

**INDIAN BUREAU OF MINES
MINERALS DEVELOPEMMENT 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 J.R.Jena, Mines Manager
Official with
Designation
- (iv) Date of Inspection : 19/12/2020
- (v) Prev.inspection date : 21/10/2019

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 : GANDHAMARDHAN
correspondance AT/PO-SUAKATI
DIST-KEONJHAR
3. (a) Lease Number : ORI0086
- (b) Lease area : 618.58
- (c) Period of lease : 30
- (d) Date of Expiry : 20/06/1993
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	:	Renewal under rule 22 MCR1960	15/01/2003
Plan/Scheme of Mining	:	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
	:	MP review under 17(1) MCR 2016	20/11/2019

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 2019-20, 35 nos of boreholes were proposed.	
1b	Exploration over lease area for geological axis 1 or 2	35 nos of boreholes were proposed during the year 2019-20.	30 nos of boreholes were drilled during the year. remaining 5 boreholes were drilled during the year 2020-21.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year		Not available.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	35 nos of boreholes were proposed during the year 2019-20.	exploration as proposed was carried out.	
1e	Balance reserve as on 01/04/20	As per the Review of mining plan, dated 20/11/2019, iron ore reserves and resources were 163.61 million tonnes and 24.98 million tonnes respectively.	due to addition/depletion over the period of time the reserves and resources as on 01.04.2020 were 159.63 million tonnes and 24.98 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.	

 Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Hill top quarry, and Putulpani quarry during the year 2019-20.	mine development is carried out in Hill top quarry, and Putulpani quarry only.	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in OB and mineral zone are proposed.	Separate benches being maintained in OB and mineral.	
2c	Stripping ratio or ore to OB ratio	1:0.69 t/cu.m.	1:0.3 t/cu.m.	
2d	Quantity of topsoil generation in m3	15500 t	Nil	
2e	Quantity of overburden generation in m3	5260000 cu.m. during the year 2019-20.	2050763 cu.m.	due to irregular nature of ore deposit.
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.	

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2 nos of pits during the year 2019-20.	2nos of pits	
3b	Quantity of ROM mineral production proposed	7.617 mil.t. during the year 2019-20.	6.827 mil.t.	
3c	Recovery of sailable/usable mineral from ROM production	6.862 mil.t. salable ore and 0.755 mil.t. of mineral reject	6.811 mil.t. salable ore and 16000 t of mineral reject	

3d	Quantity of mineral reject generation	0.755 mil.t.	16000 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	Nil	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.	drilling and blasting is carried out.
3k	Provision of mining machineries in mineral benches	shovel and dumper combination is proposed for excavation.	shovel and dumper combination is deployed for excavation.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	10m height	maintained.
3m	Total area covered under excavation/pits	208.94 ha	155.068 ha
3n	Ore to OB ratio for the pit/mine during the year.	1:0.69 t/cu.m.	1:0.3 t/cu.m.

3o	Total area put in use under different heads at the end of year	total area put to use under differner heads at the end of pland period i.e. 2019-20 is 527 ha	231.43 ha
3p	Production of ROM mineral during the last five year period as applicable	2015-16: 3.14 mil.t. 2016-17: 3.15 mil.t. 2017-18: 4.73 mil.t. 2018-19: 5.78 mil.t. 2019-20: 7.617 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. 2019-20: 6.827 mil.t.
3q	General remarks of inspecting officers on method of mining etc.		production is carried out by opencast mining method with two nos of pits.

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.	
4b	Location of topsoil, OB and mineral reject dumps	The waste dumping was proposed at Waste Dump(WD1).	Dumping of the waste was observed in Waste Dump(WD1).	
4c	Number of dumps within lease area and outside of lease area	one waste dump is proposed during the year 2019-20 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 one waste dump one waste dump and alive dumps.			
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.	provided.	
4i	Length of Retaining wall or garland drain all along dumps	4650 m length garland drain and 5023 mtrs retaining wall around waste dump and sub grade dump	carried out as proposed.	subgrade dump-2 is not formed so protective measures not carried out.
4j	Number of settling ponds	6 nos.	6 nos	
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.	Area not matured for backfilling as mineral is not exhausted fully.	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 as mineral is not exhausted fully.

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).	Yearly report on PMCP maesures to be submitted.	not submitted.	viobation observed and communicated to lessee letter dated. 12.01.2021
6b	Area available for rehabilitation (ha) .	Not propsoed.	Nil	
6c	afforestation done (ha).	3.55 ha as a part of dump management	1 ha	violation observed and communicated to lessee letter dated 12.01.2021
6d	No. of saplings planted during the year	5600 nos	1000 nos	
6e	Cumulative no .of plants		19685 nos	
6f	Any other method of rehabilitation	Not propsoed	Nil	
6g	Cost incurred on watch and care during the year		Not available.	
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	Nil	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	Nil	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Nil	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Nil	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Nil	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Nil	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 partially by planattion

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 proposed.	grade-wise sorting of mineral is carried out.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical and manual	Mechanical and manual	
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
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8a	Separate removal and utilization of topsoil (Rule 32)	proposed.	top soil not generated.
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	Not applicable	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not applicable	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	5600 nos	1000 nos
8g	Survival rate		80%
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.
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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.	submitted.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining Engineer 1, Diploma Mining Engineer 28 , Geologist 1	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 61.527 ha, Used for waste disposal 11.000 ha	Not found to be in order.	violation issued to lessee letter dated 12.01.2021
9d	Scrutiny of Annual return on afforestation	1000 nos	1000 nos	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	16000 t	16000 t	
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 is Rs.1164.72	Production cost is Rs.1164.72	

9h	Scrutiny of Annual return on fixed assets	Fixed assests Rs.209627491	Fixed assests Rs.209627491
9k	Scrutiny of Annual return on mining machineries	BACK HOE 4.260 CUM 2, BACK HOE 4.000 CUM 2, BACK HOE 2.450 CUM 12, BACK HOE 1.800 CUM 8, WHEEL LOADER 4.500 CUM 1, WHEEL LOADER 4.400 CUM 4, WHEEL LOADER 3.500 CUM 4, WHEEL LOADER 2.500 CUM 2,WHEEL LOADER 2.400 CUM 2 etc.,	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