स्टील अथॉरिटी ऑफ इण्डिया लिमिटेड
STEEL AUTHORITY OF INDIA LIMITED
राउरकेला इस्पात कारखाना
ROURKELA STEEL PLANT
बरसुआ लौह खादान - टेलडिही लौह खादान
BARSUA IRON MINES - TALDHI IRON MINES
P.O. TENSA - 770042
E-mail : gmofficebim@gmail.com

60TH YEAR OF PRODUCTION
सेल SAIL
SINCE 1969

Ref. No. BIM/E&L/2024-25/056 Date: 17.07.2024

To
The Member Secretary,
State Pollution Control Board, Odisha,
A/118, Nilakantha Nagar, Unit-VIII,
Bhubaneswar – 751012

Sub: Environmental Statement for the FY: 2023-24 in respect of Barsua-Taldih-Kalta Iron Mines of M/s SAIL.

Sir,

Please find enclosed herewith the Environmental Statement in Form – V for the FY: 2023-24 in respect of Barsua-Taldih-Kalta Iron Mines of M/s SAIL for your kind perusal.

Thanking You,

Yours faithfully,
For SAIL/Barsua-Taldih-Kalta Iron Mines

Tilak Patnaik
General Manager I/c, BIM, KIM & Taldih

Encl: As Above

Copy to:

1. Deputy Director General of Forests (C),
   Ministry of Environment, Forest and Climate Change,
   Integrated Regional Office, A/3, Chandersekharpur,
   Bhubaneswar – 751023

2. The Regional Officer,
   State Pollution Control Board,
   Near Panposh Hockey Chowk, Rourkela -769004

ENVIRONMENTAL STATEMENT
YEAR: 2023-24

STEEL AUTHORITY OF INDIA LIMITED
BARSUA-TALDIH-KALTA IRON MINES
DISTRICT - SUNDARGARH
ODISHA - 770042

FORM – V

Environmental Statement for the financial year ending 31st March 2024

PART – A

(i)	**Name and address of the owner/occupier of the industry operation or process.**	:	Barsua-Taldih-Kalta Iron Mines P.O- Tensa, Dist.: Sundargarh Pin- 770042, Odisha
	Agent	:	Shri Tilak Patnaik, General Manager I/c, BIM, KIM & Taldih
	Nominated Owner	:	Shri Atanu Bhowmick Director In Charge, Rourkela Steel Plant, SAIL.
(ii)	**Industry category Primary - (STC code) Secondary - (SIC Code)**	:	Open Cast Iron Mine
(iii)	**Production capacity**	:	12.0 MTPA
(iv)	**Year of establishment**	:	1960
(v)	**Date of the last environmental statement submitted**	:	08.07.2023

PART – B

Water and Raw Material Consumption

(1)	**Water consumption**	**m^3/day**
	Process	766.81
	Cooling	245.10 (dust suppression)
	Domestic	4704.47

Name of Products	*Process water consumption per unit of product output*	
	During the previous financial year (2022-23) in m^3/MT	*During the Current financial (2023-24) in m^3/MT*
(1) Washed Iron Ore	0.81	0.89

(2) Raw Material Consumption

Name of raw materials	*Name of products*	*Raw material consumption per unit of product output*	
		During the previous financial year (2022-23)	*During the Current financial (2023-24)*
(1) Diesel (Ltrs)		3588150	5248674
(2) Lubricant			
a) Lubricant oil (Ltrs)		89990	107552
b) Grease (Kg)		9830	16777
(3) Explosive			
a) Ammonium Nitrate in cartridged form (kg)	Iron Ore	0	366300
b) Slurry Explosive (Kg)		573899	396620
c) Detonators (Nos)		2955	54374
d) Detonating Fuse (Mtrs)		130525	105385
(4) Power Consumed (Kwh)		19377181	19330451

The ROM production during 2022-23 is 7.016 million tonnes and during 2023-24 is **7.649** million tonnes.

PART - C
Pollution discharged to environment / unit of output

[Parameter as specified in the consent issued]

Pollutants	*Quality of pollutants Discharged (mass/day)*	*Concentrations of pollutants in discharges (mass/volume)*	*Percentage of variation from prescribed standards with reason.*
a) Water	The Environmental monitoring report is attached in **Annexure - I**		
b) Air			

PART –D
Hazardous Wastes

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

Hazardous Wastes	**Total Quantity(kg)**	
	During the previous Financial Year (2022-23)	**During the current Financial Year (2023-24)**
a) From Process		
• Used / Spent Oil	13.69 KL	21.25 KL
• Waste / Residues containing oil	4.578 T	3.375 T
• Contaminated cotton rags or other cleaning materials.	0.844 T	0.790 T
• Discarded Containers / Barrels / Liners contaminated with Hazardous Wastes / Chemicals	7.584 T	6.757 T

b) From Pollution Control facility • Waste oil from oil & grease separation pit • Sludge from oil & grease separation pit	Nil (Included in process above)

PART – E
Solid Wastes

Wastes	Total Quantity(Tonnes)	
	During the previous Financial Year (2022-23)	During the current Financial Year (2023-24)
(a) From Process (1) Overburden / rejects (2) Tailings	 24,44,930.00 Ton 1,49,757 Ton	 28,41,476.78 Ton 1,96,437 Ton
(b) From Pollution Control facilities	NIL	NIL
(c) (1) Quantity recycled or re-utilized within the unit (2) Sold (3) Disposed	5,19,353.13 Ton 4,59,915.57 Ton 25,94,687.00 Ton	4,30,530 Ton 5,37,714.00 Ton 30,37,913.78 Ton

PART –F

Please Specify the chracterisation (in terms of compositions and quantum) of Hazardous as well as Solid Wastes and indicate disposal practice adopted for both these category of wastes.

Hazardous Waste Handling and Disposal:

1	Used / Spent Oil	Storage in containers over impervious floor under well ventilated covered shed followed by sale to authorized recycler through auction.
2	Waste / Residues containing oil	Storage in an impervious pit under covered shed followed by final disposal in Authorised Hazardous Waste incinerator / CHWTSDF, Jajpur.
3	Contaminated cotton rags or other cleaning materials.	Storage in an impervious pit / containers under covered shed followed by final disposal in Authorised Hazardous Waste incinerator / CHWTSDF, Jajpur.
4	Discarded Containers / Barrels / Liners contaminated with Hazardous Wastes / Chemicals	Storage in an impervious floor under well ventilated covered shed followed by captive re-use / disposal through authorized vendors.

Solid Waste Handling and Disposal:

These contain high proportions of overburden/mineral rejects in the form of gravel/ boulder and tailings. In the overburden, the Fe content is less than 45% however in mineral rejects the same is between 45-57%. The bulk chemical composition tailing is around 57.67% Fe, 6.29% Al2O3, 3.52% SiO2 and 6.93% LOI.

Disposal practice adopted for solid wastes:

i) Tailing generated out of washing and jigging operations are allowed to settle in tailing pond. The tailings thus generated are being sold through auction as per the directive of Ministry of Mines, Govt. of India vide order No. F.No. 16/30/2019-M.VI dated 16th September, 2019.

ii) The Overburden, Mineral reject are being stacked at earmarked sites as per the approved mining plan within the existing broken areas. The mineral rejects are being re-utilized by blending with high grade minerals.

PART – G

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

1. Various mineral conservation techniques are adopted by mine including use of low-grade ore by beneficiation, blending of mineral rejects with high grade ore as per steel plant quality requirements.
2. For conservation of natural resources, high efficiency HEMM are being used with schedule maintenance which keeps the vehicular emission under control and also reduce the fuel consumption.
3. A System for Zero Discharge has been provided at Barsua Iron Mine for recovery and recycling of decanted water from the tailing pond which resulted in reduction of pollution load in the nearby water bodies and reduce the fresh water consumption.
4. Dry fog system has been installed at crushing plant and transfer points which improves the working environment in the plant.
5. Check dam, retaining wall, toe wall, garland drain and settling pit has been constructed for control of surface run-off from the mines which also result in augmentation of ground water.
6. Mechanized Road Sweeping Machine has been provided for reduction in Dust Re-suspension in the mineral carrying roads.
7. Plantation of 10,000 saplings in and around the mines to improve the forest cover.

PART – H

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

The following additional investment proposals for environmental protection, abatement of pollution, prevention of pollution are under consideration for the mine:

1. Construction of Check dam, garland drain, toe walls/ retention wall and settling pit at appropriate places around the mines.
2. De-silting of existing check dams, settling pits.

3. Construction of rain water harvesting system for recharge of ground water.
4. Procurement of Mist Cannon for fugitive dust suppression.
5. Engagement of Protection watchers for protection of forest area in and around the Mining lease.
6. Installation of IoT based flow meter for real-time monitoring of water drawl for industrial purpose.
7. Avenue Plantation along the Road Side.

PART – I
Any other particulars for improving the quality of environment.

1. Celebration of World Environment Day, Environment week, Environment month, water conservation month, etc to create awareness among employees and villagers.
2. Display of Boards at various locations carrying environmental slogans and environmental parameters.
3. Celebration for Mass awareness by slogans, working models & Cultural Program by employees & school children.

T Pathak
17/07/2024

Date: 17.07.2024

General Manager I/c
Barsua-Taldih-Kalta Iron Mines