

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/CR/JJP/MCDR-12/BBS

Mine code : 11ORI19014

- (i) Name of the Inspecting : **RAM**) **RAMKISHAN R**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri M.K.Samal, Mine Mnager
Official with
Designation
- (iv) Date of Inspection : 12/03/2020
- (v) Prev.inspection date : 05/09/2019

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **SUKINDA**
- (b) **Registration NO.** : **IBM/4200//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 : 755047
- FAX No. : 06726-268143
- E-mail : smcgen@imfagroup.com
- Phone : 06726-268139,268143
- (f) Police Station : Sukinda
- (g) First opening date : 15/09/1999
- (h) Weekly day of rest : SUN
2. Address for : SUKINDA CHROMITE MINE IMFA
correspondance AT/PO-KALIAPANI
DIST-JAJPUR
3. (a) Lease Number : ORI0693
- (b) Lease area : 116.76
- (c) Period of lease : 30
- (d) Date of Expiry : 03/09/2029
4. Mineral worked : CHROMITE Main

5. Name and Address of the

Lessee : INDIAN METALS & FERRO ALLOYS LIMITED
 IMFA, BOMIKHAL, BHUBANESWAR
 ORISSA. BHUBNESHWAR ORISSA
 Phone:0674-580100,580125
 FAX :0674-580045,580020

Owner : SUBHRAKANTA PANDA
 M/S INDIAN CHARGE CHROME
 LTD. IMFA BUILDING,
 BOMIKHAL, RASULGARH,
 BHUBANESWAR- 751 010 JAJPUR
 ORISSA
 Phone: 0674-2580100,25
 FAX : 0674- 2580020/

Agent : SHRI SANJEEV DAS
 JAJPUR ORISSA
 Phone:
 FAX :

Mining Engineer

Name : SHRI M K SAMAL,Full Time
 Qualification : AMIE
 Appointment/ : 20/05/2011
 Termination date

Geologist

Name : SHRI H S SAHOO,Full Time
 Qualification : MSC GEOLOGY
 Appointment/ : 16/11/2010
 Termination date

Manager

Name : SHRI M K SAMAL
 Qualification : AMIE
 Appointment/ : 25/02/2017
 Termination date

6. Date of approval of Mining	:	Fresh under rule 22 MCR1960	18/11/1999
Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	22/10/2003
	:	Mining Scheme rule 12 MCDR1988	25/06/2004
	:	Modif.approved Mining Scheme	06/05/2005
	:	Modif.approved Mining Scheme	14/06/2007
	:	Mining Scheme rule 12 MCDR1988	01/01/2010
	:	Mining Scheme rule 12 MCDR1988	31/07/2013
	:	Modif.approved Mining Scheme	23/09/2016
	:	MP modif under 17(3) MCR 2016	14/02/2018
	:	MP review under 17(1) MCR 2016	31/10/2018

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No such specific proposal.	Nil	
1b	Exploration over lease area for geological axis 1 or 2	The entire mineralised area are explored under G1 area. However, 19 nos of boreholes were proposed in the year 2018-19.	28 nos core type boreholes and 19 nos of non coretype boreholes were drilled.	Nil
1c	Exploration Agencies and Expenditure in lakh rupees during the year		Drill king India is the exploration agency.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	The entire mineralised area explored under G1 level.	28 nos core type boreholes and 19 nos of non coretype boreholes were drilled.	
1e	Balance reserve as on 01/04/20	As per the approved document on 14/02/18 the chromite reserves are 85.3 lakh tonnes and resources are 261.58 lakh tonnes	The reserves and reosurces over the period of time the reserves as on 01.04.2019 are 83.96 lakh tonnes and resources are 261.58 tonnes.	
1f	General remarks of inspecting officers on geology, exploration etc		Exploration has been carried out more than the proposal during 2018-19.	

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	Single quarry Band-1 ore body during the year 2018-19.	A single quarry has been developed in band-1	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No generation of top soil due to its non-existence and seperate benches in OB and mineral are envisaged	Seperate benches in OB and mineral are mainatined.	
2c	Stripping ratio or ore to OB ratio	1:1.82 t/cu.m. during the year 2018-19.	1:1.5 t/cu.m.	due to irregular nature of ore deposit.
2d	Quantity of topsoil generation in m3	Not applicable	Nil	
2e	Quantity of overburden generation in m3	637200 cu.m.	510272 cu.m.	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		development is carried out by opencast mining method.	

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	one	one	
3b	Quantity of ROM mineral production proposed	351000 t during the year 2018-19.	341003 t	
3c	Recovery of sailable/usable mineral from ROM production	351000 t	341003 t	
3d	Quantity of mineral reject generation	Not proposed.	Nil	

3e	Grade of mineral rejects generation and threshold value declared.	Not applicable	Nil
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 proposed.	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 and hauling.	shovel and dumper combination is deployed for excavation and hauling.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	8 m.	maintained
3m	Total area covered under excavation/pits	28.83 ha till the plan period i.e. 2018-19.	28.83 ha
3n	Ore to OB ratio for the pit/mine during the year.	1:1.82 t/cu.m. during the year 2018-19.	1:1.5 t/cu.m.

3o	Total area put in use under different heads at the end of year	toatal area put to use till the end of plan period is 116.76 ha	116.76 ha
3p	Production of ROM mineral during the last five year period as applicable	2014-15: 282467 tonnes 2015-16: 273786 tonnes 2016-17: 351000 tonnes 2017-18: 351000 tonnes 2018-19: 351000 tonnes.	2014-15: 259730 tonnes 2015-16: 273598 tonnes 2016-17: 350512 tonnes 2017-18: 350112 tonnes 2018-19: 341003 tonnes
3q	General remarks of inspecting officers on method of mining etc.	prodcution 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)	No top soil & mineral reject generation is envisaged. However, separate dumping of OB is proposed.	separate dumping of OB is carried out.	
4b	Location of topsoil, OB and mineral reject dumps	North west part of the lease area.	North west part of the lease area.	
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.	one	one	
4f	Number of dead dumps.	Not proposed.	Nil	

4g	Number of dumps established.	Not proposed.	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	Yes	provided.
4i	Length of Retaining wall or garland drain all along dumps	150 m during the year 2018-19	150 m
4j	Number of settling ponds	Not proposed.	Nil
4k	Specific comments of inspecting officer on waste dump management		The waste management is carried out as per the proposal.

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.	Not applicable	
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	Not applicable	Nil	
5e	General remarks of inspecting officers on backfilling and reclamation etc.		Area not matured for backfilling.	

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).	PMCP report to submitted submitted before 1 st July		
6b	Area available for rehabilitation (ha) .	dump slope area 0.9 ha during the year 2018-19.	0.92 ha	
6c	afforestation done (ha).	0.9 ha	0.92 ha	
6d	No. of saplings planted during the year	2250 nos	2765 nos	
6e	Cumulative no .of plants		74476 nos	
6f	Any other method of rehabilitation	coirmatting over dumps	carried out	
6g	Cost incurred on watch and care during the year		Rs. 11 lakhs	
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 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 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 of mineral is proposed.	carried out.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	mechanical	mechanical	
7c	Different grade of mineral sorted out at mines.	below 40% Cr2O3 and+40% Cr2O3	below 40% Cr2O3 and+40% Cr2O3	
7d	Any beneficiation process at mines	Not proposed.	Nil	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		The entire ROM produced from the mine is utilised for captive consumption purpose.	

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Not applicable	Nil	
8b	Concurrent use or storage of topsoil	Not applicable	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	separate dup for waste rock is proposed.	maintained.	

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	area not matured for backfilling.	Not applicable
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not applicable	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	2250 nos	2765 nos
8g	Survival rate		94.5%
8h	Water sprinkling on roads to control airborne dust	water sprinkling on haul roads for dust suppression is proposed	carried out.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		Aesthetic beauty in and around the mine 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 as per rule 45 of MCDR, 2017	submitted.	

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	graduate mining engineer: 2 diploma mining engineer: 4 geologist: 2	graduate mining engineer: 2 diploma mining engineer: 4 geologist: 2
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	under mining: 28.83 ha, waste disposal: 49.59 ha, infra: 22.902 ha others: 15.438 ha	under mining: 28.83 ha, waste disposal: 49.59 ha, infra: 22.902 ha others: 15.438 ha
9d	Scrutiny of Annual return on afforestation	2765 nos	2765 nos
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 623736.677 t	ROM closing stock is 623736.677 t
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Prodcution cost Rs. 3693	Prodcution cost Rs. 3693
9h	Scrutiny of Annual return on fixed assets	Rs. 280708288	Rs. 280708288
9k	Scrutiny of Annual return on mining machineries	DUMPER 32.000 TONNE 20, BACK HOE 2.500 CUM 2, BACK HOE 2.100 CUM 1, BACK HOE 1.900 CUM 1, BACK HOE 0.900 CUM 1, DOZER 330.000 HP 1 etc.,	DUMPER 32.000 TONNE 20, BACK HOE 2.500 CUM 2, BACK HOE 2.100 CUM 1, BACK HOE 1.900 CUM 1, BACK HOE 0.900 CUM 1, DOZER 330.000 HP 1 etc.,

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