

**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 : **G004**) **OM PRAKASH GOPAL**
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine : Sh. Victor Basu DGM (Geo) and PK Sen QP
Official with
Designation
- (iv) Date of Inspection : 14/08/2020
- (v) Prev.inspection date : 05/09/2019

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

Geologist
 Name : ARUN KUMAR BEHERA,Full Time
 Qualification : M.Sc(Geo)
 Appointment/ : 16/02/2016
 Termination date

Manager
 Name : Saptarshi Sengupta
 Qualification : M.Sc. (Applied Geology)
 Appointment/ : 01/07/2020
 Termination date

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

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	NIL	NIL	
1b	Exploration over lease area for geological axis 1 or 2	A total of 224 boreholes were proposed for drilling in 2019-20.	240 boreholes drilled in 2019-20.	-
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No such proposal	M/s South west Pinnacle Exploration Ltd.	-
1d	Balance area to be explored to bring Geological axis in 1 or 2	224 boreholes were proposed	240 boreholes drilled	-
1e	Balance reserve as on 01/04/20	Balance reserves as on 1/9/2018 reported at 3.273 million tonnes	-	-
1f	General remarks of inspecting officers on geology, exploration etc	-	-	Leasehold area is almost elongated shape with exposures of bauxite and laterite in pit faces and escarpment sections. Bauxite deposits of the area occurs as pockets and lenses in laterite cprofile.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Development in Kujam, Polpol and Ramjharria pits were proposed.	Developmentnot done at proposed location and there is site deviation.	Violation of Rule 11(1) of MCDR 2017 pointed out for deviation from approved proposals.

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Top soil - I Morrum - I Laterite - I	Top soil - I Morrum - I Laterite - I	-
2c	Stripping ratio or ore to OB ratio	1:2.33	1:1.6	Variation in stripping ratio may be due to site deviation.
2d	Quantity of topsoil generation in m3	494037 cum	364875 cum	-
2e	Quantity of overburden generation in m3	554527 cum	372834 cum	-
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	-	-	-

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Three	Three	-
3b	Quantity of ROM mineral production proposed	324629	268725	-
3c	Recovery of sailable/usable mineral from ROM production	70%	70%	-
3d	Quantity of mineral reject generation	60490 m3 (intercalated waste)	16518 m3 (intercalated waste)	-
3e	Grade of mineral rejects generation and threshold value declared.	NA	NA	-
3f	Quantity of sub grade mineral generation.	3217 m3	3166 m3	-
3g	Grade of sub grade mineral generation	NA	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)	Deep hole blasting (100mm dia) Burden x Spacing (2.5m x 3m)	-
3k	Provision of mining machineries in mineral benches	HEMM	HEMM	-
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	9.2 ha	17.4 ha	-
3n	Ore to OB ratio for the pit/mine during the year.	1:2.33	1:1.6	-
3o	Total area put in use under different heads at the end of year	169.1 ha	181.3 ha	-
3p	Production of ROM mineral during the last five year period as applicable	2015-16- 324991 2016-17 - 324294 2017-18- 324211 2018-19 - 324528 2019-20- 324629	2015-16- 324590 2016-17 -324200 2017-18- 324060 2018-19 -152025 2019-20- 268725	-

3q	General remarks of inspecting officers on method of mining etc.	Mining operations will be carried out by fully mechanised methods of mining.	Mining operations are being done by fully mechanised methods of mining.	-
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Solid Waste Management - Dumping:

Sl.No.	Item	Proposals	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.	No external dumps	-
4e	Number of active and alive dumps.	None	None	-
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 duming.	Not applicable as external duming not in practice.	-
4i	Length of Retaining wall or garland drain all along dumps	Not applicable as there is no proposal for external duming.	Not applicable as external duming not in practice.	-
4j	Number of settling ponds	None	None	-
4k	Specific comments of inspecting officer on waste dump management	-	Generated OB and waste are utilised for concurrent backfilling of mined out pits	-

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	7.83 ha	12.01 ha	-
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent use	Concurrent use	-
5d	Total area fully reclaimed and rehabilitated	173.11 ha	161.17 ha. Rehabilititation by way of afforestation is not in practice. Mined out areas are reclaimed by backfilling. After leveling the land is handed over to Raiyats for forming as per agreement.	-
5e	General remarks of inspecting officers on backfilling and reclamation etc.	-	-	Mined out areas are reclaimed by backfilling. After leveling the land is handed over to Raiyats for forming as per agreement.

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	-
6b	Area available for rehabilitation (ha) .	7.83 ha	12.01 ha	-
6c	afforestation done (ha).	1.00 ha	1.00 ha	-
6d	No. of saplings planted during the year	2500	2500 (approx)	-

6f	Any other method of rehabilitation	NA	After reclamation of mined out area (backfilling and leveling) the land is handed over to raiyats for forming.	-
6g	Cost incurred on watch and care during the year	NA	NA	-
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D	7.83 ha	12.01 ha	-
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	7.83 ha	12.01 ha	-
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	1.00 ha	1.00 ha (approx)	-
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.	NA	NA	-
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)	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 done on quarterly basis	-
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	-	-	-

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting	Grade wise sorting	-
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual	Manual	-
7c	Different grade of mineral sorted out at mines.	NA	NA	-
7d	Any beneficiation process at mines	No such proposal	None	-

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	-	-	Lean grade material are blended with high grade material before dispatch to plant.
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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No such proposal	-	-
8b	Concurrent use or storage of topsoil	Concurrent use for spreading over backfilled area.	Concurrent use for spreading over backfilled area.	-
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 are utilised for concurrent backfilling and 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)	-	Plantation done as per proposal	-
8g	Survival rate	90%	60%	-

8h	Water sprinkling on roads to control airborne dust	Yes	Yes	-
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	-	-	Mining activity difinitely affect aesthetic beauty in and around mines. Bauxite is shallow deposit and concurrent backfilling of mined out area leads towards phased restoration and reclamati on of the land to its original use. After reclamation land is handed over to raiyats for forming.

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 reporting period are submitted	-
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer : Sh. Sanjay Kumar Geologist: Dhirendra Pratap Singh	Mining Enginear and Geologists are emoloyed as per MCDR 2017	-
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area already exploited and abandoned:181.3 ha Area under Pits: 20.13 ha Reclaimed/Rehabilitated Area: 161.17ha Infrastructure : 8.34 ha	Details on land use patterns seems to be correct	Reclaimed/Rehabilitated Area: *After backfilling and leveling the area is handed over to raiyats for forming.
9d	Scrutiny of Annual return on afforestation	4788 saplings planted	-	-

9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	NIL	Mineral reject generation not noticed	-
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM stocks : NIL Graded ore Stocks : 40% to below 45% Al2O3: 695.77 tonnes 45% to below 50% Al2O3: 28438.75 tonnes	Details on ROM and graded ore stocks seems to be correct	-
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex mine Price: Rs.1102.15 per tonnes Production cost: Rs.1102.15 per tonnes	Details on Ex mine Price and Production cost seems to be correct	-
9h	Scrutiny of Annual return on fixed assets	value of fixed assets: Rs. 629132486/-	-	-
9k	Scrutiny of Annual return on mining machineries	Showel:03 Dumper:17 Rock Drill: 04 Wheel Loader: 02 Explosive van : 02 Air compressor: 03 Water tanker : 01	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 cause position			
Rule NO.		Issued on	Compliance on	Rule NO.		Issued on	Compliance on
MCDR17	Rule 11(1)	13/10/2020	30/12/2020				
MCDR17	Rule 45(7)(a)	13/10/2020	30/12/2020				

Date :

(OM PRAKASH GOPAL)

Indian Bureau of Mines