

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

**MCDR inspection REPORT
Ranchi regional office**

Mine file No : BIH/GLA/BX/221/RRO

Mine code : 07BHR32008

- (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 : 13/09/2021
- (v) Prev.inspection date : 14/08/2020

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **GURDARI (1039.5)**
- (b) **Registration NO.** : **IBM/935/2011**
- (c) **Category** : **A Fully Mechanised**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **JHARKHAND**
- District : **GUMLA**
- Village : **GURDARI AMBAKONA**
- Taluka : **BISHUNPUR**
- Post office : **DUMBERPAT**
- Pin Code :
- FAX No. : **06526-24118**
- E-mail : **bijesh.jha@adityabirla.com**
- Phone : **06526-24016**
- (f) **Police Station** : **BISHUNPUR**
- (g) **First opening date** : **01/02/1985**
- (h) **Weekly day of rest** : **SUN**
2. **Address for** : **VILL-GURDARI**
correspondance **BISHNPUR**
DIST-GUMLA
3. (a) **Lease Number** : **BHR0249**
- (b) **Lease area** : **584.19**
- (c) **Period of lease** : **50**
- (d) **Date of Expiry** : **22/03/2035**
4. **Mineral worked** : **BAUXITE** **Main**

5. Name and Address of the

Lessee : HINDALCO INDUSTRIES LTD.,
 AT & PO - COURT ROAD,
 LOHARDAGA LOHARDAGA
 JHARKHAND
 Phone:06526- 224015/224112/223113
 FAX :06526- 224118

Owner : S.S.KOTHARI
 M/s HINDALCO INDUSTRIES
 Ltd., CENTURY BHAWAN,Dr.
 ANNIE BESANT Rd. MUMBAI
 (SUBURBAN) MAHARASHTRA
 Phone: 022- 24227586
 FAX : 022- 24308491

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 : Sanjay Kumar,Full Time
 Qualification : B.E(MINING)
 Appointment/ : 18/01/2019
 Termination date

Geologist
 Name : Dharendra Pratap Singh,Full Time
 Qualification : MSc(Geo)
 Appointment/ : 21/04/2019
 Termination date

Manager
 Name : KIRAN SHANKAR SINGH
 Qualification : B.E (MINING ENGINEER)
 Appointment/ : 01/01/2014 17/01/2019
 Termination date

6. Date of approval of Mining : Existing rule 11 MCDR1988 12/02/1992
 Plan/Scheme of Mining Mining Scheme rule 12 MCDR1988 25/09/1998
 Renewal under rule 24 MCR1960 12/05/2005
 Mining Scheme rule 12 MCDR1988 19/01/2012
 FMCP under 23C(1) 02/05/2013
 Mining Scheme rule 12 MCDR1988 17/04/2015
 MP review under 17(1) MCR 2016 20/02/2019
 MP modif under 17(3) MCR 2016 29/10/2020

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	NIL	NIL	240 boreholes were drilled in 2019-20.
1b	Exploration over lease area for geological axis 1 or 2	267 Core Boreholes has been Proposed during 2020-2021.	As per proposal no boreholes have been drilled during 2020-2021.	Violation of rule 11(1) has been issued.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	N/A	N/A	
1d	Balance area to be explored to bring Geological axis in 1 or 2	G1- 315.90 Ha G2- 94.92 Ha G3- 53.33 Ha Non-mineralised area- 120.04 Ha.	Further exploration is proposed for explored upto G1 level for the part of the lease area is still under G2 and G3 to get the precise information about the deposit.	267 nos. of boreholes proposed at grid interval of 50mX50m.
1e	Balance reserve as on 01/04/20	111- 3663578 tonnes 122- 2215471 tonnes	111- 3765138 tonnes 122- 2215471 tonnes	
1f	General remarks of inspecting officers on geology, exploration etc	267 Core Boreholes has been Proposed during 2020-2021.	As per proposal no boreholes have been drilled during 2020-2021.	Violation of rule 11(1) has been issued.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Quarry- Polpol, Pakrigarha, Barpat	Quarry- Polpol, Pakrigarha, Barpat	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	It is proposed to form Separate Bench's in Topsoil, Overburden and Mineral.	As per proposal benches are formed.	
2c	Stripping ratio or ore to OB ratio	1:1.06	1:0.68	

2d	Quantity of topsoil generation in m3	373827 cum	161939.65 cum
2e	Quantity of overburden generation in m3	303649 cum	325275.5 cum
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Proposed to work in Quarry- Polpol, Pakrigarha & Barpat during 2020-2021.	487215.15 cu.m of waste has been removed including 161939.65 cu.m of Topsoil and 325275.5 cu.m of OB.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Three	Three	
3b	Quantity of ROM mineral production proposed	324768 MT	223208 MT	
3c	Recovery of sailable/usable mineral from ROM production	70%	70%	
3d	Quantity of mineral reject generation	No proposal	Nil	
3e	Grade of mineral rejects generation and threshold value declared.	N/A	N/A	
3f	Quantity of sub grade mineral generation.	No proposal	42410 MT	
3g	Grade of sub grade mineral generation	N/A	AL2O3- 35.51% SiO2- 5.31%	Generated subgrade are utilised for blending with high grade material.
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 such proposal.	None
3j	Provision of drilling and blasting in mineral benches	Deep hole blasting (100mm dia.) Burden x Spacing (2.5m x 3m)	Drilling & Blasting are done as per proposal.
3k	Provision of mining machineries in mineral benches	SHOVEL (HYDRAULIC) ROCK DRILL (NONELEC.) AIR COMPRESSOR DUMPER WHEEL LOADER	As per proposal machineries are available in field.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height of 6m was proposed in Mineral.	Benches are formed as per proposal.
3m	Total area covered under excavation/pits	28.91 Ha.	21.90 Ha.
3n	Ore to OB ratio for the pit/mine during the year.	1:1.06	1:0.68
3o	Total area put in use under different heads at the end of year	Land use Pattern as on 01.04.2021. Mines = 28.91 hect Reclaimed =168.85 hect Roads = 7.34 hect Infrastructure = 1 hect. Green Belt =0.64 hect	Land use Pattern as on 01.04.2021. Mines = 21.90 hect Reclaimed =170.99 hect Roads = 7.34 hect Infrastructure= 1 hect. Green Belt =0.64 hect

3p	Production of ROM mineral during the last five year period as applicable	2016-17	324294	2016-17	324200	T	
			T	2017-18	324060	T	
			2017-18	324211	2018-19	152025	T
			T		2019-20	268725	T
			2018-19	324528	2020-21	223208	T
			T				
			2019-20	324629			
	T						
	2020-21	324768					
	T						

3q	General remarks of inspecting officers on method of mining etc.	Mining operations are being done by fully mechanised methods of 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)	There is no such proposal for external dumping.	Concurrent backfilling of mined out area is in practice.	
4b	Location of topsoil, OB and mineral reject dumps	There is no such proposal for external dumping.	No external dumping.	
4c	Number of dumps within lease area and outside of lease area	None	None	
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	There is no such proposal for external dumping.	Nil	
4e	Number of active and alive dumps.	None	None	Excavated area is backfilled simultaneously. So dumping is not proposed.
4f	Number of dead dumps.	None	None	
4g	Number of dumps established.	None	None	
4h	Whether Retaining wall or garland drain all along dumps are there.	Not applicable as there is no proposal for external dumping.	Nil	

4i	Length of Retaining wall or garland drain all along dumps	Not applicable	Nil	
4j	Number of settling ponds	None	None	
4k	Specific comments of inspecting officer on waste dump management	There is no such proposal for external dumping.	Generated OB and waste are utilised for concurrent backfilling of mined out pits.	Excavated area is backfilled simultaneously. So dumping is not proposed.

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 before starting backfilling.	Minerals are Fully extracted before starting backfilling.	
5b	Area under backfilling of mined out area	7.68 Ha.	6.29 Ha.	Violation of rule 11(1) has been issued.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent use	Backfilling of mined out areas concurrently	
5d	Total area fully reclaimed and rehabilitated	168.85 Ha.	170.99 Ha.	
5e	General remarks of inspecting officers on backfilling and reclamation etc.	It is proposed to backfill 7.68 hectares during 2020-2021.	6.29 hectares has Backfilled against proposal.	Violation of rule 11(1) has been issued.

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.	Annual report on PMCP submitted.	

6b	Area available for rehabilitation (ha) .	7.68 Ha	6.29 Ha.	
6c	afforestation done (ha).	1.0 Ha	1.22 Ha	
6d	No. of saplings planted during the year	2500 sapling	6519 sapling	
6e	Cumulative no .of plants	NA	43540 nos.	
6f	Any other method of rehabilitation	NIL	NIL	After reclamation of mined out area (backfilling and leveling) the land is handed over to raiyats for farming.
6g	Cost incurred on watch and care during the year	N/A	N/A	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	7.68 Ha.	6.29 Ha.	
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	1.0 Ha.	1.22 Ha.	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	NIL	NIL	

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	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	N/A	N/A
6p	Compliance of environmental monitoring (core zone and buffer zone)	Environmental monitoring of Air, Noise & Water in core & buffer zones should be conducted on quarterly basis.	Environmental monitoring of Air, Noise & Water in core & buffer zones are being carried out on quarterly basis.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		6519 saplings have been planted during 2020-2021 inside the backfilled area. Environmental monitoring of Air, Noise & Water in core & buffer zones are being carried out on quarterly basis.

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 324768 tons during 2020-2021.	223208 tons of production have been achieved during 2020-2021.	Grade wise shorting by hand picking at the mine site to the extent possible.

7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual	Manual
7c	Different grade of mineral sorted out at mines.	Grade wise shorting by hand picking at the mine site to the extent possible.	Grade wise shorting by hand picking at the mine site to the extent possible.
7d	Any beneficiation process at mines .	No such proposal	None
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		Grade wise shorting by hand picking at the mine site to the extent possible. Lean grade materials are blended with high grade material before dispatch to plant.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Proposal of removing topsoil separately and spreading over mined out area.	Concurrent backfilling and spreading of topsoil over backfilled areas is practiced for reclaimed and rehabilitation of mined out areas.	
8b	Concurrent use or storage of topsoil	Concurrent backfilling	Concurrent backfilling	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No such proposal	Concurrent backfilling is in practice.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Overburden & waste will be utilised for backfilling of mined out area and for restoring the land to its original use.	Overburden & waste rock 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 restoration and reclamation of mined out area by concurrent backfilling and restoring the land to its original use.	Phased restoration and reclamation by concurrent backfilling of mined out area and restoring the land to its original use.	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	2500 saplings have proposed in 1.00 hectares backfilled area for 2020-2021.	6519 saplings have been planted during 2020-2021 inside the backfilled area.	
8g	Survival rate	No such proposal in the approved document.	65%	
8h	Water sprinkling on roads to control airborne dust	Yes, it is proposed for water sprinkling on haul roads.	Water sprinkling on roads to control airborne dust is done regularly.	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		Bauxite is shallow deposit and concurrent backfilling of mined out area leads towards phased restoration and reclamation of the land to its original use.	After reclamation land is handed over to raiyats for farming.

Compliance of Rule 45:

Sl.No.	Item	Proposals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	--	Both Annual & Monthly returns are submitting in online system.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer in charge -Shri Sanjay Kumar, Geologist in charge -Shri Saptarshi Sengupta	As per record Mining Engineer and Geologist are present during Inspection.	

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Land use Pattern as on 01.04.2021. Exploited area = 192.89 hect. Reclaimed = 170.99 hect. Current working = 21.90 hect. Occupied by plant, buildings, residential, welfare buildings & roads = 8.34 ha.	Seems to be correct.
9d	Scrutiny of Annual return on afforestation	6519 saplings have been planted during 2020-2021 inside the backfilled area.	Seems to be correct.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	There is no Mineral Rejects Generation.
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 45% to below 50% Al ₂ O ₃ = 238625.940 tons. Mine has produced 223208.00 tons of Production during 2020-2021.	Details on ROM and graded ore stocks seem to be correct.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex mine Price: Rs.1169.67 per tonnes Production cost: Rs. 1169.67 per tonnes.	Details on Ex mine Price and Production cost seems to be correct. It is captive mine of Hindalco.

9h Scrutiny of value of fixed assets: Rs. Seems to be correct.
Annual return on fixed assets 694253438 /-

9k Scrutiny of Showel:03 Details on mining
Annual return on Dumper:17 Rock machineries seem to be
mining Drill: 04 correct.
machineries Wheel Loader:
02 Explosive
van : 02 Air
compressor: 03
Water tanker :
01

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	08/11/2021			

Date :

(RAGHVENDRA KUMAR)

Indian Bureau of Mines