

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

**MCDR inspection REPORT
Ranchi regional office**

Mine file No : BIH/LOH/BX/245/RRO

Mine code : 07JHK12007

- (i) Name of the Inspecting : **R002**) **RAGHVENDRA KUMAR**
Officer and ID No.
- (ii) Designation : Assistant Mining Engineer
- (iii) Accompanying mine :
Official with
Designation
- (iv) Date of Inspection : 12/09/2021
- (v) Prev.inspection date : 16/10/2020

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **PAKHAR(115.13HCT[134.33])**
- (b) **Registration NO.** : **IBM/935/2011**
- (c) **Category** : **A Fully Mechanised**
- (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 : **N.A.**
- Phone : **06526-224112, 224015,22311**
- (f) **Police Station** : **KISKO**
- (g) **First opening date** : **23/04/1996**
- (h) **Weekly day of rest** : **FRI**
2. **Address for correspondance** : **VILL.- PAKHAR,**
P.O.- KISKO - 835302, DISTT.- LOHARDAGA,
JHARKHAND
3. (a) **Lease Number** : **BHR0267**
- (b) **Lease area** : **115.13**
- (c) **Period of lease** : **50**
- (d) **Date of Expiry** : **31/03/2030**
4. **Mineral worked** : **BAUXITE** **Main**

5. Name and Address of the

Lessee : M/S HINDALCO INDUSTRIES LTD.
 AT - COURT ROAD,
 LOHARDAGA, LOHARDAGA
 JHARKHAND
 Phone:06526-22401112, 224446 & 224016.
 FAX :06526-224112 & 224445

Owner : A.K. AGRAWAL
 M/s HINDAL INDUSTRIES Ltd.,
 PO - RENUKOOT, UTTAR
 PRADESH- 231217 SONBHADRA
 UTTAR PRADESH
 Phone: 05446-252084, 2
 FAX : 05446-252107

Agent : B.K.JHA
 M/s HINDALCO INDUSTRIES
 Ltd. COURT ROAD PO& DIST -
 LOHARDAGA (JHK) LOHARDAGA
 JHARKHAND
 Phone: Mob- 941708929, 06526-224112/224015
 FAX : 06526-224118

Mining Engineer

Name : Shil Prakash Jha, Full Time
 Qualification : B.Thech (Mining)
 Appointment/ : 01/07/2020
 Termination date

Geologist

Name : SRI TATHAGATA DAS, Full Time
 Qualification : M.Sc (GEOLOGY)
 Appointment/ : 22/05/2018 02/12/2018
 Termination date

Geologist

Name : CHANDAN KUMAR, Full Time
 Qualification : MSc(Geo)
 Appointment/ : 03/12/2018
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Existing rule 11 MCDR1988	13/01/1994
		Renewal under rule 24 MCR1960	18/12/1995
		Mining Scheme rule 12 MCDR1988	31/01/2001
		Mining Scheme rule 12 MCDR1988	08/09/2006
		Modif.approved Mining Scheme	26/04/2007
		Modif.of approved Mining Plan	31/08/2010
		Mining Scheme rule 12 MCDR1988	31/08/2010
		Modif.approved Mining Scheme	30/06/2011
		MP modif under MCR 1960	26/02/2016
		MP review under 17(1) MCR 2016	22/01/2020

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal	Nil	
1b	Exploration over lease area for geological axis 1 or 2	120	81	Violation of rule11(1) has been issued.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposal	Southwest Pinnacle Exploration Limited Expenditure: Rs. 35,43,540/-	
1d	Balance area to be explored to bring Geological axis in 1 or 2	--	95.43 ha. of mineralised area has been covered upto G1 level.	
1e	Balance reserve as on 01/04/20	--	111-3200151MT 211-822360 MT	
1f	General remarks of inspecting officers on geology, exploration etc	120 Core Boreholes has been Proposed during 2020-2021.	As per proposal 81 boreholes has been drilled during 2020-2021.	Violation of rule11(1) has been issued.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	E 256614.105 N 2606452.881 E 254663.801 N 2605481.129	E 256614.105 N 2606452.881	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches to be made in top soil, overburden and mineral.	Separate benches in top soil, overburden and mineral not made.	Violation of rule 13(2) has been issued.
2c	Stripping ratio or ore to OB ratio	1:1.39	1:1.46	
2d	Quantity of topsoil generation in m3	99688cum	80532cum	
2e	Quantity of overburden generation in m3	259893 cum	285986.5 cum	

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	The bench dimension was not maintained as per proposal.	Violation of rule 13(2) has been issued.
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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2	1	
3b	Quantity of ROM mineral production proposed	298453 MT	177500 MT	
3c	Recovery of sailable/usable mineral from ROM production	70%	70%	
3d	Quantity of mineral reject generation	35846 MT	35500 MT	
3e	Grade of mineral rejects generation and threshold value declared.	Al2O3%: 28% Threshold value Al2O3< 30% and SiO2 =>7.00%.	Al2O3%: 28% Threshold Al2O3< 30% and SiO2 =>7.00%.	
3f	Quantity of sub grade mineral generation.	No proposal	Nil	
3g	Grade of sub grade mineral generation	No proposal	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.	No Sub-grade Generation	All the excavated ore is dispatched after blending the subgrade mineral.	
3j	Provision of drilling and blasting in mineral benches	Provision of drilling & blasting in mineral benches.	Drilling & blasting done in mineral benches.	

3k	Provision of mining machineries in mineral benches	There is provision of mining machineries in mineral benches.	Shovel (Hydraulic)0.9cum. bucket capacity, 25Te Dumper, Rock Drill (Non-Electric)100mm, Air Compressor 14.3cum/min are used.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes	Yes
3m	Total area covered under excavation/pits	30.64 ha.	21.70Ha.
3n	Ore to OB ratio for the pit/mine during the year.	1:1.39	1:1.46
3o	Total area put in use under different heads at the end of year	--	(i) Already exploited & abandoned by opencast (O/C) mining 43.02 ha. (ii) Covered under current(O/C) Workings 21.70 ha. (iii)Reclaimed/Rehabilitated 21.32 ha. (iv) Used for waste disposal 0.00 ha. (v) Occupied by plant, buildings, residential, welfare buildings & roads 0.960 ha. (vi) Other Purpose 0.000 ha. (vii) Work done under progressive mine closure plan during the year 1.36 ha.
3p	Production of ROM mineral during the last five year period as applicable	2015-16 298185 T 2016-17 298752 T 2017-18 299656 T 2018-19 298335 T 2019-20 298183 T 2020-21 298453 T	2015-16 297265 T 2016-17 282190 T 2017-18 264508 T 2018-19 294000 T 2019-20 112200 T 2020-21 177500 T

3q	General remarks of inspecting officers on method of mining etc.	177500 tons have been achieved during 2020-2021 against 298453 tons of proposal.	Production was less than as proposed in approved Review of Mining Plan and method of mining adopted was Fully Mechanised Open Cast Mining.
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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)	Concurrent use for backfilling and reclamation.	Concurrent use for backfilling and reclamation.	
4b	Location of topsoil, OB and mineral reject dumps	Stacking of top soil OB not envisaged.	Nil.	
4c	Number of dumps within lease area and outside of lease area	No proposal.	One mineral reject dump within the lease area.	violation of rule 11(1) has been issued.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	There is no such proposal for external dumping.	No external dumps.	
4e	Number of active and alive dumps.	None	None	
4f	Number of dead dumps.	None	One mineral reject dump	
4g	Number of dumps established.	None	None	
4h	Whether Retaining wall or garland drain all along dumps are there.	No proposal	None	
4i	Length of Retaining wall or garland drain all along dumps	No proposal	None	
4j	Number of settling ponds	No proposal	None	
4k	Specific comments of inspecting officer on waste dump management	Concurrent backfilling of waste envisaged.	Concurrent backfilling done as proposed.	Formed one mineral reject dump within the lease area, violation of rule 11(1) has been issued.

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	4.20 ha.	1.36 ha.	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent use of top soil for reclamation of the mined-out area proposed.	Spreading of top soil over backfilled area is in practice.	
5d	Total area fully reclaimed and rehabilitated	22.86 ha.	21.32 ha. area reclaimed & rehabilitated in the period under reporting.	
5e	General remarks of inspecting officers on backfilling and reclamation etc.		After complete extraction of minerals concurrent backfilling is in practice. After leveling and top soil carpeting the land is handed over to raiyats.	

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).	It should be on or before 1st July every year.	The Annual Report on PMCP was submitted by the lessee.	
6b	Area available for rehabilitation (ha) .	4.20 ha.	1.36 ha.	
6c	afforestation done (ha).	2.50 ha.	1.30 ha.	
6d	No. of saplings planted during the year	4000 sapling	2418 sapling	
6e	Cumulative no .of plants	NA	21218 plants	
6f	Any other method of rehabilitation	Not proposed	Nil	

6g	Cost incurred on watch and care during the year	Not proposed	Rs.-2388211.00/- (Including Plantation Cost)
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D	4.20 ha.	1.36 ha.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Voids to be filled by waste.	Voids Filled By waste.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	4000 no. of saplings in 2.50 ha. area.	2418 no. of saplings in 1.30 ha. area
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Nil	Pond
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Nil	None
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	Nil	Nil
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	NA	NA
6p	Compliance of environmental monitoring (core zone and buffer zone)	Proposal for environmental monitoring in core zone and buffer zone is envisaged.	Monitoring of environmental parameters in core zone and buffer zone are in practice as per proposal.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		After complete extraction of mineral, simultaneous backfilling and top soil spreading is in practice.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	The total target of Production was 298453 tons during 2020-2021.	177500 tons of production have been achieved during 2020-2021.	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual	Manual	separation by hand of bauxite from waste in the ore zone.
7c	Different grade of mineral sorted out at mines.	Mechanical Process and Manual Picking of Ore from Intercalated Waste	Manual shorting (on visual perception)	
7d	Any beneficiation process at mines	No such proposal	No beneficiation facility is available at mine site.	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		Beneficiation not done. Manual sorting of ore is in practice. The low-grade ore (on visual perception) blended with high grade material, before dispatch to the Plant Situated at Muri, Jharkhand.	

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Separate removal and concurrently spread over back filled area.	Separate removal of soil and spreading over backfilled area for reclamation of mined out areas is under practice.	
8b	Concurrent use or storage of topsoil	Concurrent use for spreading over backfilled area.	Concurrent use for spreading over backfilled area as per proposal.	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No proposal for dumping of OB and waste.	Concurrent backfilling of OB and waste are in practice.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Concurrent use of overburden, waste rock, rejects for restoring the land to its original use.	Concurrent use of overburden, waste rock, rejects for restoring the land to its original use.	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Phased restoration, reclamation, rehabilitation of lands proposed in PMCP.	Phased restoration, reclamation, rehabilitation of land is in practice as proposed in PMCP.	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Proposal for plantation of 4000 saplings envisaged.	Plantation of 2418 saplings(approx) done during reporting period.	
8g	Survival rate	--	75%	
8h	Water sprinkling on roads to control airborne dust	Proposal for water sprinkling to control airborne dust envisaged.	To control airborne dust water sprinkling on haul road side are being practiced.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		Mined out area are being restored by way of concurrent backfilling of generated OB and waste. After leveling and spreading Soil cover the land is hand over to raiyats.	

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	--	Monthly and Annual returns for 2020-21 submitted.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer in charge -Shri Prakash Jha , Geologist in charge -Shri Chandan Kumar	Mining Engineer appointed w.e.f. 01/07/2020 and Geologist appointed w.e.f. 20/12/2018	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Already exploited abandoned by (O/C) mining- 43.020 Ha. Coverer d under current (O/C) Workings- 21.70 Ha. Reclaimed/Rehabilitated- 21.32 Ha. Used for waste disposal- nil, Occupied by buildings, residential, welfare & roads -0.960 Ha. work done under progressive mine closure plan during year -1.36 ha.	Details submitted in AR seems to be correct.	
9d	Scrutiny of Annual return on afforestation	Afforestation: 2418 saplings.	Seems to be correct.	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil.	Mineral reject generation not shown.	

9f	Scrutiny of Annual return on ROM stock and/or graded ore	Bauxite Stock as on 01.04.2021 ROM Closing stock = Nil Dispatches of Processed ore 40% to below 45% Al ₂ O ₃ = 186693.730 tons. Mine has produced 177500.00 tons of Production during 2020-2021.	Reported ROM stocks seems to be correct.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Captive mine. Sale value is reported as NIL, Ex-Mine price & Cost of Production Rs.1093.00/te	Appears to be correct.
9h	Scrutiny of Annual return on fixed assets	Fixed Assets (in Rs.) 694253436/-	Appears to be correct.
9k	Scrutiny of Annual return on mining machineries	Shovel (0.9cum, Hydraulic): 4 no. Dumper 25Te: 6 nos. Wheel Loader: 1 no. Water Tanker: 1 no Air compressor: 2 no Rock Drill (Non-Electric, 100mm) 2nos. Pumps (Non-Electric) 0.948L/Min :2nos.	Details on mining machineries seems to be correct.

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)	01/10/2021			
MCDR17	Rule 13(2)	01/10/2021			

Date :

(RAGHVENDRA KUMAR)

Indian Bureau of Mines