



Ref No: VII/MINES/24-25/144

Dates: 29.09.24

To
The Member Secretary
Jharkhand State Pollution Control Board
TA Division Building (Ground Floor)
HEC Complex, Dhurwa
Ranchi, Jharkhand
PIN- 833201

Sub.: - Environmental Statement in Form- V for the year 2023-24 in respect of Vijay II Iron Ore Mine of M/S Tata Steel Limited.

Respected Sir,

With reference to the above subject, we are hereby submitting the environmental statement in Form - V as per section 14 of Environment (protection) rules 1986 for the Financial Year 2023-24 in respect of Vijay II Iron Ore Mine of M/S Tata Steel Limited.

This is for your kind perusal.

Thanking you

For M/s Tata Steel Limited

Mines Manager
Vijay II Iron Ore Mine
Ghatkuri RF

CC: Regional Officer, JSPCB, MB/12 New Housing Colony Adityapur, Jamshedpur, Jharkhand, 831013.
Encl: 1. Form - V.

TATA STEEL LIMITED
Mines Division Noamundi 8
Tel 91 9234301340 Fax 91 6
Registered Office Bombay House 24 Homi Mody S
Tel 91 22 66658282 Fax 91 2
Corporate Identity Number L27100MH1907PLC00

RJ171660429IN IVR:8274171660429

SP BARAJAMDA SO (833221)

Counter No:1,27/09/2024,11:18

To:THE MEMBE SEC,TA DIV BUILDING

RIN:834004, Dhurwa SO

From:VIJAY II IR,BARAJAMDA

Wt:30gms

Amt:41.00,Tax:6.30,Amt.Paid:41.00(Cash)

<Track on www.indiapost.gov.in>

<Dia: 18002666888> <Wear Masks, Stay Safe>



RJ171660300IN IVR:8274171660300

SP BARAJAMDA SO (833221)

Counter No:1,27/09/2024,11:18

To:THE REGIONAL ,MB/12 NEW HOUSIN

RIN:831013, Adityapur SO

From:VIJAY II IR,BARAJAMDA

Wt:30gms

Amt:41.00,Tax:6.30,Amt.Paid:41.00(Cash)

<Track on www.indiapost.gov.in>

<Dia: 18002666888> <Wear Masks, Stay Safe>



[FORM – V]
(See Rule 14)

Environmental Statement for the financial year ending on 31st March 2024

PART-A

(i) Name and address of the owner/occupier of the Industry operation or process.

M/s Tata Steel Limited
Vijay II Iron Ore Mine
Ghatkuri, RF
Barajamda, Dist- West Singhbhum
Jharkhand

(ii) Industry category Primary – (STC Code) Secondary – (SIC Code)

(iii) Production capacity – (ROM- 2.5 Million Tonnes /Annum)

(iv) Year of establishment- 2005

(v) Date of the last environmental statement submitted – 14.09.2023

PART-B

Water and Raw Material Consumption

(1) Water Consumption m³/d

Process Dust Suppression	-	107.52 KL/D
Cooling Green Belt Development	-	03.50KL/D
Domestic	-	02.20KL/D

Name of products Process water consumption per unit of product output.
During the previous financial year During the current financial year

	(1)	(2)
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- (1) Iron Ore (ROM)
- (2) Lump
- (3) Fines-

(2) Raw material consumption

The activity includes mining & processing of Iron ore.

Name of raw material		Name of Product	Consumption of raw material during the year.
HSD		Lump Iron Ore & Fines.	2586439Liters
Explosive	Slurry explosives		101875kg

Iron Ore (ROM) Production during the year (2023– 2024) - 711300.960 MT

* 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

Pollution discharged to environment/unit of output-NA

(Parameter as specified in the consent issued)

Pollutants! Quantities of pollutants discharge (mass/day)! Concentration of pollutants in discharges

	Quantity of pollutants discharged	Concentrations of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons
(a) Water	NA	NA	NA
(b) Air	NA	Mine (Core Zone) Average PM ₁₀ (µg/m ³)- 59.70 PM _{2.5} (µg/m ³)- 23.02 SO _x (µg/m ³)- 10.61 NO _x (µg/m ³)- 20.75 CO(mg/m ³)- 0.30	All parameters are within Standards.

PART-D

HAZARDOUS WASTE

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

Hazardous Waste	Total Quantity (Kg.)	
	During the previous financial year (2022-2023)	During the current financial year (2022-2023)
(a) From process	Used Oil – 11000ltrs Used Batteries - 09	Used Oil- 2.1 KL. Used Batteries- 11
(b) From pollution control facilities	Nil	Nil

PART-E

SOLIDS WASTE

	Total Quantity	
	During the previous financial year (2022-23)	During the current financial year(2023-24)
(a) From Mining (OB/Waste/SG)	268934.00m ³	256106.4m ³
(b) From Crushing & Screening	Nil	Nil
n(b) From pollution control facilities (1) Quantity recycled or re-utilised within the unit (2) Sold (3) Disposed	Nil	Nil

PART – F

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

There is no toxic/hazardous waste present within Iron ore deposit. The generated OB/Waste are Laterite, BHQ, Shale which contain major compounds like FeO, Al₂O₃, SiO₂ and does not have any impact on water and air quality. Generated OB/waste is used for required environmental protection measures like retaining wall at toe of the dump, settling pond and for developing of haul road.

In the financial year (2023-24) 256106.4m of OB/waste generated during mining and waste was used properly in backfilled area. Generated waste during the mining operation is also utilized for road, ramp making, and construction of retaining wall.

Generated used oil from Mining and allied activities from Heavy Earth Moving Machineries supplied to authorized agency.

PART – G

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

All the pollution control measures taken helped in

- Protecting the green belt/forest adjoining mine
- Protecting soil erosion.
- Protecting silt from flowing along with run off water during monsoon season.
- Maintaining the quality of air (by control of dust emission).
- Periodical maintenance of equipments to control noise level.
- Improving the local environment.

Implementation of environmental Protective measures and maintenance of the system have reduced impact of pollution to environment.

Environmental Pollution Control Measures

1. Green Belt Development :

In 2023-24, total 4784 saplings in safety zone and 14426saplings in backfilled area have been planted during this financial year. Species planted at mine are Shisham, Neem, Karange, Bamboo, Mahaneem, Conocarpus and fruit bearing trees. Details of plantation is given below :-

Year	Number of saplings planted at Mine
2016-17	2500
2017-18	4000
2018 -19	2710
2019-20	2820
2020- 21	5100 (in & out of lease area)
2021- 22	8746 (in & out of lease area)
2022 - 23	5050 in Mines
2023- 24	22955

2. Air Quality Management:

- A Continuous Ambient Air Quality Monitoring System with PM10, PM2.5, Sox, NOx and CO analyzer has been installed in Mine.
- AAQ monitoring is being done with NABL accredited Lab in the core and buffer zone of mines at 8 fixed AAQ monitoring stations.
- PUC certified vehicles are allowed in the mines. It is checked on our mines check post.
- 08 no. of water tankers have been deployed, equipped with water sprinkling arrangement to suppress the dust at the mines as well as in the surrounding areas.
- Ore is dispatched with only Tarpaulin covered Trucks.
- Drilling machines are equipped with wet drilling arrangements.
- Green belt/plantation is being done in the periphery of the mining lease area in safety zone to arrest dust.
- Personal Protective Equipments like dust mask, ear plug, Goggles are provided to all employees.
- Inactive Fines stacks have been covered with Tarpaulin.
- Waste dump are covered with Coir mat.

3. Top soil management:

During mining operation whenever we encounter top soil, we scrape and stack separately in earmarked area. Top soil is being used for green belt development. Top soil with binding grass is being spread on dead end slope of dump for generating grass to prevent erosion.

4. Solid Waste management:

The OB/waste are generally Laterite, BHQ, Shale containing mainly FeO, SiO₂, AL₂O₃ which are non toxic /non hazardous. OB/waste produced during mining of iron ore is used for backfilling. At the toe of OB/waste dump retaining wall and garland drain has been developed to prevent erosion. 24455 sqm area of waste dump has been covered with Coir mat to reduce erosion and to stabilize the dump.

5) The other important environmental protection activities:

- Garland drain : 400m developed.
- Retaining Wall : 430m developed within Lease hold area.
- SCP pond : Two Settling Ponds Have been developed
- CAAQMS : Installed in Mine.
- AAQ monitoring with NABL Accredited Lab: is being Monitored from 8 stations of Core and Buffer zone of Vijay II Iron Ore Mines regularly.
- Water quality and level and surface water flow rate monitoring : are being monitored quarterly basis.
- Plantation : Safety zone is being maintained and plantation is done as per approved Mining plan.
- Various awareness programs throughout the year are organized in local villages. World environment day, Vanmohatsav, Wildlife week celebration, Mine Environment and Mineral conservation week celebration. Nukkar Natak, drawing , slogan competition among the local villagers.
- Plantation is being done in and out side of lease area.

PART – H

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

Proposed Investment for environmental protective measure:

Sl. No	Description	Cost (Rs. In Lakhs)
1	Water sprinkling on haul road for dust suppression	90.00
2	Environmental Monitoring (AAQ, Water Quality, Noise level report and flow rate monitoring)	10.00
3	Retaining Wall	20.00
4	Coir mat installation	10.00
5	Green Belt Development, plantation on dump and other area & Maintenance.	10.00
6	De-siltation of settling pond and Garland drain	1.00
7	Awareness program	3.00
8	Forest Fire Protective activities as per Forest Fire Management Plan	7.00
9	Site Specific wildlife conservation plan	25.00
10	Chowsingha conservation plan	12.00
	Total	188.00

PART – I

Any other particulars for improving the quality of the environment.

Expenditure of Environment Management at Vijay II Iron ore Mines (1st April 2023 - 31st March 2024)

Sl. No	Description	Cost (Rs. In Lakhs)
1	Water Sprinkling for dust suppression	101.73
2	Environmental Pollution Monitoring Air Monitoring weekly twice, Water & Noise monitoring in core & buffer zones of Mines , River flow	11.55
3	Plantation and maintenance	49.388
4	Retaining wall development	64.340
5	De- siltation of check Dam out of lease area	3.390
6	Piezometer installation	6.897
7	Fire Line development to control forest fire and to protect planted saplings	5.990
8	Occupational health check up	1.170
9	Payment to Forest department for Chowsingha conservation Plan, Site Specific Wildlife Conservation Plan and Fire Management Plan	35.860
10	AMC cost for CAAQMS	3.810
11	Coir mat supply and installation	27.460
12	Charges for surface water drawl, used for dust suppression	2.490
23	Iron Ore Fines stacks were covered with Tarpaulin to prevent erosion and to prevent generate air born dust.	13.010
	Total	327.085