> <li>• First aid and medical facilities are available in the township health center and steel plant OHC.</li> <li>• Designated parking has been allocated at the project site for four-wheelers, two-wheelers, and cycles in the township for the inhabitants.</li> <li>• Signage has been provided along all internal roads like road markings for pedestrian pathway, speed limits etc. for smooth movement of traffic.</li> </ul>

Cost Estimation of Pollution Control (in Rs. Crores)		
Description		Expenditure 2022-23
Water pollution control system	All the wastewater is being treated in STP of capacity 1000m <sup>3</sup> /day and treated water is being reused in low end application of steel plant. A dedicated laboratory has also been set up at colony for day-to-day monitoring of Water & Wastewater parameters.	1.69
Air pollution control system	Water tankers are being deployed outside the colony for water sprinkling at material transportation to avoid dust emission to atmosphere and to keep PM <sub>10</sub> level within the prescribed limit. Mechanical Road Sweeping is being done periodically in all internal roads	2.34
Solid Waste Management System (MSW)	Segregation, Collection, installation of dust bin and recycled via composter.	0.3

C&D Waste (Repair & maintenance)	All internal road has been concreted and Interlocking paver block in the sports complex area.	0.25
----------------------------------	---	------

**PART – H**

**Additional measures/ investment proposals for environmental protection abatement of pollution, and prevention of pollution.**

- The Township is being complied with all Environmental Safeguards / Guidelines imposed in the Environmental Clearance.
- Single Use Plastics (SUPs) free residential township.
- Green Belt – Well maintained green areas have been developed inside and outside premises to reduce noise pollution & air pollution, and to increase the scenic beauty.
- Separate bins have been provided in each housing unit for facilitating the segregation of waste into wet garbage and inert materials. Also, an organic waste converter of capacity 0.25 TPD is in operation.
- Installation of 15 nos. of 30W LED solar streetlights at parking areas.
- Low Sulphur diesel is being used for running the DG sets and all diesel power generating sets are being used have acoustic enclosure to prevent noise.

**PART – I**

**Any other undertaken project for improving the quality of environment.**

- An organic waste converter of 6 TPD capacity has been installed and will be operation from November 2023.
- Installation of 4 KLD solar based water heater is in progress.
- Training staff on methods of energy conservation and to be vigilant to such opportunities.
- Promoting resident awareness on energy conservation.
- Separation of grey and black water.
- Awareness promotion through various environmental competitions, workshops, presentations, etc. on World Environment Day, Earth Day, Biodiversity Day, Ozone Day, etc.

