

**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 : 22/10/2019
- (v) Prev.inspection date : 20/02/2019

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

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No such specific proposal.	27 nos of boreholes were propose during the year 2018-19.	
1b	Exploration over lease area for geological axis 1 or 2	27 nos of boreholes were proposed during the year 2018-19 for geological axis G1/G2.	23 nos of boreholes were drilled during the year 2018-19.	4 nos of boreholes were drilled during the year 2019-20.
1c	Exploration Agencies and Expenditure in lakh rupees during the year		M/s Thriveni Earth Movers limited and expenditure incurred was Rs 340.79 lakh.	Nil
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. 27 nos of boreholes were proposed during the year 2018-19.	23 nos of boreholes were drilled during the year 2018-19.	4 nos were drilled during the year 2019-20.
1e	Balance reserve as on 01/04/20	As per the approved document on 13.02.2018 the chrome ore reserves are 5.69 mil.t. and resources are 9.32 mil.t.	due to addition and depletion over the period of time the updated reserves as on 01.04.2019 are 7.47 mil.t. and resources are 2.74 mil.t.	

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 2018-19.	Nil
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	two pits were proposed for mine developement during the year 2018-19 for Band-I & II and band-IV	two pits were developed during the year 2018-19.	Nil
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	spereate becnhes in OB and mineral are proposed. top soil is scrapped and utililisation is proposed.	spereate becnhes in OB and mineral are maintained. top soil is scrapped and utililised.	Nil
2c	Stripping ratio or ore to OB ratio	1:8.6 t/cu.m.	1:6.3 t/cu.m.	due to irregular nature of ore deposit.
2d	Quantity of topsoil generation in m3	283000 cu.m.	36165 cu.m.	Nil
2e	Quantity of overburden generation in m3	11.96 mil.cu.m.	6.61 mil.cu.m.	due to iregular 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 with two pits.	

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
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3a	Number of pit proposed for production	two pits during the year 2018-19.	production is carried from two pits.	Nil
3b	Quantity of ROM mineral production proposed	1.39 mil.t.	1.05 mil.t.	Nil
3c	Recovery of saleable/usable mineral from ROM production	saleable ore 1.15 mil.t mineral rejects 0.24 mil.t.	saleable ore 0.96 mil.t mineral rejects 0.09 mil.t.	
3d	Quantity of mineral reject generation	0.24 mil.t.	0.09 mil.t.	
3e	Grade of mineral rejects generation and threshold value declared.	+10%-40% Cr2O3	+10%-40% Cr2O3	Nil
3f	Quantity of sub grade mineral generation.	addressed in mineral rejects	Not applicable	
3g	Grade of sub grade mineral generation	Not applicable		
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.	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.	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	

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.	mainatined.	
3m	Total area covered under excavation/pits	205.18 ha at the end of plan period i.e. 2019-20.	135.785 ha	Nil
3n	Ore to OB ratio for the pit/mine during the year.	1: 806. t/cu.m.	1: 6.3 t/cu.m.	Nil
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	289.746 ha	
3p	Production of ROM mineral during the last five year period as applicable	2014-15: 1.53 mil.t. 2015-16: 1.11 mil. t 2016-17: 1.09 mil.t. 2017-18: 0.83 mil.t. 2018-19: 1.39 mil.t. 20	2014-15: 0.65 mil.t. 2015-16: 0.83 mil. t 2016-17: 1mil.t. 2017-18: 0.75 mil.t. 2018-19: 1.05 mil.t.	
3q	General remarks of inspecting officers on method of mining etc.		production is carried out by opencast mining method as proposed.	Nil

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	sperate 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 2018-19	2 nos.	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside UPL	Oustide UPL	Nil
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	provided.	
4i	Length of Retaining wall or garland drain all along dumps	1600 mtrs	1600 mtrs	
4j	Number of settling ponds	2 nos	2 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
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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 Closure Plan:

Sl.No.	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	Yearly report to besubmitted	submitted.	Nil
6b	Area available for rehabilitation (ha) .	Not applicable	Nil	
6c	afforestation done (ha).	20000 nos saplings planation is proposed during the year 2018-19 on waste dump terraces.	20200 nos saplings plantation carried out.	

6d	No. of saplings planted during the year	20000 nos	20200 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 1310145
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.	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.	+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)	20000 nos saplings plantation proposed on waste dump	20200 nos saplings plantation carried out	

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	20000 nos	20200 nos
8g	Survival rate		90%
8h	Water sprinkling on roads to control airborne dust	water sprinkling is proposed for dust suppression	water sprinkling is carried out for dust suppression
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 4, Diploma Mining Engineer 9, Geologist 2	Graduate Mining Engineer 4, Diploma Mining Engineer 9, 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 135.785 ha, waste disposal 114.523 ha, Occupied by plant, buildings, residential, welfare buildings & roads 18.816 Ha,) Other Purpose (Ore Plot) 20.622 ha	found to be in order.	
9d	Scrutiny of Annual return on afforestation	20200 nos	20200 nos	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	89993 t	89993 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 Rs. 4350.81	Production cost Rs. 4350.81	
9h	Scrutiny of Annual return on fixed assets	Rs 270975095	Rs 270975095	
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 Opencast ROCK DRILL (NONELEC.) 165.000 MM 1 etc.,	found to be in order.	Nil

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