

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON/KJR/MCDR-65/BBS

Mine code : 30ORI08017

- (i) Name of the Inspecting : **RAM**) **RAMKISHAN R**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri A.P.Mohapatra, Mine Manager & Shri S.K.Kar, QP
Official with
Designation
- (iv) Date of Inspection : 21/10/2019
- (v) Prev.inspection date : 04/05/2019

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **GANDHAMARDHAN 'B' BLOCK**
- (b) **Registration NO.** : **4269**
- (c) **Category** : **A Fully Mechanised**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **ORISSA**
- District : **KEONJHAR**
- Village : **SUAKATI**
- Taluka : **KEONJHAR**
- Post office : **SUAKATI**
- Pin Code : **758018**
- FAX No. : **06766-233085**
- E-mail : **info@orissamining.com**
- Phone : **06766-233064**
- (f) **Police Station** : **Suakati**
- (g) **First opening date** : **11/07/1970**
- (h) **Weekly day of rest** : **SUN**
2. **Address for correspondance** : **GANDHAMARDHAN
AT/PO-SUAKATI
DIST-KEONJHAR**
3. (a) **Lease Number** : **ORI0086**
- (b) **Lease area** : **618.58**
- (c) **Period of lease** : **50 yrs / As per ^{minh.} Govt company rules, 2015**
- (d) **Date of Expiry** : **~~20/06/1993~~ 10/7/2040.**
4. **Mineral worked** : **IRON ORE** Main

5. Name and Address of the

Lessee : M/S OMC LTD.
 AT & PO: TIRING PAHAR DIST.
 KEONJHAR, ORISSA KEONJHAR
 ORISSA
 Phone:06766-233064
 FAX :06766-233085

Owner : M/S OMC LTD.
 M/S OMC LTD. OMC HOUSE,
 POST BOX NO. 34
 BHUBANESWAR-751010 KEONJHAR
 ORISSA
 Phone: 06766-233064
 FAX : 06766-233085

Agent : P.K. Sahoo
 At/Po: Suakati PS: Suakati
 Dist: Keonjhar KEONJHAR
 ORISSA
 Phone: 06766-233064
 FAX : 06766-233085

Mining Engineer

Name : Dillip Kumar Choudhury, Full Time
 Qualification : BE(Mining)
 Appointment/ : 16/12/2013
 Termination date

Geologist

Name : SHRI T K KAUDEYANG, Full Time
 Qualification : MSC GEOLOGY
 Appointment/ : 21/04/2018
 Termination date

Manager

Name : Ambika Prasad Mohapatra
 Qualification : Diploma in Mining & 1st class certificat
 Appointment/ : 11/06/2014
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Renewal under rule 22 MCR1960	15/01/2003
		Mining Scheme rule 12 MCDR1988	04/12/2006
		Mining Scheme rule 12 MCDR1988	01/04/2011
		Modif.of approved Mining Plan	27/07/2016
		MP modif under 17(3) MCR 2016	07/06/2019

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No such specific proposal.	During the year 2018-19, 22 nos of boreholes were proposed.	Nil
1b	Exploration over lease area for geological axis 1 or 2	During the year 2018-19, 22 nos of boreholes were proposed.	exploration could not be carried out for which violation observed on previous inspection on 04/05/2019 and lesse has complied the violation by doing the exploration as propsoed.	Nil
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not applicable	Expenditure inccured was Rs 2080500	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	As per the modification of mining plan, dated 07/06/2019, an extent of 596.216 ha is yet to explore.	22 nos of boreholes have been drilled for the year 2018-19.	Nil
1e	Balance reserve as on 01/04/20	As per the modification of mining plan, dated 07/06/2019, iron ore reserves and resources as on 28.02.2019 were 166.08 million tonnes and 24.99 million tonnes respectively.	The position of reserves and resources as on 28.02.2019 were 166.08 million tonnes and 24.99 million tonnes respectively.	

1f	General remarks of inspecting officers on geology, exploration etc	The lease area is centered on a ridged like escarpment, which runs the north-south direction. Insitu iron ore bodies located on the hill top of Gandhamardan Block B are designated as main ore body. Flank ore bodies are confined to the lower levels as compared to the hill top. exploration carried out.	Nil
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Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	Hill top quarry, and Putulpani quarry during the year 2018-19.	mine development is carried out in Hill top quarry, and Putulpani quarry only.	Nil
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No top soil generation. Separate benches in OB and mineral zone are proposed.	Separate benches being maintained in OB and mineral.	Nil
2c	Stripping ratio or ore to OB ratio	1: 0.63 t/cu.m.	1:0.59 t/cu.m.	Nil
2d	Quantity of topsoil generation in m3	Not applicable	Nil	
2e	Quantity of overburden generation in m3	3.65 mil.cu.m.	2.979 mil.cu.m.	variation is due to less development work.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		Mine development is carried out by opencast mining method in two nos of pits. quarries.	Nil

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2 nos of pits during the year 2018-19.	2 nos of pits	Nil
3b	Quantity of ROM mineral production proposed	5.78 mil.t. during the year 2018-19.	5.05 mil.t.	Nil
3c	Recovery of sailable/usable mineral from ROM production	5.06 mil.t. of saleable ore and mineral rejects of 0.72 mil.t.	5.05 mil.t. of saleable ore	Nil
3d	Quantity of mineral reject generation	0.72 mil.t.	Nil	the generated mineral rejects were blended with ore to make it saleable ore.
3e	Grade of mineral rejects generation and threshold value declared.	+45%-55% Fe	+45%-55% Fe	Nil
3f	Quantity of sub grade mineral generation.	addressed in mineral rejects.	Not applicable	
3g	Grade of sub grade mineral generation	Not applicable	Nil	
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised and Manual	Mechanised and Manual	Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not applicable	Nil	Nil
3j	Provision of drilling and blasting in mineral benches	drilling and blasting is proposed.	drilling and blasting is carried out.	Nil
3k	Provision of mining machineries in mineral benches	shovel and dumper combination is proposed for excavation.	shovel and dumper combination is deployed for excavation.	Nil

31	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	10m in Overburden & Ore	10m in Overburden & Ore	
3m	Total area covered under excavation/pits	As per approved document dated 07.06.2019, an extent of area 208.947 ha at the end of plan period i.e. 2019-2020.	188.582ha	Nil
3n	Ore to OB ratio for the pit/mine during the year.	1: 0.63 t/cu.m.	1:0.59 t/cu.m.	Nil
3o	Total area put in use under different heads at the end of year	Area of excavation=208.94 Ha Waste dump=51.11 Ha Mineral storage=52.73 Ha Infrastructure =23.34 Ha Roads=44.06 Ha Mineral Separation plant= 118.75 ha Sub-grade storage=28.07 Ha till the end of plan period i.e. 2019-20.	Excavated area (mining)= 188.582Ha Waste dump= 10.46 Ha Mineral Storage= 15.63 Ha Infrastructure = 14.73 ha Roads = 15.91 ha Mineral Separation plant= 3.37 ha Sub-grade storage=6.64 Ha till 28.02.2019 as indicated in the approved mining plan, dated 07.06.2019.	Nil
3p	Production of ROM mineral during the last five year period as applicable	2014-15: 2.76 mil.t. 2015-16: 3.14 mil.t. 2016-17: 3.15 mil.t. 2017-18: 4.73 mil.t. 2018-19: 5.78 mil.t.	2014-15: 0.35 mil.t. 2015-16: 1.3 mil.t. 2016-17: 3 mil.t. 2017-18: 2.52 mil.t. 2018-19: 5.05 mil.t.	Lower production was due to not having Stage-II clearance form MoEF.

3q	General remarks of inspecting officers on method of mining etc.	production is carried out by opencast mining method with two nos of pits during the year 2018-19.	Nil
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Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping of OB and stacks for subgrade/ Mineral Rejects proposed.	Separate dump of OB and separate stacks for subgrade/ mineral reject maintained.	Nil
4b	Location of topsoil, OB and mineral reject dumps	No proposal of top soil generation. The waste dumping was proposed at Waste Dump(WD1).	Dumping of the waste was observed in Waste Dump(WD1).	Nil
4c	Number of dumps within lease area and outside of lease area	one waste dump is proposed during the year 2018-19 with in lease area.	one waste dump is maintained with in lease area.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	outside UPL	outside UPL	
4e	Number of active and alive dumps.	1 no of waste dump is active	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.	already provided.	provided.	

4i	Length of Retaining wall or garland drain all along dumps	no proposal as already been provided.	Not applicable	
4j	Number of settling ponds	already provided.	Not applicable.	Nil
4k	Specific comments of inspecting officer on waste dump management		The dumping of waste is done with retaining wall and garland drain facilities along the toe of waste dump	

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.	9.33 ha proposed for backfilling in hill top quarry	Not carried out as mineral not exhausted.	
5b	Area under backfilling of mined out area	9.33 ha	not carried out as mineral not exhausted fully.	
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	9.33 ha proposed for backfilling	Not carried out as mineral not exhasuted.	
5e	General remarks of inspecting officers on backfilling and reclamation etc.		backfilling of hill top quarry not carried out as mineral not exhausted.	Nil

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
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6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	Yearly report submitted on PMCP measures to be submitted.		
6b	Area available for rehabilitation (ha) .	Not applicable	Nil	
6c	afforestation done (ha).	500 nos during the year 2018-19 gap plantation	2000 nos	
6d	No. of saplings planted during the year	500 nos gap plantation	2000 nos	
6e	Cumulative no .of plants	9450 nos	9450 nos	
6f	Any other method of rehabilitation	Not applicable	Nil	
6g	Cost incurred on watch and care during the year	Not applicable		
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	9.33 ha	Nil	area not exhausted for reclamation
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	9.33 ha	Nil	Area not exhausted of mineral for backfilling
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)	Not applicable Nil		
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	Not applicable Nil		
6p	Compliance of environmental monitoring (core zone and buffer zone)	Periodical monitoring of environmental parameters are proposed.	carried out.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		PMCP measures were carried out by plammation only.	

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	grade-wise sorting of mineral proposed.	grade-wise sorting of mineral is carried out.	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical and manual	Mechanical and Manual	Nil
7c	Different grade of mineral sorted out at mines.	+45%-55% Fe and +55% Fe	+45%-55% Fe and +55% Fe	Nil
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.	Nil

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)	Separate dump of OB & mineral reject stack is envisaged.	Separate dump of OB has been maintained. The sub-grade/mineral reject stacked separately.	

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	proposed	not carried out as mineral not exhausted.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	proposed.	not carried out as mineral not exhausted fully.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	500 nos	2000 nos
8g	Survival rate		65%
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on haul roads by water tanker for haul road dust suppression.	carried out
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		Aesthetic beauty in and around mines has been maintained.

Compliance of Rule 45:

Sl.No.	Item	Proposals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	monthly and annual returns are to be submitted.	submitted.	Nil

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining Engineer 1, Diploma Mining Engineer 38 , Geologist 2	Graduate Mining Engineer 1, Diploma Mining Engineer 38 , Geologist 2
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current (O/C) Workings 188.582 ha, Used for waste disposal 11.000 Ha, Occupied by plant, buildings, residential, welfare buildings & roads 25.265 ha	Covered under current (O/C) Workings 188.582 ha, Used for waste disposal 11.000 Ha, Occupied by plant, buildings, residential, welfare buildings & roads 25.265 ha
9d	Scrutiny of Annual return on afforestation	2000 nos	2000 nos
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM closing stock is Nil	found to be in order.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Production cost Rs. 936.83	Production cost Rs. 936.83
9h	Scrutiny of Annual return on fixed assets	Rs. 79749675	Rs.79749675

9k Scrutiny of BACK HOE 4.240 found to be in order.
Annual return on CUM 2, BACK
mining HOE 4.000 CUM
machineries 2, BACK HOE
 3.100 CUM 8,
 BACK HOE 2.450
 CUM 5
 BACK HOE 1.800
 CUM 2, BACK
 HOE 0.950 CUM
 2, TIPPER
 19.700 CUM 84
 etc.,

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

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

no violation.

R. Rishi

(RAMKISHAN R)

Date : 3/12/19

Indian Bureau of Mines