

**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/GLA/BX/204/RRO

Mine code : 07BHR32009

- (i) Name of the Inspecting : **K001**) **B.L. KISKU**
Officer and ID No.
- (ii) Designation : Assistant Controller Mine
- (iii) Accompanying mine : Sri Tripurari Singh, Mines Manager & Shri Abhishek Ku
Official with
Designation
- (iv) Date of Inspection : 04/09/2023
- (v) Prev.inspection date : 15/02/2021

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **JALIM AND SANAI (38.447)**
- (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 : JALIM & SANAI
- Taluka : BISHUNPUR
- Post office : BISHUNPUR
- Pin Code :
- FAX No. : 06526-24118
- E-mail : N.A.
- Phone : 06526-24016,24112,24446
- (f) **Police Station** : BISHUNPUR
- (g) **First opening date** : 01/11/1983
- (h) **Weekly day of rest** : SUN
2. **Address for** : VILL-- JALIM & SANAI
correspondance PO-BISHNPUR
DIST-GUMLA
3. (a) **Lease Number** : BHR0248
- (b) **Lease area** : 12.14
- (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 : K.N.BHANDARI
 M/s Hindalco Industries Ltd
 P.O. Renukoot Dist.
 Sonebhadra (UP) SONBHADRA
 UTTAR PRADESH
 Phone:
 FAX :

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

Mining Engineer

Name : SOUMYA PANDA, Full Time
 Qualification : B.E. (MINING)
 Appointment/ : 01/08/2019
 Termination date

Geologist

Name : SHRI ABHISHEK KUMAR, Full Time
 Qualification : M.Sc (GEOLOGY)
 Appointment/ : 17/12/2008
 Termination date

Manager

Name : SRI TRIPURARI SINGH
 Qualification : MINES FOREMAN CERTIFICATE
 Appointment/ : 17/05/2010
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Existing rule 11 MCDR1988	03/03/1993
		Mining Scheme rule 12 MCDR1988	30/03/2000
		Renewal under rule 24 MCR1960	03/12/2004
		Mining Scheme rule 12 MCDR1988	10/04/2012
		FMCP under 23C(1)	26/02/2013
		Mining Scheme rule 12 MCDR1988	19/12/2014
		MP review under 17(1) MCR 2016	30/11/2017
		MP review under 17(1) MCR 2016	06/02/2023

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	N.A.	N.A.	Nil
1b	Exploration over lease area for geological axis 1 or 2	N.A.	N.A.	Nil
1c	Exploration Agencies and Expenditure in lakh rupees during the year	N.A.	N.A.	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	N.A.	N.A.	Nil
1e	Balance reserve as on 01/04/20	N.A.	As on 01.04.2022: (111) - 28207 MT (122) - 80947 MT	Nil
1f	General remarks of inspecting officers on geology, exploration etc	N.A.	N.A.	Nil

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Quarry 2(Northern) & Quarry 3 (Southern)	Easting : 237791 - 237823 Northing : 2592910 - 2592929	Nil

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Top soil- 1Bench Murrum- 1Bench Bauxite- 1Bench OB bench 6mX6m, Mineral bench 3mX3m Separate benches in top soil, overburden and ore have been proposed.	Top soil- 1Bench Murrum- 1Bench Bauxite- 1Bench OB bench : 6mX6m, Mineral bench : 3mX3m	Benches in top soil, overburden and ore are kept separately & maintained.
2c	Stripping ratio or ore to OB ratio	1:0.10	1:0.22	Nil
2d	Quantity of topsoil generation in m3	28271 cum	12050 cum.	Nil
2e	Quantity of overburden generation in m3	30682 cum	21067.04 cum	Nil
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Proposed to work in Quarry-2 & 3.	Worked in Quarry-2 & 3.	Nil

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	2 Nos. (Quarry-2 and Quarry-3)	2 Nos. (Quarry no.-2 & Quarry no.-3).	Nil
3b	Quantity of ROM mineral production proposed	49914 MT	45855 MT	Nil
3c	Recovery of sailable/usable mineral from ROM production	80%	76%	Nil
3d	Quantity of mineral reject generation	2376 cum	Nil	Nil
3e	Grade of mineral rejects generation and threshold value declared.	Al2O3 = < 30.00	N.A.	Nil

3f	Quantity of sub grade mineral generation.	N.A.	N.A.	Nil
3g	Grade of sub grade mineral generation	N.A.	N.A.	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.	N.A.	N.A.	Nil
3j	Provision of drilling and blasting in mineral benches	Yes	Yes	Drilling and blasting in mineral benches is done.
3k	Provision of mining machineries in mineral benches	Yes	Yes	Other than Manual.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height of benches in overburden 6mX6m and mineral 3mX3m	Height of benches in overburden 6mX6m and mineral 3mX3m are suitable for method of mining.	Nil
3m	Total area covered under excavation/pits	18.28 hecets.	7.32 hecets.	Nil
3n	Ore to OB ratio for the pit/mine during the year.	1:0.10	1:0.22	Nil
3o	Total area put in use under different heads at the end of year	Area to be excavated 18.28 hecets., Reclaimed/Rehabilitated area 7.33 hecets., Roads 0.02 hecets.	Area already exploited & abandoned by opencast (O/C) mining 19.05 hecets., Covered under current (O/C) Workings 7.32 hecets., Reclaimed/Rehabilitated area 9.1 hecets., area occupied by plant, buildings, residential, welfare Buildings & Roads 0.5hecets.	Nil

3p	Production of ROM mineral during the last five year period as applicable	(i) 2017-18 : 36180 MT (ii) 2018-19 : 49898 MT (iii) 2019-20 : 49439 MT (iv) 2020-21 : 49236 MT (v) 2021-22 : 49184 MT (vi) 2022-23 : 49914 MT	(i) 2017-18 : 35497.83 MT (ii) 2018-19 : 40395 MT (iii) 2019-20 : 45545 MT (iv) 2020-21 : 41548 MT (v) 2021-22 : 45855 MT (vi) 2022-23 : 49000 MT	Nil
3q	General remarks of inspecting officers on method of mining etc.	Mechanised method is proposed.	45855 tons have been achieved during 2021-2022 against 49184 tons of proposed production.	Less production due to Lock down.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	N.A.	N.A.	Rejects are used for simultaneously backfilled.
4b	Location of topsoil, OB and mineral reject dumps	N.A.	N.A.	There is no dump of top soil.
4c	Number of dumps within lease area and outside of lease area	N.A.	N.A.	Simultaneously Backfilling is done.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	N.A.	N.A.	Simultaneously Backfilling done
4e	Number of active and alive dumps.	N.A.	N.A.	Simultaneously Backfilling done
4f	Number of dead dumps.	N.A.	N.A.	Nil
4g	Number of dumps established.	N.A.	N.A.	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	N.A.	N.A.	Nil
4i	Length of Retaining wall or garland drain all along dumps	N.A.	N.A.	Nil

4j	Number of settling ponds	N.A.	N.A.	Nil
4k	Specific comments of inspecting officer on waste dump management	N.A.	As per proposal the concurrent backfilling is done.	There is no proposal for dumping during 2021-22. It is proposed to backfill the area simultaneously. After reclamation, Land will be handed over to the land owners (Raiyats).

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.	Fully extracted.	Drilling is done in the quarry floor and sample collected from mined out area. After getting negative result mined out zone is declared.
5b	Area under backfilling of mined out area	During 2021-22 : 0.74 hecets.	During 2021-22 : 0.7321 hecets.	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent soil spreading.	Concurrent use, Simultaneously spread over backfilled area.	Reclamation of backfilled area.
5d	Total area fully reclaimed and rehabilitated	0.75 hecets.	0.80 hecets. Cultivating land by soil spreading.	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.	N.A.	0.7321 hectares has been backfilled during 2021-22	Simultaneously Back filling has proposed to backfill Quarry-2 & 3 during and 2022-23.

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
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6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	Annual report to be submitted on or before 1st July' 2023.	Annual Report for the year 2022-23 have been submitted in due time.	Nil
6b	Area available for rehabilitation (ha) .	0.75 hecets.	0.80 hecets.	Nil
6c	afforestation done (ha).	0.75 hecets.	0.80 hecets. in backfilled areas.	Simultaneously backfilled by the waste Hydro reclamation.
6d	No. of saplings planted during the year	1184 Nos.	2000 nos.	Cumulative plantation 6400 nos.
6e	Cumulative no .of plants	N.A.	Upto August, 2023 total nos. of 6400 saplings.	Nil
6f	Any other method of rehabilitation	N.A.	N.A.	Nil
6g	Cost incurred on watch and care during the year	Rs. 757600/-	Rs. 706334/- upto August, 2023	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Q2 - 0.33 hecets. (254m×13m×5m) Q3- 0.25 hecets. (147m×17m×5m)	Q2 + Q3 = 0.4452 hecets. (159mX28mX3.5m)	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	N.A.	N.A.	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	1184 nos.	2000 nos.	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	N.A.	N.A.	Nil

6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	N.A.	N.A.	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	N.A.	N.A.	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	N.A.	N.A.	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	N.A.	N.A.	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly	Quarterly	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Environment monitoring is carried out through own as well as private agency.	1500 saplings have been planted in 0.80 hectares during 2022-23.	Nil

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 49914 tonnes during 2022-23.	49000 tonnes of production and despatch of 48843.13 tonnes (45% to below 50% Al2O3) have been achieved during 2022-23.	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.	Average Grade:- Al2O3 = 41.39% SiO2 = 4.21% Cut Off Grade:- Al2O3 = +30% SiO2 = 5%	Average Grade:- Al2O3 = 41.39% SiO2 = 4.21% Cut Off Grade:- Al2O3 = +30% SiO2 = 5%	Low grade are Blended with High grade ores to get the desired plant feed materials.
7d	Any beneficiation process at mines .	Manually sizing and sorting are proposed	Sorting and sizing is being done	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	The total target of Production was 49914 tons during 2022-23.	49000 tonnes of production and despatch of 48843.13 tonnes (45% to below 50% Al2O3) have been achieved during 2022- 23.	Low grade are Blended with High grade ores to get the desired plant feed materials.

Environment :

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Separate removal of top soil.	Separate removal of top soil.	Concurrent spreading over backfill area
8b	Concurrent use or storage of topsoil	Concurrent use.	Concurrent use	Concurrent spreading over backfill area.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Proposal of removing topsoil separately and spreading over mined out area.	Concurrent backfilling and spreading of topsoil over backfilled areas is practiced for reclamation and rehabilitation of mined out areas.	No Dump
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	O.B., Waste, Rejects to be used for Backfilling.	Backfilling is carried out simultaneously.	Concurrent backfilling is carried out.

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Simultaneously backfilling and reclamation.	Concurrent backfilling and reclamation is done.	Simultaneously backfilling and reclamation is done.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	1200 saplings has proposed in 0.75 hectares Backfilled area for 2022-23.	1500 saplings within lease area have been achieved during 2022-23.	6550 saplings have been planted from 2015 to 2022 inside the backfilled area.
8g	Survival rate	70%	70%	Nil
8h	Water sprinkling on roads to control airborne dust	Water sprinkling by water tankers on daily basis.	Water sprinkling by water tankers on daily basis is done.	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Cultivation depends mainly on Monsoon at the top of the plateau.	Surrounding area beyond lease area is greenery. The area is hilly terrain.	The aesthetic beauty in and around mines area is good.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	MR Submitted up to = August.2023 & AR Submitted for the year 2022-2023.	Both Monthly & Annual returns are submitting online system.	Timely complied.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer Sri Saumya Panda and Geologist Sri Abhishek Kumar.	As per record Mining Engineer and Geologist are present during Inspection.	Nil

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Land use Pattern as on 01.04.2023: - Exploited area = 19.541 hecets. Reclaimed = 9.54 hecets., Current working = 7.371 hecets., Roads=0.50 ha	Landuse Pattern is filled as per approved Mining Plan.	Nil
9d	Scrutiny of Annual return on afforestation	1500 saplings have been planted within lease area during 2022-2023.	The lessee has planted the saplings more than proposed 1200 nos of saplings.	Nil
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	There is no Mineral rejects generation.	There is no Mineral rejects generation.	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Bauxite Stock as on 01.04.2023: - ROM Closing stock = 346.80, Opening and closing Stock of 45% to below 50% Al2O3 is 1320.95 tons and 1477.82 tone respectively. Dispatches of Processed ore 45% to below 50% Al2O3 = 48843.13 tons. Opening and closing Stock of 40% to below 45% Al2O3 is 346.80 ton both and production and despatch for this grade was nil.	Mine has produced 49000 tons of Production during 2022-23.	Nil

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of Production & Ex. Mine Price has been given as Rs 1478.04/te	Appears to be correct.	Nil
9h	Scrutiny of Annual return on fixed assets	Fixed asset Rs 2216572/-	Appears to be correct.	Nil
9k	Scrutiny of Annual return on mining machineries	Air compressor 400cum/min 1no., Others (Non-Electric) 0.300cap. 1no.	Available in field.	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