

INDIAN BUREAU OF MINES
MCDR INSPECTION REPORT
Bhubaneswar Region

General

SL. No.	Particulars	Details
1.	Name of the Mine	Sukinda Mines (Chromite)
2.	Date of Inspection	19/12/2024
3.	Name of Inspection officer:	Sh. Rohita Sethi, Asst. Controller of Mines
4.	Name of official accompanying inspection	Sh. Saroj Kumar Mahanta, Mines Manager. Sh. Suresh Prusty, DGM- Geology Sh. Bhakta Hari Das, Mine Geologist. Miss. Kranti Kiran Bhuyan, Geologist.
5.	Last date of Inspection & Officer	09.11.2023 & Mr. Prashant S Hegde, Regional Mining Geologist
6.	Total Lease Area (Ha) with breakup of non-forest and forest land	Total Lease Area- 116.760 Ha, Forest- 115.05 Ha, Non-forest- 1.71 Ha
7.	Mine code	11ORI 19014
8.	IBM Registration Number under rule 45 of MCDR, 2017	IBM/4200/2011
9.	Name of the lessee, Address, phone, email and fax number.	M/s Indian Metals & Ferro Alloys Ltd. At- Bomikhal, PO- Rasulgarh Bhubaneswar- 10 Phone No.- 06742580100 Email- minesplanningcell@imfa.in
10.	Village	Kaliapani
11.	Taluka/Mandal	Sukinda
12.	District	Jajpur
13.	Pin code	755047
14.	State	Odisha
15.	Post office	Kaliapani
16.	Nearest police station	Kaliapani
17.	Nearest Railway station	J K Road
18.	Date of Grant of Mining Lease	17.08.1999
19.	Date of Execution	04.09.1999
20.	Date of opening of Mine	15th September 1999
21.	Date of expiry	03.09.2029. However, as per The Mines and Minerals (Development And Regulation)

		Amendment Act, 2015, the lease period of the mine is deemed to be extended up to 03.09.2049.
22.	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Mr. C R Ray IMFA Building At/Po - Bomikhal, Rasulgarh, BBSR. District: Khurda, State: Odisha, Pin code: 751010 Phone: (0674) 2580100/125, Fax: (0674) 2580020 Email id: crray@imfa.in
23.	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Mr. Lalatendu Mahapatra, At- Kaliapani, Po- kaliapani Via – Sukinda, Dist – Jajpur, 755047 Phone No.- 06742580100 Email- lalatendumahapatra@imfa.in Date of Appointment-24/01/2022
24.	Name of the Mines Manager with Address, mobile no, email, fax number and date of appointment in mine	Mr. Saroj Kumar Mahanta, First class Mines Manager certificate of competency (U/R) Kaliapani, Jajpur, 755047 Mob.9937431477, Email-sarojmohanta@imfa.in Date of appointment:-11/09/2023
25.	Name of the Mining Engineer , Qualification and total experience with Address, mobile no, email, fax/phone number and date of appointment in mine	Mr. Saroj Kumar Mahanta, First class Mines Manager certificate of competency (U/R) Kaliapani, Jajpur, 755047 Mob.9937431477, Email-sarojmohanta@imfa.in Date of appointment:-01/08/2023
26.	Name of the Geologist , Qualification and total experience with Address, mobile no, email, fax number and date of appointment in mine	Mr. Bhakta Hari Das, M. Sc. in Geology, 14 years bhaktaharidas@imfa.in Mob.- 9777444152 Kaliapani, Jajpur, 755047 Date of appointment:-03.12.2023 Full Time
27.	Date of Approval of Mining Plan/ Review of Mining Plan/ their modifications with five-year period and specific condition in approval letter, if any.	1st MP Dtd: 18.11.1999, Period- 1999-00 to 2003-04 1st Mod MP: Dtd: 18.10.2002 ,Period- 2002-03 to 2003-04 1st MS: Dtd: 25.06.2004, Period- 2004-05 to 2008-09 1st Mod of 1st MS:Dtd: 06.05.2005, Period- 2004-05 to 2008-09 2nd Mod of 1st MS: Dtd: 14.06.2007, Period- 2004-05 to 2008-09 2nd MS: Dtd: 01.01.2010, Period- 2009-10 to 2013-14 1st Mod to 2nd MS: , Dtd: 14.09.2012, Period- 2012-13 to 2013-14 3rd MS: Dtd: 31.07.2013, Period-2014-15 to 2018-19 1st Mod to 3rd MS: , Dtd: 23.09.16, Period- 2016-17 to 2018-19

		2nd Mod to 3rd MS: MPM/FM/25-ORI/BHU/2017-18/2815 Dtd: 14.02.2018 4th RMP : MS/FM/27-ORI/BHU/2018-19/1796 Dtd: 31.10.2018 1st Mod:MRMP/A/40-ORI/BHU/2020-21 Dated 13.01.2021 1st MRMP/A/40-ORI/BHU/2021-22 Dated 05.04.2022 5 th RMP: MCDR-MiFLOCR/13/2023-BBS- IBM_RO_BBS Dated 15/01/2024
28.	Mineral (s) granted in lease and proved for mining.	Chromite
29.	Method of Mining (Opencast, Underground)	Opencast
30.	Category (Fully Mechanised, Others or Manual)	A – Fully Mechanized
31.	Captive/Non-Captive	Captive
32.	Present EC Capacity	6 LTPA

Exploration:---

SL.No	Item	Proposals (FY 2023-24)	Actual work	Remarks
1a	Backlog of previous year	Nil	Nil	
1b	Exploration over lease area for Geological axis 1 or 2.	Nil	G1-46.76Ha, G2-70.00Ha, 09 nos	09 bore holes carried out to explore the deeper continuity of both Band- I & II ore body for underground mining purpose.
1c	Exploration Agency & Expenditure in lakh Rupees during the year	NA	Maheshwari Mining Private Ltd. 82817515/-	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	Entire potential mineralized area has been explored under G1 level of exploration.
1e	Balance reserves as on 01.04.2024.	Nil	146.166 Lakh tonnes	Nil

	(Proved + Probable)			
1f	General remarks of inspecting officer on geology, exploration etc.	No Backlog and exploration proposal for the year 2023-24 however Lessee has explored 9boreholes to prove the vertical extension of the ore body.		

Development:--

SL.No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
2a	Location of development w.r.t. lease area	Band I Quarry 372358E to 372593E and 2326428N to 2326647N Band II Quarry 372491E to 372897E and 2326145N	Broadly within the limit of proposals.	Nil
2b	Separate benches in topsoil, overburden and mineral	Topsoil- Nil, Overburden and mineral- Yes	As per Proposal	Nil
2c	Stripping ratio or OB to Ore ratio	1:3.21 (BI+BII)	1:3.22 (BI+BII)	Nil
2d	Quantity of topsoil generation in m3	Nil	Nil	Nil
2e	Quantity of overburden generation in m3	1030000	1030000	Nil
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	For the year 2023-24 there was a proposal to excavate 1100 tonnes of Waste and 30000 tonnes of ROM by grab trial mining method, which has not been carried out, for which violation issued under Rule 11(1) of MCDR-2017.		

Exploitation:--

SL.No	Item	Proposals (FY 2023-24)	Actual work	Remarks
3a	Number of pits proposed	2	2	Nil

	for production			
3b	Quantity of ROM mineral production proposed	350000	318973	Less achieved due to failure of Grab mining, violation issued under Rule 11(1) of MCDR-2017.
3c	Recovery of salable/usable mineral from ROM production	100.00%	100.00%	Nil
3d	Quantity of mineral reject generation	20000	Nil	Violation issued under Rule 11(1) of MCDR-2017.
3e	Grade of mineral reject generation and threshold value declared	10-30% Cr2O3	Nil	Violation issued under Rule 11(1) of MCDR-2017.
3f	Quantity of sub-grade mineral generation	20000	Nil	Violation issued under Rule 11(1) of MCDR-2017.
3g	Grade of sub-grade mineral generation	10-30% Cr2O3	Nil	Violation issued under Rule 11(1) of MCDR-2017.
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized	Mechanized	Nil
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	NA	NA	Nil
3j	Provision of drilling & blasting in mineral	115 mm diameter Drilling in staggered pattern and controlled blasting	As per proposal	Nil

	benches			
3k	Provision of mining machineries in mineral benches	Excavator-5 nos Dumper-27 nos Drill Machine- 2 nos Dozer-2 nos Grader- 1 no Front end Loader- 2 JD Backhoe loader- 1 no Water Tanker- 7 no Explosive Van- 1 no Diesel dispensing unit- 1 no Pumps & Diesel generator- As per requirement Light vehicles- 8 nos	As per proposal	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height- Max. 8 m. Width- 8 – 12 m.	As per proposal	Nil
3m	Total area covered. under excavation/pits	36.862	34.207	O/C working & reclamation area
3n	Ore to OB ratio for the pit/mine during the year	1:3.21 (BI+BII)	1:3.22 (BI+BII)	Nil
3o	Total area put in use under different heads at the end of year	Land Use Area in Hect. Area Under Mining- 36.862 Overburden & Sub grade Dump - 51.161 Mineral Storage- 5.605 Infrastructure- 10.284 Roads- 4.066 ETP- 3.484 Township- 1.05 Safety Zone-	Land Use Area in Hect. Area Under Mining- 34.207 Overburden & Sub grade Dump - 51.497 Mineral Storage- 5.572 Infrastructure- 11.529 Roads- 5.173 ETP- 3.484 Township- 1.05 Safety Zone-	Nil

		4.138 Magazine- 0.110 ----- Total-116.760	4.138 Magazine- 0.110 ----- Total-116.760	
3p	Production of ROM mineral during last five-years period , as applicable	2019-20=351000MT 2020-21=280000MT 2021-22=351000MT 2022-23=310000 MT 2023-24= 350000MT	2019-20=320141 MT 2020-21=266493MT 2021-22=256659 MT 2022-23=280611 MT 2023-24= 318973MT	Nil
3q	General remarks of inspecting Officer on method of mining etc	It is observed that there is a major variation in grade of Cr2O3 Ore (Mineral Reject, +10 to -30% Cr2O3) produced in the mine with respect to the approved proposal, for which violation issued. Also ROM quantity (30000 tonnes) proposed to achieve by grab trial mining method, which has not been carried out, for which violation issued under Rule 11(1) of MCDR-2017.		

Solid Waste Management-Dumping:--

SL.No	Item	Proposals (FY 2023-24)	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32, 33)	Topsoil- Nil OB & mineral reject -Yes	As per Proposal	Nil
4b	Location of topsoil, OB & mineral reject dumps	Topsoil- NA Overburden- E2055 N1945, E3165 N2304 Mineral Reject - NA	Topsoil- NA Overburden- E2055 N1945, E3165 N2304 .Mineral Reject - NA	Nil
4c	Number of dumps within lease area and outside lease area	Within Lease- One Outside Lease- Nil	Within Lease- One Outside Lease- Nil	Nil
4d	Location of dumps w.r.t. ultimate pit limit	E2055/N1945 to E3165/N2304 Outside the UPL	E2055/N1945 to E3165/N2304 Outside the UPL	Nil
4e	Number of active & alive dumps	One	One	
4f	Number of	Nil	Nil	Nil

	dead dumps			
4g	Number of dumps stabilized	Partly active dump, E2249,N1755 E2556 N1999 Waste dump	Partly active dump, E2249,N1755 E2556 N1999 Waste dump	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 dump	Retaining wall - Repair & maintenance Garland drain – Repair & maintenance	As per Proposal	
4j	Number of settling ponds	Maintenance	As per Proposal	Nil
4k	Specific comments of inspecting Officer on waste dump management	Waste dumping carried out as per proposal		

Solid Waste Management-Backfilling:--

SL.No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	Yes	Yes	NIL
5b	Area under backfilling of mined out area	24000 m2	30406 m2	NIL
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area	Nil	Nil	NIL
5d	Total area fully reclaimed & rehabilitated	Reclamation	Reclamation continuing	NIL

5e	General remarks of inspecting Officer on backfilling and reclamation etc	Backfilling is carried out as per proposal.
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Progressive Mine Closure Plan: ---

SL.N.	Item	Proposals (FY 2023-24)	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 26(2). (Hard copy same provided)	Before 1st of July-24	Submitted vide letter no IMFA/SMC/24/437 Dt- 27.06.2024	NIL
6b	Management of worked/mined out benches i) Area available for rehabilitation (ha) ii) Afforestation done (ha) iii) No. of saplings planted during the year iv) Cumulative no. of plants v) Any other specific method of rehabilitation vi) Cost incurred on watch & care during the year	i) Nil ii) Nil iii) Nil iv) Nil v) Nil vi) Nil	i) Nil ii) Nil iii) Nil iv) Nil v) Nil vi) Nil	NIL
6c	Compliance on reclamation and rehabilitation by backfilling i) Voids available for backfilling (L X B X D) ii) Void filled by waste/tailings iii) Afforestation on the backfilled area iv) Rehabilitation by making water reservoir	i) 297*85*20m ii) 3.07 lakh CuM iii) Nil iv) Nil	i) 306*99.34*16.35 m ii) 497034 CuM iii) Nil iv) Nil	

	v) Any other specific means	v) Nil	v) Nil	
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	i) Afforestation on OB dump slope 2750 nos ii) Rehabilitation of OB Dump slope 1.10 iii) Plantation and Coir matting	i) Afforestation on OB dump slope 2775 nos ii) Rehabilitation of OB Dump slope 1.10 iii) Plantation and Coir matting	
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Quarterly monitoring of AAQ, Water Quality and Noise level through a recognized Environmental consultant	Quarterly monitoring of AAQ, Water Quality and Noise level are being carried out through a recognized Environmental consultant, M/S Sophisticated Industrial Materials Analytic Labs. Pvt. Ltd.	
6f	General remarks of inspecting Officer on PMCP compliance & progressive closure operation etc	Afforestation on OB dump slope 2775 nos saplings with 94% survival rate has been carried out by the Lessee.		

Mineral Conservation: ---

SL.No.	Item	Proposals ((FY 2023-24)	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting with in the Lease area and dispatched	As per proposal	NIL
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Mechanized	Mechanized	NIL
7c	Different grade of mineral sorted out at mines	Below 30% , 30% to below 52% and Above 52%	As per proposal	NIL
7d	Any beneficiation	Nil	Nil	NIL

	process at mines			
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Environment:--

SL.No.	Item	Proposals (FY 2023-24)	Actual work	Remarks
8a	Separate removal and utilization of topsoil	Nil	Nil	NIL
8b	Concurrent use or storage of topsoil	Nil	Nil	NIL
8c	Separate dumps for overburden, waste rock, rejects and fines	Yes	As per proposal	NIL
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No	No	NIL
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Rehabilitation of OB dump-Planting of 2750 nos of plants covering an area of 1.1 ha. and Coir matting of 5000 Sq. mtr.	Rehabilitation of OB dump -Planted of 2775 nos of plants covering an area of 1.1 ha. and Coir matting of 5600 Sq. mtr.	NIL
8f	Baseline information on existence of plantation & additional plantation done	2750 no's plants	Plantation done as per approved MRMP. Besides plantation has also been carried out at outside of the lease area . Till 2023-24, total 88124 nos of plants have been planted over lease area covering an area of 28.86 ha. Similarly, till 2023-24, total 15915 nos of plants have been planted at outside of lease area covering an area of 8.93 ha.	NIL
8g	Survival rate	NIL	94% (Inside), 91% (Outside)	NIL
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on road by water tanker, fixed Sprinkler, fixed & mobile mist cannon.	Being done by water tanker, fixed Sprinkler, fixed & mobile mist cannon.	NIL

Compliance of Rule 45

SL.No.	Item	COMMENTS		Remarks.
9a	Status of submission of Monthly and Annual returns	Regularly submitting the MRs/ARs on-time. Submission of AR 2023-24 was not due at time of inspection.		NIL
S.N.	Item	Details given in A.R. for the year 2023-24	Observation of I/ Officer	-----
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Sh. Saroj Kumar Mahanta, Mines Manager & Mining Engineer Sh. Bhakta Hari Das, Mine Geologist	Actual also the same.	-----
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	(1) Covered under current (O/ C) Workings- 31.167Ha. (2) Used for Waste Disposal 51.497 Ha. (3) Occupied by plant, buildings, residential, welfare, buildings and roads- 17.752 Ha. (4) Other Purpose (including Mineral	Actual also as per AR at that time.	-----

		Storage)- 13.304 Ha 5. Reclaimed-rehabilitated-3.040		
9d	Scrutiny of Annual return on afforestation	2775 nos WML	Actual also as per AR	-----
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	During year-23-24 Generation of MR. Chromite: from Unprocessed Ore (10-30 % Cr2O3) NIL, Chromite: From Processed Ore (10-30 % Cr2O3) NIL	Violation issued for major variation in grade of Cr2O3 Ore (Mineral Reject, +10 to -30% Cr2O3) produced in the mine with respect to the approved proposal.	-----
9f	Scrutiny of Annual return on ROM stock and/or graded ore	As on 31.03.2024 ROM: 612929 Below 40% Cr2O3 lumps: 158.14 40-52% lumps: 100.01 >52% lumps: NIL Below 40% Cr2O3 Fines: 236.053 40-52% Fines: 361.713 >52% lumps: 17928.459	Appear to be correct at that time.	-----
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Ex. Mine price: Below 40% Cr2O3: 7369/- 40-52%:7369/- >52%: 7369/- for both lumps and fines	Appear to be correct	-----
9h	Scrutiny of Annual return on fixed assets	Fixed Value of Assets: Rs.87,34,19,107/-	Appear to be Correct.	-----
9i	Scrutiny of Annual return on mining machineries	Excavator-6 nos Dumper-27 nos Drill Machine- 2 nos Dozer-3 nos Grader- 2 nos Water Tanker- 9	Observed to be correct.	-----

		nos Explosive Van- 1 no Diesel dispensing unit- 1 no Ambulance- 1 no Diesel generator- 4 nos Pump set- 1 no		
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(10) Violation observed during current inspection and compliance position of earlier

Violation pointed out:

- (a) Compliance position of earlier violation pointed out: Nil
- (b) During current inspection: The violations of Rule 11 (1) of MCDR 2017 have been observed and the violation letter issued on 07/01/2025.
- (11) The lessee was submitted DAI/drone survey data under rule 34A for FY 23-24 on 29/06/2024.

Rohita Sethi
Assistant Controller of Mines