

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

**MCDR inspection REPORT
Ranchi regional office**

Mine file No : BIH/LOH/BX/209/RRO

Mine code : 07BHR33009

- (i) Name of the Inspecting : **K005**) **B.P. KERKETTA**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Shri Tusar Kanta Pradhan, Mines Manager
Official with
Designation
- (iv) Date of Inspection : 31/08/2019
- (v) Prev.inspection date : 09/03/2017

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **PAKHAR (15.58) 38.50**
- (b) **Registration NO.** : **IBM/961/2011**
- (c) **Category** : **A Other than Fully Mech.**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **JHARKHAND**
- District : **LOHARDAGA**
- Village : **PAKHAR**
- Taluka : **KISKO**
- Post office : **NARI-NAWADIH**
- Pin Code :
- FAX No. : **06526-224118**
- E-mail : **hindalco@adityabirla.com**
- Phone : **06526-224016, 224112**
- (f) **Police Station** : **KISKO**
- (g) **First opening date** : **26/04/1965**
- (h) **Weekly day of rest** : **TUE**
2. **Address for** : **VILL-PAKHAR**
correspondance : **TAL-KISKO**
: **DIST-LOHARDAGA**
3. (a) **Lease Number** : **BHR0271**
- (b) **Lease area** : **109.51**
- (c) **Period of lease** : **20**
- (d) **Date of Expiry** : **25/07/2028**
4. **Mineral worked** : **BAUXITE** **Main**

5. Name and Address of the

Lessee : MINERALS & MINERALS LTD.
 AT/PO-LOHARDAGA DIST-
 LOHARDAGA JHARKHAND
 LOHARDAGA JHARKHAND
 Phone:06526-224016
 FAX :06526-224118

Owner : BIJESH JHA
 COURT ROAD,LOHARDAGA PO &
 DIST. LOHARDAGA JHARKHAND
 LOHARDAGA JHARKHAND
 Phone: 06526224016
 FAX : 06526224118

Agent : MANOJ KUMAR NAYAK
 HINDALCO INDUSRTIS LTD,
 COURT ROAD, LOHARDAGA JHK
 LOHARDAGA JHARKHAND
 Phone: 9617779670
 FAX :

Mining Engineer

Name : P. K. BHALEKAR,Full Time
 Qualification : B.E.(MINING)
 Appointment/ : 15/04/2013 24/01/2019
 Termination date

Mining Engineer

Name : TUSAR KANTA PRADHAN,Full Time
 Qualification : B.TECH(MINING)
 Appointment/ : 25/01/2019
 Termination date

Manager

Name : P. K. BHALEKAR
 Qualification : B.TECH (MINING)
 Appointment/ : 15/04/2013 24/01/2019
 Termination date

Manager

Name : TUSAR KANTA PRADHAN
 Qualification : B.TECH(MINING)
 Appointment/ : 25/01/2019
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining : Existing rule 11 MCDR1988 12/02/1992
 Renewal under rule 24 MCR1960 27/04/1995
 Mining Scheme rule 12 MCDR1988 08/02/2002
 Renewal under rule 24 MCR1960 09/12/2005
 Mining Scheme rule 12 MCDR1988 12/08/2013
 MP modif under MCR 1960 09/05/2016
 MP review under 17(1) MCR 2016 20/12/2018

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	nil	nil	The area is almost explored previously and during 2015-16. Total three Boreholes were drilled on Southern part of the lease area around the dump to explore the bottom of the dump and found to be positive and considerable thickness of Bauxite encountered in each boreholes. Therefore, the entire area is already explored and almost exploited. No further exploration is proposed.
1b	Exploration over lease area for geological axis 1 or 2	nil	nil	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Nil	South West Pinnacle Exploration Limited, Expenditure:RS 20,09,700/-(@ Rs 1650/- per meter) during 2015-16.	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil	
1e	Balance reserve as on 01/04/20	Proved Reserve 111: 258Te Feasibility mineral resource 211: 617551Te Pre-feasibility mineral resource 221: 87766Te	Proved Reserve 111: 88087Te as on 01/04/2019. Feasibility mineral resource 211: 617551Te Pre-feasibility mineral resource 221: 87766Te	There was no production during Year 2015-16 & 2016-17. The mining operation was discontinued since 09/09/2014 and restarted on 30/08/2017.

1f	General remarks of inspecting officers on geology, exploration etc	There was no production during Year 2015-16 & 2016-17. The mining operation was discontinued since 09/09/2014 and restarted on 30/08/2017. Therefore, the mine has Proved reserve 111: 88087Te Feasibility mineral resource 211: 617551Te Pre-feasibility mineral resource 221: 87766Te as on 01/04/2019.No exploration was proposed and carried out during last year 2018-19.
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	N108-N207 E2156-E2227	N108-N207 E2156-E2227	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Yes	Yes	
2c	Stripping ratio or ore to OB ratio	1:1.05	1:4.20	
2d	Quantity of topsoil generation in m3	8518	70192	
2e	Quantity of overburden generation in m3	16515	148986	

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	During previous year 2018-19, it was proposed that vacant area in the Southern part, Quarry No.2A will be converted to Reservoir for irrigation purpose with Stone pitching in the backfilled areas as well as on the southern side as per Development Plan 2018-19 (Plate No. 8). But it was observed that no Reservoir for irrigation purpose with Stone pitching has been made in the above said area.	A violation letter to this effect has been issued vide violation letter no.BIH/LOH/BX/209/RRO dated 16/09/2019.Its compliance is awaited.
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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	1	1	
3b	Quantity of ROM mineral production proposed	35897 Te	35500 Te	
3c	Recovery of sailable/usable mineral from ROM production	35897 Te	35500 Te	
3d	Quantity of mineral reject generation	3902cum.	nil	
3e	Grade of mineral rejects generation and threshold value declared.	Threshold Value: Al2O3- 30% (min) and Silica (reactive) 5% (max) Grade of Reject: Al2O3- 28.5%	Al2O3- 30% (min) and Silica (reactive) 5% (max),Grade of Reject: Al2O3- 28.5%	
3f	Quantity of sub grade mineral generation.	Nil	Nil	
3g	Grade of sub grade mineral generation	Nil	Nil	

3h	Manual / Mechanised method adopted for segregating from ROM	Manual	Manual
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Nil	Nil
3j	Provision of drilling and blasting in mineral benches	Yes	Yes
3k	Provision of mining machineries in mineral benches	Poclain excavator Crawler mounted ,Larsen & Toubro CK 90 ,0.9cum.bucket cap. 4nos.,Terex Payloader HM 2021, 1.5cum bucket cap.,1no., Beaver Leyland Dumper 10Te, 6nos.,Compress 250cum/min ,1 no.,Tractor, Ford ,1no.,Massey Ferguson ,1no. Dozer (Caterpillar) 190HP, 1no.,Rock Drill Atlas Copco,32-38mm dia, 3 nos.	Poclain excavator Crawler mounted ,Larsen & Toubro CK 90 ,0.9cum.bucket cap. 4nos.,Terex Payloader HM 2021, 1.5cum bucket cap.,1no., Beaver Leyland Dumper 10Te, 6nos.,Compressor Atlas Copco 250cum/min ,1 no.,Tractor, Ford ,1no.,Massey Ferguson ,1no. Dozer (Caterpillar) 190HP, 1no.,Rock Drill Atlas Copco,32-38mm dia, 3 nos.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bauxite bench size 6mx6m and 3mx3m depending upon thickness of Bauxite.	Bauxite bench size 6mx6m and 3mx3m depending upon thickness of Bauxite.
3m	Total area covered under excavation/pits	7.50ha.	9.94ha.

3n	Ore to OB ratio for the pit/mine during the year.	1:1.05	1:4.20
3o	Total area put in use under different heads at the end of year	Quarry area (including reclaimed area 5.35ha):7.07ha Dump: 0Ha Road: 0.14Ha Greenbelt: 0.29 Total area in use: 7.50Ha	Quarry area :9.94ha(including 3.16ha reclaimed area) Dump: 0.5Ha Road: 0.14Ha Total area in use: 10.58Ha
3p	Production of ROM mineral during the last five year period as applicable	2013-14 57250 Te 2014-15 45703 Te 2015-16 10644 Te 2016-17 52768 Te 2017-18 52580 Te 2018-19 35897 Te	2013-14 57065 Te 2014-15 31175 Te 2015-16 0 2016-17 0 2017-18 28560 Te 2018-19 35500 Te
3q	General remarks of inspecting officers on method of mining etc.		The Method of mining adopted is Opencast Method of mining i.e. "A"Other than Fully Mechanised Mining .

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Nil	Simultaneously backfilled	
4b	Location of topsoil, OB and mineral reject dumps	Southern most area of ML	Southern most area of ML	
4c	Number of dumps within lease area and outside of lease area	1	1	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Southern most area of ML	Southern most area of ML	

4e	Number of active and alive dumps.	Nil	Nil
4f	Number of dead dumps.	Nil	1
4g	Number of dumps established.	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	Not proposed.	185m retaining wall.
4i	Length of Retaining wall or garland drain all along dumps	Nil	185m
4j	Number of settling ponds	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management		Waste dump management is carried out as per approved Modification in Approved Minig Plan as far as possible.

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.	full extraction of mineral from mined out area before starting backfilling.	full extraction of mineral from mined out area before starting backfilling.	
5b	Area under backfilling of mined out area	1.27ha.	0.92ha.	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent use of Topsoil	Concurrent use of Topsoil	Plantation establishment
5d	Total area fully reclaimed and rehabilitated	Yes	Yes	
5e	General remarks of inspecting officers on backfilling and reclamation etc.		There is a backlog in Backfilling and reclamation. Out of 1.27ha proposed Backfilling during 2018-19 only 0.92ha.has been backfilled.	

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).	Yes	Yes	
6b	Area available for rehabilitation (ha) .	Nil	Nil	
6c	afforestation done (ha).	2.56	1.00	
6d	No. of saplings planted during the year	6400	700 nos within Mining Lease ,with survival rate 70%.	
6e	Cumulative no .of plants	There was no proposal for cumulative plantation. However during plan period 2015-16 to 2018-19 total 12,850nos of plantation were to be done.	3016nos. in 2.60ha.	
6f	Any other method of rehabilitation	Stone Pitching in 0.25ha. Cost : Rs.760000/-	Nil	
6g	Cost incurred on watch and care during the year	Not proposed	Nil	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	1.27ha. in Q2, NIL size 121mx104mx6m		
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Nil	Nil	

6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	On 2.56ha reclaimed area of Quarry no.2. with 6400nos of plants.	700nos in 1ha area with 70% survival rate.	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not proposed.	0.4ha water reservoir made.	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Nil	Nil	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Nil	1ha.	Green land building
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Nil	Nil	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Nil	Nil	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly Monitoring of Air Quality,Water Quality,Noise Level to be done with Environmental cost Rs 65,000/-	Quarterly Monitoring of Air Quality,Water Quality,Noise Level done with Environmental cost Rs 74,000/-	

6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	PMCP compliance and progressive closure operations are not carried out as per approved Modification in Approved Mining Plan. Violation in this regard has been issued vide letter even no. dated 16/09/2019. Its compliance is awaited.
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Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting to be done within lease area.	Grade wise sorting done within lease area.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual	Manual	
7c	Different grade of mineral sorted out at mines.	Yes, Different grades sorted out at mines.	Yes, Different grades sorted out at mines.	
7d	Any beneficiation process at mines	No	No	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			Due regard is given towards Mineral Conservation.As the Bauxite of the area is mixed type with predominantly gibbsitic i.e. tri-hydrate alumina in the range of 70% to 75% and balance is Boehmite,i.e. monohydrate alumina. The ore is ideally suited for alumina plant at Renukoot/Muri designed by the Kaiser Engineering of USA based on Bayers Process of Aluminium extraction adopting double digestion Technology suited for Gibbsite & Boehmite both.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Separate removal and simultaneously utilization of Topsoil	Separate removal and simultaneously utilization of Topsoil	
8b	Concurrent use or storage of topsoil	Concurrent use	Concurrent use	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumps to be provided for overburden, waste rock, rejects and fines	Separate dumps provided for overburden, waste rock, rejects and fines	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Overburden, waste rocks to be used for restoring the land to its original use.	Overburden, waste rocks used for restoring the land to its original use.	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Phased reclamation, reclamation and rehabilitation of lands affected by mining operations to be done.	Phased reclamation, reclamation and rehabilitation of lands affected by mining operations has not been carried out as per approved Modification in approved Mining Plan. Backfilling of 1.27ha have not been done. Also plantation of 6400nos of trees in 2.56ha. area has not been done. Only 700 nos planted. Quarry no. 2A has not been converted to Reservoir for irrigation purpose with stone pitching in the backfilled area, as well as on the southern side as per Development Plan 2018-19 (Plate No.8)	A violation letter of even no. dated 16/09/2019 has been issued to the Lessee. Its compliance is awaited.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	6400nos proposed.	2300 nos plantation done. Cumulative 3016nos in 2.60ha area done.	
8g	Survival rate	70%	70%	

8h	Water sprinkling on roads to control airborne dust	Water sprinkling Proposed.	Water sprinkling carried out.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		The aesthetic beauty in and around mines area is good.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly returns and Annual Return for 2018-19 timely submitted.	Found correct.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer & Manager : Sri Tusar Kanta Pradhan B.Tech(Mining) , Geologist: Miss Parbati Kabi.	Sri Tusar Kanta Pradhan, Mining Engineer & Manager was present during inspection, but Miss Parbati Kabi was found transferred to Samripat Mines of same company.	Violation of Rule 55(1)(3)(iii) for not employing a Whole- time Geologist has been sent on 16/09/2019. Its compliance is awaited.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area already exploited & abandoned by Opencast Mining 6.55ha., area covered under current O/C workings 3.39ha., reclaimed area 3.16ha., area used for waste disposal 0.5ha. work done under progressive mine closure plan during the year 0.92ha.	Found correct.	
9d	Scrutiny of Annual return on afforestation	700nos planted within lease area with survival rate 70%.	700nos planted on 1ha ,within lease area with survival rate 70%.	

9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Found correct.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM opening stock & closing Stock 177.05Te & 550.19Te respectively.R OM production 35500Te. Closing Stock of Bauxite 40% to below 45% Al2O3 550.19Te.	Found correct.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of Production & Ex-mine price Rs 951.02/te, Sale value Nil.	Found correct.Sale value is Nil since, it is acaptive mine.
9h	Scrutiny of Annual return on fixed assets	Rs 74008949/-	Found correct.
9k	Scrutiny of Annual return on mining machineries	Air Compressor, 450 cum/min ,lno. Non-Electrical.	Not correct as details of Other HEMM machineries such as Excavators,Loaders,Dumper ,Dozer not given

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

Date :

(B.P. KERKETTA)

Indian Bureau of Mines