

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

**MCDR inspection REPORT
Jabalpur regional office**

Mine file No : MP/KATNI/BAUXITE-59

Mine code : 07MPR47022

- (i) Name of the Inspecting : **G005**) **SANJAY M. GIRHE**
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine :
Official with
Designation
- (iv) Date of Inspection : 11-MAR-20
- (v) Prev.inspection date : 04-FEB-19

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **PADWAR BAUXITE 25.82HA.**
- (b) **Registration NO.** :
- (c) Category : A Other than Fully Mech.
- (d) Type of Working : Opencast
- (e) Postal address :
State : MADHYA PRADESH
District : KATNI
Village : PADWAR
Taluka : BAHORIBAND
Post office : PADWAR
Pin Code : 483440
FAX No. :
E-mail :
Phone :
- (f) Police Station :
- (g) First opening date : 17-NOV-14
- (h) Weekly day of rest :
2. Address for :
correspondance
3. (a) Lease Number : MPR2409
(b) Lease area : 25.82
(c) Period of lease : 30
(d) Date of Expiry : 12-FEB-42
4. Mineral worked : BAUXITE Main

5. Name and Address of the

Lessee : KATNI MINERALS PVT LTD
26, COMMERCIAL COMPLEX
HOUSING BOARD COLONY KATNI
KATNI MADHYA PRADESH
Phone:
FAX :

6. Date of approval of Mining : Mining Scheme rule 12 MCDR1988 01-MAR-16
Plan/Scheme of Mining

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	During the year 2018-19 two exploratory pits of 6mx6m6m & during 2016-17 & 2017-18 02 DTH holes were proposed	During the year 2018-19 two exploratory pits of 6mx6m6m carried out.	Violation of Rule 11(1) of not carrying out exploration in 2016-17 & 2017-18 by 02 DTH holes was issued
1b	Exploration over lease area for geological axis 1 or 2	During the year 2018-19 two exploratory pits of 6mx6m6m & during 2016-17 & 2017-18 02 DTH holes were proposed	During the year 2018-19 two exploratory pits of 6mx6m6m carried out.	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	During the year 2018-19 two exploratory pits of 6mx6m6m & during 2016-17 & 2017-18 02 DTH holes were proposed	Not Given	
1d	Balance area to be explored to bring Geological axis in 1 or 2	During the year 2018-19 two exploratory pits of 6mx6m6m & during 2016-17 & 2017-18 02 DTH holes were proposed	G-1 level area- Nil G-2 level area- 18.41Ha G-3 level area- 7.41Ha	

1e	Balance reserve as on 01/04/20	Reserves in Tonnes Probable (122)-852518MT Resources in tonnes Pre-Feasibility(221): 91287 MT Inferred Resources(333)-400200 MT Reserves/resources position as per SOM approved dtd 01.03.2016	Reserves in Tonnes Probable (122)-846151 MT Resources in tonnes Pre-Feasibility(221): 91287 MT Inferred Resources(333)-400200 MT Reserves/resources position as per AR 2018-19	No additional reserves have been estimated
1f	General remarks of inspecting officers on geology, exploration etc	NA	NA	Most of the mineralised lase area has not been explored fully as per UNFC Guidelines by the lessee in past. Hence, lessee was instructed to propose further exploration to convert G2 & G3 reserves/resources into G1 level of exploration. Accordingly, lessee has proposed sufficient exploration in ROMP for the period 2021-22 to 2025-26 as per the provisions of Rule 12(4) of MCDR,2017

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	It was proposed to work in pit-4 towards north-west and in amalgamated pit-5	Mine working was carried out as per the proposed locations during the year 2018-19	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	1 st bench - lateritic soil and laterite of average height 1.0 m 2 nd 3 rd bench- bauxite of average height 2.25 m	Working carried out as per the proposals	
2c	Stripping ratio or ore to OB ratio	Proposed as 1:0.78 Tonne/CuM	Acheived as 1: 0.23 Tonne/CuM	Variation due to less production of bauxite during the year
2d	Quantity of topsoil generation in m3	proposed as 11600.00 m3 during the year 2018-19	Acheived as 3900 m3 during 2018-19	Less top soil generation due to very less production during the year.
2e	Quantity of overburden generation in m3	Proposed as 13972.00 m3 during the year 2018-19	Generated during the year 2018-19 as 1463 m3	Less OB generation due very less production during the year
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	NA	NA	Total 14 working pits of different dimensions and maximum depth of bauxite mineralisation of 12m proved/established in Pit No-1 of 180m x (10-62)m x (2.5 - 12.0)m. Bauxite mineralisation very well seen in all the pits

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
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3a	Number of pit proposed for production	Working was proposed in pit no-4 & 5	Working carried out in pit no-4 & 5	
3b	Quantity of ROM mineral production proposed	74987 MT proposed in 2018-19	4140MT (Achieved in 2018-19)	Very less production due to poor demand in market as mentioned in approved ROMP
3c	Recovery of sailable/usable mineral from ROM production	Proposed as 70% of total ROM	Acheived as per proposals	Rest 30% is considered as top lateritic soil and laterite
3d	Quantity of mineral reject generation	Not Proposed	Nil	No mineral reject generation entire ROM is utilized as major bauxite and minor laterite mineral
3e	Grade of mineral rejects generation and threshold value declared.	NA	NA	No mineral reject generation entire ROM is utilized as major bauxite and minor laterite mineral
3f	Quantity of sub grade mineral generation.	Not Proposed	Nil	
3g	Grade of sub grade mineral generation	Not Proposed	Nil	
3h	Manual / Mechanised method adopted for segregating from ROM	Manual sizing & sorting proposed	Manual sizing & sorting carried out	
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	No drilling, blasting proposed during the year 2018-19	Nil	Bauxite ore/mineralisation is of soft nature and drilling, blasting not required.

3k	Provision of mining machineries in mineral benches	L & T PC-200 of 0.90 Cum capacity TATA Dumper model 2515, 10 T capacity Water Tanker - 5KL capacity Water pump with Diesel engine	L & T PC-200 of 0.90 Cum capacity TATA Dumper model 2515, 10 T capacity Water Tanker - 5KL capacity Water pump with Diesel engine	HEMM deployed are of in-house
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height of 2m proposed in OB Bench height of 3m proposed in bauxite ore	At some extent bench height is not regular due to quality constraints	
3m	Total area covered under excavation/pits	6.58 Ha area was proposed in approved SOM period i.e. 2016-17 to 2020-21	2.0 Ha area as on 01.04.2019. Less excavation area due to very less production in approved SOM period i.e. 2016-17 to 2020-21.	
3n	Ore to OB ratio for the pit/mine during the year.	Proposed as 1:0.79 Tonne/CuM & 1:0.78 in 2020-21	Acheived as 1:0.24 CuM/Tonnes in 2018-19	Only 1463 CuM OB/inter-burden generated during the year
3o	Total area put in use under different heads at the end of year	As per the previous approved SOM Pits-0.85 Ha Waste dumps-0.80Ha Infrastructure -0.10Ha Road-0.20Ha	Pits-2.00 Ha Waste dumps-1.80Ha Infrastructure-0.40Ha Road-0.50Ha As on 01.04.19 as per approved annual return 2018-19	Updated area put to use marked on surface/working plan
3p	Production of ROM mineral during the last five year period as applicable	2015-16-: 36463 MT 2016-17-: 74985 MT 2017-18-: 74260 MT 2018-19-: 74987 MT	2015-16-: 22195 MT 2016-17-: 3445 MT 2017-18-: 1459 MT 2018-19-: 1463 MT 2019-20-: 4323 MT	Production details as per the annual returns

3q	General remarks of inspecting officers on method of mining etc.	NA	NA	Open cast fully mechanised mining operation by using Excavator /JCB & dumper combination without drilling & blasting was proposed. Due to soft nature of bauxite drilling & blasting was not proposed.
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Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping proposed at earmarked location during the year 2018-19	Dumping carried out as per the proposals	Dumps locations duly marked on surface plan
4b	Location of topsoil, OB and mineral reject dumps	Dumping was proposed along north-western part of lease area	Dumping carried towards north-western part of lease area	
4c	Number of dumps within lease area and outside of lease area	There are 03 OB dumps in lease area	Three (03) OB dumps in lease area and no dumping outside ML.	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Dumps proposed outside ultimate pit limits	Dumping carried out outside UPL	
4e	Number of active and alive dumps.	Active dumps - 03 Nos	Active dumps -03 Nos	All 03 dumps are of OB dumps
4f	Number of dead dumps.	NA	NA	
4g	Number of dumps established.	NA	NA	
4h	Whether Retaining wall or garland drain all along dumps are there.	NA	Details not provided in approved document	

4i	Length of Retaining wall or garland drain all along dumps	NA	Details not provided in approved document	
4j	Number of settling ponds	NA	Details not provided in approved document	
4k	Specific comments of inspecting officer on waste dump management	NA	NA	Around 30% of OB and mine waste are being generated and dumping of these material proposed at earmarked locations. Top soil is mostly of lateritic soil.

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.	During the 2018-19 no backfilling was proposed	Not done	
5b	Area under backfilling of mined out area	NA	NA	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent use of top soil proposed	Concurrent use of top soil for plantation purpose carried out	
5d	Total area fully reclaimed and rehabilitated	NA	NA	
5e	General remarks of inspecting officers on backfilling and reclamation etc.	NA	NA	Details on backfilled area not provided in approved document.

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).	To be submitted before 1st July of every year	Not submitted within stipulated time	Violation of Rule 26(2) of MCDR,2017 pointed out during the inspection & issued
6b	Area available for rehabilitation (ha) .	NA	NA	
6c	afforestation done (ha).	NA	NA	No information is available
6d	No. of saplings planted during the year	200 Nos of saplings proposed to be planted	200 saplings planted in ML area	Plantation seen during the inspection with very less survival rate
6e	Cumulative no .of plants	NA	NA	No information is available
6f	Any other method of rehabilitation	Not Proposed	NA	No other method of rehabilitation proposed
6g	Cost incurred on watch and care during the year	NA	Not available	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D	Not proposed	NA	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not Proposed	NA	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	Not Proposed	NA	

6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not Proposed	NA	Bauxite ore is still existed in working pits, hence scope doesnot exist.
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Not Proposed	NA	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Not Proposed	NA	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Not Proposed	NA	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Not Proposed	Nil	
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.	Outsourced consultant engaged for env. monitoring
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	NA	NA	Area is devoid of OB/Waste, hence scope of backfilling/reclamation & rehabilitation doesn't exist. Periodic monitoring is being carried out by outsourced consultant.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	74987 MT proposed as total ROM production for despatch. Grade wise sorting proposed within lease area for high grade refractory & rest non-plant cement grade	1794 MT dispatched as Cement grade bauxite & rest 51941.53 7MT as closing stock at mine head	No refractory grade bauxite despatched during the year 2018-19
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual sizing & sorting proposed	Manual sizing & sorting carried out	Grade wise sorting is being done for cement & refractory grades of ore
7c	Different grade of mineral sorted out at mines.	Bauxite having >50% Al ₂ O ₃ & 6% SiO ₂ proposed to be sorted for Plant grade & rest cement grade bauxite	Sorting carried out as per the given proposals	
7d	Any beneficiation process at mines	Not Proposed	Nil	No beneficiation is required
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	NA	NA	Bauxite ore is being conserved by grade wise sorting in the lease area. Bauxite having >50% Al ₂ O ₃ & -6% SiO ₂ proposed to be sorted for refractory plant 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)	Not Proposed	NA	Mining lease area is devoid of top soil. Top soil is of lateritic soil proposed to stacked in previous 2 yrs & then propose for backfilling.
8b	Concurrent use or storage of topsoil	Not Proposed	Mining lease area is devoid of top soil. Top soil is of lateritic soil proposed to stacked in previous 2 yrs & then propose for backfilling.	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumping of OB proposed at earmarked locations	Dumping carried out at earmarked locations	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	OB dumping proposed during the year 2018-19	Dumping carried out at proposed locations	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Not Proposed	Not done	Area is not matured for backfilling so far
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	200 saplings proposed during the year 2018-19	200 saplings planted during the year 2018-19	
8g	Survival rate	Proposed as 80%	Acheived as 40%	Very poor survival rate due to scarcity of water

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 5KL capacity is provided for the purpose
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	NA	NA	Aesthetic beauty in and around mine area is not much satisfactory as plantation not done up to that extent. Hence, more planation within mining lease area & outside ML area is required.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	M.R. submitted upto-March-2020 A.R. submitted upto- 2018-19	Annual Return for the year 2018-19 submitted within time limit.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Given	Shri Shurabh Kumar Shukla appointed as Mining Eng. & Pranjal Jain as Geologist	During mine inspection both mining eng. & geologist were present
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Given	Pits-2.30 Ha Waste dumps-1.80 Ha Infrastructure-0.40Ha Road-0.50Ha	Details as online submitted return
9d	Scrutiny of Annual return on afforestation	Given	200 saplings planted within ML area	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Not Given	NA	

9f	Scrutiny of Annual return on ROM stock and/or graded ore	Given	Cement Grade: O/S-52273MT Production-1463 MT Despatch-1794 MT C/S-51941 MT
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Given	Cement grade limestone Rs-521.84/Tonne
9h	Scrutiny of Annual return on fixed assets	Given	Nil
9k	Scrutiny of Annual return on mining machineries	Given	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 11(1)	05-MAY-20		MCDR17	Rule 11(1)	05-MAY-20 05-FEB-21
MCDR17	Rule 26(2)	05-MAY-20	11-DEC-20			
MCDR17	Rule 31(4)	05-MAY-20	11-DEC-20			
MCDR17	Rule 45(1)	05-MAY-20	11-DEC-20			
MCDR17	Rule 35(2)	05-MAY-20	11-DEC-20			

Date :

(SANJAY M. GIRHE)

Indian Bureau of Mines