



स्टील अथोरिटी ऑफ इंडिया लिमिटेड
STEEL AUTHORITY OF INDIA LIMITED
रॉ मटेरियल्स डिवीजन
RAW MATERIAL DIVISION
बोलानी ओर्स माइन्स
BOLANI ORES MINES

Letter No. : BOM/ENV/STMT/HD-1709B

Date : 17/09/2020

To

The Member Secretary,
State Pollution Control Board,
Paribesh Bhawan, A/118, Nilkantha Nagar, Unit – VIII,
Bhubaneswar – 751 012, Odisha

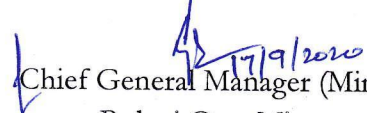
Sub: Submission of Environment Statement of 6.90 sq. miles ML of Bolani Ores Mines for the year 2019-20

Dear Sir,

Please find enclosed herewith the Annual Environment Statement of 6.90 sq. miles ML of Bolani Ores Mines for the period of Apr'19 to Mar'20 in Form-V as per the prescribed format of SPCB, Odisha. The report also contains the updated status of environmental monitoring reports for air and water pertaining to the above period.

Thanking you,

Yours Faithfully,


Chief General Manager (Mines)
Bolani Ores Mines

Encls. : As Above

मुख्य महाप्रबंधक (खान)/ Chief General Manager (Mines)
सेल-आर.एम.डी-बोलानी-अयस्क खदान
SAIL-RMD-Bolani Ores Mines
बोलानी-758 037, क्योझर, ओडिशा
Bolani-758 037, Keonjhar, Odisha

Copy to:

(1) Regional Officer, State Pollution Control Board, Keonjhar

स्टील अथोरिटी ऑफ इंडिया लिमिटेड, रॉ मटेरियल्स डिवीजन, बोलानी ओर्स माइन्स, पोस्ट- बोलानी- 758 037, जिला- क्योझर, आडिशा
Steel Authority of India Ltd, Raw Materials Division, Bolani Ores Mines, Po.- Bolani - 758 037, Dist.- Keonjhar, Odisha
दूरभाष / Telephone : 06767-260211, फैक्स / Fax : 06767-260172, ई-मेल : E-mail : rmdbom@gmail.com, Website : www.sail.co.in

Regd. Office : Ispat Bhawan, Lodi Road, New Delhi- 110003, Phone : 01124367481-86, Fax : 01124367015

हर किसी की जिन्दगी से जुड़ा हुआ है सेल

There's a little bit of SAIL in everybody's life.



ENVIRONMENTAL STATEMENT

Year : 2019-20

6.90 Sq. Miles ML

BOLANI ORES MINES



STEEL AUTHORITY OF INDIA LIMITED

RAW MATERIALS DIVISION

BOLANI ORES MINES (BOM)

KHEONJHAR (DIST.)

ODISHA – 758037

September, 2020

FORM – V

Environmental Statement for the financial year ending 31st March 2020

PART – A

- (i) **Name and address of the owner/occupier of the industry operation or process.** : 6.90 sq. miles ML of Bolani Ores Mines
P.O- Bolani,
Dist. : Keonjhar
Pin- 758037, Odisha
- Occupier** : Shri A K Mishra
Chief General Manager(Mines), BOM
- Agent** : Shri P C Naik,
Executive Director (RP&E), RMD
- Nominated Owner** : Shri Harinand Rai,
Director (Tech.) with Addl. Charge of
Director (RM&L)
- (ii) **Industry category Primary - (STC code) Secondary - (SIC Code)** : Open Cast Manganese & Iron Ore Mine
- (iii) **Production capacity** : Manganese Mining not commenced in this ML. Ancillary activities of adjoining ML viz. 10 MTPA loading Plant and Railway Siding, 600 TPH C&S Plant, Tailing Dam, Stockpiles and fines dumps & Residential Colony existing in this ML
- (iv) **Year of establishment** : 1962
- (v) **Date of the last environmental statement submitted** : 18.04.2019

PART – B

Water and Raw Material Consumption

(1) Water consumption m³/day

Process

Cooling

No water utilized as Mining operations have not commenced yet

Domestic

The details of domestic consumption included in the Env. Statement of adjoining 5.10 sq. mile ML

<i>Name of Products</i>	<i>Process water consumption per unit of product output</i>	
	<i>During the previous financial year (2018-19)</i>	<i>During the Current financial (2019-20)</i>
(1) Washed Iron Ore	Nil	Nil

(2) Raw Material Consumption

<i>Name of raw materials</i>	<i>Name of products</i>	<i>Process water consumption per unit of product output</i>	
		<i>During the previous financial year (2018-19)</i>	<i>During the Current financial (2019-20)</i>
Diesel	-	-	-
Explosives	-	-	-
Electricity	-	-	-

This is an opencast mine with Manganese & iron ore deposits. As such, the mining operations within the ML area have not started yet.

PART - C

Pollution discharged to environment / unit of output

a) Water Environment

<i>Pollutants</i>	<i>Quality of pollutants generated (mass/volume)</i>	<i>Concentrations of pollutants in discharges</i>	<i>Percentage of variation from prescribed standards with reason.</i> <u><i>Standard</i></u>
1. Process Effluent: The Ore Beneficiation Plant within the adjoining 5.10 sq. miles ML of Bolani Ores Mines was not operational during 2019-20. Hence there was no discharge to the tailing pond existing in this ML. Accumulation of rain water from the upper hill areas has taken place in the tailing pond in this ML. Though there is no direct discharge from the Tailing Pond, seepage from dam body is accumulated in Eastern side in a small trough. The quality of the same is monitored. The annual average quality of tailing dam seepage is follows:			
(i) pH	-	6.88 at 25 ^o C	5.5 – 9.0
(ii) TSS	-	8.8 mg/l	100 mg/l
(iii) Oil & Grease	-	ND	10 mg/l
(iv) BOD	-	2.4 mg/l	30 mg/l
(v) COD	-	9.5 mg/l	250 mg/l
(vi) Iron (Fe)	-	0.26 mg/l	3 mg/l
2. Domestic Effluents: The domestic effluent generated from the township within the ML area is directed to Soak pits via intermediate septic tanks. The proposal for installation of STP is in tendering process.			
3. Workshop Effluents: No vehicle maintenance workshops are present within the ML area.			

b) Air Environment

As such, the mining operations within the ML area have not started yet. The annual average ambient air quality in and around the mines for the year 2019-20 is given below:

Unit: microgram/m³

	<i>Pollutants</i>	<i>Quality of pollutants generated (mass/volume)</i>	<i>Concentrations of pollutants in discharges (µg/m³)</i>	<i>Percentage of variation from prescribed standards with reason.</i> <u>Standard</u>
Core Zone	(1) Near Karo Bridge			
	i) PM _{2.5}	-	45.74	60
	ii) PM ₁₀	-	103.95	100
	(2) Mount Club Guest House			
	i) PM _{2.5}	-	22.33	60
	ii) PM ₁₀	-	42.49	100
Buffer Zone	(3) CISF camp			
	i) PM _{2.5}	-	23.78	60
	ii) PM ₁₀	-	58.20	100
	(4) Campus Office			
	i) PM _{2.5}	-	11.24	60
	ii) PM ₁₀	-	51.37	100
	iii) SO ₂	-	8.78	80
	iv) NO _x	-	14.45	80

PART –D

Hazardous Wastes

Hazardous Wastes	Total Quantity(kg)	
	During the previous Financial Year (2018-19)	During the current Financial Year (2019-20)
a) From Process	Nil*	Nil*
b) From Pollution Control facilities	Nil*	Nil*

* No Hazardous waste generated as Mining operations have not commenced yet

PART – E
Solid Wastes

Wastes	Total Quantity(Tonnes)	
	During the current Financial Year (2018-19)	During the current Financial Year (2019-20)
(a) From Process		
(1) Overburden / rejects	NIL	NIL
(2) Ore washing slimes		
(b) From Pollution Control facilities	NIL	NIL
(c) (1) Quantity recycled or re- utilized within the unit		
(2) Sold	NIL	NIL
(3) Disposal		

PART –F

No Hazardous waste is generated as the mining process has not yet commenced and there is no vehicle maintenance workshop in this ML.

PART – G

Impact of pollution control measures on conservation of natural resources and consequently on the cost of production.

Mining operations have not yet started.

PART-H

Environmental Protection Measures undertaken for abatement of pollution.

Bolani Ores Mines is an ongoing mining project which has been working for production and despatch of Iron Ore since 1960. The total mining complex spreads over composite area 12 sq. miles, which was once under a single lease, constitutes two adjoining Mining leases granted by the state Government in favour of Bolani Ores Ltd. viz. 5.1 Sq. Mile ML (executed on 11.04.1960) for extraction of Iron Ore & 6.9 Sq. Mile ML (executed on 13.11.1962) for extraction of Manganese ore along with the infrastructural facilities required for ancillary mining activities required for despatch of iron ore produced from Bolani 5.1 Sq. Miles ML to steel plants. The entire mining operation involving both the mining leases is fully mechanized with heavy earth moving equipment, Ore processing and beneficiation plant, Railway siding and other machineries and infrastructural facilities.

In order to manage and monitor the environment Bolani Ores Mines have a setup of Environment Cell which looks after the compliance needs of both the ML areas combinedly. The cost of environmental management for both the ML areas is accounted in the overall cost of Bolani Ores Mines. Accordingly the following environmental protection measures have been undertaken:

SL.	ISSUES	POLLUTION ABATEMENT MEASURES
i.	Top soil preservation & utilization	Mining operations have not yet started.
ii.	Reclamation of Mined out Land	Mining operations have not yet started.
iii.	OB/Fines Dump rehabilitation	No active OB dumps within the ML area as Mining operations have not yet started
iv.	Management of Run off from Dump areas	No active OB dumps within the ML area as Mining operations have not yet started
v.	Afforestation activities	2280 nos. of saplings have been planted over 1 ha of Degraded forest Lands in 2019-20.
vi.	Air quality Management	i. Work order for installation of Dry Fog Dust Suppression system covering the entire loading plant including the stockpiles, has been issued with a financial outlay of Rs.1.38 crores. ii. 01 no. of 09 KL mobile sprinkler is used to control fugitive emissions near Loading Plant iii. High Pressure Fixed sprinklers installed at Feed hopper of 600 TPH plant.

		iv. Fixed water sprinklers are installed near 600TPH stock Yard, along the 600TPH plant and Panposh haul road
vii.	Water Quality Management	The domestic effluent generated from the township within the ML area is directed to Soak pits via intermediate septic tanks.
viii.	Hazardous Waste management	No Hazardous Waste Generated
ix.	Noise	(i) Plantation has been done around Loading plant and 600TPH plant to act as Noise Barriers (ii) Audiometric tests of all the employees conducted as a part of Personal Medical Examination (PME) indicates no abnormality.
x.	Ground Vibration	No blasting as Mining operations have not yet started.
xi.	Forest Fire Prevention	05 nos. of workers have been engaged for Forest fire prevention by fire line creation and maintenance during the months of Mar'20-June'20 at a cost of Rs.3.18 lakhs.
xii.	Environmental Monitoring	Fugitive Dust and Water Quality monitoring at Bolani Ores Mines are outsourced to M/s Mitra S K Pvt. Ltd., a NABL accredited laboratory, in conformance with the stipulations in EC and CTO. The monitoring activity is common to both 5.10 sq. miles ML and 6.90 sq. miles ML of BOM. 04(four) nos. of CAAQMS stations (02 in Core Zone & 02 in Buffer Zone) were installed at a cost of Rs.1.75 (approx.) crores as per the directive of MS, SPCB and stipulation in CTO grant order.
xiii.	Scientific Studies	A Biological Study to identify and preserve orchids within both the leases of BOM has been conducted and the report has been submitted to MoEF&CC vide no. BOM/ENV/HD-1707A Dt.17.07.2019 for technical approval of the said report.
xiv.	Wild Life conservation	Necessary biological surveys were conducted by expert committees and Wild Life Experts and based on the same, Site Specific Wildlife Conservation Plan has been prepared and approved by the state Forest and Wildlife Department vide order no 10680/1WL-FC-Mrl-SSP-

		<p>228/2018 Dt. 22.11.2018 with a total financial outlay of Rs.1088.431 lakhs. An amount of Rs.772.999 lakhs has already been deposited in CAMPA account of Forest Dept. for interventions in Project impact area.</p> <p>The Study revealed no Wildlife corridors within the Mining Lease area.</p>
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PART – I

Additional environment protection and abatement of pollution measures undertaken in 2019-20:

The activity of environmental management for this ML area is included in the overall activities of Bolani Ores Mines. The following additional environmental awareness and general housekeeping measures etc. have been undertaken as a part of protection measures.:

1. Creating awareness amongst employees and public regarding protection of environment by observing Vana Mahotsav week, Earth Day, Environment day, Environment month and Environment week.
2. Display of Boards carrying environmental slogans. LED display boards for displaying environment monitoring data & environment care.
3. Celebration for Mass awareness by slogans, working models & Cultural Programmes by employees & school children in Mines Environment & Mineral Conservation week under the aegis of IBM.
4. Free distribution of over 75,000 saplings developed in Nursery of BOM, to local dwellers till date.
5. Bolani Ores Mines has also implemented Environment Management System (EMS) as per ISO 14001:2015 standard, Quality Management System (QMS) as per ISO 9001:2015 standard and Occupational Health and Safety Management System (OH&S) as per ISO 45001:2018 standard certified by BSI.
6. Environmental Management Cell and Sustainable Development Unit constituted that operate directly under the unit head, i.e., Chief General Manager, BOM.
7. An Expenditure of Rs.152.71 lakhs has been made for various Environmental and allied activities within both the leases in 2019-20.

Date : 16.09.2020

Chief General Manager (Mines)

Bolani Ores Mines

मुख्य निदेशक (खान) / Chief General Manager (Mines)
 सैल आर.एम.डी बोलाणी खदान
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