



TSJ/EMD/C-23/174/23
September 26, 2023

The Member Secretary
Jharkhand State Pollution Control Board
T.A. Division Building
HEC Campus, Dhurwa
Ranchi - 834004

Subject: Submission of Environment Statement for Township of Tata Steel Limited, Jamshedpur for the year 2022-23

Dear Sir,

With reference to captioned subject, we are submitting herewith the Environment Statement for Township of Tata Steel Limited, Jamshedpur for the year 2022-23 duly filled in the prescribed format for your kind consideration.

You are requested to kindly acknowledge the same and place in your records.

Thanking you

Yours faithfully,
For Tata Steel Limited

Utsav Kashyap
Head Environment Clearance & Compliance (TSL)

Enclosures as above

Copy to: Regional Officer, Jharkhand State Pollution Control Board, Jamshedpur

**ENVIRONMENTAL STATEMENT
FOR THE YEAR 2022-23**

**Township
TATA STEEL LIMITED**

**Submitted by:
ENVIRONMENTAL MANAGEMENT DEPARTMENT
TATA STEEL LIMITED
JAMSHEDPUR-831001
JHARKHAND**

Environment Statement 2022-23

[Form V]

Environmental Statement for the Financial Year ending 31/03/2023

Part A

(i)	Name & address of the owner/occupier of the industry operation or process:	Mr. T.V. Narendran CEO & MD Tata Steel Limited Jamshedpur-831001 East Singhbhum, Jharkhand
(ii)	Industry Code	Orange Category
	Primary STC Code:	SIC Code: 4941, 4950 & 4953
	Secondary SIC Code	-
(iii)	Production Capacity	Kharkai STP – 16 MLD, Bara STP - 45 MLD List of services provided, and Major Installations within Tata Steel Leasehold Area for Township Operations is enclosed as Annexure I
(iv)	Year of Establishment	1907
(v)	Date of last Environment Statement submitted	September 22, 2022 vide letter no. EMD/C-23/ 167 /22

Part B

WATER & RAW MATERIAL CONSUMPTION

i) Water Consumption (m³/day)

Process	:	0
Cooling	:	0
Domestic Consumption	:	2,03,923
(As drinking water supplied to township)	:	

Name of the product	Process water consumption/unit of product output	
	During the Previous Financial year (2021-22)	During the Current Financial year (2022-23)
Township Services		
Water Treatment at WTP	64,78,150 m ³ /month	65,42,108 m ³ /month

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ii) Raw Material Consumption (Water Treatment Plant):

Name of Raw Material	Name of the Products/Services	Consumption of Raw material (Tonnes)	
		During the Previous Financial year (2021-22)	During the Current Financial year (2022-23)
Solid Alum	Water Treatment	164	175
Liquid PAC		600	555
Liquid Chlorine		210	502
Powder PAC		90	210
Bleaching Powder		30	80
Polyelectrolyte		1	13.5

Part C

Pollution Discharged to Environment / Unit of Output (Parameter as Specified In the Consent Issued)

Pollutants	Concentrations of pollutants in discharges (mass/volume)		Percentage of variation from prescribed standards with reasons
	mg/L		
a) WATER	Northern STP (Bara) Treated Outlet		
	2021-22	2022-23	
BOD	6.9	9.9	-67
COD	73.5	24.6	-90
TSS	7.5	12.9	-87
Oil & Grease	1.1	4.4	-56
b) AIR	Not Applicable		

Pollutants	Concentrations of pollutants in discharges (mass/volume)		Percentage of variation from prescribed standards with reasons
	mg/L		
a) WATER	Southern STP (Kharkai) Treated Outlet		
	2021-22	2022-23	
BOD	7.0	9.5	-68
COD	69.0	24.6	-90
TSS	8.1	25.3	-75
Oil & Grease	1.4	4.1	-59
b) AIR	Not Applicable		

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Part D

Hazardous Waste

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

Hazardous Waste	Total Quantity (Tonnes)	
	During the previous Financial year (2021-22)	During the Current Financial year (2022-23)
(a) From Process		
	NA	NA
(b) From Pollution Control Facilities		
	NA	NA

Part E

Solid Waste

Total Quantity Generated

Name of the Waste	Total Quantity Generated	
	During the previous Financial year (2021-22)	During the Current Financial year (2022-23)
(a) From Process		
Municipal Solid Waste	98,550 Tonnes	99,280 Tonnes
(b) From Pollution Control Equipment (cubic meter)		
STP Sludge	600 m ³	600 m ³
(c)(1). Total Quantity Recycled/ Reutilized within the unit		
Total waste processed at compost plant (Municipal solid waste)	33,572 Tonnes	111,825 Tonnes
STP Sludge	600 m ³	600 m ³
(c)(2). Total Quantity Sold		
Organic Compost from Municipal Solid Waste	4,226 Tonnes	7,546 Tonnes
(c)(3). Total Quantity Disposed		
Inert Municipal Solid Waste (Process Rejects)	90954 Tonnes	98488 Tonnes

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Part F

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

A. Physical Analysis

Sl. No.	Waste Stream Materials	% Content	Qty MT out of 400TPD
01.	Short Term Bio-degradable: Leafy matter, food waste, remains of fruits, vegetables	50.20	200.60
02.	Remains of fish, meat, poultry	2.80	11.20
03.	Tree twigs, banana stump, hardnuts, coconut shells, palm leaves	4.00	16.00
04.	Cotton, jute, wool, rags, textiles, yarn	4.50	18.00
05.	Rubber and leather products	1.80	7.20
06.	Bamboo products, wooden materials, coir, cane, furniture etc.	4.80	19.20
07.	Diapers, napkins, bandages etc.	1.50	6.00
08.	Paper products of all kinds	3.70	14.8
09.	Plastic products of all kinds	4.80	19.20
10.	Glass & Metals	1.20	4.60
11.	Stone, earth, street sweeping dust	12.00	48.00
12.	Cattle dung and others	8.70	34.60
Total		100.00	400.00

B. Waste Suitability Analysis for Product Recovery

Sl. No.	Items	%	Qty. MT
1.	Easily Compostable matter incl. food waste, fish, meat waste and cattle dung	58.00	232.00
2.	Combustible materials with high C.V. to be recovered as refused derived fuels	18.30	73.20
3.	Recyclable plastic	4.00	16.00
4.	Construction material	12.00	48.00
5.	Non-usable inert for SLF	7.70	30.80
Total		100.00	400.00

C. Calorific Value Analysis:

- Gross Calorific Value of mixed sample 1130 K.Cal/Kg
- Gross Calorific Value of combustibles 2320 K.Cal/Kg

D. Chemical Analysis

Sl. No.	Parameter	Observed Values
1.	pH	6.2
2.	Organic Carbon %	35.00

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3.	Nitrogen %	0.84
4.	Phosphorus %	0.46
5.	Potassium %	0.42
6.	Calcium %	1.40
7.	Magnesium %	0.36
8.	Sulphates %	0.40
9.	C : N Ratio	41.6:1

E. Heavy Metal Analysis:

Sl. No.	Parameter	Observed Values (PPM)
1.	Lead	60.00
2.	Cadmium	Below Detectable Limits
3.	Nickel	8.50
4.	Chromium	4.00
5.	Mercury	Below Detectable Limits
6.	Copper	30.00
7.	Zinc	70.00

Part G

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

Sl. No.	Pollution abatement Measures taken	Impact on conservation of natural resources & others
1	Tree Plantation 2020-21= 104908 nos.	Increase in green cover
2	Tree Plantation 2021-22= 124604 nos.	Increase in green cover
3	Tree Plantation 2022-23= 121629 nos.	Increase in green cover

Part H

Additional Measures Investment Proposal of Environmental Protection Including Abatement of Pollution

- Electronic Waste Collection Centre for channelization of E-waste is completed.
- Scientific capping of old Bara dumpsite – Profiling work Completed, HDPE, Geo membranes liner laying, vegetative soil laying and Greenery development.
- Installation of OWC at flat complexes completed.
- Modular Biogas units installed at Bulk Generators premises.
- Door to door Source Segregation at 25,000 household and establishments. Capturing of bulk generators
- Bioremediation and Biomining activity under progress.
- Plastic Tar Road laying at the Township.
- Increased in capacity of Organic waste processing.

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- EC and CFE received for IMSWFM Begunadih
- Total 3 Nos locations have been identified to process Municipal solid waste by Bio-methanation and composting.
- Rated 3 star in the Garbage free city – Star rating in Swachh Survekshan 2022.
- Channelization of Segregated combustible fraction (SCF) to cement industries.
- New Chlorine Di oxide Generation and dosing system for disinfection of 230 MLD of filtered water (in place Liquid Chlorine) as per CPHEEO guideline at Water Works. Total of 9 ClO₂ units each of capacity 1.8 Kg/hr.

Part I

Any other particulars for improving the quality of Environment

- River clean-up / Water conservation and mass awareness drives in the township.
- Mass awareness drives in the township during World Water Day.
- Rainwater harvesting (RWH) units at 20 residential / office complexes having water regeneration capacity of 57 million liter yearly.
- Construction, Operation & Maintenance of Package Sewage Treatment Plant of 550 KLD at Pandey Maidan
- Construction, Operation & Maintenance of Package Sewage Treatment Plant of 700 KLD at Jahir Tola, Baridih.
- Construction, Operation & Maintenance of Package Sewage Treatment Plant of 1000 KLD at M – Type, Baridih.
- 5 Nos. of RRR centre developed which are geo-tagged for easy locating and recyclable resources like clothes, shoes, books etc will be received.
- Facilitation to Township consumer for installing Roof Top Solar by providing Net Meters. The total RTS install capacity in Town is 1728kWp and in FY-23 total unit generated by this drive is 1.58 MU.

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Annexure – 1

List of services provided and Major Installations within Tata Steel Lease Hold Area for Township Operations

I.	Type of services provided
	<ol style="list-style-type: none"> 1. Power Supply to Company accommodations and adjoining area. 2. Drinking Water Supply to Company accommodations and adjoining area. 3. Repair and Maintenance of roads of lease area. 4. Maintenance and operation of Sewage network of command area (Sewage pumping stations and Sewage Treatment Plant) 5. Fleet Management Services – Maintenance of company vehicles. 6. Municipal Solid Waste Management – Collection, transportation, processing and Disposal from township. 7. Horticulture and green cover of township.
II.	Office Installations
	<ol style="list-style-type: none"> i. Chamarlia Guest House ii. Tubes Guest House iii. Directors Bungalow - 1 iv. Directors Bungalow - 2 v. Tata Workers Union vi. JUSCO Shramik Union vii. Security Training Centre. viii. Urban Services ix. Corporate Communication TSL x. Centre for Excellence, xi. JUSCO Corporate Office xii. Town Electrical Office xiii. Horticulture Office xiv. ICS Centres (South Park, Central, Kadma, Sakchi, Sidhghora) xv. Public Health Centres (RDB, NT, Kasidih, Baridih, Burma mines) xvi. Tata Zoological Park xvii. Public conveniences throughout township (Urinals / Public Latrines)
III.	Market
	<ol style="list-style-type: none"> i. Bistupur Market ii. Kadma Market iii. Sakchi Market iv. Golmuri Market v. Sidhghora Market vi. Burmamines Market vii. Kagal Nagar Market viii. Gudri Market ix. Airport Market

IV	RESIDENTIAL ACCOMMODATIONS								
SL. NO.	AREA	QTRS	FLAT	BUNG.	SL. NO.	AREA	QTRS	FLAT	BUNG.

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	AGRICO				KADMA			
1	NEW/ BARA FLATS		594		47	KAISER BUNG. (2 ROOMED)		15
2	AGRICO - BARA FLATS		240		48	KAISER BUNG. (3 ROOMED)		77
3	RN1/AGRICO	3			49	NEW TC BHA KADMA-2 ROOMED		22
4	M2/AGRICO	2			50	NEW TC BHA KADMA-3 ROOMED		38
5	L4/AGRICO- H6/GOLMURI	715			51	TS FLAT (OLD)	60	
6	L5/AGRICO	174			52	T.S.FLAT (NEW)	24	
7	L6/AGRICO	198			53	KF4 FLATS,KADMA	153	
	BARIDIH				54	BELDIH LAKE SUP.FLAT	112	
8	M.SUP.FLAT, TUBES		56		55	GPS FLATS	238	
9	BARIDIH FLATS		728		56	GREEN ENCLAVE, KADMA	182	
10	NEW K2 TYPE	280			57	PRAKRITI VIHAR(NOPR)	182	
11	MODIFIED NB	251			58	ULIYAN/KADMA FLATS	1895	
12	TJ1/TJ2, BARIDIH	296			59	GREEN ENCLAVE(OPR)	70	
13	K2/TUBES BARIDIH	50			60	PRAKRITI VIHAR, KADMA	140	
14	L4/TUBES BARIDIH	93			61	K/K.D. TYPE	28	
15	L5 & S TYPE TUBES	56			62	DINDLI ENCLAVE, KADMA	70	
16	L6/TUBES BARIDIH	122			63	K.D.FLATS, C.H.AREA	32	
17	NEW BARIDIH	64			64	K.D.FLATS, KADMA	76	
18	MODIFIED TJ TYPE, BARIDIH	105			65	KAISER FLATS, KADMA	8	
	BISTUPUR				66	PROF.FLATS,I.C.R OAD	152	
19	TR/BISTUPUR	206			67	PROF.FLATS, K.S.LINK	192	
20	L4/BISTUPUR	43			68	PROF.FLATS, FARM AREA	80	

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21	L5/BISTUPUR	38			69	K.S LINK EXECUTIVE FLATS		24	
22	H2,H3,H4,H6,G1 & G2,BIST.	451			70	GT (ULIYAN FLAT)		89	
23	G,H1 & H5,BISTUPUR	65			71	RN1,N2,N1 & RMR,KADMA	0		
24	P & P1 BISTUPUR	27			72	M2 KADMA	0		
	BURMAMINES				73	TR INCLUDING R.D.BHATTA.	286		
25	SECURITY FLAT B.MINES		140		74	MODIFIED TR TYPE,KADMA	239		
26	S-TYPE B/MINES	160			75	L4/XN(R.D.BHATT A)TJ4,BHA	19		
27	L,L3,L4 & BML,B/MINES	485			76	L5 KADMA	545		
28	H6 & BMH BURMA MINES	93			77	L6 & G5, KADMA	98		
29	BUNG. BURMA MINES	8			78	H6 KADMA	100		
	DHATKIDIH				79	PC & PCF	21		
30	DHATKIDIH FLATS		96		80	T.C. (OLD)	60		
31	PROTO TYPE FLAT		8		81	MODIFIED M-2 TYPE	0		
32	CS QUARTERS	435				SAKCHI			
	GOLMURI				82	SF1, SWARNAREKHA FLAT		198	
33	GF1,GF2,GF3,GF4 FLATS		253		83	SF3, BARADWARI FLAT		192	
34	GF5 FLATS		80		84	NEW SWARNREKHA FLATS		48	
35	GOLMURI FLATS - 6		196		85	PIPE-LINE FLATS, SAKCHI		32	
	NILDIH				86	RN & N1 SAKCHI	0		
36	B TYPE BUNGALOW, NILDIH			2	87	M2/SAKCHI	78		
37	DS/B BUNGALOW, NILDIH			10	88	TR & SM SAKCHI	85		
38	C TYPE BUNGALOW, NILDIH			21	89	L,L1,L2,L3,L4,LH - SAKCHI	721		
39	DSB TYPE FLATS, NILDIH		8		90	SECURITY FLATS SAKCHI	1		

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40	C_TYPE FLATS, NILDIH		32		91	H6/SAKCHI	190		
41	D TYPE FLATS, NILDIH		28		92	G4/SAKCHI	13		
42	P TYPE FLATS, NILDIH		66		93	MODIFIED TR TYPE SAKCHI	48		
	NORTHERN TOWN					SIDHGORA			
43	N TOWN BUNGALOW			189	94	NEW SR/SIDHGORA	9		
44	VIP BUNGALOW			24	95	SR/SIDHGORA	14		
45	PARK ROAD OFFICERS' FLATS		48		96	X/XN-SIDHGORA	464		
46	JUBILEE RD.OFFICERS' FLAT		64		97	MODIFIED X-XN, SIDHGORA	273		

V	Work Installations		
	S.No.	Location	Premises Type
	i	Southern STP (Kharkai) 16 MLD	Sewage treatment plant
	ii	Bara Sewage Treatment Plant 45 MLD	Sewage treatment plant
	iii	Northern SPS (CH Area)	Sewage pumping station
	iv	Sonari SPS	Sewage pumping station
	v	Old Uliyan SPS	Sewage pumping station
	vi	New Uliyan SPS	Sewage pumping station
	vii	Baradwari Sewage Pumping Station	Sewage pumping station
	viii	Burma Mines Sewage pumping station	Sewage pumping station
	ix	Bhuiyandi Sewage Pumping Station	Sewage pumping station
	x	Baridih SPS	Sewage pumping station
	xi	Swarnarekha SPS	Sewage pumping station
	xii	Southern SPS	Sewage pumping station
	xiii	WTP Sakchi (Including Chlorination)	Drinking water tower
	xiv	Central WT	Drinking water tower
	xv	Sakchi WT	Drinking water tower
	xvi	Kadma WT	Drinking water tower
	xvii	Tata Nagar WT	Drinking water tower
	xviii	Burma Mine WT	Drinking water tower
	xix	Sidhghora WT	Drinking water tower
	xx	Sonari WT	Drinking water tower
	xxi	River Pump House	River water pumping station
	xxii	Dimna Filter Plant	Water Treatment Plant
	xxiii	Dimna Management Development Centre	DBGR
	xxiv	Fleet Management	Vehicle Maintenance
	xxv	Horticulture Nursery	Park and garden
	xxvi	Town Electric Office	Office area

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	xxvii	Compost Plant – 50 TPD	Manure manufacturing plant
VI	Sonari Airport		
VII	Hospitals and dispensaries		
	i.	Tata Main Hospital	
	ii.	Dispensaries (ECC, Sonari, Kadma, South Park, Tubes, Sakchi, Sidhghora, Agrico, Burmamines)	
	iii.	Adersir Dalal Memorial Hospital.	
	iv.	Kantilal memorial Hospital	
	v.	Centre for Family Initiative	
	vi.	Veterinary Hospital	
	vii.	Dog Sterilization Centre	
	viii.	Immunization Centre	
VIII	Educational Institutions		
	i.	SNTI, N-Road.	
	ii.	Mrs. KMPM Intercollege	
	iii.	JUSCO School , South Park	
	iv.	JUSCO School, Kadma.	
	v.	Kasidih High School	
	vi.	RD Tata Technical Institute, Golmuri.	
	vii.	Burmamines High School	
	viii.	DM Madan Girls High School	
	ix.	Sakchi Girls High School	
	x.	Jamshedpur Public School	
	xi.	AIWC School, Old Baridih	
	xii.	Tube Baridih High School.	
IX	Parks		
	i.	Jublee Park	
	ii.	Droabji Park	
	iii.	Bistupur Postal Park	
	iv.	Bhetia Park	
	v.	Kagal Nagar Park	
	vi.	Golmuri Park	
	vii.	Agrico Park	
	viii.	Nildih Park	
	ix.	Tubes Guest House Park	
X	Playgrounds/ Golf ground/ Clubs		
	i.	JRD Sports complex	
	ii.	Keenan Stadium	
	iii.	Mohan Ahuja Stadium	
	iv.	Gopal Maidan	
	v.	Armoury Ground	
	vi.	Aaam Bagan	
	vii.	Bari Maidan	
	viii.	Agrico Maidan	
	ix.	G-Town Maidan	
		Golf ground	
	x.	Beldih Golf Course	

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	<ul style="list-style-type: none">xi. Golmuri Golf Course <p>Clubs</p> <ul style="list-style-type: none">xii. G-Town Clubxiii. United Clubxiv. Beldih Clubxv. Tube Makers Clubxvi. Golmuri Club
XI	<p>Bustees</p> <ul style="list-style-type: none">i. Gurudwara Busteeii. Harijan Bustee, Dhatkhediiii. Ranikudariv. New Ranikudarv. Sonari Busteevi. Khutadih Busteevii. Kumharpada Busteeviii. Kasidih Busteeix. Hume Pipe Busteex. Bhalubasha Busteexi. Sitaramdera Busteexii. Baridih Busteexiii. Toiladungri Busteexiv. Gadabasha Busteexv. East Plant Busteexvi. Namda Busteexvii. Monifit Bustee