

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/CR/JJP/MCDR-6/BBS

Mine code : 11ORI19007

- (i) Name of the Inspecting : **RAM**) **RAMKISHAN R**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri K.Pradhan, Mine Manager
Official with
Designation
- (iv) Date of Inspection : 12/12/2020
- (v) Prev.inspection date : 24/02/2020

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **SOUTH KALIAPANI**
- (b) **Registration NO.** : **IBM/4269/2011**
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : JAJPUR
- Village : KALIAPANI
- Taluka : SUKINDA
- Post office : KALIAPANI
- Pin Code :
- FAX No. : 06767-230367
- E-mail : info@orissamining.com
- Phone : 06726-268722
- (f) Police Station : Kaliapanio
- (g) First opening date : 06/10/1980
- (h) Weekly day of rest : SUN
2. Address for : SOUTH KALIAPANI CHROMITE MINE
correspondance AT/PO: KALIAPANI, DIST: JAJPUR
ORISSA
3. (a) Lease Number : ORI0236
- (b) Lease area : 552.46
- (c) Period of lease :
- (d) Date of Expiry : 31/03/2020
4. Mineral worked : CHROMITE 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 : Sri R. Vineel Krishna
The Odisha Mining
Corporation Ltd. OMC House
Post Box 34 Bhubaneshwar
BHUBNESHWAR ORISSA
Phone: 0674-2393431
FAX : 0674-2391629

Agent : SHRI MANOJ PATI
JAJPUR ORISSA
Phone:
FAX :

Mining Engineer

Name : SHRI N SETHI, Full Time
Qualification : B E MINING
Appointment/ : 12/06/2019
Termination date

Geologist

Name : Sri Kali Charan Rath, Full Time
Qualification : M. Sc> Geology
Appointment/ :
Termination date

Manager

Name : KATHI PRADHAN
Qualification : BE(Mining)
Appointment/ : 14/06/2019
Termination date

6. Date of approval of Mining	:	Fresh under rule 22 MCR1960	21/02/2003
Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	22/03/2007
	:	Mining Scheme rule 12 MCDR1988	22/03/2010
	:	Modif.approved Mining Scheme	22/08/2014
	:	Mining Scheme rule 12 MCDR1988	16/04/2015
	:	MP modif under 17(3) MCR 2016	13/02/2018
	:	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.	15 nos of boreholes were proposed during the year 2019-20.	
1b	Exploration over lease area for geological axis 1 or 2	12 nos of boreholes were proposed during the year 2019-20 for geological axis G1/G2.	15 nos of boreholes were drilled during the year.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year		In house drilling. Rs. 333.88 Lakh	
1d	Balance area to be explored to bring Geological axis in 1 or 2	48 nos of boreholes were proposed during the plan period which was approved on 13/02/2018 for the plan period till the end of 2019-20.	15 nos of boreholes were drilled during the year.	
1e	Balance reserve as on 01/04/20	As per the approved document on 20.11.2019 the chrome ore reserves are 8.51 mil.t. and resources are 5.4 mil.t.	due to addition and depletion over the period of time the updated reserves as on 01.04.2020 are 7.91 mil.t. and resources are 5.4 mil.t.	Nil
1f	General remarks of inspecting officers on geology, exploration etc		Regionally all the chrome band within lease area has been established. exploration has been carried out as proposed during the year 2019-20.	

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	four pits were proposed for mine developement during the year 2019-20.	3 pits were developed durinf the year.	Nil
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	seperate becnhes in OB and mineral are proposed. top soil is scrapped and utilisation is proposed.	seperate becnhes in OB and mineral are maintained. top soil is scrapped and utililised.	
2c	Stripping ratio or ore to OB ratio	1:9.29 t/cu.m.	1:6.63 t/cu.m.	due to variation in geomtery of orebody and also less development and prodcution of mineral.
2d	Quantity of topsoil generation in m3	2.86 lakh cu.m.	36165 cu.m.	
2e	Quantity of overburden generation in m3	12872000 cu.m.	4728030 cu.m.	
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 with three pits.	

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	4 pits during the year 2019-20.	production is carried from three pits.	
3b	Quantity of ROM mineral production proposed	1.38 mil.t. during the year 2019-20.	0.713 mil.t.	
3c	Recovery of sailable/usable mineral from ROM production	768182 t of ore and 617569 t of mineral reject	474278 t of ore and 239248 t of mineral reject.	

3d	Quantity of mineral reject generation	617569 t	239248 t
3e	Grade of mineral rejects generation and threshold value declared.	+10%-40% Cr2O3	+10%-40% Cr2O3
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
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	proposed for new beneficiation plant	carried out
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	maximum bench of 6 m. is proposed.	maintained.
3m	Total area covered under excavation/pits	205.18 ha at the end of plan period i.e. 2019-20.	135.832 Ha

3n	Ore to OB ratio for the pit/mine during the year.	1:9.29 t/cu.m.	1:6.63 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. 2019-20 is 473.17 ha	317.432 ha
3p	Production of ROM mineral during the last five year period as applicable	2016-17 = 1098524 MT 2017-18= 832716 MT 2018-19 = 1391228 MT 2019-20= 1385751 MT	2015-16 =8300015 MT 2016-17 = 1008820 MT 2017-18 =755145 MT 2018-19 = 1050513 MT 2019-20 = 7,13,526 MT
3q	General remarks of inspecting officers on method of mining etc.		production is carried out 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)	seperate dumping of OB and mineral rejects are proposed. top soil generated is being proposed to be utilised.	top soil generated is being utilised and seperate dumps for mineral rejects are mainatined.	
4b	Location of topsoil, OB and mineral reject dumps	OB is dmped in WD1, WD2 and mineral rejects are proposed to be stacked in SGD2	OB is dmped in WD1, WD2 and mineral rejects are stacked in SGD2	
4c	Number of dumps within lease area and outside of lease area	2 nos with in lease area proposed during the year 2019-20.	two nos.	

4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside UPL.	Outside UPL.	
4e	Number of active and alive dumps.	2 nos.	2 nos.	
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.	partially provided.	
4i	Length of Retaining wall or garland drain all along dumps	1900 m of retaining wall and Garland drain.	1100 mm of retaining wall and garland drain.	vioalction issued dated 21.01.2021.
4j	Number of settling ponds	2 nos.	4 nos	
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.		Not matured for reclamation as mineral not exhausted.	
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)	top soil is being proposed for utilisation for planation	carried out	

5d	Total area fully reclaimed and rehabilitated	Not applicable Nil	
5e	General remarks of inspecting officers on backfilling and reclamation etc.		Not matured for reclamation as mineral not exhausted.

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 to be submitted	submitted.	
6b	Area available for rehabilitation (ha) .	Not applicable	Nil	
6c	afforestation done (ha).	30000 nos saplings planattion is proposed during the year 2019-20. on waste dump terraces.	33136 nos.	
6d	No. of saplings planted during the year	30000 nos	33136 nos	
6e	Cumulative no .of plants		90459 nos	
6f	Any other method of rehabilitation	Not applicable	Nil	
6g	Cost incurred on watch and care during the year		Rs.1,26,85,058	

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)	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 are carried out as proposed.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	grade-wise sorting is proposed with in lease area.	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.	+10%-40% Cr2O3 and +40% Cr2O3	+10%-40% Cr2O3 and +40% Cr2O3	
7d	Any beneficiation process at mines .	proposed.	not carried out due to want of Environmmetal clerance for disposal of tailings.	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		grade-wsie sorintg is carried out as proposed.	

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	separate removal and utilisation of top soil is proposed	seperate removal and utlisation of top soil is carried out.	
8b	Concurrent use or storage of topsoil	proposed.	carried out.	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	separate dumps for OB and mineral rejects are proposed.	mainatained.	
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)	30000 nos saplings plantation proposed on waste dump	33136 nos of saplings were planted.	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	30000 nos	33136 nos	
8g	Survival rate		98%	
8h	Water sprinkling on roads to control airborne dust	water sprinkling is proposed for dust supression	water sprinkling is carried out for dust supression	

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

Aesthetic beauty in and around mined 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.	submitted.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining Engineer 5, Diploma Mining Engineer 15, Geologist 1	Graduate Mining Engineer 5, Diploma Mining Engineer 15, 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 135.832 ha, waste disposal 139.153ha, Occupied by plant, buildings, residential, welfare buildings & roads 20.808 Ha,) Other Purpose (Ore Plot) 21.639 ha	found to be in order.	
9d	Scrutiny of Annual return on afforestation	33136 nos	33136 nos	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	239248 t	239248 t	

9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM Closing stock is Nil	found to be in order.	concentrates production is furnished though beneficiation not carried out. so violation observed dated 12.01.2021
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Production cost Rs. 5216.03	Production cost Rs. 5216.03	
9h	Scrutiny of Annual return on fixed assets	Rs.249468999	Rs.249468999	
9k	Scrutiny of Annual return on mining machineries	SHOVEL (HYDRAULIC) 3.300 CUM 10, SHOVEL (HYDRAULIC) 1.300 CUM 1, DOZER 200.000 HP 7 ROCK DRILL (NONELEC.) 165.000 MM 2, DUMPER 35.000 TONNE 54 etc.,	found to be in order.	

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