

**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, Mine Manager
Official with
Designation
- (iv) Date of Inspection : 03/07/2021
- (v) Prev.inspection date : 19/12/2020

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.	Nil	
1b	Exploration over lease area for geological axis 1 or 2	33 nos of boreholes were proposed during the year 2020-21 to brought area under G1/G2 level.	48 nos boreholes were drilled.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year		Rs.6536984	
1d	Balance area to be explored to bring Geological axis in 1 or 2	33 nos of boreholes were prosoed.	48 nos o f boreholes were drilled.	
1e	Balance reserve as on 01/04/20	As per the Modification of review of mining plan, dated 02/08/2021, iron ore reserves and resources were 187.99 million tonnes and 30.76 million tonnes respectively.	due to addition/depletion over the period of time the reserves and resources as on 01.04.2021 were 187.99 million tonnes and 30.76 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 2020-21	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. top soil is proposed to be scrapped.	Separate benches being maintained in OB and mineral. top soil is scrapped.	
2c	Stripping ratio or ore to OB ratio	1:0.22 t/cu.m.	1:0.37 t/cu.m.	
2d	Quantity of topsoil generation in m3	80000 cu.m.	15178 cu.m.	
2e	Quantity of overburden generation in m3	1570000 cu.m. for the year 2020-21.	2370124 cu.m.	due to variation in ore deposit formation.
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	2	
3b	Quantity of ROM mineral production proposed	7020000 t during the year 2020-21.	6424900 t	
3c	Recovery of sailable/usable mineral from ROM production	5750000 t	5974900 t	
3d	Quantity of mineral reject generation	1270000 t	450000 t	blended with saleable ore to make it saleable ore.
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.	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	10 m height	maintained.
3m	Total area covered under excavation/pits	260.5876 ha at the end of plan period i.e. year 2024-25.	155.0688 ha
3n	Ore to OB ratio for the pit/mine during the year.	1:0.22 t/cu.m.	1:0.37 t/cu.m.
3o	Total area put in use under different heads at the end of year	630.4508 ha at the end of plan period i.e. year 2024-25.	265.9478 ha
3p	Production of ROM mineral during the last five year period as applicable	2016-17: 3.15 mil.t. 2017-18: 4.73 mil.t. 2018-19: 5.78 mil.t. 2019-20: 7.617 mil.t. 2020-21: 7.02 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. 2020-21: 6.42 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
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4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping of OB and stacks for subgrade/ Mineral Rejects proposed. top soil is proposed to be temporarily stacked and utilised for plantation.	Separate dump of OB and separate stacks for subgrade/ mineral reject maintained. top soil is stacked and utilised for plantation.	
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 within lease area	one within 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	1	
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	3620 m of retaining wall and 3620 of garland drain	1125 m of retaining wall and Nil of garland drain	the proposed protective measures are for the extended portion of waste dump as the dump was not extended so the actual work done is adequate.
4j	Number of settling ponds	3	1	

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
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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	Nil	
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	Area not matured for backfilling	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 maasures to be submitted.	submitted.	

6b	Area available for rehabilitation (ha) .	Not applicable Nil	
6c	afforestation done (ha).	3 ha	3 ha
6d	No. of saplings planted during the year	3000 nos	16685 nos
6e	Cumulative no .of plants		33535 nos
6f	Any other method of rehabilitation	Not applicable Nil	
6g	Cost incurred on watch and care during the year		Rs. 148 lakhs
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x 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)	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 as stipulated in Environment Clearance granted by MoEF & CC and Consent to Operate granted by SPCB.	Periodical Monitoring as stipulated in Environment Clearance granted by MoEF & CC and Consent to Operate granted by SPCB is 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
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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.
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	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	proposed.	carried out	
8b	Concurrent use or storage of topsoil	proposed for plantation purpose.	carried out.	
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)	dump stabilisation is proposed.	carried out
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	3000 nos	16685 nos
8g	Survival rate		98%
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	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 155.069 ha, Used for waste disposal 31.811 ha etc.,	found to be in order.
9d	Scrutiny of Annual return on afforestation	16685 nos	found to be in order
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	prodcuton ocst is Rs. 1632.38	prodcuton ocst is Rs. 1632.38
9h	Scrutiny of Annual return on fixed assets	Rs. 1589617395	Rs. 1589617395

9k Scrutiny of BACK HOE 4.260 found to be in order.
Annual return on CUM 2, BACK
mining HOE 4.000 CUM
machineries 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.,

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

Date :

(RAMKISHAN R)

Indian Bureau of Mines