

**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 : **S010**) **SHRI G.C. SETHI**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Shri M.K.Samal, Mine Mnager
Official with
Designation
- (iv) Date of Inspection : 05/09/2019
- (v) Prev.inspection date : 28/08/2018

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 Plan/Scheme of Mining	:	Fresh under rule 22 MCR1960	18/11/1999
		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 proposal. However 19 nos of boreholes were proposed in the year 2018-19.	27 nos of holes were drilled in the year 2018-19	To brought are under G1 in depth wise and for proving non minerlised area.
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.	27 nos of boreholes were drilled in the year 2018-19.	To brought area under G1 in depth wise and for proving non minerlised area.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No such specific proposal.	Drill king India is the exploration agency.	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	The entire mineralsied area explored under G1 level.	Exploration carried out more than the proposal during the year 2018-19 to brought area under G1 in depth wise and to proved the non mineralised area.	Nil
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 as on 01.12.2017	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.	Nil

1f	General remarks of inspecting officers on geology, exploration etc	Exploration has been carried out more than the proposal during 2018-19.	Nil
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Single quarry is proposed in Band-1 ore body.	A single quarry has been developed in band-1	Nil
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No generation of top soil due to its non-existance and seperate benches in OB and mineral are envisaged.	Seperate benches in OB and mineral are mainatined with 8 m height of bench. No topsoil generated during 2018-19.	Nil
2c	Stripping ratio or ore to OB ratio	1:1.83 t/cu.m.	1:1.71 t/cu.m.	Due to irregular nature of ore deposit.
2d	Quantity of topsoil generation in m3	No topsoil exists.	No topsoil generated during 2018-19.	Nil
2e	Quantity of overburden generation in m3	645000 cu.m. in 2018-19.	597295 cu.m. OB/waste generated during 2018-19.	Due to irregular nature of ore deposit.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		The mine developement is being carried out in single quarry only.	Nil

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	one.	one.	Nil

3b	Quantity of ROM mineral production proposed	351000 tonnes in the year 2018-19	350112 tonnes during 2018-19.	Nil
3c	Recovery of sailable/usable mineral from ROM production	The ROM production proposed for 351000 tonnes in the year 2018-19 with no generation of mineral rejects.	351000 tonnes of ROM produced wduring the year 2018-19 with no mineral rejects.	Nil
3d	Quantity of mineral reject generation	Nil	No mineral reject generated during 2018-19.	Nil
3e	Grade of mineral rejects generation and threshold value declared.	Not applicable.	Not applicable.	Nil
3f	Quantity of sub grade mineral generation.	No sub-grade generation envisaged in 2018-19.	Nil	Nil
3g	Grade of sub grade mineral generation	Not applicable.	Not applicable.	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised.	Mechanised.	Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	None.	Not applicable.	Nil
3j	Provision of drilling and blasting in mineral benches	Drilling by 115 mm dia drilling machine and blasting by emulsion/slurr y explosive with NONEL intiation.	Drilling by 115 mm dia drilling machine and blasting by emulsion/slurry explosive with NONEL intiation carried out.	Nil

3k	Provision of mining machineries in mineral benches	Excavator: 2.5 cu.m. dumper: 32 tonnes drill machine: 115 mm dia.	Excavator: 2.5 cu.m. dumper: 32 tonnes drill machine: 115 mm dia.	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height of the benches proposed is 8 m in OB and mineral zone.	Height of the benches maintained is 8 m in OB and mineral zone.	Nil
3m	Total area covered under excavation/pits	28.83 ha till the plan period i.e. 2018-19.	28.83 ha.	Nil
3n	Ore to OB ratio for the pit/mine during the year.	1:1.83 t/cu.m.	1:1.71 t/cu.m.	Due to irregular nature of ore deposit.
3o	Total area put in use under different heads at the end of year	Pit: 28.83 ha, OB:49.59 ha, mineral storage: 11.19 ha, infrastructure : 11.872 ha	Pit: 28.83 ha, OB:49.59 ha, mineral storage: 11.19 ha, infrastructure: 11.872 ha	Nil
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: tonnes	2014-15: 259730 tonnes 2015-16: 273598 tonnes 2016-17: 350512 tonnes 2017-18: 350112 tonnes 2018-19: tonnes	Nil
3q	General remarks of inspecting officers on method of mining etc.		The production is carried out only from single pit as proposed in the approved document.	Nil

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)	No top soil & mineral reject generation is envisaged. However, seperate dumping of OB is proposed.	Seperate dumping of OB is being done in the designated waste dumping site.	Nil
4b	Location of topsoil, OB and mineral reject dumps	One OB/waste dump is proposed in the north west part of lease area. However, there is no top soil generation & no mineral rejects generation envisaged, thereby no provisions for separate dumping/stacking the same in the approved document.	OB dump mainatined in northwest of the lease area. No topsoil & mineral rejects generated during 2018-19.	Nil
4c	Number of dumps within lease area and outside of lease area	One dump within lease area.	Only one dump within lease area.	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside the PUL	Outside the PUL	Nil
4e	Number of active and alive dumps.	One waste dump	One waste dump	Nil
4f	Number of dead dumps.	Nil	Not applicable.	Nil
4g	Number of dumps established.	None	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	No fresh proposal.	Already existing. No fresh retaining wall constructed during 2018-19.	Nil

4i	Length of Retaining wall or garland drain all along dumps	No fresh proposal.	Nil	Nil
4j	Number of settling ponds	One	One	Nil
4k	Specific comments of inspecting officer on waste dump management		The solid waste management is carried out as per the approved document.	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.	No area is matured for backfilling as the mineral has not been exhausted.	No area is matured for backfilling as mineral has not been exhausted.	Nil
5b	Area under backfilling of mined out area	No area is matured for backfilling as the mineral has not been exhausted.	No area is matured for backfilling as mineral has not been exhausted.	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No topsoil exists.	No topsoil generated during 2018-19.	Nil
5d	Total area fully reclaimed and rehabilitated	No area is matured for backfilling as the mineral has not been exhausted.	Nil	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.	No area is matured for backfilling as the mineral has not been exhausted.	No area is matured for backfilling as mineral has not been exhausted.	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).	The annual report on PMCP has to be submitted under Rule 26(2) of MCDR,2017.	Submitted with in the stipulated time.	Nil
6b	Area available for rehabilitation (ha) .	No area is available for rehabilitation .	Nil	Nil
6c	afforestation done (ha).	0.5 ha proposed on dump slopes	0.55 ha carried out on dump slopes	Nil
6d	No. of saplings planted during the year	1250 nos of saplings in the year 2018-19.	1650 nos of saplins planted during 2018-19.	Nil
6e	Cumulative no .of plants	No such proposal.	71711 nos.	Nil
6f	Any other method of rehabilitation	Not applicable.	Not applicable.	Nil
6g	Cost incurred on watch and care during the year	2.5 lakhs	11 lakhs	cost inccured is more than the proposal.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No area is matured for reclamation and rehabilitation .	No area is matured for reclamation and rehabilitation.	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No area is matured for reclamation and rehabilitation .	No area is matured for reclamation and rehabilitation.	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area	No area is matured for reclamation and rehabilitation .	Not applicable.	Nil

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No area is matured for reclamation and rehabilitation .	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)	Not applicable.	Not applicable.	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	By plantation.	By plantation.	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly monitoring of air, water and noise level quality are envisaged.	Quarterly monitoring of air, water and noise level quality are being done.	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		Quarterly monitoring of air, water and noise level quality are being done and the same are found to be within the permissible limits.	Nil

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting is envisaged.	grade wise sorting is being done in the mine site.	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical means	Mechanical means	Nil
7c	Different grade of mineral sorted out at mines.	+52% cr +40%-52% cr +30%-40% cr	+52% cr +40%-52% cr +30%-40% cr	Nil
7d	Any beneficiation process at mines	Not applicable.	Not applicable.	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.	Nil

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No topsoil exists.	Not applicable.	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)	No mined out area is matured for reclamation.	No mined out area is matured for reclamation.	Nil

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No mined out area is matured for reclamation.	Not applicable.	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not applicable.	Not applicable.	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	1250 nos saplings plantation envisaged in 2018-19.	1650 nos of saplings planted during 2018-19.	Plantation is carried out IS more than the proposal.
8g	Survival rate	No such proposal.	90%	Nil
8h	Water sprinkling on roads to control airborne dust	Water sprinkling by fixed srpinkler and mobile water sprinkler on haul road	water sprinkling by fixed srpinkler and mobile water sprinkler on haul road are being done.	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		1650 nos of saplings were planted during the year 2018-19.	Nil

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
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9a	Status of submission of Monthly and Annual returns	Monthly and annual returns for the year 2018-19 were submitted within the stipulated time.	Submitted.	Nil
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	Nil
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	Nil
9d	Scrutiny of Annual return on afforestation	1650 nos.	1650 nos.	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	ROM stock: 613235.135 tonnes Lumps: Below 40% Cr203: 892.050 tonnes 40% to below 52%Cr203: 11.010 tonnes Fines: Below 40% Cr203: 28724.380 tonnes 40% to below 52%Cr203: 9319.585 tonnes 52% Cr203 and above: 3594.565 tonnes	ROM stock: 613235.135 tonnes Lumps: Below 40% Cr203: 892.050 tonnes 40% to below 52%Cr203: 11.010 tonnes Fines: Below 40% Cr203: 28724.380 tonnes 40% to below 52%Cr203: 9319.585 tonnes 52% Cr203 and above: 3594.565 tonnes	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Pproduction cost: Rs 3940.25	Production cost: Rs 3940.25	Nil
9h	Scrutiny of Annual return on fixed assets	Rs. 280763230	Rs. 280763230	Nil
9k	Scrutiny of Annual return on mining machineries	excavator: 5 nos loader: 1 no. dumper: 20 nos drill machine: 1 no. dozer 3 nos. grader: 1 no.	excavator: 5 nos loader: 1 no. dumper: 20 nos drill machine: 1 no. dozer 3 nos. grader: 1 no.	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
MCDR17	Rule 45(7)(a)	17/09/2019			

Date :

(SHRI G.C. SETHI)

Indian Bureau of Mines