

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

MCDR inspection 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 :
Official with
Designation
- (iv) Date of Inspection : 10/09/2021
- (v) Prev.inspection date : 02/03/2020

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 correspondance** : **VILL-SHRENDAG**
BISHNUPUR
DIST-GUMLA
3. (a) **Lease Number** : **BHR0247**
- (b) **Lease area** : **155.8**
- (c) **Period of lease** :
- (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 : 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

Mining Engineer

Name : VIDYA SAGAR SINGH,Full Time
Qualification : B.Sc.(MINING)
Appointment/ : 01/07/2017 01/07/2020
Termination date

Mining Engineer

Name : Pradeep Kumar,Full Time
Qualification : B.Tech. (Mining)
Appointment/ : 01/07/2020
Termination date

Geologist

Name : ONKAR NATH TIWARI,Full Time
Qualification : M. Sc. (Geology)
Appointment/ : 22/05/2018
Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Existing rule 11 MCDR1988	26/05/1992
		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

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	
1b	Exploration over lease area for geological axis 1 or 2	45	44 (795 Mt. drilled at 50X50 grid interval)	Vio. of rule 11(1) has been issued
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No such proposal	M/s South West Pinnacle Cost - Rs1641775/-	
1d	Balance area to be explored to bring Geological axis in 1 or 2	No such proposal	Nil	
1e	Balance reserve as on 01/04/20	--	Reserves & Resources as on 01.04.2021 Proved Mineral Reserves (111) = 152988 tons Probable Mineral Reserve (122) = 650263 tons	
1f	General remarks of inspecting officers on geology, exploration etc	Serengdag Plateau is situated at an altitude of 1030msl to 1070msl.	The plateau is bounded with steep escarpments of laterite overlying on Chota Nagpur Granite Gneiss.	Plateau surface is covered with laterite profile of variable thickness.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Tuimu-3 (E-241648-241963 and N-2586212-2586618)	Tuimu-3 (E-241699-241899 and N258620-258655)	2 quarries were excavated in the proposed area, violation of rule 11(1) has been issued.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Top soil & Morrum-2 B Laterite-1 B Bauxite-1B	Top soil & Morrum-2 B Laterite-1 B Bauxite-1B	Separate benches of top Soil and OB has been maintained
2c	Stripping ratio or ore to OB ratio	1:2.07	1:3.20	

2d	Quantity of topsoil generation in m3	401935cum	Nil	
2e	Quantity of overburden generation in m3	222682cum	406213cum	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	The nature of Bauxite in this Plateau varies within a short distance as well as the thickness of Overburden also varies, due to this reason there is variation in removal of waste.	During the Review of Mining Plan period the mine development was carried out almost as per the proposal except during 2020-21, as there was a little change in the working area due to unavailability of land. Stripping ratio is more due to more O.B. encountered.	2 quarries were excavated in the proposed area, violation of rule 11(1) has been issued.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	1 Nos.	2 Nos.	Violation of rule 11(1) has been issued.
3b	Quantity of ROM mineral production proposed	258176 MT	128814 MT	
3c	Recovery of sailable/usable mineral from ROM production	80%	50%	
3d	Quantity of mineral reject generation	Nil	1950 MT	
3e	Grade of mineral rejects generation and threshold value declared.	Al2O3 < 30.00	25.44%Al2O3	
3f	Quantity of sub grade mineral generation.	There is no proposal for production of subgrade mineral.	No production of subgrade mineral.	
3g	Grade of sub grade mineral generation	NA	NA	

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	Not done
3j	Provision of drilling and blasting in mineral benches	Proposed.	Drilling and blasting in mineral benches carried out.
3k	Provision of mining machineries in mineral benches	Hydraulic Shovel, Wheel Loader, Dumper, Air Compressor Proposed.	Hydraulic Shovel, Wheel Loader, Dumper, Air Compressor deployed.
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	4.60 Ha.	3.98 Ha.
3n	Ore to OB ratio for the pit/mine during the year.	1:2.07	1:3.20
3o	Total area put in use under different heads at the end of year	109.16	114.61
3p	Production of ROM mineral during the last five year period as applicable	2014-15 253610 MT 2015-16 259173MT 2016-17 259729 MT 2017-18 257604 MT 2018-19 258074 MT 2019-20 258976 MT 2020-21 258176 MT	2014-15 253610 MT 2015-16 259113 MT 2016-17 258487 MT 2017-18 236504 MT 2018-19 255430 MT 2019-20 210915 MT 2020-21 128814 MT

3q General remarks of inspecting officers on method of mining etc. A category OTFM mine. Mining operations are being done by Shovel dumper combination. Sizing, sorting and loading is by manual means.

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.	
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	
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.	No such proposal.	Nil.	
4i	Length of Retaining wall or garland drain all along dumps	No such proposal.	Nil.	
4j	Number of settling ponds	No such proposal.	Nil	

4k	Specific comments of inspecting officer on waste dump management	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.
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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.	Full extraction.	
5b	Area under backfilling of mined out area	5.53 Ha.	2.96 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	0.50 Ha.	0.55 Ha.	Cultivating land by soil spreading.
5e	General remarks of inspecting officers on backfilling and reclamation etc.		After backfilling and leveling reclaimed area handed over to Rayats for cultivation purpose as per Rayat's demand.	

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 2020-2021.	
6b	Area available for rehabilitation (ha) .	No Proposal	Nil	

6c	afforestation done (ha).	No Proposal	Nil	
6d	No. of saplings planted during the year	No Proposal	Nil	
6e	Cumulative no .of plants	No Proposal	Nil	
6f	Any other method of rehabilitation	No Proposal	Creating water reservoir by rain water harvesting in the mined out pit.	
6g	Cost incurred on watch and care during the year	No Proposal	Nil	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D	5.53 ha.	2.96 ha.	
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No Proposal	Nil	
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	2.77 ha., 4432 plants	2500 plants	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal	Creating water reservoir by rain water harvesting in the mined out pit.	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal	Creating water reservoir by rain water harvesting in the mined out pit.	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	800 saplings in .5 ha. Safety Barrier	Nil	Violation of Rule 11(1) has been issued.

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No proposal	Nil	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal	Nil	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Proposed in core and buffer zone.	Quarterly monitoring.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	it was proposed to plant 800 nos of saplings, in 0.5 ha. of safety barrier area and 4432 saplings in 2.77 ha. backfilled area, during 2020-21.	No plantation was done in the proposed safety barrier area and only 2500 saplings have been planted in the 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 258176 tons during 2020-2021.	128814.00 tons of production have been achieved during 2020-2021.	
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.	

7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	For the purpose of mineral conservation low grade, material is blended with high grade material depending upon plants requirements.
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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.	
8b	Concurrent use or storage of topsoil	Concurrent use	Concurrent use	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No Proposal	Nil	
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.	
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.	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Proposal for plantation of 5232 saplings.	2500 saplings have been planted in the backfilled area.	
8g	Survival rate	No proposal	50%	

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	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	--	Monthly and annual returns Submitted.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer in charge -Shri Pradeep Kumar, Geologist in charge -Shri Kapil Ojha	Mining Engineer and Geologist are appointed.	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under pits: 1.020 ha Reclaimed area: 252.86 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	2500 saplings planted inside the lease area.	Seems to be correct.	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	Reject generation not reported.	

9f	Scrutiny of Annual return on ROM stock and/or graded ore	Bauxite Stock as on 01.04.2021 ROM Closing stock = Nil Dispatches of Processed ore 40% to below 45% Al ₂ O ₃ = 128637.720 tons. Mine has produced 128814.00 tons of Production during 2020-2021	ROM stock-Nil. Seems to be correct.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex mine Price is reported at Rs. 1447/tonnes	Ex-mine price appears to be correct.
9h	Scrutiny of Annual return on fixed assets	Total Fixed Assets: Rs. 58695768/-	Appears to be correct.
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.

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)	01/10/2021	08/11/2021			

Date :

(RAGHVENDRA KUMAR)

Indian Bureau of Mines