

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

**FMCP Inspection REPORT  
Ranchi regional office**

**Mine file No :** JHK/GML/BX/252/RRO

**Mine code :** 07JHK09004

- (i) Name of the Inspecting : **K001** ) **B.L. KISKU**  
Officer and ID No.
- (ii) Designation : Assistant Controller Mine
- (iii) Accompanying mine : Shri Pradeep Kumar, Manager & Mining Engineer and Shr  
Official with  
Designation
- (iv) Date of Inspection : 05/06/2023
- (v) Prev.inspection date :

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **KUJAM - I BAUXITE MINE(80**
- (b) **Registration NO.** : **IBM/935/2011**
- (c) Category : A Other than Fully Mech.
- (d) Type of Working : Opencast
- (e) Postal address  
State : JHARKHAND  
District : GUMLA  
Village : KUJAM  
Taluka : BISHNUPUR  
Post office : JOBHIPAT  
Pin Code : 835207  
FAX No. : 06526-224118  
E-mail :  
Phone : 06526-224015, 224112, 22311
- (f) Police Station : BISHUNPUR
- (g) First opening date : 14/05/2006
- (h) Weekly day of rest : SUN
2. Address for : AT- COURT ROAD, LOHARDAGA,  
correspondance PO - LOHARDAGA,  
DIST - LOHARDAGA (JHARKHAND).
3. (a) Lease Number : JHK0159  
(b) Lease area : 80.87  
(c) Period of lease : 50  
(d) Date of Expiry : 12/03/2056
4. Mineral worked : BAUXITE Main

## 5. Name and Address of the

Lessee : M/S HINDALCO INDUSTRIES LTD.  
COURT ROAD, LOHARDAGA,  
LOHARDAGA JHARKHAND  
Phone:06526 - 224012 & 224118  
FAX :06526-224112, 224016 & 0651- 2330782

Owner : A.K. AGARWALA  
HINDALCO INDUSTRIES LIMITED  
AT-RENUKOOT, P.O.-RENUKOOT  
DIST. SNOEBHADRA, U.P  
SONBHADRA UTTAR PRADESH  
Phone: 05446-252084, 2  
FAX : 05446-252107

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

## Mining Engineer

Name : Pradeep Kumar, Full Time  
Qualification : B.Tech (Mining)  
Appointment/ : 02/02/2023  
Termination date

## Mining Engineer

Name : SHASHWATO DAS SHARMA, Full Time  
Qualification : B.TECH. (MINING)  
Appointment/ : 01/03/2021  
Termination date

## Geologist

Name : RAJESH KUNDU, Part Time  
Qualification : M.Sc (GEOLOGY)  
Appointment/ : 01/03/2021  
Termination date

## Manager

Name : SHAMBHU SHARAN VASHISTH  
Qualification :  
Appointment/ : 02/06/2020  
Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Fresh under rule 22 MCR1960	12/04/2005
		Mining Scheme rule 12 MCDR1988	02/09/2015
		MP modif under 17(3) MCR 2016	10/09/2020
		MP modif under 17(3) MCR 2016	13/02/2023

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

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Nil.	Nil.	N.A.
1b	Exploration over lease area for geological axis 1 or 2	Nil	Explored under G1 -70.85 ha Non-Mineralized area - 10.02 ha	Explored under G1 -70.85 ha Non-Mineralized area - 10.02 ha
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Nil.	Nil.	Not applicable as entire area have been explored previously.
1d	Balance area to be explored to bring Geological axis in 1 or 2	Nil	Nil.	Not applicable as entire area have been explored previously.
1e	Balance reserve as on 01/04/20	As on 01.04.2023 : 149041Tonnes	As on 01.04.2023: 149041 tonnes	As approved MMP available reserves 149041 tonnes.
1f	General remarks of inspecting officers on geology, exploration etc	Nil	Nil	Entire area have already been explored previously.

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Quarry 449 & 483	Quarry 449 & 483	Development work carried out as per approved RMP & Modified MP.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Yes. Separate Bench in Ore and O.B. have been given.	Separate bench has been made top soil and O.B.	Separate bench has been made top soil and O.B.
2c	Stripping ratio or ore to OB ratio	Ore: O.B. given is 1:0.90 (Tonne:cum).	Ore: O.B. given is 1:1.12 (Tonne:cum).	Nil
2d	Quantity of topsoil generation in m3	Top soil - 104888 m3	Top soil - 130990 m3	Slight increase in the volume of topsoil due to the thickness variation.

2e	Quantity of overburden generation in m3	O.B. generation - 39784 m3	O.B. generated - 47228 m3	O.B. generated are utilized by concurrent backfilling and reclamation.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Nil	Nil	O.B. generated are utilized by concurrent backfilling and reclamation.

### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2(Two)	2(Two)	Nil
3b	Quantity of ROM mineral production proposed	148669 tonnes	143610 tonnes	Production is based on demand from captive plant.
3c	Recovery of sailable/usable mineral from ROM production	90%	90%	Nil
3d	Quantity of mineral reject generation	Nil	Nil	Nil
3e	Grade of mineral rejects generation and threshold value declared.	Less than 20% Al2O3 & More than 15% silica	Less than 20% Al2O3 & More than 15% silica	Nil
3f	Quantity of sub grade mineral generation.	Nil	Nil	Nil
3g	Grade of sub grade mineral generation	Nil	Nil	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Manual	Manual	Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	Nil	Nil	Nil

3j	Provision of drilling and blasting in mineral benches	Drilling & Blasting is proposed.	Drilling & Blasting practice is done.	Drilling & Blasting practice is done in mineral benches.
3k	Provision of mining machineries in mineral benches	Yes. Machineries are proposed in approved mining plan.	Machineries are deployed in the mine.	Mine is operated Fully Mechanized.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes.	Yes. Bench height in Ore and O.B. are kept suitable for mining.	Nil.
3m	Total area covered under excavation/pits	4.40 ha	4.22 ha	As per approved modified MP.
3n	Ore to OB ratio for the pit/mine during the year.	Ore:O.B - 1:0.90 (Tonns :Cum)	Ore:O.B - 1:1.12 (Tonns :Cum)	Nil
3o	Total area put in use under different heads at the end of year	Nil.	48.86 ha	Nil
3p	Production of ROM mineral during the last five year period as applicable	2017-18: 286074 tonnes 2018-19: 298044 tonnes 2019-20: 297947 tonnes 2020-21: 148361 tonnes 2021-22: 148028 tonnes 2022-23: 148669 tonnes	2017-18 : 141655 tonnes 2018-19 : 131115 tonnes 2019-20 : 44245 tonnes 2020-21 : 59695 tonnes 2021-22 : 94130 tonnes 2022-23: 143610 tonnes.	
3q	General remarks of inspecting officers on method of mining etc.	N.A.	N.A.	Nil

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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)	Top soil will be used for reclamation of the backfilled quarry.	Top soil are spreading over the reclaimed areas of the backfilled quarries.	Top soil are spreading over the reclaimed areas of the backfilled quarries.

4b	Location of topsoil, OB and mineral reject dumps	Nil.	Nil	Nil.
4c	Number of dumps within lease area and outside of lease area	Nil. As per approved MP, overburden is to be used for backfilling of the mined-out areas.	Nil. Overburden are used for concurrent backfilling of mined-out areas.	Overburden are used for concurrent backfilling of mined-out areas.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not applicable.	Not applicable.	Nil
4e	Number of active and alive dumps.	Nil.	Nil	Nil.
4f	Number of dead dumps.	three	three	Temporary dump.
4g	Number of dumps established.	Nil	Nil	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	Nil	Nil	Nil
4i	Length of Retaining wall or garland drain all along dumps	Nil	Nil	Nil
4j	Number of settling ponds	Nil	Nil	Nil
4k	Specific comments of inspecting officer on waste dump management	Nil	Nil	No waste dump has been observed during the inspection. All rejects and wastes are used for concurrent backfilling.

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Solid Waste Management - Backfilling:

Sl.No.	Item	Proposals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Yes.	After fully exhaustion of Bauxite , backfilling is being done.	After fully exhaustion of bauxite , backfilling is being done.

5b	Area under backfilling of mined out area	During 2022-23: 2.60 ha.	During 2022-23: 2.60 ha.	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent use of topsoil for restoration & rehabilitation .	Concurrent use of topsoil for restoration & rehabilitation as per the proposal.	Nil
5d	Total area fully reclaimed and rehabilitated	1.51ha proposed to be reclaimed in 2021-22.	During 2021-22: 3.41 ha mined out area reclaimed.	Cumulative reclamation 44.12 ha. upto 2021-22.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	Nil	Nil	Cumulative reclamation 44.12 ha. upto 2021-22.

#### 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.	A.R. for FY 2022-23, submitted on time and correctly.	Nil
6b	Area available for rehabilitation (ha) .	Nil	Nil	Nil
6c	afforestation done (ha).	Nil	Nil	Nil.
6d	No. of saplings planted during the year	Nil	Nil	Nil
6e	Cumulative no .of plants	Nil	Nil	Nil
6f	Any other method of rehabilitation	Nil	Nil	Nil
6g	Cost incurred on watch and care during the year	Nil	Nil	Nil

6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	2.60 ha.	2.60 ha.	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Nil	Nil	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	Nil	Nil	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Nil	Nil	Rainwater harvesting pond.
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	0.10 ha.	0.20 ha.	Rainwater harvesting pond.
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	3075 nos.	3094 nos.	Plantation on Safety barrier.
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Nil	Nil	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Nil	Nil	Nil



6p	Compliance of environmental monitoring (core zone and buffer zone)	Rs. 144703/-	Rs. 372735.50/-	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Nil	Nil	Rainwater harvesting pond has been proposed in Final Mine Closure Plan. Since, land have to be handed over to Raiyats, RWHP is not required.

#### Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Yes.	Yes, grade-wise sorting and sizing is done manually within lease.	Grade-wise sorting and sizing is done manually within lease.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical- Manual picking of Ore from Intercalated Waste.	Mechanically and Manually Picking of Ore from Intercalated Waste.	Sorting and sizing is done mechanical & manual combined means within lease.
7c	Different grade of mineral sorted out at mines.	Average Grade:- Al2O3 = +44% Sio2 = 3.8% Cut-off Grade:- Al2O3 = +30% Sio2 = 7%	Average Grade:- Al2O3 = +44% Sio2 = 3.8% Cut-off Grade:- Al2O3 = +30% Sio2 = 7%	Sorting and sizing is done manually within lease.
7d	Any beneficiation process at mines	Nil	Sorting and sizing is done manually within lease area.	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Nil	Nil	Sorting and sizing is done manually within lease. Sorted ore are transported to Lohardaga Railway siding for onward tranport to Muri Plant.

#### Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
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8a	Separate removal and utilization of topsoil (Rule 32)	Yes	Concurrent backfilling and spreading of topsoil over backfilled areas is practiced for reclamation and rehabilitation of mined out areas.	Nil
8b	Concurrent use or storage of topsoil	Concurrent use.	Concurrent use.	Top soil are spread over the reclaimed areas concurrently.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Proposal of removing topsoil separately. O.B./Waste/Rejects are concurrently used for backfilling.	Concurrent backfilling and spreading of topsoil over backfilled areas is practiced for reclamation and rehabilitation of mined out areas.	All overburden is used for backfilling the mined-out areas.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Proposal of O.B. and Waste generated are to be backfilled simultaneously in the mined out areas.	Overburden, waste rock and rejects are used for concurrent backfilling of mined-out areas.	Overburden, waste rock and rejects are used for concurrent backfilling of mined-out areas for restoring the land to its original use.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	All overburden will be backfilled in mined-out areas, soil will be spread for reclamation.	All overburden are used for backfilling of mined-out areas, soils are being spread over reclaimed areas.	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Yes	Plantation during 2022-23: WML-3094 & OML-120 trees with survival rate 70%	Nil
8g	Survival rate	80%	70%	Nil
8h	Water sprinkling on roads to control airborne dust	Yes	Water sprinkling on road is observed during the inspection.	Water sprinkling is done on haul road to control the airborne dust.

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Nil	In and around the lease boundary scanty vegetation are seen.	Surrounding area beyond lease area is greenery. The area is hilly terrain.
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#### Compliance of Rule 45:

Sl.No.	Item	Proposals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly and Annual returns submitted on regularly.	Monthly and Annual returns are submitted online in due time as per MCDR, 2017.	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Information on Mining Engineer, Geologist and Manager have been given in AR.	Shri Pradeep Kumar - Mining Engineer & Manager and Shri Rajesh Kundu have been given in A.R.	Nil
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Land use pattern for area under pits, reclaimed area dumps etc are furnished in A.R. 2022-23.	Land use pattern furnished are as follows:- (i) Already exploited and abandoned by opencast (O-C) mining - 47.77 ha., (ii) Covered under current (O-C) Workings - 3.65 ha., (iii) Reclaimed-rehabilitated - 44.12 ha., (iv) Occupied by plant, buildings, residential, welfare buildings and roads - 1.09 ha., (v) Work done under progressive mine closure plan during the year - 2.80 ha.	Nil
9d	Scrutiny of Annual return on afforestation	As per approved MMP afforestation have been furnished in A.R. 2022-23.	i) Number of trees planted during the year : WML - 3094 trees & OML - 120 trees, ii) Survival rate in percentage : WML - 70% and OML - 75%, iii) Total no. of trees at the end of the year : WML - 2160 trees & OML - 90 trees.	Plantation need to take more care for obtaining better survival rate.

9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Rejects generation have been given in A.R.	Generated during the year = 178218.15 cum.	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Grade-wise ROM Stock & Dispatched have been furnished in A.R.	During 2022-23: - (i) Production - 143610 tonnes (40% to below 45% Al2O3) (ii) Despatches from mine-head - 143428.18 tonnes, (iii) Closing stock at mine-head - 4191.70 tonnes.	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Details on Ex-mine price given in A.R.	Ex-mine price (Rs. per Tonne) = 1305.99/-	Mine is captive and ore are consumed on its Muri plant.
9h	Scrutiny of Annual return on fixed assets		(i) Industrial Building: Rs. 1817476/- (ii) Plant and Machinery including transport equipments: Rs. 390322/- (iii) Capitalised Expenditure major overhaul and machinery etc. (As per Income Tax Act): Rs. 22884754/- Total Value of Fixed Assets = Rs. 25092552/-	Nil
9k	Scrutiny of Annual return on mining machineries	Mining Machineries deployed in the mine are furnished in A.R.	Mining Machineries deployed in the mine are given in A.R. below: - 1) SHOVEL (HYDRAULIC) - 0.90 cum - 2 nos. Non Electrical, 2) WHEEL LOADER - 1.75 cum - 1 no. Non Electrical, 3) DUMPERS - 25 Tonne - 3 nos. Non Electrical, 4) DUMPERS - 35 Tonne - 2 nos. Non Electrical, 5) BLAST HOST DRILL - 100 mm - 1 no. Non Electrical, 6) AIR COMPRESSORS - 450 cum/min.	Nil

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

Date :

(B.L. KISKU)

Indian Bureau of Mines