

**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 : **RKR5**) **RAJANI KANTA RAUTARAY**
Officer and ID No.
- (ii) Designation : Assistant Mining Engineer
- (iii) Accompanying mine : Sh. M K Saml, Mines Manager
Official with
Designation
- (iv) Date of Inspection : 19-NOV-21
- (v) Prev.inspection date : 11-DEC-20

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-SEP-99**
- (h) **Weekly day of rest** : **SUN**
2. **Address for correspondance** : **SUKINDA CHROMITE MINE IMFA**
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-SEP-29**
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-MAY-11
 Termination date

Geologist

Name : SHRI H S SAHOO,Full Time
 Qualification : MSC GEOLOGY
 Appointment/ : 16-NOV-10
 Termination date

Manager

Name : SHRI M K SAMAL
 Qualification : AMIE
 Appointment/ : 25-FEB-17
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Fresh under rule 22 MCR1960	18-NOV-99
		Mining Scheme rule 12 MCDR1988	22-OCT-03
		Mining Scheme rule 12 MCDR1988	25-JUN-04
		Modif.approved Mining Scheme	06-MAY-05
		Modif.approved Mining Scheme	14-JUN-07
		Mining Scheme rule 12 MCDR1988	01-JAN-10
		Mining Scheme rule 12 MCDR1988	31-JUL-13
		Modif.approved Mining Scheme	23-SEP-16
		MP modif under 17(3) MCR 2016	14-FEB-18
		MP review under 17(1) MCR 2016	31-OCT-18
		Modif.approved Mining Scheme	13-JAN-21

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal	Nil	
1b	Exploration over lease area for geological axis 1 or 2	No proposal	Total mineralised area has been explored under G1 level.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposal	Nil	
1d	Balance area to be explored to bring Geological axis in 1 or 2	No proposal	Nil	
1e	Balance reserve as on 01/04/20	As per approved Modification of Review of Mining Plan dated 13.01.2021, the balance reserve AS ON 01.09.2020 is 123.77 MT	Balance reserves as on 01.04.2021 is 122.36 Lakh MT	
1f	General remarks of inspecting officers on geology, exploration etc			The total potential area has been explored under G1 category.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	E3046 N1891 to E3662 N1856	E3046 N1891 to E3662 N1856	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No proposal	Nil	
2c	Stripping ratio or ore to OB ratio	01:03.57	01:03.82	
2d	Quantity of topsoil generation in m3	No proposal	Nil	

2e	Quantity of overburden generation in m3	1000000 Cum.	1018766 Cum.	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			No topsoil and overburden are generated in 2020-21 and also no mineral benches are proposed in the year.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One	One	
3b	Quantity of ROM mineral production proposed	280000 Tonnes	266493 Tonnes	
3c	Recovery of sailable/usable mineral from ROM production	No proposal	Nil	
3d	Quantity of mineral reject generation	No proposal	Nil	
3e	Grade of mineral rejects generation and threshold value declared.	No proposal	Nil	
3f	Quantity of sub grade mineral generation.	No proposal	Nil	
3g	Grade of sub grade mineral generation	No proposal	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.	No proposal	Nil	

3j	Provision of drilling and blasting in mineral benches	115 mm diameter Drilling in staggered pattern and controlled blasting	115 mm diameter Drilling in staggered pattern and controlled blasting are carried out as per proposal
3k	Provision of mining machineries in mineral benches	Excavator-5 no Dumper-26 no Drill Machine- 2 no Dozer-3 no Grader- 1 no Front end Loader- 2 Water Tanker- 6 Explosive Van- 1 Disel dispensing unit- 1	Excavator-5 no Dumper-26 no Drill Machine- 2 no Dozer-3 no Grader- 1 no Front end Loader- 2 Water Tanker- 6 Explosive Van- 1 Disel dispensing unit- 1
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	8m. height of benches in mineral is proposed for method of mining	8m height is maintained
3m	Total area covered under excavation/pits	29.44 Ha.	29.44 Ha.
3n	Ore to OB ratio for the pit/mine during the year.	1:03.57	1:03.57

3o	Total area put in use under different heads at the end of year	Land Use Area Under Mining- Hect. 29.444 29.444 51.497 Mineral Stores- Overburden & Sub grade Dump - 51.497 Mineral Stores- 8.807 Infrastructure- - 11.894 Road- 4.160 ETP- 8.807 Infrastructure - 5.660 Township- 11.894 Road- 4.160 ETP- 5.660 Township- 1.05 Safety	Land Use Area in Hect. Area Under Mining- 29.444 Overburden & Sub grade Dump - 51.497 Mineral Stores- 8.807 Infrastructure- 11.894 Road- 4.160 ETP- 5.660 Township- 1.05 Safety	
3p	Production of ROM mineral during the last five year period as applicable	2016-17=351000 MT 2017-18=351000 MT 2018-19=351000 MT 2019-20=351000 MT 2020-21=280000 MT	2016-17=350512 MT 2017-18=350112 MT 2018-19=341003 MT 2019-20=320141 MT 2020-21=266493 MT	Mining operation has been carried out as per proposal.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
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4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate overburden only has been proposed	Separate overburden has been dumped	No generation of top soil & mineral reject during the year.
4b	Location of topsoil, OB and mineral reject dumps	Overburden- North West of the lease	Overburden- North West of the lease.	No generation of top soil & mineral reject.
4c	Number of dumps within lease area and outside of lease area	Within Lease- One	Within Lease- One	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	E2055/N1945 to E3165/N2304	E2055/N1945 to E3165/N2304	
4e	Number of active and alive dumps.	One	One	
4f	Number of dead dumps.	Not proposed	Nil	
4g	Number of dumps established.	Partly active dump	Partly active dump	
4h	Whether Retaining wall or garland drain all along dumps are there.	Proposed	Carried out as per proposal	
4i	Length of Retaining wall or garland drain all along dumps	Retaining wall -Nil Garland drain - Repair & maintenance	Garland drain - Repair & maintenance work are carried out	
4j	Number of settling ponds	Maintainance of settling pond was proposed	maintained	
4k	Specific comments of inspecting officer on waste dump management			No generation of top soil & mineral reject are generated in the year 2020-21.

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.	No proposal	Nil	
5b	Area under backfilling of mined out area	No proposal	Nil	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal	Nil	
5d	Total area fully reclaimed and rehabilitated	No proposal	Nil	
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Pit is not matured for backfilling and rehabilitation of mined out areas.

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).	Annual report on PMCP has been proposed to submit under Rule 26(2) of MCDR, 2017.	Submitted in time	
6b	Area available for rehabilitation (ha) .	Rehabilitation of Dump slope-1.1 ha	Rehabilitation of Dump slope-1.1 ha	
6c	afforestation done (ha) .	1.1 Ha.	1.1 Ha.	
6d	No. of saplings planted during the year	2750 nos. of plantation has been proposed	2945 nos sapplings have been planted	
6e	Cumulative no .of plants		56722 nos. of plants have been planted.	
6f	Any other method of rehabilitation	Coir Mating- 3640 sq m	Coir Mating- 3640 sq m	
6g	Cost incurred on watch and care during the year	6.87 lakhs	7.95 Lakhs	

6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	1190 Cum.	1190 Cum.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	1190 Cum.	1190 Cum.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	Not proposed	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not proposed	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	2750 Nos of sapplings are proposed	2945 nos of sapplings
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	1.1 Ha.	1.1 Ha.
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Through plantation	Through Plantation

6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly monitoring was proposed	Quarterly monitoring of AAQ, Water Quality and Noise level are being carried out through a recognized Environmental consultant.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Closure activity has been carried out as per proposal.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise dispatch of minerals are proposed	Grade wise dispatch has been carried out to different plants.	
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% , 40% to below 52% and Above 52%	Below 40% , 40% to below 52% and Above 52%	
7d	Any beneficiation process at mines .	Not proposed	Nil	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			No mineral reject generation during the year and only mineral has been dispatched grade wise.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal	Nil	

8b	Concurrent use or storage of topsoil	No proposal	Nil	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dump for overburden was proposed.	As per proposal	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal	Nil	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Rehabilitation of dump- Planting of 2750 nos of plants covering an area of 1.1 ha.	Rehabilitation of dump- Planting of 2750 nos of plants covering an area of 1.1 ha.	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Proposed	Plantation done as per approved Scheme of Mining. Besides plantation has also been carried out at outside of the lease area .	
8g	Survival rate	80%	80%	
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on road by mobile water tanker to control airborne dust.	Water sprinkling done by 4 no. of water sprinkler and Sprinkling mobile mist canyon.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Rehabilitation has been carried by means of plantation.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Submission of statutory returns have been proposed	Annual and monthly returns have been submitted in due time.	

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Details provided	ME- Mr M K Samal Geologist- Mr H S Sahoo Mines Manager-Mr M K Samal
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Details provided	Land Use Area in Hect. Area Under Mining- 29.444 Overburden & Sub grade Dump - 51.497 Mineral Stores- 8.807 Infrastructure- 11.894 Road- 4.160 ETP- 5.660 Township- 1.05 Safety
9d	Scrutiny of Annual return on afforestation	Details are provided	2945 nos. of plantation
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)		No mineral reject generation during the year
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Given	266493 Metric Tonnes
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Details provided	Ex mines price : Rs. 3773.51
9h	Scrutiny of Annual return on fixed assets	Detail is given	Rs. 257494710/-

9k	Scrutiny of Annual return on mining machineries	Details are given	Excavator - 7 no. Loader- 1 no. Dumper- 25 no. Wagon Drill-2 no. Dozer- 3 no. Grader- 1 no..
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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

Date :

(RAJANI KANTA RAUTARAY)

Indian Bureau of Mines