

**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/205/RRO

Mine code : 07BHR32015

- (i) Name of the Inspecting : **R002**) **RAGHVENDRA KUMAR**
Officer and ID No.
- (ii) Designation : Assistant Mining Engineer
- (iii) Accompanying mine : Shambhu Sharan Vasistha, Mines Manager
Official with
Designation
- (iv) Date of Inspection : 26/07/2023
- (v) Prev.inspection date : 11/09/2021

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **SHRENGDAG (402.67)**
- (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 : **SHRENGDAG, TUIMU, ETC**
- Taluka : **BISHUNPUR**
- Post office : **SARANGO**
- Pin Code :
- FAX No. : **06526-224118**
- E-mail :
- Phone : **06526-224016, 224112 & 224**
- (f) **Police Station** :
- (g) **First opening date** : **25/05/1976**
- (h) **Weekly day of rest** : **SUN**
2. **Address for** : **VILL-SHRENDAG**
correspondance : **BISHNUPUR**
: **DIST-GUMLA**
3. (a) **Lease Number** : **BHR0247**
- (b) **Lease area** : **155.81**
- (c) **Period of lease** : **50**
- (d) **Date of Expiry** : **31/03/2030**
4. **Mineral worked** : **BAUXITE** **Main**

5. Name and Address of the

Lessee : HINDALCO INDUSTRIES Ltd.
M/s HINDALCO INDUSTRIES
Ltd. AT & PO - COURT ROAD,
LOHARDAGA LOHARDAGA
JHARKHAND
Phone:06526-224016 & 224112
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 : Prateek Kumar
Hindalco Ind. Ltd. Court
Road Lohardaga LOHARDAGA
JHARKHAND
Phone: 7738368627
FAX :

Mining Engineer

Name : Dillu Singh,Full Time
Qualification : B Tech (Mining)
Appointment/ : 25/02/2022
Termination date

Geologist

Name : Rajarshi Majumdar,Full Time
Qualification : M. Sc. (Applied Geology)
Appointment/ : 25/02/2022 31/10/2023
Termination date

Geologist

Name : Sri Abhishek Kumar,Full Time
Qualification : M.Sc. (in Applied Geology)
Appointment/ : 01/11/2023
Termination date

6. Date of approval of Mining	:	Existing rule 11 MCDR1988	26/05/1992
Plan/Scheme of Mining		Renewal under rule 24 MCR1960	08/11/2004
		Mining Scheme rule 12 MCDR1988	08/04/2011
		FMCP under 23C(1)	09/05/2013
		MP modif under MCR 1960	23/05/2016
		MP review under 17(1) MCR 2016	10/09/2020
		MP modif under 17(3) MCR 2016	07/10/2020
		FMCP under 23C(1)	03/02/2023

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No exploration proposal	Exploration not done	No exploration proposed during 2022-23.
1b	Exploration over lease area for geological axis 1 or 2	No exploration proposal	No exploration proposal	104.23 ha. area covered under G1.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No such proposal	Nil	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	No such proposal	Nil	G1: 104.23 ha., G2: 13.58 ha., G3: 38.00 ha.
1e	Balance reserve as on 01/04/20	-	Reserves & Resources as on 01.04.2022 Proved Mineral Reserves (111) = 32788 tons Probable Mineral Reserve (122) = 650263 tons	Nil
1f	General remarks of inspecting officers on geology, exploration etc	No exploration proposal	104.23 ha. area covered under G1. G2: 13.58 ha., G3: 38.00 ha.	Reserves & Resources as on 01.04.2022 Proved Mineral Reserves (111) = 32788 tons Probable Mineral Reserve (122) = 650263 tons

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	The working is proposed in quarry 2A.	Less working has been done in quarry 2A.	Less development work and production has been done in quarry 2A.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Top soil & Morrum-2 Bench Latiric OB - 1 Bench Bauxite-1Bench	Top soil & Morrum-2 Bench Latiric OB - 1 Bench Bauxite-1Bench	Separate Benches of top Soil and OB has been maintained

2c	Stripping ratio or ore to OB ratio	1:1.38	1:1.21	Nil
2d	Quantity of topsoil generation in m3	296566 cum	44502.77cum	Nil
2e	Quantity of overburden generation in m3	358559 cum	133508 cum	Nil
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	The working is proposed in quarry 2A.	Less working has been done in quarry 2A.	Less development work and production has been done in quarry 2A.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	1 Nos.	1 Nos.	Less working has been done in quarry 2A.
3b	Quantity of ROM mineral production proposed	258367 MT	110300 MT	Nil
3c	Recovery of sailable/usable mineral from ROM production	80%	70%	Nil
3d	Quantity of mineral reject generation	Nil	Nil	Nil
3e	Grade of mineral rejects generation and threshold value declared.	Al2O3<30.00	25.44%Al2O3	Nil
3f	Quantity of sub grade mineral generation.	There is no proposal for production of subgrade mineral.	No production of subgrade mineral.	Nil
3g	Grade of sub grade mineral generation	NA	NA	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.	No such proposal	Not done	Nil
3j	Provision of drilling and blasting in mineral benches	Proposed.	Drilling and blasting in mineral benches carried out.	Drilling and blasting is being done in mineral benches.
3k	Provision of mining machineries in mineral benches	Hydraulic Shovel, Wheel Loader, Dumper, Air Compressor Proposed.	Hydraulic Shovel, Wheel Loader, Dumper, Air Compressor deployed.	Fully Mechanized.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Yes	Yes	As per approved proposal.
3m	Total area covered under excavation/pits	4.72 Ha.	2.1 Ha.	Less working has been done in quarry 2A.
3n	Ore to OB ratio for the pit/mine during the year.	1:2.07	1:3.20	Nil
3o	Total area put in use under different heads at the end of year	33.216 Ha.	26.046 Ha.	Nil
3p	Production of ROM mineral during the last five year period as applicable	2018-19 258074 MT 2019-20 258976 MT 2020-21 258176 MT 2021-22 257281 MT 2022-23 258367 MT	2018-19 255430 MT 2019-20 210915 MT 2020-21 128814 MT 2021-22 120200 MT 2022-23 110300 MT	Less production achieved due to unavailability of land/failure in land acquisition.
3q	General remarks of inspecting officers on method of mining etc.	The working for the year 2022-23 was proposed with average three benches around the borehole no. SBP-71 to 77 & SBHA28,46 & 47 in quarry 2A.	Less working has been done in quarry 2A.	Entire OB and Waste from this face has been used for concurrent backfilling. Soil has been spread over these backfilled areas.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Proposal for concurrent backfilling of soil and OB in mined out area.	Concurrent backfilling of mined out area as proposed.	Entire OB and Waste from this face has been used for concurrent backfilling. Soil has been spread over these backfilled areas.
4b	Location of topsoil, OB and mineral reject dumps	No proposal	Nil	Proposed concurrent backfilling of mined out area.
4c	Number of dumps within lease area and outside of lease area	No proposal	Nil	Simultaneously Backfilling.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	No proposal of external dumping.	Nil	Nil
4e	Number of active and alive dumps.	None	None	Nil
4f	Number of dead dumps.	None	None	Nil
4g	Number of dumps established.	None	None	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	Proposal for concurrent backfilling of soil and OB in mined out area.	There is no proposal for external dumping. Generated OB and top soil are backfilled in mined out area thus mined out area are being reclaimed simultaneously.	Entire OB and Waste from this face has been used for concurrent backfilling. Soil has been spread over these backfilled areas.

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	Less working has been done in quarry 2A.	Less development work and production has been done in quarry 2A.
5b	Area under backfilling of mined out area	6.23 Ha.	1.68 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	Concurrent use	Nil
5d	Total area fully reclaimed and rehabilitated	6.23 Ha	1.68 Ha	1.68 Ha. backfilled & reclaimed, 2.0 ha.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	It was proposed to mine 4.72 ha. and backfill 6.23 ha. area in quarry number 2A during 2022-23.	As per the proposal 1.68 ha. Backfilling has been done in the 2.10 ha. Mined-out area of quarry number 2A.	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.	Submitted for the year 2022-2023.	Nil.
6b	Area available for rehabilitation (ha) .	No Proposal	Nil	Nil
6c	afforestation done (ha).	No Proposal	Nil	Nil
6d	No. of saplings planted during the year	No Proposal	Nil	Nil
6e	Cumulative no .of plants	No Proposal	Nil	Nil
6f	Any other method of rehabilitation	No Proposal	Nil	Nil

6g	Cost incurred on watch and care during the year	No Proposal	Nil	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	6.23 ha.	1.68 ha.	Violation of Rule 11(1) has been issued.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No Proposal	Nil	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	3.20 ha., 5120 plants	2.0 ha., 2000 plants	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal	Nil	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	1280 saplings in 0.80 ha. Safety Barrier.	1000 saplings in 0.80 ha. Safety Barrier.	Violation of Rule 11(1) has been issued.
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No proposal	Nil	Nil

6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal	Nil	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Proposed in core and buffer zone.	Quarterly Monitoring.	Nil.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	It was proposed to plant 1280 nos. of saplings, in 0.80 ha. of Green Belt/Safety barrier area and 5120 saplings in 3.20 ha. Backfilled area, during 2022-23.	1000 saplings were planted in the proposed safety barrier 0.65 ha. area and 2000 saplings have been planted in the 2.0 ha. Backfilled area.	Violation of Rule 11(1) has been issued.

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 258367 tons during 2022-2023.	110300 tons of production have been achieved during 2022-2023.	Less development work and production has been done in quarry 2A.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual	Manual	Separation by hand of bauxite from waste in the ore zone.
7c	Different grade of mineral sorted out at mines.	No such proposal.	Grade wise sorting not done.	Manual shorting (on visual perception).
7d	Any beneficiation process at mines	No such proposal.	Not done.	Nil

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	The total target of Production was 258367 tons during 2022-2023.	110300 tons of production have been achieved during 2022-2023.	Less development work and production has been done in quarry 2A.
----	--	--	--	--

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Separate removal and utilisation of top soil for carpeting over backfill.	Separate removal and utilisation of top soil for carpeting over backfilled area is in practice.	Simultaneous utilization has been done.
8b	Concurrent use or storage of topsoil	Concurrent use	Concurrent use	Concurrent use of top soil has been done.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No Proposal	Nil	No dump available.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	concurrent backfilling of generated OB.	Concurrent backfilling as per proposal.	Concurrent backfilling as per proposal has been done.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Phased Restoration, reclamation and rehabilitation .	Phased Restoration and reclamation of mined out area is in practice.	Phased Restoration and reclamation of mined out area is in practice.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	5120 plants on backfilled area & 1280 plants on safety barrier/green belt.	2000 plants on backfilled area & 1000 plants on safety barrier/green belt.	Fewer plantations have been done. Violation of rule 11(1) has been issued.
8g	Survival rate	No proposal	50%	Nil

8h	Water sprinkling on roads to control airborne dust	Yes	Yes	Water sprinkling by water tankers on daily basis.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	The natural vegetation is less in the area. Most of the land is fallow in nature.	There is very little or low dense forest growth in the bottom of the valleys.	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	Details provided.	Monthly and annual returns Submitted.	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Information of Mining Engineer, Geologist and Manager.	Shambhu Sharan Vasistha, Mines Manager, Mining Engineer in charge -Shri Ashish Kumar Mohanta, Geologist in charge - Shri Rajarshi Majumdar	Manager, Mining Engineer and Geologist are appointed.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Details given in AR.	Area under pits: 2.696 ha Reclaimed area: 257.78 ha. Dumps: Nil, Occupied by plant, buildings, residential, welfare buildings & roads: 14.65 ha.	Details given in AR appears to be correct
9d	Scrutiny of Annual return on afforestation	Details given in AR.	3000 saplings planted inside the lease area. Seems to be correct.	Fewer plantations has been done, violation of rule 11(1) has been issued.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Reject generation not reported	There is no reject generation.	No mineral rejects storage found within the mining lease.

9f	Scrutiny of Annual return on ROM stock and/or graded ore	Bauxite Stock as on 01.04.2023 ROM Closing stock = Nil Dispatches of Processed ore 40% to below 45% Al2O3 = 109842.43 tons. Mine has produced 110300.00 tons of Production during 2022-2023.	ROM stock- Nil	Mine has produced 110300.00 tons of Production during 2022-2023.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex mine Price is reported at Rs. 1826/tonnes	Ex-mine price appears to be correct.	Nil.
9h	Scrutiny of Annual return on fixed assets	Total Fixed Assets: Rs. 47889721.	Appears to be correct.	Nil.
9k	Scrutiny of Annual return on mining machineries	Hydraulic Shovel (1.85cum) 2nos., Hydraulic Shovel (0.80cum) 1no. Wheel Loader (2cum) 2nos. Dumper (25te cap) 5nos., Dumper (7.5te cap) 4nos., Air Compressor (400cum/min) 4nos.	Details on mining machineries seems to be correct.	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	
MCDR17	Rule 11(1)	19/09/2023	31/01/2024				

Date :

(RAGHVENDRA KUMAR)

Indian Bureau of Mines