

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

**MCDR inspection REPORT**

**Ranchi regional office**

**Mine file No :** JHK/LOH/BX/248/RRO

**Mine code :** 07JHK12009

- (i) Name of the Inspecting : **K005** ) **B.P. KERKETTA**  
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Sri Ajay Kr. pandey, Mines manager, Sri Victor Basu, Ge  
Official with  
Designation
- (iv) Date of Inspection : 13/10/2020
- (v) Prev.inspection date : 22/08/2018

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **HISRI EXTENSION (19.58 H)**
- (b) **Registration NO.** : **IBM/935/2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address  
State : JHARKHAND  
District : LOHARDAGA  
Village : HISRI  
Taluka : LOHARDAGA  
Post office :  
Pin Code :  
FAX No. : 033-22883964  
E-mail : N.A.  
Phone : 06526-295526/27, 294611,
- (f) Police Station : KISKO
- (g) First opening date : 10/10/1951
- (h) Weekly day of rest : FRI
2. Address for : VILL.- HISRI,  
correspondance P.O.- BAGRU HILL,  
DISTT.- LOHARDAGA (JHK)
3. (a) Lease Number : BHR0266
- (b) Lease area : 14.55
- (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.  
 AT - COURT ROAD,  
 LOHARDAGA, LOHARDAGA  
 JHARKHAND  
 Phone:06526-22401112, 224446 & 224016.  
 FAX :06526-224112 & 224445

Owner : A.K AGRAWAL  
 M/S HINDALCO INDUSTRIES  
 LTD. CENTURY BHAWAN, 3rd  
 FLOOR, Dr. ANNIE BASANT  
 ROAD, WORLY, MUMBAI (MH)  
 KOLKATA WEST BENGAL  
 Phone:  
 FAX :

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 : TARINI GAUTAM, Full Time  
 Qualification : B. Tech. (Mining)  
 Appointment/ : 08/05/2021  
 Termination date

## Geologist

Name : BASUDEV GANGOPADHYAY, Full Time  
 Qualification : M.TECH (APPLIED GEOLOGY), I.S.M. DHANBAD  
 Appointment/ : 01/11/2017  
 Termination date

## Manager

Name : AJAY KUMAR PANDEY  
 Qualification : B.E. (MINING), ISM, DHANBAD  
 Appointment/ : 28/08/2014  
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining : Existing rule 11 MCDR1988 13/01/1994  
 Renewal under rule 24 MCR1960 18/12/1995  
 Renewal under rule 24 MCR1960 20/05/2006  
 Mining Scheme rule 12 MCDR1988 06/10/2010  
 Modif.of approved Mining Plan 06/10/2010  
 FMCP under 23C(1) 05/08/2014  
 MP modif under MCR 1960 23/12/2015  
 MP review under 17(1) MCR 2016 19/03/2020

## PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No Proposal	The lease area has been fully explored in G1 axis	
1b	Exploration over lease area for geological axis 1 or 2	No Proposal	The lease area has been fully explored in G1 axis	
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No Proposal	NA	
1d	Balance area to be explored to bring Geological axis in 1 or 2	No Proposal	The lease area has been fully explored in G1 axis	
1e	Balance reserve as on 01/04/20	No Proposal	Balance reserve as on 01/04/2020 111 - 902495 Tonnes 221 - 316363 Tonnes	
1f	General remarks of inspecting officers on geology, exploration etc		It has been noticed that the lessee drilled 38 numbers of coring types (HQ) boreholes within the lease area more than the proposed 13 boreholes during plan period 2015-16 to 2019-20.	

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Quarry -6	Quarry -6	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Soil - 1 OB - 1 Ore-1	Soil - 1 OB - 1 Ore-1	
2c	Stripping ratio or ore to OB ratio	1:0.38	1:1.03	
2d	Quantity of topsoil generation in m3	7700.00 m3	6724.00 m3	

2e	Quantity of overburden generation in m3	39852.00 m3	37052.00 m3
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		The Lessee has developed the Quarry no 6 during 2019-20 as proposed in the approved Mining Plan.

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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One	One	
3b	Quantity of ROM mineral production proposed	54980 (Cum)	11025 (Cum)	
3c	Recovery of sailable/usable mineral from ROM production	99458 (Tonne)	22162(Tonne)	
3d	Quantity of mineral reject generation	5498 (Tonne)	110 (Tonne)	
3e	Grade of mineral rejects generation and threshold value declared.	No proposal	Al2O3-26.5% SiO2- 5.62%	
3f	Quantity of sub grade mineral generation.	NIL	NIL	
3g	Grade of sub grade mineral generation	NIL	NIL	
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	No	

3j	Provision of drilling and blasting in mineral benches	Yes Proposed	Drilling and blasting done in ineral benches
3k	Provision of mining machineris in mineral benches	Yes	Mining machineris present in mineral benches.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height & width 6m in OB,Ore	Bench Height in OB 2.6m& Ore 4.5m.
3m	Total area covered under excavation/pits	5.49 Ha	5.056 ha
3n	Ore to OB ratio for the pit/mine during the year.	1:0.38	1:1.03
3o	Total area put in use under different heads at the end of year	5.32 Ha	4.186 Ha
3p	Production of ROM mineral during the last five year period as applicable	2015-16 99087MT 2016-17 99316MT 2017-18 99904MT 2018-19 99026MT 2019-20 99458MT	2015-16 64488MT 2016-17 98608MT 2017-18 90001MT 2018-19 90674MT 2019-20 22162MT
3q	General remarks of inspecting officers on method of mining etc.		Out of proposed production of ROM 99458MT during 2019-20, only 22162MT ROM has been produced.This is due to Muri Alumina plant was closed for about six months during the year due to Tailing Dam failure.

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Solid Waste Management - Dumping:

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Sl.No.	Item	Propasals	Actual work	Remarks
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4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No Proposal	No work done
4b	Location of topsoil, OB and mineral reject dumps	No Proposal	No work done
4c	Number of dumps within lease area and outside of lease area	No Proposal	No work done
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	No Proposal	No work done
4e	Number of active and alive dumps.	No Proposal	No work done
4f	Number of dead dumps.	No Proposal	No work done
4g	Number of dumps established.	No Proposal	No work done
4h	Whether Retaining wall or garland drain all along dumps are there.	No Proposal	No work done
4i	Length of Retaining wall or garland drain all along dumps	No Proposal	No work done
4j	Number of settling ponds	No Proposal	No work done
4k	Specific comments of inspecting officer on waste dump management		No comment as there was no proposal for dumping.

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#### Solid Waste Management - Backfilling:

Sl.No.	Item	Proposals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Part by Part Extraction and simultaneous back filling	Part by Part Extraction and simultaneous back filling	

5b	Area under backfilling of mined out area	0.71Ha	0.87 ha	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	FOR REHABILITATION	FOR REHABILITATION	
5d	Total area fully reclaimed and rehabilitated	0.71 Ha	1.129 Ha	
5e	General remarks of inspecting officers on backfilling and reclamation etc.		Backfilling and reclamation was carried out as per proposal in the approved Modification in Mining Plan as far as possible.	

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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).	PMCP to be submitted on time and correctly.	PMCP submitted on time and correctly.	
6b	Area available for rehabilitation (ha) .	Nil	Nil	
6c	afforestation done (ha).	0.71ha.	0.876ha.	
6d	No. of saplings planted during the year	1260nos.	3096nos.	Total-7838nos.
6e	Cumulative no .of plants	3920nos.	7838nos.	
6f	Any other method of rehabilitation	Nil	Nil	
6g	Cost incurred on watch and care during the year	Not proposed.	Rs.118800.00	

6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	159mx46m	159mx55m
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Nil	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	Nil	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	Nil	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	1260nos.	3096nos.
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	0.71 Ha	1.129 Ha
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Plantation	Plantation



6p	Compliance of environmental monitoring (core zone and buffer zone)	AIR, WATER, NOISE MONITORING TO BE DONE QUARTERLY	AIR, WATER, NOISE MONITORING DONE QUARTERLY	Cost-Rs.1215361.50
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		PMCP compliance and progressive closure operations carried out as per approved Modification of Mining Plan. The number of plantation was done as per the availability of reclaimed area & it is on the higher side.	

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Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting	Grade wise sorting	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual	Manual	
7c	Different grade of mineral sorted out at mines.	42 to 45 % Al2O3	42 to 45 % Al2O3	
7d	Any beneficiation process at mines	No Proposal	No work done	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	It has been proposed in the approved Modification of Mining Plan that, low grade Bauxite will be hand sorted and suitably blended to meet the metal grade requirement.	The mineral conservation aspect was skillfully maintained by the lessee by deploying suitable nos. of persons for sorting, sizing etc.	

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Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Continuous Spreading over backfilled area	Continuous Spreading over backfilled area	
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	No work done	
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Back Filling	Back Filling	
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Phased restoration	Phased restoration	
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	1260nos.	3096nos.	Total-7838nos.
8g	Survival rate	80 %	80 %	
8h	Water sprinkling on roads to control airborne dust	Regular Sprinkling	Regular Sprinkling	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area		The aesthetic beauty in and around the mine area is being maitained by simultaneous backfilling and plantation done by the lessee over backfilled area. Further, a gentle gradient is being maitained after backfilling of the mined out area.	

## Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns		Submitted On Time	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer- Shri Manoj Kr. Nayak Geologist-Shri Basudev Gangopadhyay Manager- Shri Ajay Kr.Pandey	Mining Engineer- Shri Manoj Kr. Nayak Geologist-Shri Basudev Gangopadhyay Manager- Shri Ajay Kr.Pandey	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area already exploited by O/C mining 5.056ha., covered under current O/C mining 0.7ha., reclaimed/rehabilitated area 3.752ha., work done under progressive mine closure plan 1.129ha.	Road area has not been given.	
9d	Scrutiny of Annual return on afforestation	3096nos.	3096nos.	
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Nil	found correct.	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM Bauxite :Production 22162MT, Opening & closing Stock Nil, Closing stock of Graded Ore , Below 40% Al <sub>2</sub> O <sub>3</sub> , 1455.48MT (av. grade 39.68%Al <sub>2</sub> O <sub>3</sub> ) & 40% to below 45% Al <sub>2</sub> O <sub>3</sub> , 5329.14MT (av. grade 44.79%Al <sub>2</sub> O <sub>3</sub> ) respectively.	Found correct.	

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex- Mine Cost- 1262.85 Production Cost- 1262.85	Ex- Mine Cost- 1262.85 Production Cost- 1262.85
9h	Scrutiny of Annual return on fixed assets	Rs.629132486	Rs.629132486
9k	Scrutiny of Annual return on mining machineries	SHOVEL (HYDRAULIC)0.9 cum 1no.,SHOVEL (HYDRAULIC)1.5 cum 1no., DUMPER 25Te,2nos. AIR COMPRESSOR 365cum 1no., AIR COMPRESSOR 450cum 1no., CRUSHER 120T/H 1no., CRUSHER 200T/H 1no., AIR COMPRESSOR 450cum 1no., CRUSHER 120T/H 1no., CRUSHER 200T/H 1no.,	SHOVEL (HYDRAULIC)0.9cum 1no., SHOVEL (HYDRAULIC)1.5cum 1no., DUMPER 25Te,2nos. AIR COMPRESSOR 365cum 1no., AIR COMPRESSOR 450cum 1no., CRUSHER 120T/H 1no., CRUSHER 200T/H 1no.,

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**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)	06/11/2020	MCDR17	Rule 11(1)	06/11/2020 16/04/2021

**Date :**

**(B.P. KERKETTA)**

Indian Bureau of Mines