

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON/KJR/MCDR-64/BBS

Mine code : 30ORI08016

- (i) Name of the Inspecting : **RAM**) **RAMKISHAN R**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri A.P.Rout Mines Manager
Official with
Designation
- (iv) Date of Inspection : 20/12/2020
- (v) Prev.inspection date : 21/12/2019

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **GANDHAMARDHAN 'A' BLOCK**
- (b) **Registration NO.** : **IBM/4269/2011**
- (c) Category : A Manual
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : KEONJHAR
- Village : SUAKATI
- Taluka : KEONJHAR
- Post office : SUAKATI
- Pin Code :
- FAX No. : 06766233085
- E-mail : mangermininggiom@gmail.com
- Phone : 06766233160
- (f) Police Station : KEONJHAR
- (g) First opening date : 21/06/1963
- (h) Weekly day of rest : SUN
2. Address for : GANDHAMARDAN IRON MINE, M/S OMC LTD
correspondance P.O.SUAKATI, DIST:KEONJHAR
ORISSA-758018
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 Orissa Mining Corporation Ltd
 P.O.NO.34 OMC House
 Bhubaneswar KHURDA ORISSA
 Phone:
 FAX :

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

6. Date of approval of Mining	:	Mining Scheme rule 12 MCDR1988	01/08/2006
Plan/Scheme of Mining		Mining Scheme rule 12 MCDR1988	20/05/2011
		Mining Scheme rule 12 MCDR1988	20/05/2011
		Renewal under rule 24 MCR1960	14/08/2013
		MP review under 17(1) MCR 2016	23/01/2018

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No such specific proposal.	255 nos of boreholes were proposed during the year 2019-20.	
1b	Exploration over lease area for geological axis 1 or 2	255 nos of boreholes were proposed during the year 2019-20.	no exploration work carried out.	violation observed and communicated to lessee letter dated 12.01.2021
1c	Exploration Agencies and Expenditure in lakh rupees during the year		Not applicable	
1d	Balance area to be explored to bring Geological axis in 1 or 2	255 nos of boreholes were proposed during the year 2019-20.	no exploration work carried out.	
1e	Balance reserve as on 01/04/20	As per the Modification of Review of mining plan, dated 12/01/2021, iron ore reserves and resources were 24.04 million tonnes and 0.43 million tonnes respectively.	the iron ore reserves as on 01.07.2020 are 24.04 mil.t. and resources are 0.43 mil.t	

1f	General remarks of inspecting officers on geology, exploration etc	The in-situ iron orebody of Gandhamardan-A lease is the continuation of the main orebody of the adjoining Gandhamardan-B lease of the same lessee (OMC), which is revealed from the orebody exposed throughout the benches cut across the strike direction the at the common boundary and considering the structural attitude of the formation - it strike and plunge and also from the orebody formation encountered in the Boreholes
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	one quarry is proposed for development during the year 2019-20.	one quarry is developed.	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in OB and mineral zone are proposed. no topsoil generaion is envisaged	Separate benches being maintained in OB and mineral.	
2c	Stripping ratio or ore to OB ratio	1:3.69 t/cu.m.	1:0.22 t/cu.m.	deviation is due to less development work & Production and also irregular nature of ore deposit.
2d	Quantity of topsoil generation in m3	Nil	Nil	

2e	Quantity of overburden generation in m3	1290000 cu.m. during the year 2019-20.	40000 cu.m.	deviation is due to less development work & Production and also 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 one quarry.	

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	one pit	one pit	
3b	Quantity of ROM mineral production proposed	0.35 mil.t. during the year 2019-20.	0.179 mil.t.	deviation is due to delay in obtaining statytroy clearances.
3c	Recovery of sailable/usable mineral from ROM production	300000 t of saleable ore and 50000 t of mineral reject.	179000 t of saleable ore and Nil of mineral reject	
3d	Quantity of mineral reject generation	50000 t	Nil	
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 proposed.	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	5 m	maintained
3m	Total area covered under excavation/pits	at the end of plan period i.e. year 2022-23 is 74.348 ha	58.719 ha
3n	Ore to OB ratio for the pit/mine during the year.	1:3.69 t/cu.m.	1:0.22 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. 2022-23 is 128.576 ha	113.647 ha

3p	Production of ROM mineral during the last five year period as applicable	2015-16: 403151 t 2016-17: 350289 t 2017-18: 366943 t 2018-19: 350000 t 2019-20: 350000 t	2015-16: Nil 2016-17: Nil 2017-18: Nil 2018-19: Nil 2019-20: 179000 t	deviation is due to delay in obtaining statytroy clearances.
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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)	no top soil generaion is propsoed. backfilling of OB/waste is propsoed with blending of Mineral Rejects proposed.	backfiling is carried out by OB/waste. mineral rejects are blended with ROM.	
4b	Location of topsoil, OB and mineral reject dumps	backfilling is proposed in the location of BF1.	backfilling at carrued out at BF1 location.	
4c	Number of dumps within lease area and outside of lease area	Nil	Nil	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not applicable	Nil	
4e	Number of active and alive dumps.	Nil	Nil	
4f	Number of dead dumps.	Nil	Nil	
4g	Number of dumps established.	Nil	Nil	
4h	Whether Retaining wall or garland drain all along dumps are there.	Not propsoed.	Nil	

4i	Length of Retaining wall or garland drain all along dumps	Not proposed.	Nil
4j	Number of settling ponds	Not proposed.	Nil
4k	Specific comments of inspecting officer on waste dump management		backfilling is carried out by OB/waste generated.

Solid Waste Management - Backfilling:

Sl.No.	Item	Proposals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Backfilling proposed after full extraction	carried out	
5b	Area under backfilling of mined out area	15.327 Ha for the year 2019-20.	3.638 Ha	Deviation is due to less development and production of waste and also 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	Not applicable	Nil	
5e	General remarks of inspecting officers on backfilling and reclamation etc.		Backfilling is carried out as proposed.	

Progressive Mine Closure 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 measures to be submitted.	Not submitted.	violation observed and communicated to lessee letter dated. 12.01.2021
6b	Area available for rehabilitation (ha) .	Not applicable	Nil	
6c	afforestation done (ha).	Not applicable	Nil	
6d	No. of saplings planted during the year	Not applicable	Nil	
6e	Cumulative no .of plants		1300 nos	
6f	Any other method of rehabilitation	Nil	Nil	
6g	Cost incurred on watch and care during the year	Not applicable	Nil	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	1.29 mil.cu.m.		
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	1.29 mil.cu.m.	40000 cu.m.	Deviation is due to less development and production of waste and also mineral not exhausted fully.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	Not propsoed.	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 proposed. 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.

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.	Mechanised	Mechanised
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)	No top soil generation is envisaged	not applicable	
8b	Concurrent use or storage of topsoil	Not applicable	Nil	

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	OB/waste generated is proposed to be backfilled in the exhaust portion of quarryy and mineral rejects are proposed to be blended with ROM to make it saleable ore	Carried out as proposed
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	OB/waste generated is proposed to be backfilled	carried out.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Backfilling is proposed	Carried out
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Not applicable	Nil
8g	Survival rate	Not applicable	Nil
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on haul roads by water tanker for haul road dust supresion	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	a		
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Diploma Mining Engineer 2 , Geologist 1	Diploma Mining Engineer 2 , Geologist 1	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under current (O/C) Workings 55.058 ha, Used for waste disposal 6.97 ha etc.,	Not found to be in order.	violation issued to lessee letter dated 12.01.2021
9d	Scrutiny of Annual return on afforestation	Nil	Nil	
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. 1373.01	Production cost Rs. 1373.01	

9h	Scrutiny of Annual return on fixed assets	Rs. 5166419	Rs. 5166419
9k	Scrutiny of Annual return on mining machineries	BACK HOE 1.230 CUM 1, BACK HOE 0.950 CUM 1, BACK HOE 0.900 CUM 1, WHEEL LOADER 3.000 CUM 2, TIPPER 16.000 CUM 4 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