

MCDR INSPECTION REPORT

1.0 GENERAL

SN	Particulars	Details
1	Name of inspecting office & designation	R.K. Das, Senior Assistant Controller of Mines
2	Date of inspection	14-10-2018
3	Name of the Mine	Samri Bauxite Mine
4	Total Lease Area (Ha) with breakup of Non-forest and forest land	2146.746 Hact. (Non-Forest- 1347.919 Hact., Forest – 798.827 Hact.)
5	Mine Code	07MPR42005
6	IBM Registration Number under rule 45 of MCDR, 1988	IBM/935/2011
7	Name of the lessee, Address, phone, email and fax number	M/s Hindalco Industries Ltd Registered Office Address:- Ahura Centre, 1st Floor-Wing Mahakali Caves Road Andheri (east), Mumbai 400093, State: Maharashtra, India Phone +912266626666 Fax +912266917001. Mobile No.9617779285 Email ID: rajesh.ambastha@adityabirla.com
8	Village	Samri, Gopatu, Kutku, Amtahi, Rajendrapur, Dumerkholi, Dtaram & Charkaht Kalan etc
8	Taluka / Mandal / District	Kusmi, Distt. – Balrampur-Ramanujganj
10	State	Chhattisgarh
11	Post office & PIN	Kusmi (Samri) & 497224
12	Nearest police station	Samri
13	Nearest Railway station	Ambikapur
14	Date of Grant of Mining Lease	20/05/1998
15	Date of Execution	24/06/1998
16	Date of opening of Mine	25/05/1999
17	Date of first Renewal, if applicable and its period & expiry	NA
18	Date of second Renewal, if applicable and its period & expiry	NA
19	Date of submission of renewal application if Mining Operations are continuing under deemed extension	Lease period has been extended up to 23.06.2048.
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 Fax No. – 02266525801 Phone No. - 02266525000
21	Name of the Mine Agent with	Shri R.R.P Ambastha

	Address, phone, email, fax number and date of appointment	Agent of Mines Hindalco Industries Ltd., Kusmi, Tahsil – Kusmi Distt. – Balrampur- Ramanujganj (CG) Phone No. – 07778 274326 Email – rajesh.ambastha@adityabirla.com
22	Name of the Mines Manager with Address, phone, email, fax number and date of appointment in mines	Shri Amit Tiwary Manager (Mines) Hindalco Industries Ltd., Kusmi, Tahsil – Kusmi Distt. – Balrampur- Ramanujganj (CG) Phone No. – 07778 274325 Email – amit.t@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 K K Singh Dy.Manager -Mines Hindalco Industries Ltd., Kusmi, Tahsil – Kusmi Distt. – Balrampur- Ramanujganj (CG) Phone No. – 07778 274325 Email – kamlesh.k.singh@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.	Dhirendra Pratap Singh Geologist Hindalco Industries Ltd., Kusmi, Tahsil – Kusmi Distt. – Balrampur- Ramanujganj (CG) Phone No. – 07778 274326 Email – iitdhirendra@gmail.com@adityabirla.com
25	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	SRG/BX/MPLN-385/NGP, Dated 30.11.1994
26	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	Modification of Mining Plan for the period 2017-18 & 2018-19 was approved on Dated 10.01.2018 vide letter no.-BLR/BX/MPLN-1135/2017-RPR ,
27	Mineral(s) granted in lease and proved for mining	Bauxite
28	Method of Mining(Opencast, Underground)	Opencast
29	Category (Fully Mechanised, Others or Manual)	Category A (OTFM)
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	NA	NA	
1b	Exploration over lease area for Geological axis 1 or 2. During the plan period (2014-15 to 2018-19 up to Sept.-2018)	1345	634	
1c	Exploration Agency & Expenditure in lakh Rupees during the year	By Lessee (Hindalco Industries Limited)	1) By Lessee (Hindalco Industries Limited) & 2) M/s Southwest Pinnacle Exploration Private Limited 1.5cr (expenditure of In houses and outsourced exploration)	
1d	Balance area to be explored to bring Geological axis in 1 or 2	Proposal not given in approved document	43.0hect	
1e	Balance reserves as on 01.08.2018	Proposal not given in approved document	7356878MT Mineable Reserve (Proved and Probable Mineral Reserve)as on 01.08.2018	
1f	General remarks of inspecting officer on geology, exploration etc.	<p>Laterite and accompanying Bauxite are exposed at places on plateau tops and slopes. Laterite and associated Bauxite are belived 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. Samari blocks forms a part of Jamirapat region in Balrampur dist. Of chhattisgarh. Samri area was investigated by the G.S. Lin in the year 1977-78. The aranges of compositions of laterite SiO₂: 6-12% and Al₂O₃: 20-30% Bauxite ranges of SiO₂: 1-5% & Al₂O₃: 31-58%. Exploration work will be continued and in phase manner entire lease area will be converting in G1 category.</p>		

2.0 Development

SN	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	RP1 2592971 N - 2593279N & 801954 E – 802018 E) , AT1 :- 2591831 N	RP1 :- 2592971 N - 2593279N & 801954 E – 802018 E) ,	

		- 2592112N & 799428 E – 801031 E), DK1:- 2596215 N - 2596423N & 798932 E – 799065 E) , DP1:- 2596785 N - 2596640N & 797923 E – 798106E) & DP2:- 2596821 N - 2596999N & 798245 E – 798600E)	DP:- 2596200N- 2597200N & 797400E-798400E DK1:- 2595700N- 2596200N & 798900E-799400E AT1 :- 2591830 N - 2592112N & 799428 E – 801032 E	
2b	Separate benches in topsoil, overburden and mineral (Rule 13 of MCDR, 2017)	Top Soil-1, O.B-1, Bauxite-1	Top Soil-1, O.B-1, Bauxite-1	
2c	Stripping ratio or ore to OB ratio	1:2.50	1:2.27	
2d	Quantity of topsoil generation in m3	88072	84190	
2e	Quantity of overburden generation in m3	466124	420946.540	
2f	General remarks of inspecting officer on development of pit w.r.t. type of deposit etc.	Development is in order. The thickness of Bauxite occurs as lenses, bands or pockets of 0.5 to 3.5m, within laterite. Samri mines are shallow in nature therefore maximum depth of pit is 12.5m from surface level.		

3.0 Exploitation

SN	Item	Proposals	Actual work	Remarks
3a	Number of pits proposed for production	5	4	
3b	Quantity of ROM mineral production proposed	956954 MT	683056 MT	
3c	Recovery of salable/usable mineral from ROM production	52.1%	62.4%	
3d	Quantity of Quarry waste (below the Threshold value declared	458381 MT	262391 MT	
3e	Grade of Quarry waste and threshold value declared	Al ₂ O ₃ – 30% SiO ₂ - >= 5%	Al ₂ O ₃ :26.86% SiO ₂ :14.73%, Fe ₂ O ₃ -37.70%, LOI-13.97% Threshold value: Al ₂ O ₃ :30.00 SiO ₂ >5.00	
3f	Quantity of sub-grade mineral generation	0.00	0.00	
3g	Grade of sub-grade mineral	Proposal not given	NIL	

	generation	in approved document		
3h	Manual / Mechanised method adopted for segregating 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	17.614Hect	15.974 Hect	
3n	Ore to OB ratio for the pit/mine during the year	1:2.5	1:2.27	
3o	Total area put in use under different heads at the end of year	Pit- 36.54ha waste/reject- 0.75ha Others- 4.18ha	Pit – 36.54ha waste/reject-0.75ha Others- 4.18ha	
3p	Production of ROM mineral during last five-year period, as applicable (In Metric Tonnes)	Yr-2013-14: 754150 MT Yr-2014-15: 823915.6 MT Yr-2015-16: 1206791MT Yr-2016-17: 1184388 MT Yr.-2017-18 956954 MT	Yr-2013-14: 869399 MT Yr-2014-15: 516890 MT Yr-2015-16: 776962 MT Yr-2016-17: 716846 MT Yr.2017-18 683056 MT	
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 ans blasted separately and removed by shovel tipper combination. There is no need for drilling in overburden as it is soft and easily lift out by excavator		

		without blasting. Hence drilling is only required in Bauxite zone
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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)	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 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	1	
4g	Number of dumps stabilised	Proposal not given in approved document	1	
4h	Whether Retaining wall or garland drain all along dumps are there	Proposal not given in approved document	100x1x1(Retaining wall) 20x1x1(garland drain)	
4i	Length of Retaining wall or garland drain all along dump	Proposal not given in approved document	NA	
4j	Number of settling ponds	Proposal not given in approved document	Proposal not given in approved document	
4k	Specific comments of inspecting officer	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		

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	Fully reclaimed and plantation done over there	Fully reclaimed and plantation done over there	Concurrent backfilling is done.
5b	Area under backfilling of mined out area during the 2017-18	14.362 Hect	13.863 Hect.	Due to less production

5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 36 of MCDR, 2017)	Yes	Simultaneously carried out	
5d	Total area fully reclaimed & rehabilitated since mine operation to till date	Not mentioned specifically	156.254 Ha.	
5e	General remarks of inspecting officer on backfilling, reclamation etc	It is shallow depth mining and band thickness of bauxite is 1.5-2.0m and after removal of bauxite OB/IB and topsoil backfilled.		

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.	Submitted	Submitted	
6b	Management of worked/mined out benches i) Area available for 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	Nil	Nil	
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	i) 17.614 Hect. ii) 14.362 Hect iii) 4.970 Hect. iv) Nil	i) 15.974 Hect. ii) 13.188 Hect iii) 4.970 Hect. iv) 0.8 Hect	

6d	Compliance of Rehabilitation of waste land within lease i) Afforestation ii) Area rehabilitated (ha) iii) Method of rehabilitation	Nil	Nil	
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Air, Soil and Noise monitoring carried out by Annacon Labs	Air, Soil and Noise monitoring carried out by Annacon Labs	

		certified by government	certified by government	
6f	General remarks of inspecting officer on PMCP compliance & progressive	PMCP proposal are broadly implemented		

7.0 Mineral Conservation

SN	Item	Proposals	Actual work	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 sorted out at mines	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. No beneficiation is done but proper blending is done to dispatch low grade bauxite.		

8.0 Environment

SN	Item	Proposals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	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 dumps 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 &	Proposal not given in approved document	11681 Nos(2017-18)	

	additional plantation done (Rule 44 of MCDR, 2017)		178892 Nos (total plantation done since mines operation to till date)	
8g	Survival rate	Not mentioned specifically	87%	
8h	Water sprinkling on roads to control airborne dust	Yes	Truck mounted water tanker is being continuously spraying water on Haul road	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines are	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 upto-June -2018 A.R. submitted upto- 2017-18	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Yes, Mining Engineer: Shri K K Singh Geologist: Shri G S Prasad Manager: Shri Amit Tiwary	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Open Cast Mining: 190.268ha Area Under current working pit: 36.514ha Reclaimed area: 156.254ha Occupied by plant, building residential, welfare building and roads:3.352ha Other purpose:4.182 ha	
9d	Scrutiny of Annual return on afforestation	11681 nos, Servival Rate: 87%	
9e	Scrutiny of Annual return on mineral reject generation (Grade & Quantity)	262391tone, Al ₂ O ₃ :26.86%SiO ₂ :14.73%, Fe ₂ O ₃ -37.70%, LOI-13.97%	
9f	Scrutiny of Annual return on ROM stock and/or grade ore	Opening Stock: 00.00 tonne ROM Production: 683056.600 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 840.00 Cost of Production: Rs 848.88	
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)	3	0.900CUM	
		Shovel (Hydraulic)	2	1.280CUM	
		Air compressor	1	11.110CUM/MN	
		Air compressor	2	12.700CUM/MN	
		Blast Host Drill	3	100.00MM	
		Dumper	16	25.00Tonne	
		Dumper	02	35.00Tonne	
		Water Tanker	1	12000.00L	
		Wheel Loader	1	1.480CUM	
		Wheel Loader	1	1.700CUM	
		Water Tanker	1	20000.00L	

10- Details of violations observed during current inspection and compliance position of earlier violation pointed out:- The present inspection is done for Review of Mining Plan and during inspection no serious violation found.

During last inspection dated 05.07.2018 by Shri R.N.Mishra, SMG violation under Rule 45 pointed out and same considered as complied.

Name: Rajesh Kumar Das
Designation: Senior Assistant Controller of Mines