

MCDR INSPECTION REPORT

1.0 GENERAL

SN	Particulars	Details
1	Name of inspecting office & designation	S. Kartikeya, Jr. Mining Geologist, IBM Raipur
2	Date of inspection	01/08/2017
3	Name of the Mine	Kudag Bauxite Mine
4	Total Lease Area (Ha) with breakup of Non-forest and forest land	377.116 Hact. (Non-Forest- 253.007 Hact., Forest – 124.109 Hact.)
5	Mine Code	07MPR42004
6	IBM Registration Number under rule 45 of MCDR, 1988	IBM/935/2011
7	Name of the lessee, 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: manoj.nayak@adityabirla.com
8	Village	Kudag
8	Taluka / Mandal / District	Kusmi, Distt. – Balrampur-Ramanujganj
10	State	Chhattisgarh
11	Post office & PIN	Samri 497224
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: 23/10/1996 to 22/10/2046 (Fifty years)
18	Date of second Renewal, if applicable and its period & expiry	N/A
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	28.05.2016
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 Date of Appointment: 10/11/2011 Fax No. – 02266525801 Phone No. - 02266525000 Email: info@adityabirla.com
21	Name of the Mine Agent with Address, phone, email, fax number and date of appointment	Shri M K Nayak Agent of Mines Date of Appointment: 10/01/2012 Hindalco Industries Ltd.,

		Kusmi, Tahsil – Kusmi Distt. – Balrampur- Ramanujanj (CG) Phone No. – 07778 274326 Email – manoj.nayak@adityabirla.com
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Shri P R Parmar, Manager (Mines) Qualification: AMIE (Mining) Total Experience: 33 Years Date of Appointment: 07/08/2008 Hindalco Industries Ltd., Kusmi, Tahsil – Kusmi Distt. – Balrampur- Ramanujanj (CG) Phone No. – 07778 274325 Email – pratap.parmar@adityabirla.com
23	Name of the Mining Engineer, Qualification and total experience with Address, phone, email, fax number and date of appointment in mine	Shri P K Giri B.Tech, Assistant Mining Engineer Qualification: B. Tech. (Mining Engineering) Total Experience: 3 Years Date of Appointment: 06/04/2017 Hindalco Industries Ltd., Kusmi, Tahsil – Kusmi Distt. – Balrampur- Ramanujanj (CG) Phone No. – 07778 274325 Email – pradeep.giri@adityabirla.com
24	Whether Geologist and Mining Engineer appointed in mines satisfy the rule 55 & carrying out their duties as per rule 56 & 57 of MCDR, 2017.	Shri Tapas Gachhayat, Manager (Geology) Qualification: MSc. Applied Geology Total Experience: 8 Years Date of Appointment: 01/09/2009 Hindalco Industries Ltd., Kusmi, Tahsil – Kusmi Distt. – Balrampur- Ramanujanj (CG) Phone No. – 07778 274325 Email – tapas.gachhayat@adityabirla.com
25	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Modified Mining Plan approved vide letter no. SAR/BXT/MPLN-383/NGP/2016/25-RPR Raipur dated 31/08/2016. Period: 2017-18 to 2021-22 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.	1st Scheme of Mining approved vide letter no. SRG/BX/MPLN-383/NGP Nagpur Dated 10/02/2003 Period: 2002-03 to 2006-07 Modified Scheme of Mining approved vide letter no. SRG/BX/MPLN-383/NGP Nagpur Dated 20/10/2005 Period: 2004-05 to 2006-07 2nd Scheme of Mining approved vide letter no. SRG/BX/MPLN-383/NGP Nagpur Dated 17/08/2007 Period: 2007-08 to 2011-12 3rd Scheme of Mining approved vide letter no. SRG/BX/MPLN-383/NGP Nagpur Dated 30/01/2013 Period: 2012-13 to 2016-17
27	Mineral(s) granted in lease and proved for mining	Bauxite
28	Method of Mining(Opencast,	Opencast

	Underground)	
29	Category (Fully Mechanised, Others or Manual)	Category A Mechanised
30	Captive/Non Captive	Captive

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

1.0 Exploration

SN	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No exploration has been proposed during 2016-17 in the approved document.	Not Applicable	-
1b	Exploration over lease area for Geological axis 1 or 2.	G1 Category: 112.38 Ha. G2 Category: 208.56 Ha G4 Category: 34.376 Ha. Non-Mineralised: 21.80 Ha.	G1 Category: 112.38 Ha. G2 Category: 208.56 Ha G4 Category: 34.376 Ha. Non-Mineralised: 21.80 Ha.	-
1c	Exploration Agency & Expenditure in lakh Rupees during the year	M/S Hindalco Industries Limited.	M/S Hindalco Industries Limited.	-
1d	Balance area to be explored to bring Geological axis in 1 or 2	G4 Category: 34.376 Ha. Non-Mineralised: 21.80 Ha.	G4 Category: 34.376 Ha. Non-Mineralised: 21.80 Ha.	-
1e	Balance reserves as on 01.04.2017	Under (111) Category: 522589.00 Metric Tonnes Under (122) Category: 1126317.00 Metric Tonnes Under (221) Category: 145051.00 Metric Tonnes Under (222) Category: 281579.00 Metric Tonnes	Under (111) Category: 524278.00 Metric Tonnes Under (122) Category: 1126317.00 Metric Tonnes Under (221) Category: 145051.00 Metric Tonnes Under (222) Category: 281579.00 Metric Tonnes	-
1f	General remarks of inspecting officer on geology, exploration etc.	NIL		

2.0 Development

SN	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	Quarry No. B1 in between grid 2600681.4 N – 2600866 N & 805924.8 E – 806037.5 E at Northern part and Quarry no. B2 in between 2600130 N – 2600333 N & 805191.9 E – 805405.9 E	N2598400-2598800 & E803700-804100 (Plot no. 630, 631 & 632) and in between N2598400-2598800 & E803300-803500 (plot no. 642)	Production and development is being carried out from different locations. Deviation has been pointed out.
2b	Separate benches in topsoil, overburden and mineral (Rule 13 of MCDR, 2017)	OB/Waste: 01 Ore/Mineral: 01	OB/Waste: 01 Ore/Mineral: 01	-
2c	Stripping ratio or ore to OB ratio	1:4.35	1:2.23	-
2d	Quantity of topsoil generation in m3	167150	54330.658	-
2e	Quantity of overburden generation in m3	167150	54330.658	-
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Deviation from proposal has been observed in respect of development.		

3.0 Exploitation

SN	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	02 nos. (Quarry B1 and B2)	NIL	Excavation has not been carried out as per proposal.
3b	Quantity of ROM mineral production proposed	117579.590 Metric Tonnes	115469.627 Metric Tonnes	-
3c	Recovery of salable/usable mineral from ROM production	49 %	48.43 %	-
3d	Quantity of mineral reject generation	59965.797 Metric Tonnes	59544.628 Metric Tonnes	-
3e	Grade of mineral reject generation and threshold value declared	Laterite Al ₂ O ₃ : 29.64% SiO ₂ : 12.12% Fe ₂ O ₃ : 35.7% LOI: 15.71	Al ₂ O ₃ – 29.64 % SiO ₂ – 12.12 %	-
3f	Quantity of sub-grade mineral generation	Not proposed in the approved document	Not Applicable	-
3g	Grade of sub-grade mineral	Not proposed in	Not Applicable	-

	generation	the approved document		
3h	Manual / Mechanised method adopted for segregating from ROM	Manual Sizing and Sorting	Manual Sizing and Sorting	-
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	Not proposed in the approved document	Not Applicable	-
3j	Provision of drilling & blasting in mineral benches	Proposal has been given in the approved document. 1. DTH Wagon Drill (Tyre mounted) 100mm dia 2. Jack Hammer 37mm dia.	Drilling and blasting is in practiced. 1. DTH Wagon Drill (Tyre mounted) 100mm dia 2. Jack Hammer 37mm dia.	-
3k	Provision of mining machineries in mineral benches	1. L&T Excavator: 115HP, 0.9m3 Capacity (01 no.) 2. HM Loader: 110HP, 2.6m3 Capacity (01 no.) 3. IR Compressor: 450 HP, 450cfm Capacity (01 no.) 4. Tata Dumpers 110Hp, 4m3 Capacity (04nos.) 5. Tata Water Tanker: 95 HP, 8000 Ltr Capacity (01 no.)	1. L&T Excavator: 115HP, 0.9m3 Capacity (01 no.) 2. HM Loader: 110HP, 2.6m3 Capacity (01 no.) 3. IR Compressor: 450 HP, 450cfm Capacity (01 no.) 4. Tata Dumpers 110Hp, 4m3 Capacity (04nos.) 5. Tata Water Tanker: 95 HP, 8000 Ltr Capacity (01 no.)	-
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	OB/Waste: 3.5 m Ore: 2.0 m	OB/Waste: 3.5 m Ore: 2.0 m	-
3m	Total area covered under excavation/pits	5.354 hect	3.013 hect	-
3n	Ore to OB ratio for the pit/mine during the year	1:4.35	1:2.23	-
3o	Total area put in use under different heads at the end of year	Pit- 5.354 Ha Waste/reject - Nil Others- 6.84 Ha (Road, Colony, Infrastructure)	Pit- 3.013 Ha Waste/reject - Nil Others- 6.84 Ha (Road, Colony, Infrastructure)	-
3p	Production of ROM mineral during last five-year period, as applicable (In Metric	Yr-2012-13: 119673.469 Metric Tonnes	Yr-2012-13: 83563.324 Metric Tonnes	-

	Tonnes)	Yr-2013-14: 106026.530 Metric Tonnes Yr-2014-15: 108046.938 Metric Tonnes Yr-2015-16: 104557.142 Metric Tonnes Yr-2016-17: 117579.59 Metric Tonnes	Yr-2013-14: 107191.454 Metric Tonnes Yr-2014-15: 94201.615 Metric Tonnes Yr-2015-16: 101977.147 Metric Tonnes Yr-2016-17: 115469.627 Metric Tonnes	
3q	General remarks of inspecting officer on method of mining etc.	NIL		

4.0 Solid Waste Management-Dumping

SN	Item	Proposals	Actual work	Remarks
4a	Separate dumping of topsoil, OB & mineral reject (Rule 36, 37 of MCDR, 2017)	Concurrent reclamation of mined out area has been proposed.	Concurrent reclamation of mined out area is in 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 14 of MCDR, 2017)	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 dead dumps	Proposal not given in approved document	Proposal not given in approved document	-
4g	Number of dumps stabilised	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 document	Proposal not given in approved document	-
4i	Length of Retaining wall or garland drain all along dump	Proposal not given in approved	Proposal not given in approved	-

		document	document	
4j	Number of settling ponds	Proposal not given in approved document	Proposal not given in approved document	-
4k	Specific comments of inspecting officer	NIL		

5.0 Solid Waste Management-Backfilling

SN	Item	Proposals	Actual work	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	Concurrent backfilling and reclamation by plantation.	Concurrent backfilling and reclamation by plantation.	-
5b	Area under backfilling of mined out area	Concurrent backfilling in the mined out area has been proposed.	Ranging in between N2598400-2598600 & E804100-804300 within revenue forest has not been backfilled and reclaimed.	Deviation has been observed . Protective measure s has not been taken.
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 36 of MCDR, 2017)	Yes	Yes	Topsoil has been used for plantation.
5d	Total area fully reclaimed & rehabilitated	Reclaimed area: 64.79 Ha. Rehabilitation: 15.41 Ha (during five year progressive mine plan)	Reclaimed area: 64.79 Ha. Rehabilitation: 15.41 Ha. (during five year progressive mine plan)	-
5e	General remarks of inspecting officer on backfilling, reclamation etc	NIL		

6.0 Progressive Mine Closure Plan

SN	Item	Proposals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly - Rule 26(2) of MCDR, 2017. Details should be given in the format as given in Annexure-20.	Yes, Submitted.	Yes, Submitted.	-
6b	Management of worked/mined out benches i) Area available for	2.77 hect	2.72 hect	-

	rehabilitation (ha) ii) Afforestation done (ha) iii) No. of saplings planted during the year iv) Cumulative no. of plants v) Any other specific method of rehabilitation vi) Cost incurred on watch & care during the year	2.77 hect 4931 24656	2.72 hect 4352 117570 Rs 320000/-	
6c	Compliance on reclamation and rehabilitation by backfilling i) Voids available for backfilling (L X B X D) ii) Void filled by waste/tailings iii) Afforestation on the backfilled area iv) Rehabilitation by making water reservoir v) Any other specific means	2.264 Ha 2.77 Ha	1.799 Ha 2.72 Ha	-
6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	2.77 Ha Concurrent Backfilling and reclamation by plantation.	2.72 Ha Concurrent Backfilling and reclamation by plantation	-
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Proposal has been given for Environmental monitoring	Air, Soil and Noise monitoring carried out by ANACON LABS certified by government.	-
6f	General remarks of inspecting officer on PMCP compliance & progressive	NIL		

7.0 Mineral Conservation

SN	Item	Proposals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sizing and sorting has been proposed	Grade wise sizing and sorting has been done.	-
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Manually sizing and sorting	Manually sizing and sorting	-
7c	Different grade of mineral sorted out at mines	Yes	Yes	-

7d	Any beneficiation process at mines	Not proposed in the approved document.	Not Applicable	-
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	NIL		

8.0 Environment

SN	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Yes	Yes	-
8b	Concurrent use or storage of topsoil	Top soil has been used for restoration of mined out area.	Top soil has been used for restoration of mined out area.	-
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Concurrent backfilling by waste rock in the mined out area has been proposed.	Concurrent backfilling by waste rock in the mined out area is in practiced.	-
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Concurrent backfilling by waste rock in the mined out area has been proposed.	Concurrent backfilling by waste rock in the mined out area is in practiced.	-
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Concurrent backfilling by waste rock in the mined out area has been proposed.	Concurrent backfilling by waste rock in the mined out area is in practiced.	-
8f	Baseline information on existence of plantation & additional plantation done (Rule 44 of MCDR, 2017)	The local plant species in the region are Teak (<i>Tectona grandis</i>), Sal (<i>Shorea robusta</i>), Bija (<i>Pterocarpus marsupium</i>), Saja (<i>Terminalia tomentosa</i>), Dhawarda (<i>Anogeissus latifolia</i>), Bamboo (<i>Dendrocalamus strictus</i>), Tendu (<i>Diospyrus melanoxylon</i>), Mahua (<i>Madhuka indica</i>) and Ambla (<i>Embilica officinalis</i>) etc.	Most of plants that have been planted in the backfilled area is acacia (80-90%)	Deviation has been pointed out.

8g	Survival rate	80-90%	68%	-
8h	Water sprinkling on roads to control airborne dust	Water sprinkling by Water tanker	Water sprinkling by Water tanker	-
8i	General remarks of inspecting officer on aesthetic beauty in and around mines are	NIL		

9.0 Compliance of Rule 45

S. N.	Item	COMMENTS	Remarks
	Status of submission of Monthly and Annual returns	M.R. Submitted upto – June 2017 A.R. submitted upto- F.Y 2016-17	-

S. N.	Item	Details GIVEN in A.R.	Observation of I/Officer	Remarks
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer: Shri P. K. Giri Geologist: Shri Tapas Gachhayat Manager: Shri p. R. Parmar	NIL	-
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Pits: 4.00 Ha. Reclaimed area: 62.223 Ha. Dump: 1.587 Ha. Others: 70.278 Ha.	NIL	-
9d	Scrutiny of Annual return on Afforestation	Area: 2.72 hect Nos. of Sapling: 4352	NIL	-
9e	Scrutiny of Annual return on mineral reject generation (Grade & quantity)	Laterite Al ₂ O ₃ : 29.64% SiO ₂ : 12.12% Fe ₂ O ₃ : 35.7% LOI: 15.71	NIL	-
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM: NIL Bauxite:103.290 Metric Tonnes	NIL	-
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost	Ex Mine Price: Rs. 753.50 Per Metric Tonne Production Cost: 753.62 Per Metric Tonne	NIL	-
9i	Scrutiny of Annual return on fixed assets	Rs. 6.505 crore	NIL	-

9k	Scrutiny of Annual return on mining machineries	Given	NIL	-

10- Details of violations observed during current inspection and compliance position of earlier violation pointed out:-
No out-standing violation.

Violation pointed out during inspection: Rule 11(1), 23, 27, 33, 35, 44 and 47 of MCDR, 2017