

**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 : **S010**) **SHRI G.C. SETHI**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Shri A.K.Pradhan, Mines Manager
Official with
Designation
- (iv) Date of Inspection : 20/02/2019
- (v) Prev.inspection date : 05/01/2018

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 BIJAY KUMAR BEHERA
BANGUR CHROMITE MINE PO-
DHANURJAYPUR KEONJHAR
KEONJHAR ORISSA
Phone:
FAX :

Mining Engineer

Name : B C Mallick, Full Time
Qualification : B E (Mining Engineer) 1977
Appointment/ : 20/05/2011
Termination date

Geologist

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

Manager

Name : Sri A. K. Pradhan
Qualification : BE Mining
Appointment/ : 03/04/2014
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 backlog.	258 nos. of bore holes were drilled during 2017-18.	Nil
1b	Exploration over lease area for geological axis 1 or 2	Boreholes proposed for G,1/G2 level.	25 nos of boreholes proposed for G,1/G2 level.	Nil
1c	Exploration Agencies and Expenditure in lakh rupees during the year	120 lacs.	110.46 Lacs	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2		222.00 ha. area.	Nil
1e	Balance reserve as on 01/04/20	In the approved SOM dated 16/04/2015, the Reserve and Resource of the chromite ore furnished was 11.115 and 27.47 million tonnes respectively.	Reserve is 8.80 million tonnes and resource is 27.47 million tonnes.	Nil
1f	General remarks of inspecting officers on geology, exploration etc		Regionally all the chrome band within lease area has been established. However, entire lease area yet to explore.	Nil

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Within chrome Band-I and IV.	Within chrome Band-I and IV.	Nil

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in OB and Ore. Bench height: 6 mts Bench width: 11 mts	Separate benches being maintained in OB and Ore.	Nil
2c	Stripping ratio or ore to OB ratio			
2d	Quantity of topsoil generation in m3	No top soil exists.	Nil	No soil generation from excavation.
2e	Quantity of overburden generation in m3	4.463 Million CumM	3.562 Million CumM	The quantity of OB generation was less due to not achieving the targeted production of chromite.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		Bench height and width have been maintained and Development was found to be in order.	Nil

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	02	02	Nil
3b	Quantity of ROM mineral production proposed	1098524 tonnes.	755145 tonnes.	Nil
3c	Recovery of sailable/usable mineral from ROM production	1025696tonnes	755145 tonnes.	+40% Cr2O3
3d	Quantity of mineral reject generation			

3e	Grade of mineral rejects generation and threshold value declared.	Between 10 to 40% Cr2O3	33.70 % Cr2O3	Nil
3f	Quantity of sub grade mineral generation.			
3g	Grade of sub grade mineral generation	Between 10 to 40% Cr2O3	33.70 % Cr2O3	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized in Qry-D Manually in Qry-F	Mechanized in Qry-D Manually in Qry-F	Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not applicable	Not applicable.	Nil
3j	Provision of drilling and blasting in mineral benches	Deep hole in Qry -D Short hole in Qry-F	Deep hole in Qry -D Short hole in Qry-F	Nil
3k	Provision of mining machineries in mineral benches	Dumper Shovel combination.	Dumper Shovel combination.	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes.	Yes.	Nil
3m	Total area covered under excavation/pits	136.320 (at end of scheme period)	123.642	Nil
3n	Ore to OB ratio for the pit/mine during the year.			

3o	Total area put in use under different heads at the end of year	At the end of the plan period i.e. March 2020: 383.51 Ha area.	286.682 Ha		Nil
3p	Production of ROM mineral during the last five year period as applicable	2012-13 =1371000 MT 2013-14 = 1374000MT 2014-15 = 1534808 MT 2015-16 = 1110319 MT 2016-17= 1098524 MT	2012-13 =521462.480 MT 2013-14 = 484489.360 MT 2014-15 =651215.000 MT 2015-16 = 830015.000 MT 2016-17 = 1008820.000 MT		NIL.
3q	General remarks of inspecting officers on method of mining etc.		At present, opencast method of mining is suitable for ore extraction. However, to extract the Ore in near future underground mining method to be adopted.		Nil

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 waste .	Separate dumping of waste practised .	Nil
4b	Location of topsoil, OB and mineral reject dumps	OB Dump yard - WD1 X-100W-145E Y-900N-1750N	OB Dump yard -WD1	Nil
4c	Number of dumps within lease area and outside of lease area	Within Lease area: 02 Outside lease area: NIL	Within Lease area: 02 Outside lease area: NIL	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside of the UPL.	Outside of the UPL.	Nil

4e	Number of active and alive dumps.	01	01	Nil
4f	Number of dead dumps.	01	01	Nil
4g	Number of dumps established.	01	01	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	Yes.	Yes.	Nil
4i	Length of Retaining wall or garland drain all along dumps	1200 mts.	1400 mts.	Nil
4j	Number of settling ponds	Not applicable.	02	Nil
4k	Specific comments of inspecting officer on waste dump management		Matured slope of the dumps are planted for stabilization. Retaining wall and garland drain has been provided along the waste dump.	Nil

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.	Mineralisation is continue and pit is not matured for reclamation.	Mineralisation is continue and pit is not matured for reclamation.	Nil
5b	Area under backfilling of mined out area	Mineralisation is continue and pit is not matured for reclamation.	Mineralisation is continue and pit is not matured for reclamation.	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not applicable.	Nil	Nil

5d	Total area fully reclaimed and rehabilitated	Not applicable.	Nil	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.		Mineralisation is continue and pit is not matured for reclamation.	Nil

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).	As per rule 26 of MCDR, 2017 PMCP report for previous to be submitted on or before 1st July.	PMCP Report Submitted.	Nil
6b	Area available for rehabilitation (ha) .	Area not matured for reclamation & rehabilitation	Area not matured for reclamation & rehabilitation.	Nil
6c	afforestation done (ha).	Plantation at OB dump.	1.57 Ha	Plantation at OB dump.
6d	No. of saplings planted during the year	8000	10000	Plantation at OB dump.
6e	Cumulative no .of plants	21000 no.	40773 No.	Nil
6f	Any other method of rehabilitation	Not applicable.	Not applicable.	Nil
6g	Cost incurred on watch and care during the year	5 lacs.	Rs. 60127.00	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Not applicable.	Not applicable.	Nil

6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not applicable.	Not applicable.	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	Not applicable.	Not applicable.	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not applicable.	Not applicable	NIL.
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	Not applicable	Not applicable	NIL.
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	Not applicable.	Not applicable	Nil
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	No waste land.	Not applicable	Nil
6o	Compliance of rehabilitation of waste land within lease (iii) Method of rehabilitation	Not applicable.	Not applicable.	Nil

6p	Compliance of environmental monitoring (core zone and buffer zone)	Regular monitoring of environmental parameter like water quality, noise quality, air quality etc.	Regular monitoring of environmental parameter like water quality, noise quality, air quality etc. is being done.	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		Area has not been matured for reclamation & rehabilitation and afforestation has been carried out along slope of waste dump & safety zone. Regular monitoring of environmental parameter like water quality, noise quality, air quality etc.	Nil

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Proposal for grade-wise Sorting.	-40% Cr2O3, 40% to 52% Cr2O3 and +52% Cr2O3.	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical.	Mechanical.	Nil
7c	Different grade of mineral sorted out at mines.	+40% : saleable 10 to 40%: beneficiable	-40% Cr2O3, 40% to 52% Cr2O3 and +52% Cr2	Nil
7d	Any beneficiation process at mines	Not applicable.	By existing COB Plant.	Nil

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	The Chrome mineral above threshold value and below cut-off grade is being stacked separately for beneficiation or future use. However, at present COB is not in operation due to area constraint for tailing disposal.	Nil
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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No top soil exists in the location proposed for excavation in 2017-18.	No top soil generated during 2017-18.	Nil
8b	Concurrent use or storage of topsoil	Not applicable	Not applicable	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumping of overburden, waste rock, mineral reject and fines has been proposed.	All the material like overburden, waste rock, mineral reject and fines are being dumped separately.	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not applicable.	Not applicable.	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Area not matured for reclamation & rehabilitation	Area not matured for reclamation & rehabilitation.	Nil

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Plantation havebeen carried out along the dump slope and proposed along the slope of waste dump	Plantation has been carried out as per proposal.	Nil
8g	Survival rate	85%	85%	Nil
8h	Water sprinkling on roads to control airborne dust	Water sprinkling proposed.	Water sprinkling on the haul road practised.	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		Aesthetic beauty in and aroun mined area is maintained.	Nil

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	As per rule 45 of MCDR, 2017 monthly and annual returns to be submitted.	The Monthly and Annual return for the year 2017-18 has been submitted.	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mines Manager: 01, Mining Engineer incharge -05, Geologist-02	Mines Manager: 01, Mining Engineer incharge -05, Geologist-02	Nil

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Already exploited & abandoned: 3.410ha, current O/C working: 123.642ha, waste disposal: 103.050ha, Occupied by plant, buildings etc.: 22.420ha & ETP, Ore stack yard: 53.360ha	Found to be in order.	Nil
9d	Scrutiny of Annual return on afforestation	10000 saplings.	10000 saplings.	Nil
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Nil	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Closing stock: Below 40%Cr2O3: 994955.020 tonnes 40 to above 52% Cr2O3: 223434.277 tonnes. 52% & above Cr2O3:220208.883 tonnes	Closing stock: Below 40%Cr2O3: 994955.020 tonnes 40 to above 52% Cr2O3: 223434.277 tonnes. 52% & above Cr2O3:220208.883 tonnes	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of production: Rs 5632.41/tonne	Seems to be in order.	Nil
9h	Scrutiny of Annual return on fixed assets	Rs 34963399.00	To be in order.	Nil

9k	Scrutiny of Annual return on mining machineries	A fleet of heavy mining machineries are deployed as indicated in the annual return 2017-18.	The same is found in order.	Nil
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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	
MCDR17	Rule 34(1)	05/03/2019	02/05/2019				

Date :

(SHRI G.C. SETHI)

Indian Bureau of Mines