



स्टील अथॉरिटी ऑफ इंडिया लिमिटेड  
STEEL AUTHORITY OF INDIA LIMITED  
रॉ मटेरियल्स डिवीजन  
RAW MATERIALS DIVISION  
किरीबुरु लौह अयस्क खदान  
KIRIBURU IRON ORE MINE

Ref. No.: KIOM/E&L/20-21/

Date: 09.05.2020

To,  
The Member Secretary  
Jharkhand State Pollution Control Board  
Main Office, HEC Complex  
T.A. Bhawan, Dhurwa  
Ranchi 834004  
Jharkhand

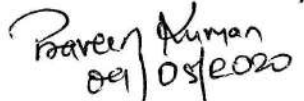
**THROUGH: THE REGIONAL OFFICER, JHARKHAND-831013**

**SUBJECT: SUBMISSION OF ENVIRONMENT STATEMENT FOR THE YEAR ENDING 31ST MAR 2020**

Respected Sir,

Enclosed please find here with Environment Statement in respect of Kiriburu Iron Ore Mine, M/s SAIL for the year ending on 31<sup>st</sup> mar 2020 for your kind information please.

Thanking you

Your's sincerely  
  
(Praveen Kumar)  
AGM (Mining)/E&L

Copy to:

The Regional Officer  
Jharkhand State Pollution Control Board  
MB/15, New Housing Colony  
Adityapur, Jamshedpur  
Jharkhand-831013

किरीबुरु लौह अयस्क खदान, पत्रालय/थाना-किरीबुरु, जिला-पश्चिम सिंहभूम, राज्य-झारखण्ड, पिन 833222 फेक्स:0657-245251  
Kiriburu Iron Ore Mine, P.O./P.S. : Kiriburu, Dist : West Singhbhum, State : Jharkhand, Pin No. : 833222, Fax : 06596-245251

हर किसी की जिन्दगी से जुड़ा हुआ है सेल

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



**ENVIRONMENTAL STATEMENT**  
**Year: 2019-2020**  
**KIRIBURU IRONORE MINES**



**STEEL AUTHORITY OF INDIA LIMITED**  
**RAW MATERIALS DIVISION**  
**Kiriburu Iron Ore Mine**  
**WEST SINGHBHUM (Dist.)**  
**JHARKHAND – 833 222**

*Praveen Kumar*

प्रवीण कुमार / Praveen Kumar  
ज्येष्ठ प्रबंधक (खनन)  
Senior Manager (Mining)  
सेल-राम एन डी, किरिबुरु लोह अयस्क खान  
SAIL-RMD, Kiriburu Iron Ore Mines

## FORM – V

**Environmental Statement for the financial year ending 31<sup>st</sup> March 2020**

### **PART – A**

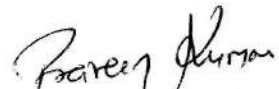
- (i) **Name and address of the owner/occupier of the industry operation or process.** : Kiriburu Iron Ore Mine  
P.O- Kiriburu,  
Dist. : Singhbhum (West)  
Pin- 833222, Jharkhand
- Agent** : Shri D K Barman,  
Chief General Manager (Mines)
- Nominated Owner** : Shri Vivek Gupta  
Director (RM&L)
- (ii) **Industry category Primary - (STC code) Secondary - (SIC Code)** : Open Cast Iron Ore Mine
- (iii) **Production capacity** : 7.5 million tonnes per annum of ROM
- (iv) **Year of establishment** : 1964
- (v) **Date of the last environmental statement submitted** : 04.05.2019

### **PART – B**

#### **Water and Raw Material Consumption**

<b>(1) Water consumption</b>	<b>m<sup>3</sup>/day</b>
Process	0
Cooling	1398.65(including dust suppression)
Domestic	1827.05

<b>Name of Products</b>	<b>Process water consumption per unit of product output</b>	
	<b>During the previous financial year (2018-19)</b>	<b>During the Current financial (2019-20)</b>
(1) Washed Iron Ore	0.00 m <sup>3</sup> /Te. Of ROM	0.00 m <sup>3</sup> /Te. of ROM (only Dry Circuit Operation)

  
प्रवीण कुमार / Praveen Kumar  
अधीन प्रबंधक (खनन)  
Senior Manager (mining)  
सिंहभूम एन सी, सिंग्गर्ह रीट एरिया, कोयला  
SAIL-RMD, Kiriburu Iron Ore mine

## (2) Raw Material Consumption

Name of raw materials	Name of products	Process water consumption per unit of product output	
		During the previous financial year (2018-19)	During the Current financial (2019-20)
-	-	-	-

This is an opencast mine producing iron ore, as such, no raw material from outside is required for processing of iron ore. Run-of-Mine (ROM) from the mine is processed to produce sized ore products. The ROM production during 2018-19 is 3.88 million tones and during 2019-20 is 3.92 million tonnes.

## 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. <b>Process Effluent:</b> The effluent generated from ore washing process is being treated in thickeners. The clear water from the thickeners is being recycled back and the under flow slurry is being discharged to the Tailings Pond. Though there is direct discharge from the Tailing Pond, seepage from dam body is being discharged. The same is being monitored. The annual average quality of tailing dam seepage is follows:			
(i) pH	-	5.7 to 6.1	All parameters are within permissible limit
(ii) TSS	-	58 to 62	
(iii) Oil & Grease	-	N/D	
2. <b>Domestic Effluents :</b>			
(i) pH			
(ii) TSS			
(iii) BOD			
(iv) COD			
(v) Oil & Grease			

**b) Air Environment**

This is an opencast mine and the air emissions are fugitive in nature mainly containing dust particles. The fugitive emissions are being controlled through various dust prevention and control measures. Hence, the quantity of air pollutants discharged in Kg/day cannot be ascertained. The annual average ambient air quality in and around the mines for the year 2019-20 is given below:

**Unit: microgram/m<sup>3</sup>**

<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) Location –Mining Field			
i) SPM	-	87 to 95	All parameters are within permissible limit
ii) RPM	-	42 to 49	
iii)SO <sub>2</sub>	-	15 to 18	
iv)NO <sub>2</sub>		14 to 16	
(2)Location –Hopper			
i) SPM	-	90 to 96	All parameters are within permissible limit
ii) RPM	-	43 to 50	
iii)SO <sub>2</sub>	-	14 to 16	
iv)NO <sub>2</sub>		14 to 16	

## PART –D

### Hazardous Wastes

<b>Hazardous Wastes</b>	<b>Total Quantity(kg)</b>	
	<b>During the previous Financial Year (2018-19)</b>	<b>During the current Financial Year (2019-20)</b>
a) From Process i. Used Oil ii. Batteries	52,500Ltrs 63Nos	40250Ltrs 11Nos
b) From Pollution Control facilities	NIL	NIL

## PART – E

### Solid Wastes

Wastes	Total Quantity (Tonnes)	
	During the previous Financial Year (2018-19)	During the current Financial Year (2019-20)
(a) From Process		
(1) Overburden / rejects	13.51 Lakhs Tonnes	12.99 Lakhs Tonnes
(2) Ore washing slimes	NIL	NIL
(b) From Pollution Control facilities	NIL	NIL
(c) (1) Quantity recycled or re-utilized within the unit	-	-
(2) Sold		
(3) Disposal		

## PART – F

The characteristics (in terms of concentration and quantum) of Hazardous as well as Solid Wastes and their disposal practices adopted for these categories of wastes are as follows:

- (1) **Solid Wastes** : Solid waste generator as overburden / rejects and slime from this iron ore mine are inert. The average chemical composition of these solid wastes and their mode of disposal are as follows:

Waste	Overburden / Reject	Slime
<b>Quality</b>		Slime from ore washing plant is separately stored in a Tailing Dam.
a) Fe (%)	<45%	
b) Al <sub>2</sub> O <sub>3</sub> (%)	10% to 15%	
c) SiO <sub>2</sub> (%)	10% to 12%	
Mode of disposal	Backfilled in the pre-approved areas	

### (2) Hazardous Wastes

S. No.	Description of Hazardous Wastes (nature)	Mode of disposal
1.0	Used Oil	Disposal is through by State pollution Control Board authorized reusers and recyclers only.
2.0	Used Batteries	

## PART – G

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

The major pollution prevention / control measures adopted at the mine, which resulted in resource conservation as well as cost of production are as follows:

1. Natural habitat of wild life undisturbed.
2. Mineral conservation by way of blending rich and low-grade ore.
3. Preservation of Flora and Fauna.
4. Non contamination of Natural water streams.
5. Strengthens & cleaning of check Dam on Sankoja Nallah.
6. Strengthen and repairing & maintaining & construction of bunds in Tailing dam.
7. Suspended particulate matter, Respirable particulate matter, SO<sub>2</sub>, Nox and CO is below the prescribed norms.
8. Free Indoor and outdoor medical treatment of peripheral villages in Kiriburu General Hospital.
9. The following villages are adopted under peripheral development :-  
Six (06) Villages in Jharkhand: Karampada, Noagaon, Bhangaon, Kumdi, Baraiburu and Tatiba. Two(02) Villages in Orissa : Horomotto and Lasarda.

### **In addition to the above, the following peripheral work has been done in KIOM.**

1. Expences on Eklaya Archery Academy -51.26 Lakhs
2. Organizing Medical Camps (Eye, RCH, HIV –AIDS, weekly med. Check up camp in villages), Exp. for CSR patients in Indoor & OPD. -24.02Lakhs
3. Providing Bus services for School children of peripheral villages [ Karampada, Thalkobad] -21.69 Lakhs
4. Expenditure against to the adopted village's child in KIOM, Saranda hostel - 10.90 Lakhs
5. Payment of Para-teachers engaged in 08 Schools (03 Schools in Jharkhand) & (05 Schools in Odisha)- 15.54Lakhs
6. Procurement of machine for woman empowerment, mashrrom cultivation & support services for improvement of production. -2.22 Lakhs
7. Skill Development/ Vocational training-ITI training of youths periphery villages -10.54 Lakhs
8. Maintenance of CSR installation and infrastructure in neighbouring village– 1.42 Lakhs.
9. Organizing football/ women-hockey competition on local basis and maintenance of fields in villages and providing sports items & kits once in a year- 1.55 Lakhs
- 10.Meeting with public representatives, Base line survey of villages etc -0.37 Lakhs



11. Distribution of face mask, hand sanitizer, soap, Ration kit to the needy people in the neighbouring village due to COVID -7.01 Lakh

## **PART – H**

### **Additional investment proposal for environmental protection including abatement of pollution.**

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

#### **The following Environment project done in the year 2019-20**

1. Upkeeping of garden of different area for greenery and Maintenance of existing plantation, Plantation of trees 1,000 nos saplings in Backfilled area – Rs 29.37 Lakhs
2. Support facility for drinking water & supply- 6.2 Lakhs
3. Cleaning & Removal of Drain & Sewerage line- Rs 17.60 Lakhs
4. Up-keeping of different areas of Plants and Kiriburu township-Rs17.89 Lakhs
5. Collection & Disposal of domestic garbage-Rs38.97 Lakhs
6. Cleaning of Ghagirathi sump & Drain inside plant -Rs3.72 Lakhs
7. Implementation of Mosquito Control system- Rs7.89 Lakhs
8. Bush cleaning - Rs2.76 Lakhs
9. Dust Solution system inside plant pkg-1D ongoing project- Rs1.7 Lakhs
10. Cleaning of sankoja Dam, Upkeeping of different office inside plant and mines area- 5.58 Lakhs
11. Ensuring Zero discharge from Tailing Dam.

#### **The following are the proposal for Environmental Project, Year 2020-21**

1. Dust Suppression system in Plant is being done by dry fogging system.
2. Plantation of 1,000 saplings at waste dump/ Township area.
3. Collection & Disposal of domestic garbage
4. Cleaning & Removal of Drain & Sewerage line.
5. Upkeeping of garden of different area for greenery and Maintenance of existing plantation,
6. Pilot project of Rainwater harvesting scheme at KIOM office.
7. Desilting of various check dams, Tailing dam

#### **The following are the proposal for CSR Project, Year 2020-21**

1. Adoption of students for free education at SSC from peripheral villages strength 20 nos. – Rs 15.00 Lakhs
2. Providing Bus services for school children from Kiriburu to Karampada – Rs 11.00 Lakhs



3. Providing Bus services for school children from Kiriburu to Tholkobad via Karampada – Rs 14.00 Lakhs
4. Arrangement of Para-teachers [Total 23 Nos.] in Government schools in nearby villages of Jharkhand and Odisha -19.50Lakhs
5. Organizing Medial Camps (Eye, RCH, HIV-AIDS, weekly medical camp) and indoor treatment of CSR patients – Rs 20.00 Lakhs
6. Sponsoring the ITI course to the students – Rs 10.00 Lakhs
7. Sponsoring of local youths for short duration skill development training [10 Nos.] – 2.0 Lakhs
8. Procurement of Machine for women empowerment scheme like KSEC, Mushroom Cultivation etc. – Rs 3.00 Lakhs
9. Operation of Eklavya Archery Academy – Rs 60.00 Lakhs
10. Organizing Women's Hockey Championship. – Rs 4.00 Lakhs
11. Organizing football/hockey /Kabbadi competition on local basis and maintenance of fields in villages and providing sports kits once in a year to sports person. – Rs 2.00 Lakhs
12. Maintenance of CSR installation and infrastructure in peripheral villages – Rs 2 .00 Lakhs
13. Meeting with public representative, base line survey of villages etc. – 0.5 Lakh
14. Distribution of soap, Ration kit to the needy people in the neighbouring village during COVID –Rs. 2.00 Lakh

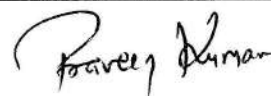
## **PART – I**

### **Any other particular in respect of environment protection and abatement of pollution.**

1. Creating awareness amongst employees and public regarding protection of environment by observing Environment day, Environment month and Environment week, wild life week, swatchta pakhwada in mines and world environment day .
2. Display of Boards carrying Environmental slogans.
3. Celebration of World Environment Day, Environment Week, Environment Month.
4. 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, Swatchta pakhwada.

**KIRIBURU IRON ORE MINES IS AN EMS ISO 14001:2015, ISO- 9001:2015 & ISO- 45001:2018 CERTIFIED MINE.**

**Date:09/05/2020**



**(Praveen Kumar)  
AGM(Mining)/E&L  
SAIL, RMD, KIOM**