

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

MCDR inspection REPORT

Ranchi regional office

Mine file No : JHK/LOH/BX/255/RRO

Mine code : 07JHK12012

- (i) Name of the Inspecting : **K005**) **B.P. KERKETTA**
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Sri Kiran Shankar Singh, Mines Manager, Sri Ramesh Kuma
Official with
Designation
- (iv) Date of Inspection : 15/10/2020
- (v) Prev.inspection date : 02/09/2019

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **PAKHAR BAUXITE MINE109.50**
- (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 : **835302**
- FAX No. : **06526-224118**
- E-mail :
- Phone : **06526-224112, 224015, 22311**
- (f) **Police Station** : **KISKO**
- (g) **First opening date** : **18/08/2011**
- (h) **Weekly day of rest** : **SUN**
2. **Address for correspondance** : **VILL.- PAKHAR**
P.O.- KISKO, DISTT.- LOHARDAGA,
JHARKHAND-835302
3. (a) **Lease Number** : **BHR0271**
- (b) **Lease area** : **109.51**
- (c) **Period of lease** : **50**
- (d) **Date of Expiry** : **25/07/2058**
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 KUMAR JHA
 Minerals&Minerals Ltd. At &
 P.O. Lohardaga Jharkhand
 LOHARDAGA JHARKHAND
 Phone:
 FAX : 06526224016

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

Mining Engineer

Name : DILLU SINGH,Full Time
 Qualification : B.TECH(MINING)
 Appointment/ : 02/07/2018
 Termination date

Geologist

Name : RAMESH KUMAR,Full Time
 Qualification : MSc.(GEO)
 Appointment/ : 10/10/2017
 Termination date

6. Date of approval of Mining	:	Fresh under rule 22 MCR1960	23/04/2008
Plan/Scheme of Mining		MP modif under MCR 1960	23/05/2016
		MP review under 17(1) MCR 2016	27/07/2020

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	The entire leasehold area has been explored at a grid interval of 100mx100m(PBH total 84 number) & 50mx50m(PBHC Total 23number) Altogether 107 boreholes have been drilled, so future exploration is not given for 2019-20, as per approved Modification in approved Mining Plan for plan period 2019-20 dated 16/11/2020.	The Lessee has drilled 132 numbers of coring types(HQ) boreholes with 2500m meterage within which 60 numbers of boreholes are completely drilled & samples are analyzed. Form I & Form J as per MCDR 2017 have been submitted.	The lessee is in the process to explore the mineralised area G1 level as per Rule 12 of MCDR 2017 & till now 60 numbers are completely drilled & samples are analyzed out of total 132 numbers of boreholes.
1b	Exploration over lease area for geological axis 1 or 2	nil	G1: 20.75ha.(Bauxite & subgrade) G2: 88.757ha. (Bauxite & subgrade)(including negative area)	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	NA	South West Pinnacle Exploration Limited Expenditure: Rs. 789589.00	
1d	Balance area to be explored to bring Geological axis in 1 or 2	111	111	
1e	Balance reserve as on 01/04/20		Proved Reserve 111-1803259MT Probable Reserve 121-730778MT	

1f General remarks of inspecting officers on geology, exploration etc Lease area has already been fully explored. No proposal for further exploration.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	756E -830E 542N -700N 643E -787E 700N -835N 12W -350W 00 - 162N	756E -830E 542N -700N 643E -787E 700N -835N 12W -350W 00 -162N	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in topsoil,overburden and mineral proposed.	Yes.Separate benches in topsoil,overburden and mineral made.	
2c	Stripping ratio or ore to OB ratio	1:1.36	1:1.37	
2d	Quantity of topsoil generation in m3	2,95,563 cum (soil & morrum)	46,800 cum (Top soil)	
2e	Quantity of overburden generation in m3	1,75,329 cum	3,29,607 cum (Morrum & OB)	

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	The Mine development was carried out as per approved Modification in approved Mining Plan dated 16/11/2020. The bench dimension was maintained as per proposal. Bauxite deposit of the area is mostly associated with laterite, occurs as irregular and discontinuous lenses or tabular bodies within the laterite capping. The thickness of different litho horizons observed in the quarry face was as given below:- i. Laterite: 1-5m; ii. Bauxite: 5-15m; iii. Lithomargic clay: 1-1.5m.
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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	3	3	
3b	Quantity of ROM mineral production proposed	278144MT	240100MT	
3c	Recovery of sailable/usable mineral from ROM production	80%	80%	
3d	Quantity of mineral reject generation	30233MT	NIL	
3e	Grade of mineral rejects generation and threshold value declared.	Grade of Mineral Reject Al ₂ O ₃ <30%, Threshold Value Bauxite 30% (Min) and silica (relative) 5% max.	Grade of Mineral Reject Al ₂ O ₃ <30%, Threshold Value Bauxite 30% (Min) and silica (relative) 5% max.	
3f	Quantity of sub grade mineral generation.	Nil	Nil	

3g	Grade of sub grade mineral generation	NA	NA
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.	No Sub-grade Generation	All the excavated ore is dispatched after blending the subgrade mineral.
3j	Provision of drilling and blasting in mineral benches	Drilling & blasting in mineral benches proposed.	Drilling & blasting in mineral benches done.
3k	Provision of mining machineries in mineral benches	Proposed Mining machinery to be deployed in mineral benches are : DTH-2nos., 88mm-Atlas capco-diesel-440 HP Excavators-7nos., 0.9cum - diesel-124 HP Compressor-2-300cfm Jackhammer-4nos., Trippers - 8nos., 10MT-Diesel-98.5HP	Following machinery were deployed during mining of Bauxite. DTH-02nos., 25m/hr Hyd. Excavator - 02nos., 0.9cum, Hyd. Excavator - 01nos., 1.9cum, Hyd. Excavator - 01nos., 1.3cum, Compressor- 02nos., 450cfm & 330cfm Wheel Loader-02, 2.3cum Dumpers-06nos., 25MT capacity, Water Tanker 8000Ltrs. cap. 1no.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Maximum height of the proposed benches will be 6m and avg thickness 2.9m	Height of the benches maintained between 3.5 to 4 m.
3m	Total area covered under excavation/pits	5.45Ha	2.68Ha (covered under current O/C workings)
3n	Ore to OB ratio for the pit/mine during the year.	1:1.36	1:1.37

3o	Total area put in use under different heads at the end of year	as per approved Modified Mining Plan area covered under mining including reclamation-37.15 ha Road-3.83 ha Infrastructure -0.16 ha soil dump-0.87 ha.	(i) Already exploited & abandoned by opencast (O/C) mining 24.44ha. (ii) Covered under current(O/C) Workings 2.680ha (iii) Reclaimed/Rehabilitated 21.760ha (iv) Used for waste disposal 0.000 (v) Occupied by plant, buildings, residential, welfare buildings & roads 0.000 (vi) Other Purpose 0.000 (vii) Work done under progressive mine closure plan during the year 3.04ha.
3p	Production of ROM mineral during the last five year period as applicable	2014-15 212832MT 2015-16 279778MT 2016-17 277509MT 2017-18 277791MT 2018-19 279242MT 2019-20 278144MT	2014-15 277855MT 2015-16 277350MT 2016-17 277220MT 2017-18 277605MT 2018-19 247130MT 2019-20 240100MT
3q	General remarks of inspecting officers on method of mining etc.	The method of mining adopted is Fully Mechanised Opencast Mining.	The method of mining adopted is Fully Mechanised Opencast Mining. The bench height in Top soil was maintained between 1-2m, in OB(Laterite) it was maintained at 2-3.5m and in Bauxite it was maintained at 4m, which were within proposed limit.

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)	Concurrent use for backfilling and reclamation	Concurrent use for backfilling and reclamation
4b	Location of topsoil, OB and mineral reject dumps	No such proposal.	Simultaneous backfilling of mined out quarries and spread of top soil over backfilled area.No dumping of Top soil and No reject generation.
4c	Number of dumps within lease area and outside of lease area	No such proposal.	Simultaneous backfilling of mineout quarries and spread of top soil over backfilled area.No dumping of Top soil and No reject generation.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	No proposal for dumps.	NA,Simultaneous backfilling of mineout quarries and spread of top soil over backfilled area.No dump.
4e	Number of active and alive dumps.	Nil	Nil
4f	Number of dead dumps.	No proposal	Two dead dumps are in the lease area.
4g	Number of dumps established.	NA	Two old dumps near the southern boundary of the lease area at 400S-600S, 400E-600E
4h	Whether Retaining wall or garland drain all along dumps are there.	No such proposal	Two old dumps with garland drain and retaining wall were there.
4i	Length of Retaining wall or garland drain all along dumps	No such proposal	Two old dumps with Garland Drain and retaining wall were made. Size 170x2x2, 130x2x2
4j	Number of settling ponds	No such proposal	Nil
4k	Specific comments of inspecting officer on waste dump management		No proposal for dump.Simultaneous backfilling of the mineout quarries and spread of top soil over backfilled area.

Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
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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	4.72ha.	3.04ha	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Soil will be used concurrently to spread over backfilled quarry.	Soil is used concurrently to spread over backfilled quarry.	
5d	Total area fully reclaimed and rehabilitated	During plan period (2015-16 to 2019-20), 23.09ha area was proposed to be reclaimed.	Total area reclaimed was 21.76 ha. as on 01/04/2020.	
5e	General remarks of inspecting officers on backfilling and reclamation etc.		Concurrent backfilling and reclamation of minedout areas were in progress.No duming of Top soil or OB.Total reclaimed area 21.76ha. as on 01/04/2020.	Concurrent backfilling and reclamation of minedout areas were in progress.No duming of Top soil or OB.Total reclaimed area 21.76ha. as on 01/04/2020.

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).		Lessee has submitted annual Report on PMCP in time.	
6b	Area available for rehabilitation (ha) .	4.72ha	3.04ha.	
6c	afforestation done (ha).	1.20ha	2.35ha.	

6d	No. of saplings planted during the year	4500nos.	3200nos.	As per approved Review of mining Plan dated 27/07/2020, plantation of 4116nos in 2.05ha. reclaimed area during current year 2020-21 have not been carried out. A violation letter has been issued for it on 06/11/2020.They replied vide letter dated 15/12/2020 that due to Covid -19 and Nationwide Lockdown the development work was affected and proposed area for plantation could not be prepared.Due to insurgency by outfits development work affected.However, they have planted 2270no.of saplings
6e	Cumulative no .of plants	NA	14140nos.	
6f	Any other method of rehabilitation	No such proposal.	Nil	
6g	Cost incurred on watch and care during the year	NA	Rs.125000/-approx.	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	2.07ha.	3.04ha.	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	NA	filled by waste	

6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	NA	NA	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	NA	0.20ha.	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	NA	Nil	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	NA	Nil	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	NA	NIL	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	NA	NIL	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Environmental monitoring cost Rs.2,84,800/-	Environmental monitoring cost Rs.2,85,000/-	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.			Lessee used to provide all means of PMCP compliance of the lease.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	278432 MT	226630.82 MT
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual sorting was proposed.	Manual sorting was in practice.
7c	Different grade of mineral sorted out at mines.	No grading of ore was proposed at mine site.	Grading of ore not done at mine site. Low grade ore is blended with high grade ore and despatched as feed grade for Alumina plant.
7d	Any beneficiation process at mines .	No beneficiation only hand sorting was proposed	Ore was sorted manually, No beneficiation at mine site.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		There is no such problem for Mineral conservation. Lower grade ore blended with high grade ore to prepare feed grade and despatched to Alumina plant.

Environment :

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Proposal was there to remove top soil seprately and will be spread over backfilled minedout quarries.	Soil so removed was used to spread over backfilled minedout quarries.	
8b	Concurrent use or storage of topsoil	Concurrent spread of top soil over concurrent backfiilled minedout areas was proposed.	Soil so removed used to spread over backfilled minedout areas as proposed.	

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No dump was proposed as concurrent backfilling of minedout areas was proposed.	No dump was there except two old dumps.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Proposal was there that all excavated OB and waste will be used for concurrent backfilling and soil will be used for reclamation of backfilled areas to restore the land to its original use.	It was seen that all excavated O B and Waste used for concurrent backfilling and soil is used for reclamation of the backfilled quarries by spreading soil over backfilled areas.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Phased restoration, reclamation and rehabiliotatio n of lands (23.09ha) affected by mining operations was proposed.	Plantation and or making cultivating land was practised. 21.76ha. area has been reclaimed and rehabilitated.

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	4500 no of Plantation was proposed to be carried on reclaimed quarries.	3200 nos of plantation was done on reclaimed quarries.	As per approved Review of mining Plan dated 27/07/2020, plantation of 4116nos in 2.05ha. reclaimed area during current year 2020-21 have not been carried out. A violation letter has been issued for it on 06/11/2020. They replied vide letter dated 15/12/2020 that due to Covid -19 and Nationwide Lockdown the development work was affected and proposed area for plantation could not be prepared. Due to insurgency by outfits development work affected. However, they have planted 2270no. of saplings
8g	Survival rate	Not specified.	75%	
8h	Water sprinkling on roads to control airborne dust	Proposal was there to use sprinkler to control airborne dust.	Water sprinkler used to control airborne dust.	
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 and Annual Return to be submitted	Monthly and Annual Return submitted	

- 9b Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager Mining Engineer: Sri Dillu Singh, Geologist: Sri Ramesh Kumar, Manager: Sri Kiran Shankar Singh Found Correct.
- 9c Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. As per latest Annual return available in the office, land use pattern during 2019-20 is given below:
Area exploited 24.44 ha, Area under current working - 2.68ha, Area reclaimed /rehabilitated - 21.76, Workdone under progressive mine closure plan during the year-3.04 ha. Road area have not been given. Other information is more or less correct.
- 9d Scrutiny of Annual return on afforestation 3200 sapplings planted within lease area, with 75% survival rate. Found Correct.
- 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 As per Annual return of 2019-20 total production of ROM was 240100 MT, Opening Stock & closing stock Nil and despatch during the year 226630.82MT 40% to below 45% Al2O3. Closing stock 208.39MT Below 40% Al2O3 and 13491.18MT 40% to below 45% Al2O3 respectively Found correct.
- 9g Scrutiny of Annual return on sale value, Ex. Mine price and production cost Sale value for 226630.82MT Bauxite Ore despatched is 213291988MT. Ex -mine Price & Cost of Production is same i.e. Rs 882.63/MT . Appears to be correct.
- 9h Scrutiny of Annual return on fixed assets Combined information on Fixed asset for the three mines i.e. (i) Pakhar(15.58ha)(ii) Pakhar(109.507 ha) & (iii) Bimarla Bauxite mine has been given as Rs.98140290/- Found to be correct.

9k	Scrutiny of Annual return on mining machineries	Following machinery were deployed during mining of Bauxite. DTH- 02nos., 25m/hr Hyd. Excavator - 02nos., 0.9cum, Hyd. Excavator - 01nos., 1.9cum, Hyd. Excavator - 01nos., 1.3cum, Compressor- 02nos., 450cfm & 330cfm Wheel Loader- 02, 2.3cum Dumpers- 06nos., 25MT capacity, Water Tanker 8000Ltrs. cap. 1no.	Found correct.
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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)	06/11/2020	17/11/2020		

Date :

(B.P. KERKETTA)

Indian Bureau of Mines