

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

**MCDR inspection REPORT
Ranchi regional office**

Mine file No : BIH/LOH/BX/246/RRO

Mine code : 07JHK12006

- (i) Name of the Inspecting : **K03**) **G. S. KANNAN**
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : Sri Victor Basu, Manager Geology
Official with
Designation
- (iv) Date of Inspection : 06/01/2020
- (v) Prev.inspection date : 20/12/2018

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **BHUSAR & KEKRANG**
- (b) **Registration NO.** : **IBM/935/2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
State : JHARKHAND
District : LOHARDAGA
Village : BHUSAR
Taluka : BAGRU
Post office : BAGRU
Pin Code : 835302
FAX No. : 06526-24049
E-mail : bijesh.jha@adityabirla.com
Phone : 06526-24161
- (f) Police Station : KISKO
- (g) First opening date : 05/04/1978
- (h) Weekly day of rest : FRI
2. Address for : VILL.-BHUSAR & KEKRANG,
correspondance P.O.- BAGRU HILL
DISTT.-LOHARDAGA (JHK)
3. (a) Lease Number : BHR0265
(b) Lease area : 65.31
(c) Period of lease : 50
(d) Date of Expiry : 31/03/2030
4. Mineral worked : BAUXITE Main

5. Name and Address of the

Lessee : M/S HINDALCO INDUSTRIES LTD.
COURT ROAD, LOHARDAGA,
LOHARDAGA JHARKHAND
Phone:06526 - 224012 & 224118
FAX :06526-224112, 224016 & 0651- 2330782

Owner : A.K. AGRAWAL
M/s HINDAL INDUSTRIES Ltd.,
PO - RENUKOOT, UTTAR
PRADESH- 231217 SONBHADRA
UTTAR PRADESH
Phone: 05446-252084, 2
FAX : 05446-252107

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 : SHRI PRADEEP KUMAR, Full Time
Qualification : B. TECH (MINING)
Appointment/ : 03/09/2013 30/07/2019
Termination date

Mining Engineer

Name : Akhilesh Kumar Sinha, Full Time
Qualification : B.Tech. (Mining)
Appointment/ : 01/08/2019
Termination date

Geologist

Name : VICTOR BASU, Full Time
Qualification : M.Sc(Geology)
Appointment/ : 26/11/2013
Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Renewal under rule 24 MCR1960	27/03/1996
		Mining Scheme rule 12 MCDR1988	25/07/2007
		Modif.of approved Mining Plan	11/10/2010
		Mining Scheme rule 12 MCDR1988	22/12/2011
		MP modif under MCR 1960	31/05/2016
		MP modif under 17(3) MCR 2016	29/07/2019

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No Core Boreholes has been Proposed during 2018-2019 and 16 Boreholes has proposed during 2019-2020	No boreholes has been drilled during 2019-2020	Violation has been issued under Rule 11(1)
1b	Exploration over lease area for geological axis 1 or 2	No Additional exploration was proposed during 2018-2019 in the lease area for Geological axis - 1	No Additional exploration was carried out in the lease area for Geological axis - 1 during 2018-2019	Total 104 + 19 boreholes have been drilled in the lease area.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No Proposal for Exploration during 2018-2019.	Nil	
1d	Balance area to be explored to bring Geological axis in 1 or 2	No Additional exploration was proposed during 2018-2019	No Exploration was carried out during 2018-2019	104 + 19 boreholes have been drilled so far in the lease area and 62.95 hectares has explored to G-1. 2.36 hectares is under G-2.
1e	Balance reserve as on 01/04/20	Reserves & Resources as on 01.04.2019 Proved Mineral Reserves (111) = 565027 tons Feasibility Mineral Resources (211) = 480000 tons	Reserves & Resources as on 01.04.2019 Proved Mineral Reserves (111) = 1553273 tons Feasibility Mineral Resources (211) = 263651 tons	Reserves and Resources are updated based on the revised threshold value.

1f	General remarks of inspecting officers on geology, exploration etc	It is part of Chotanagpur Granite gneiss. Laterite, Bauxite and Lithomerge occur in the plateau top as capping of Chotanagpur Granite gneiss.	Bauxite deposit is not extensive and continuous but found in limited area only.	Lease is having Same Geology. Hence borehole has to be drilled at closer interval to get quantity and quality
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Proposed to work in Quarry-A1 & B during 2018-2019 and Quarry-A2 & B during 2019-2020.	Development has not been carried out as per the proposal	Mining plan has been modified for 2019-2020. Violation has been issued under Rule 11(1)
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	It is proposed to form separate Bench's in Topsoil, Overburden and Mineral.	Separate Benches are formed for Topsoil, Overburden and Mineral.	
2c	Stripping ratio or ore to OB ratio	1 : 1.48	1 : 1.13	
2d	Quantity of topsoil generation in m3	It is proposed to remove 234699 cu.m of topsoil during 2018-2019	194070 cu.m of topsoil has been generated.	
2e	Quantity of overburden generation in m3	During 2018-2019 it is proposed OB as 376276 Cu.m	335972 cu.m of OB have been removed.	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Proposed to work in Quarry-A1 & B during 2018-2019 and Quarry-A2 & B during 2019-2020.	335972 cu.m of OB have been removed.	

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Proposed to work in Quarry-A1 & B during 2018-2019 and Quarry-A2 & B during 2019-2020.	Production has not been carried out as per the proposal	Mining plan has been modified for 2019-2020. Violation has been issued under Rule 11(1)
3b	Quantity of ROM mineral production proposed	The total target of Production was 278595 tons during 2018-2019.	190078 tons of production have been achieved during 2018-2019	
3c	Recovery of sailable/usable mineral from ROM production	90%	90%	
3d	Quantity of mineral reject generation	There is no proposal to produced mineral rejects during 2018-2019	No mineral rejects has been generated	
3e	Grade of mineral rejects generation and threshold value declared.	Mineral reject- below the threshold value and outside the ore zone.	Mineral reject- below the threshold value and outside the ore zone.	
3f	Quantity of sub grade mineral generation.	No Sub Grade Generation	33030 tons of Sub Grade has been Generated against proposal during 2018-2019.	Mining plan has been modified for the year 2019-2020.
3g	Grade of sub grade mineral generation	There is No proposal for Generation of Subgrade Mineral	TA= 31.32% Sio2=5.64%	
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 Proposal	Nil	Only Manual Picking of Ore from Intercalated Waste.

3j	Provision of drilling and blasting in mineral benches	Spacing - 2.5m Burden - 2m Depth - 5.5m It is Proposed to drill by 115mm dia, crawler mounted down hole drill. Blasting is done by using slurry explosives.	Drilling & Blasting are done as per proposal.
3k	Provision of mining machineries in mineral benches	Hydraulic Excavators Dumpers Compressor Tractor Dozer Water Tanker Electric generator	As per proposal machineries are available in field.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height of 3m was proposed in Mineral.	Benches are formed as per proposal.
3m	Total area covered under excavation/pits	61.47 hect area is under Pit	55.72 hect area is under Pit
3n	Ore to OB ratio for the pit/mine during the year.	1 : 1.48	1 : 1.13
3o	Total area put in use under different heads at the end of year	Landuse Pattern as on 01.04.2019 Mining area=61.47 hect Topsoil storage = 0.56 hect OB Dump = 2.36 hect Roads = 0.45 hect	Landuse Pattern as on 01.04.2019 Mining area=55.72 hect Topsoil storage = 0.56 hect OB Dump = 2.36 hect Roads = 0.45 hect

3p	Production of ROM mineral during the last five year period as applicable	2018-2019 = 278595 tons 2017-2018 = 278190 tons 2016-2017 = 278411 tons 2015-2016 = 146431 tons 2014-2015 = 259079 tons	2018-2019 = 190078 tons 2017-2018 = 108666 tons 2016-2017 = 171961 tons 2015-2016 = Nil 2014-2015 = 82032 tons
3q	General remarks of inspecting officers on method of mining etc.	Mechanised Method is Proposed	190078 tons has been achieved during 2018-2019 against 278595 tons of proposal

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	There is no proposal for dumping during 2018-2019. It is proposed to backfill the area simultaneously	As per proposal the backfilling is done concurrently.	
4b	Location of topsoil, OB and mineral reject dumps	It is proposed to backfill during 2018-2019 nearer to Quarry-A1 & B, during 2019-2020 nearer to Quarry-A2 & B.	As per proposal the backfilling is not carried out during 2018-2019 & 2019-2020.	Mining plan has been modified for the year 2019-2020. Violation has been issued under Rule 11(1).
4c	Number of dumps within lease area and outside of lease area	Lease area = 2 Non Lease area = Nil	Lease area = 2 Non Lease area = Nil	Totally 2 old dumps are present in the lease area.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	There is no proposal of Dump.	Nil	
4e	Number of active and alive dumps.	Active Dump = Nil Alive Dump = Nil	There is no active dump within lease area for waste dumping.	Excavated area is backfilled simultaneously. So dumping is not proposed.
4f	Number of dead dumps.	Dead Dumps = Nil	Dead Dumps = Nil	

4g	Number of dumps established.	No dumps have been established.	No dumps have been established.
4h	Whether Retaining wall or garland drain all along dumps are there.	No Proposal	Nil
4i	Length of Retaining wall or garland drain all along dumps	No Proposal	Nil
4j	Number of settling ponds	No Proposal	Nil
4k	Specific comments of inspecting officer on waste dump management	There is no proposal for dumping during 2018-2019. It is proposed to backfill the area simultaneously	As per proposal the backfilling is done concurrently.

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.	Simultaneously Back filling has proposed during 2018-2019 nearer to Quarry-A1 & B, during 2019-2020 nearer to Quarry-A2 & B.	Simultaneously Back filling was in process and could not achieved as per proposal	Mining plan has been modified for the year 2019-2020. Violation has been issued for 2019-2020 under Rule 11(1).
5b	Area under backfilling of mined out area	It is proposed to backfill 2.82 hectares during 2018-2019	5.19 hectares has Backfilled against proposal	
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	Mining area=61.47 hect Reclaimed = 21.00 hect	Mining area=55.72 hect Reclaimed = 10.00 hect	

5e General remarks of inspecting officers on backfilling and reclamation etc. Simultaneously Back filling has proposed in Quarry-7A 5.19 hectares has Backfilled against proposal of 2.82 hectares during 2018-2019

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 2018-2019	
6b	Area available for rehabilitation (ha) .	Proposed 2.82 hectares during 2018-2019	5.19 hectares has achieved during 2018-2019	Out of 55.72 hectares mined out area only 10.00 hectares has been Reclaimed
6c	afforestation done (ha).	Proposed 2.82 hect in 2018-2019	5.19 hectares has been afforested	
6d	No. of saplings planted during the year	6950 saplings proposed in backfilled area for 2018-2019	5175 saplings have been achieved.	
6e	Cumulative no .of plants	20050 nos of saplings proposed from during the plan period 2015-2020 in the backfilled area.	18068 saplings have been planted during 2015-2020 inside the backfilled area.	
6f	Any other method of rehabilitation	No Proposal	Nil	
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 (Lx B x D	Proposed 2.82 hect in 2018-2019	5.19 hectares has been afforested	Out of 55.72 hectares mined out area only 10.00 hectares has been Reclaimed

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 on backfilled area	Proposed 2.82 hect in 2018-2019	5.19 hectares has been afforested
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No Proposal	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No Proposal	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	6950 saplings proposed in backfilled area for 2018-2019	5175 saplings have been achieved.
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	Proposed 2.82 hect in 2018-2019	5.19 hectares has been afforested
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Simultaneously Back filling	Simultaneously Back filling
6p	Compliance of environmental monitoring (core zone and buffer zone)	Bi-Annually Survey	Environment monitoring is carried out through own as well as private agency.

6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Environment monitoring is carried out through private agency.	5175 saplings have been achieved in 5.19 hectares during 2018-2019	18068 saplings have been planted during 2015-2020 inside the backfilled area.
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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 278595 tons during 2018-2019.	190078 tons has been achieved during 2018-2019	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical Process and Manual Picking of Ore from Intercalated Waste	Mechanical Process and Manual Picking of Ore from Intercalated Waste	
7c	Different grade of mineral sorted out at mines.	Average Grade:- Al2O3 = +40% Sio2 = 5% Cut Off Grade:- Al2O3 = +30% Sio2 = 7%	Average Grade:- Al2O3 = +40% Sio2 = 5% Cut Off Grade:- Al2O3 = +30% Sio2 = 7%	Low grade are Blended with High grade ores to get the desired plant feed materials.
7d	Any beneficiation process at mines .	Manually sizing and sorting are proposed	sorting and sizing is being done	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	The total target of Production was 278595 tons during 2018-2019.	190078 tons has been achieved during 2018-2019	Low grade are Blended with High grade ores to get the desired plant feed materials.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
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8a	Separate removal and utilization of topsoil (Rule 32)	Proposal of removing topsoil separately and spreading over mined out area.	Concurrent backfilling and spreading of topsoil over backfilled areas is practiced for reclaimed and rehabilitation of mined out areas.	
8b	Concurrent use or storage of topsoil	Concurrent use	Concurrent use	
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Proposal of removing topsoil/ OB separately and spreading over mined out area.	Concurrent backfilling and spreading of topsoil over backfilled areas is practiced for reclaimed and rehabilitation of mined out areas.	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	The OB and waste generated are to be proposed to backfilled simultaneously in the mined out areas	Backfilling has done in unproposed area and restoring the land to its original use.	Violation has been issued for 2019-2020 under Rule 11(1).
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No Proposal	Nil	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	6950 saplings proposed in backfilled area for 2018-2019	5175 saplings have been achieved in 5.19 hectares during 2018-2019	
8g	Survival rate	No such proposal in the approved document	80%	
8h	Water sprinkling on roads to control airborne dust	Yes, it is proposed for water sprinkling on haul roads.	Water sprinkling on road is observed during the inspection.	

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Scanty vegetation, agriculture are observed in lease area	Surrounding area beyond lease area is greenery. The area is hilly terrain.
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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	MR Submitted up to = November 2019 AR Submitted up to = 2018-2019	Both Annual & Monthly returns are submitting in online system. Submitted within the time limits	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer and Geologist has shown	As per record Mining Engineer and Geologist are present during Inspection	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Land use Pattern as on 01.04.2019. Exploited area = 55.72 hect Current working = 19.54 hect Dump = 2.36 hect	Landuse Pattern is filled as per approved Mining Plan	
9d	Scrutiny of Annual return on afforestation	5175 saplings have been achieved in 5.19 hectares during 2018-2019.	It is advised the lessee to plant the saplings as per the proposal.	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	There is no Mineral Rejects Generation	There is no Mineral Rejects Generation	

9f	Scrutiny of Annual return on ROM stock and/or graded ore	Bauxite Stock as on 01.04.2019 ROM Closing stock = Nil Dispatches of Processed ore below 40% Al2O3 = 3894 tons and 40% to below 45% Al2O3 = 153396.320 tons	Mine has produced 1980078 tons of Production during 2018-2019
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of Production & Ex. Mine Price has shown	It is captive mine of Hindalco
9h	Scrutiny of Annual return on fixed assets	Fixed Assets is given	Fixed Assets is filled
9k	Scrutiny of Annual return on mining machineries	Machineries details given	As available in field

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)	28/02/2020			
MCDR17	Rule 33	28/02/2020			

Date :

(G. S. KANNAN)

Indian Bureau of Mines