

**INDIAN BUREAU OF MINES  
MINERALS DEVELOPEMMENT AND REGULATION DIVISION**

**MCDR INSPECTION REPORT**

**Bhubaneshwar regional office**

**Mine file No :** ORI/IRON/SNG/MCDR-6/BBS

**Mine code :** 30ORI13034

- (i) Name of the Inspecting : **RAM** ) **RAMKISHAN R**  
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri P.K. Sahoo, Mines Manager  
Official with  
Designation
- (iv) Date of Inspection : 23/12/2020
- (v) Prev.inspection date : 13/08/2019

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **RAIKELA**
- (b) **Registration NO.** : **IBM/5796/2011**
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : SUNDARGARH
- Village : RAIKELA
- Taluka : BONAI
- Post office : DENGULA
- Pin Code :
- FAX No. : 06767-275795
- E-mail : sahuo\_ore@yahoo.co.in
- Phone : 06767-275520
- (f) Police Station : Koira
- (g) First opening date : 23/08/1993
- (h) Weekly day of rest : SUN
2. Address for : VILL. RAIKELA, PO DENGULA  
correspondance POLICE STATION. KOIRA DIST. SUNDERGARH  
ORISSA, PIN-770048 PHONE. 30896
3. (a) Lease Number : ORI0143
- (b) Lease area : 67.59
- (c) Period of lease : 50
- (d) Date of Expiry : 01/07/2041
4. Mineral worked : IRON ORE Main

## 5. Name and Address of the

Lessee : G.R MOHANTY  
 AT/PO BARBIL KEONJHAR  
 ORISSA  
 Phone:06767-30520, 30795, 30895  
 FAX :

Owner : SRINIVAS SAHOO  
 AT/PO. STATION ROAD BARBIL  
 KEONJHAR ORISSA  
 Phone: 06767-75896  
 FAX : 06767-75896

## Geologist

Name : PRADEEPT MOHAPATRA,Full Time  
 Qualification : MSC (GEOLOGY)  
 Appointment/ : 09/04/2019  
 Termination date

## Manager

Name : P.K.SAHOO  
 Qualification : AMIE MINING  
 Appointment/ : 03/09/2002  
 Termination date

6. Date of approval of Mining	:	Mining Scheme rule 12 MCDR1988	11/10/1999
Plan/Scheme of Mining		Modif.approved Mining Scheme	08/05/2003
		Mining Scheme rule 12 MCDR1988	17/02/2005
		Mining Scheme rule 12 MCDR1988	22/03/2010
		Modif.of approved Mining Plan	15/06/2016
		Modif.approved Mining Scheme	20/09/2019
		MP review under 17(1) MCR 2016	18/11/2020

## PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No such specific proposal.	however 30 nos of boreholes were propsoed during the year 2019-20.	
1b	Exploration over lease area for geological axis 1 or 2	30 nos of boreholes were proposed during the year 2019-20.	17 nos of boreholes were drilled.	violation observed and commuicated to lessee letter dated 12.01.2021.
1c	Exploration Agencies and Expenditure in lakh rupees during the year		M/s Natural Resources exploration and mining ltd., Rs. 52,77,578.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	30 nos of boreholes were proposed during the year 2019-20.	17 nos of boreholes were drilled.	
1e	Balance reserve as on 01/04/20	As per the approved document dated 08.11.2020, the iron ore reserves are 63.631 mil.t and resources are 14.636 mil.t.	the updated reserves and resources as on 01.08.2020 are 63.631 mil.t and resources are 14.636 mil.t.	
1f	General remarks of inspecting officers on geology, exploration etc		The main rock types such as Laterite, BHQ & Hematite found in Raikela Iron Ore Mines of M/s Geetarani Mohanty are of iron ore series of Singhbhum- Bonai synclinorium.	

## Development :

Sl.No.	Item	Propasals	Actual work	Remarks
--------	------	-----------	-------------	---------

2a	Location of development w.r.t. lease area	two quarries proposed for development during the year 2019-20 called as top quarry and middle quarry.	development is carried out in two quarries.	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	no top soil generation is envisaged, separate benches in Ob and mineral are proposed.	separate benches in OB and mineral are maintained.	
2c	Stripping ratio or ore to OB ratio	1:0.025 t/cu.m.	1:0.015 t/cu.m.	
2d	Quantity of topsoil generation in m3	Not applicable	Nil	
2e	Quantity of overburden generation in m3	51096 cu.m.	9190 cu.m.	due to less production of ROM as the mines was started operation after revocation of suspension order in the month of septemebr 2019.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		development is carried out by opencast mining method as propsoed.	

---

### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2 nos	2 nos	
3b	Quantity of ROM mineral production proposed	1982165 t during the year 2019-20.	575700 t.	

3c	Recovery of sailable/usable mineral from ROM production	1418430 t of salable ore and 563735 t of mineral reject	506050 t of salable ore and 69650 t of mineral reject
3d	Quantity of mineral reject generation	563735 t	69650 t
3e	Grade of mineral rejects generation and threshold value declared.	+45% -55% Fe	+45% -55% Fe
3f	Quantity of sub grade mineral generation.	Not applicable	Nil
3g	Grade of sub grade mineral generation	Not applicable	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised	Mechanised
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not applicable	Nil
3j	Provision of drilling and blasting in mineral benches	drilling and blasting is proposed.	carried out
3k	Provision of mining machineries in mineral benches	shovel and dumper combination is proposed for excavation and hauling.	shovel and dumper combination is deployed for excavation and hauling.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	10 m.	maintained

3m	Total area covered under excavation/pits	32.554 ha at the end of plan period i.e. year 2020-21	30.193 ha
3n	Ore to OB ratio for the pit/mine during the year.	1:0.025 t/cu.m.	1:0.015 t/cu.m.
3o	Total area put in use under different heads at the end of year	Total area put to use at the end of plan period i.e. year 2020-21 is 54.232 ha	45.574 ha
3p	Production of ROM mineral during the last five year period as applicable	2015-16: 2.09 mil.t. 2016-17: 0.864 mil.t. 2017-18: 0.864 mil.t. 2018-19: 0.864 mil.t. 2019-20: 1.98 mil.t.	2015-16: Nil 2016-17: Nil 2017-18: Nil 2018-19: Nil 2019-20: 0.575 mil.t.
3q	General remarks of inspecting officers on method of mining etc.		production is carried out from two quarries by opencast mining method as proposed.

---

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	no topsoil generation is envisaged. seperate dumping of waste and mineral rejects are proposed.	seperate dumping of waste and mineral rejects are carried out.	
4b	Location of topsoil, OB and mineral reject dumps	dump-1	dump-1	

4c	Number of dumps within lease area and outside of lease area	within lease area 1no.	1 no.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Out side UPL	Out side UPL	
4e	Number of active and alive dumps.	1 no.	1 no.	
4f	Number of dead dumps.	Not applicable	Nil	
4g	Number of dumps established.	Not applicable	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there.	proposed.	not carried out.	violation issued to lessee letter dated 12.01.2021
4i	Length of Retaining wall or garland drain all along dumps	300 m retaining wall and 435 m garland drain	not carried out.	violation issued to lessee letter dated 12.01.2021.
4j	Number of settling ponds	1 no	1 no	
4k	Specific comments of inspecting officer on waste dump management		waste dump management is carried out as proposed.	

---

#### Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Area not matured for backfilling.	Not applicable.	
5b	Area under backfilling of mined out area	Not applicable	Nil	

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not applicable Nil	
5d	Total area fully reclaimed and rehabilitated	Not applicable Nil	
5e	General remarks of inspecting officers on backfilling and reclamation etc.		Area not matured for backfilling.

---

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	PMCP report to submitted submitted before 1 st July.		
6b	Area available for rehabilitation (ha) .	Not applicable Nil		
6c	afforestation done (ha).	0.31 ha as dump plantation	0.31 ha	
6d	No. of saplings planted during the year	496 nos	513 nos	
6e	Cumulative no .of plants		513 nos	
6f	Any other method of rehabilitation	Not applicable Nil		
6g	Cost incurred on watch and care during the year		Rs 30000	



6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	Not applicable Nil		
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not applicable Nil		
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	Not applicable Nil		
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not applicable Nil		
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not applicable Nil		
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Not applicable Nil		
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	0.5 ha	Not carried out.	violation issued to lessee letter dated 12.01.2021

6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	plantation	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	periodical environmental monitoring of core zone and buffer zone are proposed.	carried out
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		PMCP measures were carried out.

---

#### Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	grade-wise sorting of mineral is proposed.	grade-wise sorting of mineral is carried out.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical	
7c	Different grade of mineral sorted out at mines.	+45-55% Fe and +55% Fe	+45-55% Fe and +55% Fe	
7d	Any beneficiation process at mines .	Not applicable	Nil	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		grade-wise sorting of mineral is carried out.	

---

## Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Not applicable	Nil	
8b	Concurrent use or storage of topsoil	Not applicable	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	seperate dumps for waste and mineral rejects are proposed.	seperate dumps for waste and mineral rejects are maintained.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not applicable	Nil	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	513 nos	513 nos as dump plantation	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)		513 nos	
8g	Survival rate		65%	
8h	Water sprinkling on roads to control airborne dust		water sprinkling on haul roads for dust supression is proposed.	carried out

8i General remarks of inspecting officer on aesthetic beauty in and around mines area

aesthetic beauty in and around the mines area is maintained.

---

Compliance of Rule 45:

---

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly and annual returns are to be submitted as per rule 45 of MCDR, 2017	submitted.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining Engineer 2, Diploma Mining Engineer 2, Geologist 2.	found to be in order.	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current (O/C) Workings: 30.193 ha, Used for waste disposal: 2 ha, etc.,	found to be in order.	
9d	Scrutiny of Annual return on afforestation	513 nos	513 nos	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	69650 t	69650 t	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM closing stock is Nil	not matching with the processed ore quantities.	violation issued to lessee letter dated 12.01.2021.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Production cost is Rs. 1445.57	Production cost is Rs. 1445.57	

---

9h	Scrutiny of Annual return on fixed assets	Rs. 37372969	Rs. 37372969
9k	Scrutiny of Annual return on mining machineries	BACK HOE 3.300 CUM 1, BACK HOE 0.900 CUM 3, FRONT END LOADER 3.000 CUM 2 BLAST HOST DRILL 100.000 MM 1, DUMPER 30.000 TONNE 6	found to be in order.

---

**Details of violations observed during current inspection and compliance position of violation pointed out**

Violation observed		Show couse position	
Rule NO.	Issued on Compliance on	Rule NO.	Issued on Compliance on

**Date :**

(RAMKISHAN R)

Indian Bureau of Mines