

MCDR INSPECTION REPORT

General

File No- CHG/BLR/BXT/07MPR42004

S.N.	Particulars	Details
1	Name of the Mine Date of Inspection: Name of Inspecting Officer Accompanying Mine Official with Designation:	Kudag Bauxite Mine, M/s Hindalco Ind. Ltd. 6/11/2020 Rudra N. Mishra (Senior Mining Geologist) Shri Yogendra Kumar Lilhare Mine Manager
2	Total Lease Area (Ha) with breakup of Non-forest and forest land	Lease area –377.116 ha Non-Forest- 253.007 Hact Forest – 124.109 Hact.
3	Mine code	07MPR42004
4	IBM Registration Number under rule 45 of MCDR,2017	IBM/935/2011
5	Name of the Lease, Address, Phone, email and fax number	Hindalco Industries Ltd. Renukoot (231217) Dist: Sonbhadra, U.P Ph.No.(05446)52077-79 Fax No (05446)521017 Email: bijeh.jha@adityabirla.com
6	Village	Kudag
7	Taluka/Mandal	Kusmi
8	District	Balrampur-Ramanujganj
9	Pincode	497224
10	State	Chhattisgarh
11	Post Office	Samri
12	Nearest Police Station	Samri
13	Nearest Railway Station	Ambikapur
14	Date of Grant of Mining Lease	23/10/1996
15	Date of Execution	24/12/1996
16	Date of opening of Mine	27.06.1997
17	Date of First Renewal, if applicable and its period & expiry	As per MMDR Amendment Act,2015 section 8A, Validity of the lease period: 24/12/1996 to 23/12/2046 (Fifty years)
18	Date of Second Renewal, if applicable and its period & expiry	Not Applicable
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	Lease period has been extended up to 23/12/2046
20	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	Shri K N Bhandari Aditya Birla Centers K Ahira Marg, Worli, Mumbai (MS) PIN – 400030 Email: knbhandari1942@gmail.com Date of appointment: 10/11/2011 Fax No. – 02266525801

		Phone No. - 02266525000
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri R R P Ambastha Hindalco Colony, Post -Kusmi, District-Balrampur, Pin-497224 Mob- 09617779285 Date of Appointment –10.08.2018 Email-rajesh.ambastha@adityabirla.com
22	Name of the Mine Manager with Address, phone, email, fax number and date of appointment in mines	Shri Yogendra Kumar Lilhare BE in Mining Hindalco Colony, Post -Kusmi, District-Balrampur, Pin-497224 Mob- 09825479772 Date of Appointment –01.10.2020 Email- lilhare.yogendra@adityabirla.com
23	Name of the Mining Engineer, Qualification and total experience with address, phone, email, fax number and date of appointment in the mine	Shri Yogendra Kumar Lilhare BE in Mining Hindalco Colony, Post -Kusmi, District-Balrampur, Pin-497224 Mob- 09825479772 Date of Appointment –01.10.2020 Email- lilhare.yogendra@adityabirla.com Total experience: 12 yrs
24	Whether Geologist and Mining Engineer appointment in mines satisfy the rule 55 & carrying out their duties as per rule 56 & 57.	Ku. Parbati Kabi Education qualification -M. Sc in Applied Geology from Indian Institute of Engineering Science and Technology (IEST), Shibpur Hindalco Colony, Post -Kusmi, District-Balrampur, Pin-497224 Email- parbati.kabi@adityabirla.com
25	Date of Approval of Mine Plan/Modified Mine Plan with five- year period and specific condition in approval letter, if any.	Mining Plan approved vide letter no. SRG/BX/MPLN-383/NGP Nagpur Dated 29/11/1994, Period: 1997-98 to 2001-02
26	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five- year period and specific condition in approval letter, if any.	1 st Scheme of Mining approved vide letter no. SRG/BXT/MPLN-383/NGP Nagpur Dated 10/02/2003, Period 2002-03 to 2006-07. Modified Scheme of Mining approved vide letter no. SRG/BXT/MPLN-383/NGP Nagpur Dated 20/10/2005, Period 2004-05 to 2006-07. 2 nd Scheme of Mining approved vide letter no. SRG/BXT/MPLN-383/NGP Nagpur Dated 17/08/2007, Period 2007-08 to 2011-12. 3 rd Scheme of Mining approved vide letter no. SRG/BX/MPLN-383/NGP Nagpur Dated 30/01/2013, Period 2012-13 to 2016-17. Modification of Mining Plan for the period 2017-18 to 2021-22 was approved on Dated 31/08/2016 vide letter no.- SRG/BX/MPLN-

		383/NGP/2016/25-RPR, Raipur
27	Mineral(s) granted in lease and approved for Mining	Bauxite
28	Method of Mining (Opencast, Underground)	Opencast
29	Category (Fully Mechanised, Others or Manual)	Category: A, Mechanised
30	Captive/Non-Captive	Captive mine
31	Environment Clearance	60000 tonnes (Dated: 27/07/2007)
32	Status of Financial Assurance as per rule 27 of MCDR, 2017	Financial Assurance in the form of bank Guarantee for Rs. 547850/- (Rupees Five Lakh Seven Thousand Eight Hundred Fifty Only) has submitted at Regional Controller of Mines, Raipur.

Scientific Mining: Compliance of proposals of approved mining plan/scheme of mining. –

Exploration

S.N.	Item	Proposals (2019-20)	Actual Work (2019-20)	Remarks
1a	Backlog of previous year	NIL	Nil	
1b	Exploration over lease area for Geological axis 1 or 2.	Nil	Total boreholes-136 G1 Detailed exploration: 146.6 Ha G2 General Exploration: 174.34 Ha	
1c	Exploration Agency & Expenditure in Lakh Rupees during the year	Nil	South West Pinnacle Exploration Ltd	
1d	Balance area to be explored to bring Geological axis in 1 or 2.	Proposal not given in approved document	Nil	
1e	Balance reserves as on 01.04.2020	Under 111: - 457310 MT Under 122: - 1234186 MT, Under 221: - 154246 MT Under 222: - 322417 MT		
1f	General remarks of Inspecting officer on geology, exploration etc.	Laterite and accompanying Bauxite are exposed at places on plateau tops and slopes. Laterite and associated Bauxite are believed to be products of insitu chemical weathering of underlying basalts (Deccan traps) The Bauxite bearing laterite capping is found on the top of the basaltic plateau (Deccan traps). The Bauxite characteristics of this area is massive, sometimes pisolitic hard and compact, denser than the laterite vesicular and pitted, displays shades of light grey to pink colour.		

		Kudag blocks forms a part of Jamirapat region in Balrampur dist. Of chhattisgarh. The area was investigated by the G.S. Lin in the year 1977-78. The arranges of compositions of laterite SiO ₂ : 6-12% and AL ₂ O ₃ : 20-30% Bauxite ranges of SiO ₂ : 1-5% & Al ₂ O ₃ : 31-58%.
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Development

S.N	Item	Proposals (2019-20)	Actual Work (2019-20)	Remarks
2a	Location of Development w.r.t. lease area	1)2598503 N to 2598651 N, 804373 E to 804526E 2)2598596 N to 2598709 N, 803766 E to 803931E 3) 2598547N to 2598702N to 803567 E to 803682 E	Same as Proposal	
2b	Separate benches in topsoil overburden and mineral (Rule 15)	Soil – 1 Bauxite - 1	Soil – 1 Bauxite - 1	
2c	Stripping ratio or ore to OB ratio	1: 3.22	1: 2.47	
2d	Quantity of topsoil generation in m ³	179678.00 Cu.m	39350 Cu.m	Including top soil and Hard OB
2e	Quantity of overburden generation in m ³	179678.00 Cu.m	118050.26 Cu.m	
2f	General remarks of Inspecting officer on development of pit w.r.t type of deposit etc.	Development is in order.		

Exploitation

S.N	Item	Proposals (2019-20)	Actual Work (2019-20)	Remarks
3a	Number of pits proposed for production	2	1	
3b	Quantity of Bauxite mineral production proposed (2019-20)	55761 MT	47832 MT	
3c	Recovery of Salable/usable mineral from ROM production	49 %	50.12 %	
3d	Quantity of mineral reject generation	25233Cu.m	20698.370 Cu.m	
3e	Grade of mineral reject generation and threshold value declared	Al ₂ O ₃ – 30% SiO ₂ - >= 5%	Al ₂ O ₃ – 27.04 % SiO ₂ – 15.42 %	
3f	Quantity of sub-grade mineral generation	5576	4783.2	
3g	Grade of sub-grade mineral generation	Proposal not given in approved document	NIL	
3h	Manual/Mechanized method adopted for segregation from ROM	Manual	Manual	

3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	NA	Characterization studies on Low grade Bauxite Ore to enhance Alumina Content by IMMT, Bhubaneswar		
3j	Provision of drilling & blasting in mineral benches	Yes	Yes		
3k	Provision of mining machineries in mineral benches	Yes	Yes		
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	3.36 Ha	2.310 Ha		
3n	Ore to OB ratio for the pit/mine during the year	1: 3.22	1: 2.47		
3o	Total area put in use under different heads at the end of year	17.09 Hect area to be put in used under deferent heads under plan period (2017-18 to 2021-22)	2.05 hect		
3p	Production of ROM/ Bauxite mineral during last five-years period, as Applicable (Tonns)	2015-16	104557.14	101977.147	
		2016-17	117579.59	115469.627	
		2017-18	119897.0	88591.310	
		2018-19	121177.00	108070.00	
		2019-20	55761.00	47832.00	
3q	General remarks of inspecting officer on method of mining etc	Bauxite is mined by Open cast with the help of Semi mechanized method. The Soil first removed by excavator having 0.9cubic meter capacity. The morrum beneath the soil is if hard and laterite is drilled and blasted separately and removed by shovel dumper combination. There is no need for drilling in overburden as it is soft and easily lift out by excavator without blasting.			

Solid Waste Management-Dumping

S.N.	Item	Proposals (2019-20)	Actual Work (2019-20)	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 32,33)	Simultaneously reclamation of mined out area is practiced	Simultaneously reclamation of mined out area is practiced	
4b	Location of topsoil, OB & mineral reject dumps	Proposal not given in approved document	Proposal not given in approved document	

4c	Number of Dumps within lease area and outside lease area	Proposal not given in approved document	Proposal not given in approved document	
4d	Location of Dumps w.r.t. ultimate pit limit (Rule 16)	Proposal not given in approved document	Proposal not given in approved document	
4e	Number of Active & Alive dumps	Proposal not given in approved document	Proposal not given in approved document	
4f	Number of deed dumps	Proposal not given in approved document	Proposal not given in approved document	
4g	Number of dumps established	Proposal not given in approved document	Proposal not given in approved document	
4h	Whether Retaining wall or garland drain all along dumps are there	Proposal not given in approved plan	Proposal not given in approved document	
4i	Length of Retaining wall or garland drain all along dump	Proposal not given in approved document	Proposal not given in approved document	
4j	Number of settling ponds	Proposal not given in approved document	Proposal not given in approved document	
4k	Specific commends of inspecting officer on waste dump management	Waste is being back filled in mined out Area. Concurrent backfilling system has been adopted and only top soil is dumped short period not kept more than six months to preserve its fertility		

Solid Waste Management-Backfilling

S.N.	Item	Proposals (2019-20)	Actual Work (2019-20)	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	Reclaimed and plantation done	Reclaimed and plantation done	
5b	Area under backfilling of mined out area	2.22 Ha	3.144 Ha	
5c	Concurrent use of topsoil for	Yes	Simultaneously carried out	

	restoration or rehabilitation of mined out area (Rule 32)			
5d	Total area fully reclaimed & rehabilitated	Proposal not given in approved document	68.077 Hect	
5e	General remarks of inspecting officer on backfilling, reclamation etc	Its a shallow depth mining. Full extraction of mineral and simultaneously backfilling carried out.		

Progressive Mine Closer Plan

S.N	Item	Proposals (2019-20)	Actual Work (2019-20)	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly-Rule 23E (2). Details should be given in the format as given in Annexure-20	Yes	Yes	
6b	Management of worked/mined out benches	Proposal not given in approved document	Nil	
	Area available for rehabilitation (Ha)			
	Afforestation done (ha)			
	No. of saplings planted during the year			
	Cumulative no. of plants			
	Any other specific method of rehabilitation			
	Cost incurred on watch & care during the year			
6c	Compliance on reclamation and rehabilitation by backfilling i) Voids available for backfilling (L*B*D) ii) Void filled by waste/tailings iii) Afforestation on the backfilling iv) Rehabilitation by making water reservoir v) Any other specific means	1. Void available for Backfilling (L*B*D) pit wise/ stope wise: - 3.36 Ha 2.) Void filled by waste/tailings: 2.22 Ha 3. Afforestation on the backfilled area- 1.086 Ha iv) Rehabilitation by making	1. Void available for Backfilling (L*B*D) pit wise/ stope wise: - 2.310 Ha 2.) Void filled by waste/tailings: 3.144 Ha 3. Afforestation on the backfilled area- 1.20 Ha iv) Rehabilitation by making water reservoir - Nil	

		water reservoir - Nil v) Any other specific means- Nil	v) Any other specific means- Nil	
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitation iii) Method of rehabilitation	Nil	Nil	
6e	Compliance of Environment monitoring (core zone & buffer zone)	Proper Monitoring	Done in core-zone & buffer zone	
6f	General remarks of inspecting officer on PMCP compliance & progressive closer operations	PMCP proposal are implemented		

Mineral Conservation

S.N.	Item	Proposals (2019-20)	Actual Work (2019-20)	Remarks
7a	ROM mineral dispatch or grade wise sorting within lease area	Yes	Yes	
7b	Method of grade-wise mineral sorting i.e., manual or mechanical	Manual Sorting	Manual Sorting	
7c	Different grade of mineral sort out at mine	Yes	Yes	
7d	Any beneficiation process at mines	No	No	
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Due to manual sorting of Bauxite its help to improve the grade. Screening will be good for the small size of ore.		

Environment

S.N.	Item	Proposals (2019-20)	Actual Work (2019-20)	Remarks
8a	Separate removal and utilization of topsoil (Rule32)	Spread on backfilled area for plantation	Spread on backfilled area for plantation	
8b	Concurrent use or storage of topsoil	Top soil used for restoration of Mined out Area	Top soil used for Restoration of Mined out Area	
8c	Separate dumps for overburden waste rock, rejects and fines (Rule 33)	Proposal not given in approved document	Proposal not given in approved document	

8d	Use of overburden, waste rock, rejects and fines dump for restoring the land to its original use	Reclaim by overburden, waste rock, rejects and fines	Reclaim by overburden, waste rock, rejects and fines	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Reclaim by overburden, waste rock, rejects and fines	Reclaim by overburden, waste rock, rejects and fines	
8f	Baseline information on existence of plantation & additional plantation done (Rule 41)	During current planning period (2019-2020): Afforestation: 1.086 Ha Total plantation:2715	During current planning period (2019-2020): Afforestation: 1.20 Ha Total plantation:2780	
8g	Survival rate	Not mentioned in approved document	75%	
8h	Water sprinkling on roads to control airborne dust	yes	Proper Water sprinkling on Haul road	
8i	General remarks of inspecting officer on aesthetic beauty in and around mine area	EMP parameters are regularly being monitored. Top Soil spread the concurrent back filled area.		

Compliance of Rule 45

S. N.	Item	Comments	Remarks
9a	Status of submission of monthly and Annual returns	M.R. Submitted up to–Nov-2020 A.R. submitted up to- 2019-2020	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Yes, Mining Engineer: Shri Yogendra Kumar Lilhare, BE in Mining Geologist: Yes, Ku. Parbati Kabi Manager: Shri Yogendra Kumar	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Open Cast Mining: 70.770ha Area Under current working pit: 8.033ha Reclaimed area: 64.933ha Waste disposal: 1.587 ha Occupied by plant, building residential, welfare building and roads:3.00ha Other purpose:0.00 ha Work done under progressive mine closure plan during the year: 3.271ha	
9d	Scrutiny of Annual return on afforestation	2780 nos, Survival Rate: 75%	

9e	Scrutiny of Annual return on mineral reject generation (Grade & Quantity)	0.00 tone, Al ₂ O ₃ :27.04%SiO ₂ :15.42%, Fe ₂ O ₃ - 36.06%, LOI-15.10%			
9f	Scrutiny of Annual return on Bauxite stock and/or grade ore	Opening Stock: 00.00 tonne Bauxite Production: 55915.00 tonne Closing Stock: 0.00tonne			
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production costs	Ex- Mine Price i) 40% to below 45% Al ₂ O ₃ : Rs 1050.55 Cost of Production: Rs 1050.55			
9i	Scrutiny of Annual return on Fixed assets	Given			
9k	Scrutiny of Annual return on mining Machineries	Equipment	Nos	Capacity	
Scrutiny of Annual return on mining Machineries	Shovel (Hydraulic)		1	0.900CUM	
	Air compressor		1	12.700CUM/MN	
	Blast Host Drill		1	100.00MM	
	Dumper		3	25.00Tonne	
	Water Tanker		1	12000.00L	
	Wheel Loader		1	1.480CUM	

10.0 Details of Violations observed during current inspection

Compliance position of earlier violation pointed out: -. Earlier Violation Rule 11 (1) has been considered as complied. Star rating also evaluated.

Last Date of Inspection: 13/02/2020

Name of the Inspection Officer: Shri R.K. Das (Sr. ACOM), IBM Raipur

Date: 11/12/2020

Name: Rudra N Mishra

Designation: Senior Mining Geologist