

**INDIAN BUREAU OF MINES  
MINES CONTROL AND CONSERVATION OF MINERAL DIVISION**

**MCDR INSPECTION REPORT**

**Bhubaneshwar regional office**

**Mine file No :** ORI/IRON/KJR/MCDR-60/BBS

**Mine code :** 30ORI08013

- (i) Name of the Inspecting : **25** ) **SHRI IBRAHIM SARIF**  
Officer and ID No.
- (ii) Designation : Assistant Controller Mine
- (iii) Accompanying mine :  
Official with  
Designation
- (iv) Date of Inspection : 17/02/2016
- (v) Prev.inspection date : 09/06/2015

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **BOLANI**
- (b) Category : A Mechanised
- (c) Type of Working : Opencast
- (d) Postal address  
State : ORISSA  
District : KEONJHAR  
Village : BOLANI  
Taluka : BARBIL  
Post office : BOLANI  
Pin Code : 758037  
FAX No. : 06767-30246  
E-mail : NIL  
Phone : 06767-60207
- (e) Police Station :
- (f) First opening date : 12/04/1960
2. Address for : BOLANI ORES MINES, AT/PO: BOLANI  
correspondance KEONJHAR DISTRICT  
ORISSA
3. (a) Lease Number : ORI0102  
(b) Lease area : 1321.45  
(c) Period of lease : 20  
(d) Date of Expiry : 09/04/2010
4. Mineral worked : IRON ORE Main

## 5. Name and Address of the

Lessee : STEEL AUTHORITY OF INDIA LIMITED  
 PURNAPANI LIMESTONE MINE  
 SUNDERGARH DISTRICT -770  
 ORISSA SUNDARGARH ORISSA  
 Phone:0661-728121  
 FAX :

Owner : SAIL  
 SUNDARGARH ORISSA  
 Phone:  
 FAX :

## Mining Engineer

Name : N.P. PRAMANIK, Full Time  
 Qualification : DEGREE IN MINING  
 Appointment/ :  
 Termination date

## Geologist

Name : PETER DANG, Full Time  
 Qualification : MSC GEOLOGY  
 Appointment/ :  
 Termination date

## Manager

Name : R. CHATERJEE  
 Qualification : FIRST CLASS MINES MANAGER CERTIFICATE HC  
 Appointment/ : 30/06/1978  
 Termination date

6. Date of approval of Mining : 03/08/2015  
 Plan/Scheme of Mining

**PART - II : TECHNICAL DETAILS/COMMENTS****1. Details about Average employment :**

**Maximum number of persons employed on any day during the year**

<b>Employment category</b>	<b>No.of employment</b>	<b>Av. yearly working days</b>
----------------------------	-------------------------	--------------------------------

2. Community Development Plan (in and around the mines) : Proposed action and expenditure towards socio-economic development.

Action during the year	Expenditure in Rs. Lakhs for				Remarks
	previous year		current year		
	Proposed	Incurred	Proposed	Incurred	
<b>General</b>					
Housing	0.00	0.00	0.00	13.40	
Water supply	13.31	4.80		39.46	
Sanitation	10.16	15.00	0.00	35.35	
Health	39.60	61.92	0.00	172.45	
<b>Sub total</b>	<b>63.07</b>	<b>81.72</b>	<b>0.00</b>	<b>260.66</b>	
<b>Infrastructure</b>					
Public transport	24.03		24.00	66.40	
<b>Sub total</b>	<b>24.03</b>		<b>81.72</b>	<b>66.40</b>	
<b>Training</b>	<b>95.19</b>		<b>240.00</b>	<b>352.00</b>	
<b>Employment</b>	<b>11.59</b>		<b>4.20</b>	<b>16.15</b>	
<b>Sports activities</b>	<b>6.96</b>		<b>8.00</b>	<b>17.90</b>	
<b>Recreation</b>	<b>15.79</b>		<b>22.58</b>	<b>65.44</b>	
<b>Total</b>	<b>216.63</b>	<b>0.00</b>	<b>380.50</b>	<b>778.55</b>	

3. Status of compliance of MCDR, 1988, including therewith the rectification of the outstanding violation of rules.

There was no outstanding violations. During current inspection violation of rule 13(1), 16(1), 32(2), 45(5)(b)(i), 45(7) of MCDR 1988 was observed and pointed out to the part on the spot.

4. A note on the justification in case of suspension of mining operation under rule 13(2) or prohibition of deployment of any person under rule 56 of MCDR, 1988, if recommended.

Not recommended at present.

## 5. Scientific Mining

Items	Proposal	Actual work done	Remarks
-------	----------	------------------	---------

**A. Exploration (Rule 13)**

a.Type of prospecting : 10 no of bore holes over  
and exploration i.e. 1000 meterage.  
pitting, drilling

**B. Working (Rule 13)**

b.Bench : F Area : 10m x F Area : 10m x 30m  
size(LxWxH)length can 30m G area : 10m x 30m  
be defined as G area : 10m x 30m D area : 15m x 7m  
regular/irregular D area: 6m x 12m Panposh area (N): 10m x  
Panposh area (N) : 6m  
6m x 12m

d.Total area covered : 360.1 Ha  
under excavation/pits

**C. Waste disposal (Rule 13)**

a.Location of dumps : Dump No. Co-ordinates  
Co-ordinates  
X  
Y  
"D" Area S-1280 to S-  
1540 W-1200 to W-1540  
"F" Area S-2500 to S-  
1850 W-3000 to W-2300  
"G" Area S-1200 to S-  
1400 W-2420 to W-2720  
Panposh  
Area S-150 to S-310 E-  
200 to E-280  
Panposh  
Area 2 N-100 to N-180  
W-75 to W-220  
Panposh  
Area3 N-40 to S-35 W-  
200 to W-325

b.Method of dumping : Advancing  
whether Advancing  
advancing/retreat

e.Yearly generation : 2014-15 : 2530938 Tons  
of waste quantity. 2015-16 : 2220359 Tonnes

c.Total area covered : 14 Ha  
under waste dump.

**D. Production**

b.Year wise : 2014-15 : 4342889 T  
production of last 2015-16 (up to Jan 2016)  
five year. :4434811 T

**D. Reserve**

a. Reserve position as :	(In Million Tonnes)
per latest MP/MS and	Proved Reserves (111 )
at the time of	: 150.257 mt
inspection.	Probable Reserves (122)
	: 20 m
	Other resources (221,
	333) : 101.37mt

**RESERVE POSITION AS ON 01/04/2015**

<b>IRON ORE</b>		
Category	Quantity in Tonnes	Grade
Proved	150.25	+45% Fe
Probable	20	+45% Fe
Possible	101.37	+45% Fe
Total	271.62	

**PRODUCTION FOR THE PREVIOUS YEAR 2014 - 2015**

Mineral	Production	Unit
IRON ORE	4342889	TON

**6. Conservation of Mineral - both quantitative and qualitative****Beneficiation (Rule 20 and 26)**

- Efforts for improving low grade and sub grade mineral. : Blended with high grade Ore. Beneficiation of ore is being carried out to to utilise low grade ore
- Efforts for improving percentage of recovery of ore. : By wet beneficiation for low grade ore & dry process for high grade ore to reduce tailing loss.

**Mineral Rule 15**

Number of benches in ore and waste. : No. of OB benches No. of benches in ore

F Area	4	9	
G area	3		7
D area	5		
	14		
Panposh area (N)	2	7	

**Sub/grd mineral/fines (Rule16)**

Qty of yearly generation and total qty available during inspection with grade : Cumulative as on 01.04.2015 : 150000 T  
Quantity consumed : 20000 T  
Quantity stacked : 130000  
Grade -57% Fe

Separate stacking from waste : Yes

Location of stacking. : Old dumps considered as waste now subgrade ore as per revised threshold value of Iron ore. details are below.

Dump No.	Dump type	Co-ordinates
	X	Y
"D" Area	OB/ SGM	S-1280 to S-1540 W-1200 to W-1540
"F" Area	OB/ SGM	S-2500 to S-1850 W-3000 to W-2300
"G" Area	OB/ SGM	S-1200 to S-1400 W-2420 to W-2720

**Exploration data as on 31/03/ 2015**

No. of Boreholes	No. of Pits	No. of Trenches
358	170	

**OVERBURDEN HANDLED DURING PREVIOUS YEAR 2014 - 2015**

Overburden/waste removed (in m3) : 2530938

**Utilisation of Sub Grade Mineral and Mineral Rejects**

Generated	Utilised	Stacked	(In Ton.)

## 7. Environment Management - both quantitative and qualitativ

### A. Land environment

- a. Landscape. : The lease area spread over hill ranges.
- b. Aesthetic environment : The total lease area consists of both forest (1225.78Ha) and non-forest land (93.35 Ha). The major part lease area falls in reserve forest, however mining operations have been confined to already broken up area only.
- c. Soil and land use pattern : Top soil encountered during mining is stocked separately and has been utilized for plantation over backfilled area. Out of total area of 1225.78 ha, the broken up area is 487.01 ha.  
Land use pattern :  
Area under excavation: 360.1Ha.  
Reclaimed / Rehabilitated: 09 Ha  
Used For waste disposal : 14 Ha  
Occupied by plant, building, township: 70.11 Ha. Other purpose : 01.00 Ha.  
Work done under progressive mine closure plan: 2.50 Ha.  
Total: 456.71 Ha.
- d. Agriculture : There is no agricultural land exist in the area
- e. Forest(flora and fauna) : The lease farms part of reserve forest, The common trees like Sal, Kusum,, Kadumba and palaes are found. Common fauna are Monkey, cat, Mangrooves, bat are found.
- f. Vegetation : Vegetation is quite good in the lease area.
- h. Public building, places and monuments (protected, historical), placec of worship and places of tourist : No Public building, places and monuments (protected monument and historical monument), places of worship and places of tourist interest is exist in buffer zone.

### B Water environment.

- a. Surface water : The nearest surface water source is Karo Nala which flows on the southern side of the mine.
- b. Ground water : Source of ground water in the area is hand pump & tube wells.

### C. Air environment

- a. Noise : Ambient Noise level is monitored quarterly and the analysis data shows that it is within permissible limit.
- b. Air : The air pollution is controlled by using mobile sprinkler on haul roads and using wet drilling techniques at mine faces.

### D. Socio economic environment

- b. Recommending health and : Health check up camps is being organized annually and

- safety. hospital is maintained by the company, free medicines are provided to the employees as well as needy peoples of the area.
- c. Human settlement : Density of population is low. Adjacent villages are mostly employed in mines.
- d. Recreational facility. : Recreation centre is established by the company for the workers, various sport events and cultural programmes is being organised by the company.

**7.1 Comments on the steps taken by the lessee towards maintaining environment and monitoring of environmental parameters to ensure the qualitative improvement in the environment and ecology.**

<u>Water Management</u>					
Season	Station type	Station name	Parameter	Value	
				Actual	Excess

<u>Air data for excess parameters</u>					
Season	Station name	Type of area	Parameter	Value	
				Actual	Excess

<u>PLANTATION DURING THE PREVIOUS YEAR</u>			<u>2014 - 2015</u>			Area in Hect.
Within lease area			Outside lease area			
Area	Trees planted	Survival rate	Area	Trees planted	Survival rate	
4	10000	60	6	15000	60	

<u>TOP SOIL MANAGEMENT</u>	
Quantity as on 31/03/2015	



8. Scrutiny of annual returns on cost of production, reserve, production, pit mouth value, stock, land use pattern and fixed assets.

For the Year 2014-15

1. Cost of production: Rs. 588.90
2. Reserve : (In Million Tonnes)
  - Proved Reserves (111 ) : 150.257 mt
  - Probable Reserves (122) : 20 m
  - Other resources (221, 333) : 101.37mt
3. Production : 4342889 MT
4. Pit's Mouth Value: Rs. 588.90
- 5 Stock: Iron ore - 4943 MT
- 6 Land use pattern :
  - Area under excavation: 360.1Ha.
  - Reclaimed / Rehabilitated: 09 Ha
  - Used For waste disposal : 14 Ha
  - Occupied by plant, building, township: 70.11 Ha. Other purpose : 01.00 Ha.
  - Work done under progressive mine closure plan: 2.50 Ha.
  - Total: 456.71 Ha.

**PART - III : PERFORMANCE OF MINE OWNER**

(In case of lease expiring within 2 years - as per guidelines)

**PART - IV : PROPOSALS FOR FURTHER ACTION FOR :**

Indian Bureau of Mines (any issue related to CGPB, SGPB, Assistance, Consultancy, Annual Programme and studies, etc.)

None

State Government (Illegal mining, mining dispute, infrastructure, Mineral based industry, Mineral policy, etc.)

None

The Central Government (Infrastructure, Development, Mineral policy and Legislation, Mineral based industry, etc.)

None

Date :

(SHRI IBRAHIM SARIF)

Indian Bureau of Mines