

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

**Inspection under SDF for star rating of mines REPORT**

**Ranchi regional office**

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

**Mine code :** 07JHK12007

- (i) Name of the Inspecting : **P002** ) **PHILLIP HAPADGARA**  
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : S.P. Jha, Mines Manager & Tapas Gachhayat, Geologist  
Official with  
Designation
- (iv) Date of Inspection : 28/08/2023
- (v) Prev.inspection date : 15/10/2022

**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** : TUE
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 : BIJESH KUMAR JHA  
 Minerals&Minerals Ltd. At &  
 P.O. Lohardaga Jharkhand  
 LOHARDAGA JHARKHAND  
 Phone:  
 FAX : 06526224016

Agent : Prateek Kumar  
 Hindalco Ind. Ltd. Court  
 Road Lohardaga LOHARDAGA  
 JHARKHAND  
 Phone: 7738368627  
 FAX :

## Mining Engineer

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

## Geologist

Name : Sri Anupam Kumar,Full Time  
 Qualification : M.Sc.(in Geology)  
 Appointment/ : 04/11/2023  
 Termination date

## Geologist

Name : CHANDAN KUMAR,Full Time  
 Qualification : MSc(Geo)  
 Appointment/ : 03/12/2018 15/03/2023  
 Termination date

## Geologist

Name : Sayantan Das,Full Time  
 Qualification : M Sc. (in Applied Geology)  
 Appointment/ : 15/03/2023 04/11/2023  
 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
		MP modif under 17(3) MCR 2016	06/05/2022

## PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil	Nil	Entire potential area is been explored in G1
1b	Exploration over lease area for geological axis 1 or 2	no such proosal	nil	Entire potential area is been explored in G1
1c	Exploration Agencies and Expenditure in lakh rupees during the year	NA	NA	nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	NA	NA	Entire potential area is been explored in G1
1e	Balance reserve as on 01/04/20	111: 3744765 T 221: 456141 T as on 01.04.2022	111: 3477965 T, 221: 456141 T as on 01.04.2023	nil
1f	General remarks of inspecting officers on geology, exploration etc	-	-	The bauxite deposits are the result of silica leaching process of alumina rich rocks and it occurs in form of an extensive blanket below the laterite cover on the top. The entire potential area of lease is been explored in G1,

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Quarry - 7 Quarry - 4	Quarry - 7 beyond proposed area by 20 m in Northern side of pit. Quarry - 4	Violation issued under rule 11(1) of MCDR, 2017

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Yes	Separate benches in topsoil, overburden, and mineral is been maintained.	Nil
2c	Stripping ratio or ore to OB ratio	1:1.5	1:3.04	Nil
2d	Quantity of topsoil generation in m3	124725 cum	324389 T	Thickness of top soil and OB are more than expected.
2e	Quantity of overburden generation in m3	459816.5 cum	810974.59 T	Thickness of top soil and OB are more than expected.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	-	-	Violation issued under rule 11(1) of MCDR,2017 for development beyond proposed area by 20 m in Northern side of pit/quarry 7.

### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2	2	Nil
3b	Quantity of ROM mineral production proposed	298620 T	266800 T	Nil
3c	Recovery of sailable/usable mineral from ROM production	70%	70%	Nil
3d	Quantity of mineral reject generation	127980 T	nil	grade is above 30 % Al <sub>2</sub> O <sub>3</sub> and blended (lower grade material) with higher grade material and hence no mineral reject generated during the reporting year
3e	Grade of mineral rejects generation and threshold value declared.	Al <sub>2</sub> O <sub>3</sub> % : 28%threshold valueAl <sub>2</sub> O <sub>3</sub> % <30%	no mineral reject generated during reporting year	nil

3f	Quantity of sub grade mineral generation.	no such proposal	nil	nil
3g	Grade of sub grade mineral generation	NA	NA	nil
3h	Manual / Mechanised method adopted for segregating from ROM	manual	manual	manual sorting of mineral is in practice
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	no such proposal	nil	nil
3j	Provision of drilling and blasting in mineral benches	Spacing - 1.5m, Burden - 1m, Depth - 3.3 m for OB and mineral. Bench height- 3m. It is Proposed to drill by 34-38mm dia, Jack hammer drill. Blasting is done by using ANFO explosives	Drilling & Blasting are done as per proposal	nil
3k	Provision of mining machineries in mineral benches	yes	yes	nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	bench height of 6m is in proposal	as per proposal	nil
3m	Total area covered under excavation/pits	Area under mining: 51.97 ha	47.22 Ha	nil
3n	Ore to OB ratio for the pit/mine during the year.	1:1.5	1:3.04	nil

3o	Total area put in use under different heads at the end of year	Area under mining: 51.97 ha, Road: 0.82 ha, Others (pond): 2.49 ha.	Already exploited & abandoned by opencast (O/C) mining=47.22 Ha., Covered under current(O/C) Workings= 22.62 Ha., reclaimed/Rehabilitated= 24.60 Ha., Occupied by plant, buildings, residential, welfare buildings & roads=0.96 Ha., Work done under progressive mine closure plan during the year: 0.71 Ha.	Nil
3p	Production of ROM mineral during the last five year period as applicable	2018-19: 298335 T 2019-20: 298183 T 2020-21: 298453 T 2021-22: 299127 T 2022-23: 298620 T	2018-19: 294000 T 2019-20: 112200 T 2020-21: 177500 T 2021-22: 195000 T 2022-23: 266800 T	nil
3q	General remarks of inspecting officers on method of mining etc.	-	-	Mining is been done by formation of benches. Maximum height of bench is 6m (proposal). Separate benches have been formed of OB and ore. Drilling & Blasting are done as per proposal on hard strata.

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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)	no such prposal as top soil and ob is used for concurrent backfilling on exahusted/ mined out pit	top soil and ob used for concurrent backfilling and reclamation.	nil

4b	Location of topsoil, OB and mineral reject dumps	no such proposal	nil	nil
4c	Number of dumps within lease area and outside of lease area	no such proposal	nil	nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	no such proposal	nil	nil
4e	Number of active and alive dumps.	no such proposal	nil	nil
4f	Number of dead dumps.	no such proposal	nil	nil
4g	Number of dumps established.	no such proposal	nil	nil
4h	Whether Retaining wall or garland drain all along dumps are there.	no such proposal	nil	nil
4i	Length of Retaining wall or garland drain all along dumps	no such proposal	nil	nil
4j	Number of settling ponds	no such proposal	nil	nil
4k	Specific comments of inspecting officer on waste dump management	-	-	OB/ waste is been used for Concurrent backfilling of mined out (exhausted pit)

#### 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 is in proosal for mined out area before backfilling	full extraction of mineral for mined out area before backfilling is in practice	nil
5b	Area under backfilling of mined out area	3.66 ha proposed to be back filled	0.71 ha	nil

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent use of topsoil for restoration or rehabilitation of mined out area is in proposal	Concurrent use of topsoil for restoration or rehabilitation of mined out area is in practice	nil
5d	Total area fully reclaimed and rehabilitated	3.66 ha is in proposal for the reporting year	0.71 ha has been reclaimed	Mine progressive closure operation are not satisfactory and violation issued under rule of 11 (1) of MCDR, 2017 for dumping of waste on reclaimed land.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	-	-	Mine progressive closure operation are not satisfactory and violation issued under rule of 11 (1) of MCDR, 2017 for dumping of waste on reclaimed land.

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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	nil
6b	Area available for rehabilitation (ha) .	3.66 ha	0.71 ha	Mine progressive closure operation are not satisfactory and violation issued under rule of 11 (1) of MCDR, 2017 for dumping of waste on reclaimed land.
6c	afforestation done (ha).	3.66 ha	2.01 ha	nil
6d	No. of saplings planted during the year	3312 nos	3478 nos	nil
6e	Cumulative no .of plants	-	28646 nos	nil



6f	Any other method of rehabilitation	no such proposal	nil	nil
6g	Cost incurred on watch and care during the year	Rs. 16024120/-	Rs. 1503097.93	nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	3.66 ha	0.71 ha	nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	379929 cum	Voids Filled By waste	Mine progressive closure operation are not satisfactory and violation issued under rule of 11 (1) of MCDR, 2017 for dumping of waste on reclaimed land.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	3312 nos	nil	violation issued under rule 11(1) of MCDR, 2017 for not carrying out plantation on said area
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	no such proposal	nil	nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	no such proposal	nil	nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	nil	28646 nos	nil

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	no such proposal	2.01 ha	nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	no such proposal	plantation	nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Compliance of Environmental monitoring is in proposal for core zone & buffer zone	Environmental monitoring in core zone & buffer zone is been done quarterly basis	nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	-	-	Mine progressive closure operation are not satisfactory and violation issued under rule of 11 (1) of MCDR, 2017 for dumping of waste on reclaimed land.

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#### Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	298620 T above 30% Al2O3	266800 T above 30% Al2O3	nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	manual	manual	nil
7c	Different grade of mineral sorted out at mines.	no such propoal	nil	nil
7d	Any beneficiation process at mines	no such proposal	nil	nil

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	-	-	There is no provision of beneficiation process at mines. Manual process is adopted for sorting of mineral
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### Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Separate removal and concurrently spreading over backfilled area is in proposal	Separate removal and concurrently spreading over backfilled area is in practice	nil
8b	Concurrent use or storage of topsoil	Concurrent use	Concurrent use	nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	no such proposal	nil	nil
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	nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Plantation and or making cultivating land	Plantation and or making cultivating land	nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	3312 nos of plants proposed for reporting year	3478 nos of saplings havv been planted	nil
8g	Survival rate	70%	70%	nil

8h	Water sprinkling on roads to control airborne dust	proposal of Water sprinkling on roads to control airborne dust	Water sprinkling on roads to control airborne dust is in practice	nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	-	-	Mine is located at top of plateau devoid of major vegetation however slope of plateau having vegetation of mainly sal tree.

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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly and Annual Return submitted	Monthly and Annual Return submitted	nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer & Mines Manager: Shil Prakash Jha, Geologist: Chandan Kumar.	Mining Engineer & Mines Manager: Shil Prakash Jha, Geologist: Chandan Kumar.	details are in order

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Already exploited and abandoned by opencast (O-C) mining: 47.220 ha, Covered under current (O-C) Workings: 22.62 ha, Reclaimed-rehabilitated: 24.6 ha, Occupied by plant, buildings, residential, welfare buildings and roads: 0.96 ha, Work done under progressive mine closure plan during the year: 0.71 ha	information seems to be in oreder	nil
9d	Scrutiny of Annual return on afforestation	Plantation within the lease area: 3478 nos, Survival rate: 70%, Total nos. of tree at the end of the year: 28646 nos.	information seems to be correct	nil
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	no mineral reject generated during the reporting year	no mineral reject generated during the reporting year
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Opening stock: 0 T, Closing stock: 0 T, Production: 266800.000 T	information seems to be correct	no provision of stacking of ROM at mine
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of production: Rs. 1401.04 per tonne.	information seems to be correct	nil

9h	Scrutiny of Annual return on fixed assets	Rs. 44050740/-	information seems to be correct	nil
9k	Scrutiny of Annual return on mining machineries	Shovel (Hydraulic): 4, Dumper: 12, Wheel Loader: 1, Water Tanker: 1, Air Compressor: 2, Rock Drill (Non-Elec.): 2, Pumps (Non-Elec.): 2	information seems to be correct	nil

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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)	08/09/2023	MCDR17	Rule 11(1)	08/09/2023

**Date :**

**(PHILLIP HAPADGARA)**

Indian Bureau of Mines