

MCDR inspection REPORT

Jabalpur regional office

Mine file No : MP/SATNA/OCH-44MPR35176

Mine code : 44MPR35176

- (i) Name of the Inspecting : **G007**) **RAGHUBIR SHARAN GARG**
Officer and ID No.
- (ii) Designation : Assistant Controller Mine
- (iii) Accompanying mine : Mohammad Kafil, Mining Engineer, Dharmendra Pandey, G
Official with
Designation
- (iv) Date of Inspection : 29-JUL-23
- (v) Prev.inspection date : 15-MAR-17

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **KARIGOHI (15.621 HA)**
- (b) **Registration NO.** : **IBM/7075/2011**
- (c) Category : B Manual
- (d) Type of Working : Opencast
- (e) Postal address
State : MADHYA PRADESH
District : SATNA
Village : KARIGOHI
Taluka : MAJHGAON
Post office : JAITWARA
Pin Code :
FAX No. : 07622453141
E-mail : nikoonib@gmail.com
Phone : 9575414141
- (f) Police Station :
- (g) First opening date :
- (h) Weekly day of rest : SUN
2. Address for : M/S RAKESH AGENCIES
correspondance P.O. JAITWARA
DISTT. SATNA (M.P.) 485221
3. (a) Lease Number :
- (b) Lease area : **15.62**
- (c) Period of lease : **50year**
- (d) Date of Expiry : 15/12/2053
4. Mineral worked : OCHRE Main

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5. Name and Address of the

Lessee : RAKESH AGENCIES
P.O. JAITWARA SATNA
MADHYA PRADESH
Phone:N. A.
FAX :N. A.

Owner : RAKESH AGENCIES
P.O. JAITWARA SATNA
MADHYA PRADESH
Phone: N. A.
FAX : N. A.

6. Date of approval of Mining :
Plan/Scheme of Mining

1. MP/Satna/Ochre-7/MPLN/G-20/02-03 dated 13/05/2003 period from 16/12/2003 to 31/03/2008
- 2 . MP/Satna/Bauxite/RMPN-14/2021- 22 dated 09/07/2021 period from 2021-22 to 2022-23
3. E 2361 MCDR-MPC0BXT/2/2022-JBP-IBM_RO_JBP dated 22/03/2023 period from 2023-24 to 2027-28

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PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	There was no backlog of proposed exploratory work	Not applicable as there was no backlog of proposed exploratory work.	No deviation
1b	Exploration over lease area for geological axis 1 or 2	There is no exploratory proposal to convert entire mineralised area into G1 or G2 level.	Entire mineralised area already explored under G1 level	No deviation
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not proposed.	Not applicable.	No deviation.
1d	Balance area to be explored to bring Geological axis in 1 or 2	There was no proposal as there is no more area to explore under G1 or G2 level.	Not applicable.	
1e	Balance reserve as on 01/04/20	As per RMP approved on 22/03/2023 Reserves as on 01/04/2023 111-197212MT 211-45538.85MT	As per RMP approved on 22/03/2023 Reserves as on 01/04/2023 111-197212MT 211-45538.85MT	In RMP approved on 22/03/2023 reserves assessment carried out as on 01/10/2022. For updation of reserves as on 01/04/2023 total production achieved from the mine from October, 22 to March, 23 i.e. 3180 tone have been taken into account for updation of proposed as well as actual reserves. Accordingly both the figures are same.

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1f	General remarks of inspecting officers on geology, exploration etc	Mineral deposit of the lease area is part of Vindhyan super group of Rewa formation. Entire lease area have explored under G1 level of UNFC.
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Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	It was proposed to develop Pit-2 towards south-west from 374 to 371.5mRL	Working carried out as per the proposals. In continuation to Pit No.1 extraction of mineral from statutory barrier zone between BP.no3/2 to BP no.3 was also observed.	Deviation related with extraction of mineral from statutory barrier zone has been pointed out through violation of rule 11(1) of MCDR,2017
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Yes, separate benches proposed	Working carried out in separate benches	
2c	Stripping ratio or ore to OB ratio	1:1.0 tonne/CuM	1:0.55 tone per cum	Less overburden/interburden generated during the year 2022-23
2d	Quantity of topsoil generation in m3	proposed 1410cum	Achieved 600cum	Reportedly Less generation of top soil as per site it is acceptable.
2e	Quantity of overburden generation in m3	proposed 2550cum	4475cum	certain part of top soil mixed with OB material.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc			There are 2 working pits of following dimensions were reported in draft ROMP as Pit No-1 (60m x 40m x (2-3)m), Pit No-2 (74m x 46m x 1.5-5m)

Exploitation:

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Sl.No.	Item	Proposals	Actual work	Remarks
3a	Number of pit proposed for production	Single Pit-2	Working carried out in Pit-2. Extraction of mineral from statutory barrier zone between BP No.3/2 to BP No.3 was also observed.	Observed deviation pointed out through rule 11(1) vide letter dated 09/08/2023
3b	Quantity of ROM mineral production proposed	8606tonne bauxite ore production proposed in 2022-23	8044tonne bauxite ore production achieved in 2022-23	-
3c	Recovery of sailable/usable mineral from ROM production	Proposed as 60% of total ROM	Achieved as 60% as proposed	Recovery study report not submitted. However an undertaking given in ROMP for carrying out the same.
3d	Quantity of mineral reject generation	Not proposed	Nil	Not generated.
3e	Grade of mineral rejects generation and threshold value declared.	Not envisaged in approved RMP	Not applicable as no reject generation from the mine.	Not applicable
3f	Quantity of sub grade mineral generation.	Not proposed	Nil	Sub grade mineral not generated.
3g	Grade of sub grade mineral generation	Not proposed	Not applicable as nil generation of sub grade mineral from the mine.	Not generated. during the year.
3h	Manual / Mechanised method adopted for segregating from ROM	Manual sizing & sorting proposed	Manual sizing & sorting carried out as proposed. occasionally screening is also carried out through portable screening machine which may be accepted in the light of mineral conservation.	-
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Not proposed	Not carried out during the year.	-
3j	Provision of drilling and blasting in mineral benches	Not proposed	Nil	This is B category manual method of working proposed & being carried out

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3k	Provision of mining machineries in mineral benches	Manual method of mining proposed	Manual method of mining carried out	Document having proposal from 2023-24 to 2027-28 had been approved on 22/03/2023 with mechanised method of extraction of mineral from the min.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes, benches height in ore & OB found suitable	Yes, benches height in ore & OB found suitable	
3m	Total area covered under excavation/pits	Proposed as 0.28Ha	Achieved as 0.22 Ha	
3n	Ore to OB ratio for the pit/mine during the year.	1:1.0	1:0.55	
3o	Total area put in use under different heads at the end of year	As per the previous approved ROMP dtd 09.07.2021 Pits-2.07Ha	As per the Annual return for 2021-22 Pits-1.15 Ha Mineral Storage-0.25Ha Waste Dumps-0.28Ha Infrastructure-0.17Ha Other-0.17Ha	Overall total area utilised under mining and allied activities are almost same as envisaged in earlier approved RMP applicable upto 31/03/2023 for which valid financial assurance is submitted to IBM. However a new document with proposal from 2023-24 to 2027-28 with mechanised proposal had approved for which valid financial assurance is also with IBM.
3p	Production of ROM mineral during the last five year period as applicable	2018-19-: No Proposals 2019-20-: No Proposals 2020-21-: No Proposals 2021-22-: 5992 MT 2022-23-: 8606MT	2018-19-: No Proposals 2019-20-: No Proposals 2020-21-: No Proposals 2021-22-: 5802 MT 2022-23-: 8044MT	

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3q General remarks of inspecting officers on method of mining etc.

Open cast manual method of working proposal by using dumper combination without deep/shallow drilling and blasting was effective only upto 31/03/2023. A new document with proposal from 2023-24 to 2027-28 with mechanised proposal got approved on 22/03/2023.

Solid Waste Management - Dumping:

Sl.No.	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Top soil proposed for bund formation & OB for simultaneous backfilling	Top soil and OB/interburden generated during the year 2022-23 utilised as per approved proposal. However a stack of about 200-300cum was seen within the lease area. Reportedly it will be utilised in preparation of bund and in plantation of saplings.	
4b	Location of topsoil, OB and mineral reject dumps	Not proposed	N2552800and E496750	Stacked top soil likely to be utilised in plantation scheduled for 2023-24 and rest in preparation of bund.
4c	Number of dumps within lease area and outside of lease area	Concurrent use of top soil & OB proposed	Except a stock of top soil there is no external dumping of OB	As stated in earlier, stacked top soil likely to be utilised mainly in plantation and rest in preparation of bund.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not proposed	Not applicable as there is no external dumping of OB and waste material.	

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4e	Number of active and alive dumps.	Not proposed	There is no external dumping of OB & mine waste . Only a small quantity of top soil stacked which will be utilised mainly in plantation during 2023-24.	
4f	Number of dead dumps.	No dead dumps in ML area	No dead dumps in ML area	-
4g	Number of dumps established.	Nil	Nil	No dead OB dumps in the lease area
4h	Whether Retaining wall or garland drain all along dumps are there.	No Proposals	Not seen. In fact there is small heap of soil which will be utilised in plantation proposed against 2023-24 and rest small quantity if remains utilised in bund preparation.	
4i	Length of Retaining wall or garland drain all along dumps	Not proposed	Not applicable as there is no prominent dump within lease area.	
4j	Number of settling ponds	No Proposals	Nil	
4k	Specific comments of inspecting officer on waste dump management			Mine waste /OB/ top soil generated during mining operation is utilised in simultaneous reclamation and rehabilitation of mined out area. There is no issue related with handling of OB including top soil and mine waste as simultaneously utilised.

Solid Waste Management - Backfilling:

Sl.No.	Item	Proposals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	0.18hect	0.17hect	Little less production.

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5b	Area under backfilling of mined out area	0.19hect	0.10hect.	Less generation of OB/IB/Mine waste.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent use of top soil for rehabilitation of mined out area.	Partly utilised in rehabilitation of mined out area and partly stacked for the purpose of plantation envisaged against 2023-24.	Accepted.
5d	Total area fully reclaimed and rehabilitated	0.30hect	0.10hect	Only reclamation work carried out. Rehabilitation remains to be carried out. Less generation of OB/IB/Mine waste is reason for less reclamation.
5e	General remarks of inspecting officers on backfilling and reclamation etc.			Simultaneous backfilling and reclamation work initiated by the lessee. Although it is lacking than the proposed one mainly due to reopening of mine only one year before and less generation of OB/IB/Mine waste. Considering the fact violation not pointed out.

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).	Yes.	PMCP report against 2022-23 submitted with AR, 2022-23	No deviation
6b	Area available for rehabilitation (ha) .	0.11hect	Rehabilitation work not seen during the inspection. However soil is stacked for the purpose of plantation overbackfilled area and as per discussion it will be completed in current monsoon season over reclaimed area.	Deviation not pointed out as discussed in para 6(a) of the report.

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6c	afforestation done (ha).	0.16hect	As proposed plantation on both sides of the road bifurcating lease area in two parts have been carried out.	
6d	No. of saplings planted during the year	200 Nos of saplings were proposed in 2022-23	200 saplings planted during the year 2022-23	As discussed in previous para plantation on bothsides of the roadhave been carriedout.
6e	Cumulative no .of plants	NA	NA	No information furnished in approved document
6f	Any other method of rehabilitation	Not proposed	Not adopted	OK
6g	Cost incurred on watch and care during the year	Not proposed	NA	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	During the year 2021-22, backfilling by waste material was proposed towards the north-western part between BP/16/3 to BP/16/5 (N2752600 to N2752710 & E496700 to 496720)	Voids available 0. 60hect	Working not carried out as proposed, violation of rule 11(1) pointed out.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	0.19hect	0.10hect	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on on backfilledarea	0.11hect	Nil	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not proposed	Not done	No deviation

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6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal	Not applied	ok
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Plantation on both side of road passing through the lease area.	As per proposal plantation carried out.	ok
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No proposal	Not done	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal	Not applied.	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Periodical Air, Water, Noise monitoring Proposed	Yes, Compliances of environmental monitoring is being carried out.	Analysis reports were provided
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Mine re-opened in 2021-22 &, hence comparatively less backfilling/reclamation & rehabilitation doesn't exist in compression to proposed one. Periodic monitoring is being carried out by outsourced consultant.

Mineral Conservation:

Sl.No.	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	8606 Tones of bauxite production proposed in 2022-23 for dispatches	8018 Tones of bauxite production carried out in 2022-23 for dispatches	Comparatively more production than the last year but within proposed limit for the year under review.

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7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual method for sizing & sorting proposed	Manual method for sizing & sorting adopted.	A new RMP document having proposal from 2023-24 to 2027-28 have been approved with mechanised method of mining. A portable screening machine was seen on site although it was not in operation on the date of inspection as mining operation was found closed on the date of inspection. .
7c	Different grade of mineral sorted out at mines.	Bauxite of chemical grade-Al ₂ O ₃ : +46%, SiO ₂ : (-) 5% Cement Grade Bauxite: Al ₂ O ₃ : 30-45%, SiO ₂ : 10% Max, Fe ₂ O ₃ -10-30%	Bauxite of chemical grade-Al ₂ O ₃ : +46%, SiO ₂ : (-) 5% Cement Grade Bauxite: Al ₂ O ₃ : 30-45%, SiO ₂ : 10% Max, Fe ₂ O ₃ -10-30%	
7d	Any beneficiation process at mines .	No Proposals	Portable screen plant was existing in ML area for screening of ore	Portable screen plant was existing in ML area for screening of ore
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Mineral is being conserved by grade wise sorting in the lease area. Bauxite having - +46%, SiO ₂ : (-) 5% proposed to be sorted for chemical grade and rest non-plant grade (NPG) bauxite proposed to be sell to the nearby cement plants.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
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8a	Separate removal and utilization of topsoil (Rule 32)	Concurrent use for reclamation of mined out area and plantation proposed	Concurrently top soil generated during mining operation utilised in reclamation of mined out area. However certain quantity of top soil stacked separately for envisaged plantation during 2023-24.	Acceptable
8b	Concurrent use or storage of topsoil	Concurrent use for reclamation of mined out area and plantation proposed	In addition to concurrent use of top soil it is stacked separately for envisaged plantation during 2023-24.	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Not proposed as simultaneous use of OB/IB/Mine waste in reclamation of mined out area.	Separate dumping of OB/IB/Mine waste not required as simultaneous reclamation is adopted as per approved proposal. However certain quantity of top soil were seen separately stacked for plantation purpose, envisaged against 2023-24.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Concurrent use for backfilling was proposed during the year 2021-22	As per approved proposal	OK
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Reclamation and rehabilitation of mined out area proposed.	Reclamation of mined out area have been done as per approved proposal. Rehabilitation of mined out reclaimed area so far not started as the year under review was first year of reclamation. Preparatory work for reclaimed area were seen during inspection. There was no proposal of rehabilitation of old dumps as there is no prominent old dump exist within lease area.	OK

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8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	150saplings over 1100sqm reclaimed area	200	
8g	Survival rate	80%	70%	
8h	Water sprinkling on roads to control airborne dust	Water sprinkling is proposed by water tanker	Regular water sprinkling is done by water tanker	Water tanker of suitable capacity is provided for the purpose
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			Aesthetic beauty in and around mine area is not below the level of satisfactory as naturally grown plants are there in nearby lease area. Plantation on both side of road passing through the lease area have also done which gives nice look. Preparatory work for Plantation over reclaimed area were seen during site inspection.

Compliance of Rule 45:

Sl.No.	Item	Proposals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Submission of AR for 2021-22 72022-23 & MR upto July,2023	AR submitted for 2021-22 & 2022-23 MR submitted upto July,2023	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Given	Mining Eng. Shri Mohd Kafil and Shri Karim Mohamad as Geologist appointed	During the inspection mining engineer and Geologistboth were present
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Given	Pits-1.15 Ha Mineral Storage-0.25Ha Waste Dumps-0.28Ha Infrastructure-0.06Ha Other-0.13Ha	

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9d	Scrutiny of Annual return on afforestation	Given	200 saplings with 80% survival	Reportedly actual survival rate is 75%
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Not Given	Nil	OK
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Given	ROM stock Nil Grade wise stock:- Grade Cement Refractory Chemica	closing stock 872.4MT 11550.81MT5 1313.52MT
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Given	A-Sale value i. cement grade Rs.895/44 ii.Reefr.grade Rs.4260/25 Chem. Grade Rs.942/32 B-Ex Mine Price i. cement grade Rs.895/45 ii.Refr.grade Rs.4260/25 iii.Chem.Grade Rs.942/33 C Cost of prod.Rs. 1051/25	
9h	Scrutiny of Annual return on fixed assets	Given	Shovel 0.9cum bucket capacity 1 no	B category mine
9k	Scrutiny of Annual return on mining machineries	Given		Mining operation in the mine for year under review was B category manual means. A RMPhaving proposals from 2023-24 to 2027-28 approved on 23/03/2023 with mechanised method of working.

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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
1.	09/08/2023	11(1)	
2.	09/08/2023	34A	
3.	09/08/2023	45(7)	

(RAGHUBIR SHARAN GARG)

Indian Bureau of Mines