

**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 : **B001** ) **SAGAR BODRA**  
Officer and ID No.
- (ii) Designation : Assistant Mining Geologis
- (iii) Accompanying mine : S/SHRI VICTOR BASU, GEOLOGIST, A.K.PANDEY, MINES MANA  
Official with  
Designation
- (iv) Date of Inspection : 26/07/2016
- (v) Prev.inspection date : 07/06/2016

**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** : **15**
- (d) **Date of Expiry** : **18/07/1996**
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 : SUDEEP KUMAR, Full Time  
 Qualification : B. Tech. (Mining)  
 Appointment/ : 07/12/2015  
 Termination date

## Mining Engineer

Name : PRAKASH RANJAN, Full Time  
 Qualification : B. Tech (Mining)  
 Appointment/ : 26/06/2016  
 Termination date

## Geologist

Name : B.K. MAHAPATRA, Full Time  
 Qualification : M.Sc(Geo)  
 Appointment/ : 20/02/2014  
 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

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

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	As the lease area was already explored in detail systematically by drilling boreholes on regular grid no proposal of boreholes was there during 2010-11 to 2014-15.	NIL	Nil
1b	Exploration over lease area for geological axis 1 or 2	Entire lease area already explored.during plan period 2015-16 to 2019-20, Thirteen (13) additional boreholes havebeen proposed.	No boreholes drilled as yhe mine was not working by the order of state Govt ,pending 2nd renewal. .Mine started operation from 9/12/2015.	Mining operation was stopped as per letter no 428/M dated 9.9.2014 from DMO lohardaga.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	NA	NIL	Nil
1d	Balance area to be explored to bring Geological axis in 1 or 2	Entire area already explored.	No exploration carried as mine reopened on 9/12/2015.	Nil
1e	Balance reserve as on 01/04/20	Reservee as on 01.04.2015 as perModificati on in approved Mining Plan: (111) : 852382 MT	Reserve as on 01.04.2016 : After depleting the production of 2015-16; 64488 MT (111) : ( 852382 MT - 64488 MT) = 787894 MT.	Mne reopene on 9.12.2015.

1f	General remarks of inspecting officers on geology, exploration etc	Nil.	The bauxite in the area is both boehmitic and gibbsitic and is found suitable for low temperature and low pressure. The average grade of bauxite is Al <sub>2</sub> O <sub>3</sub> ->38%; SiO <sub>2</sub> -<5%.. The entire lease hold area has already been explored.	Mine reopened on 09.12.2015.
----	--	------	---	------------------------------

---

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	During 2015-16 ,It was proposed to mine Quarry no 2A and 2B.	Mine started operation in Q-2A and 2 B.	Nil
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches for topsoil ,OB and Mineral have been proposed.	Two benches for OB and one Bench in Mineral were there.	Nil
2c	Stripping ratio or ore to OB ratio	During 2015-16,Proposed stripping ratio was 1:0.35 as per approved document.	Stripping ratio achieved was 1: 0.44.(production of bauxite-64488 MT and OB Generated -28616 MT.	Nil
2d	Quantity of topsoil generation in m3	Proposed Quantity of top soil generation during 2015-16 was 12688 cum.	Quantity of top soil generated during 2015-16 is 28616 cum.	Nil
2e	Quantity of overburden generation in m3	Proposed quantity of Total OB was 35214 cum during the year 2015-16.	Actual quantity of Total OB and waste is 25616 cum.	Nil
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Not applicable	The mine was reopened 09.012.2015. Mining operation started in quarry no. 2A & B.	Nil

---

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Quarry no-2A and 2B are proposed for production during 2015-16.	Quarry no 2A and 2B started production after reopening of since 9.12.2015.	Nil
3b	Quantity of ROM mineral production proposed	Proposed quantity ROM during 2015-16 was 99087 Tonnes.	During 2015-16 64488 Tonne ROM produced which was 65% less as per proposal. Since the mine was reopened from 09.12.2015. There was Nil production for the month of April 15 & May, 15 and October, 15 to January, 2016 also reported Nil production. Remaining months low production reported.	Nil
3c	Recovery of sailable/usable mineral from ROM production	Proposed recovery was 90% Bauxite from ROM.	Recovery was 90% Bauxite from ROM.	Nil
3d	Quantity of mineral reject generation	No proposal for reject generation.	Nil	Nil
3e	Grade of mineral rejects generation and threshold value declared.	NO proposal for reject generation.	Not applicable.	Nil
3f	Quantity of sub grade mineral generation.	No proposal of subgrade generation.	The sub grade bauxite is blended with high grade bauxite to make the material salable and as such no subgrade ore is generated from the mine	Nil
3g	Grade of sub grade mineral generation	No such proposal	Not applicable.	Nil
3h	Manual / Mechanised method adopted for segregating from ROM	Sorting and sizing of bauxite boilders are done manually.	Ores is manually sorted and sized and suitably blended to ensure metal grade requirement of the captive alumina plant .	Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No such proposal	Not applicable	Nil

3j	Provision of drilling and blasting in mineral benches	Drilling was proposed by DTH drills and blasting by charging the drill holes with explosives.	Drilling and blasting is practiced as proposed	Nil
3k	Provision of mining machineries in mineral benches	Following Mining machinery was proposed to be deployed . Excavator 0.9cum- 01,1.5cum- 1,1.7cum-1 Dumper-25T- 03,32T-01 Crusher - 120tph- 1,60tph-01 Air compressor-1, Aerial ropeway -BRECO,USA- 20HP-45tph.	Machinery as proposed were deployed during mining operation.	Nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	As per approved document height of the benches in OB -4.5m and in ore-4m.	Height of the benches in OB -1.5-2.5m and height of the benches in ore 3.5-4m	Nil
3m	Total area covered under excavation/pits	Total area proposed under excavation during 2015-16 was 3.88ha.	Total area under excavation during 2015-16 was 3.89 ha.	Nil
3n	Ore to OB ratio for the pit/mine during the year.	As per proposal Ore to OB ratio during 2015-16 was 1:0.35	Stripping ratio achieved was 1: 0.44.(production of bauxite-64488 MT and OB Generated -28616 MT.	Nil

3o	Total area put in use under different heads at the end of year	Proposed area put in use under different heads during 2015-16 was as follows. Quarry- 2.39ha, Reclaimed area- 1.49ha, Green belt- 0.16ha, Road- 0.13ha	Actual area put in used as per Annual return of 2015-16 is: Area already exploited - 1.77ha Area reclaimed-0.260ha Area used for waste disposal-0.120ha	Nil
3p	Production of ROM mineral during the last five year period as applicable	Proposed Production of ROM during last five years was as given: 2015-16 : 99087 MT 2016-17:99316 MT 2017-18 : 99904 MT 2018-19 : 99026 MT 2019-20 : 99458 MT	Actual production during last five years is given below: 2010-11 : NIL 2011-12 : NIL 2012-13 : 99651 MT 2013-14 : 93813 MT 2014-15 : 54529 MT 2015-16: 64488 MT	Nil
3q	General remarks of inspecting officers on method of mining etc.	NA	This is a fully mechanised mine. Mining operation is being carried out by deploying machneries. By and large mining is being done as per proposal.	Nil

## Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Concurrent backfillingis proposed for the plan period followed by spreading of top soil for reclamation.	Concurrent backfillingis proposed for the plan period followed by spreading of top soil for reclamation.	Nil
4b	Location of topsoil, OB and mineral reject dumps	No proposal for dumping.	No information available.A	Nil

4c	Number of dumps within lease area and outside of lease area	Not Applicable.	There is no waste dump.	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Not Applicable.	NA	Nil
4e	Number of active and alive dumps.	NIL	NIL	Nil
4f	Number of dead dumps.	NIL	NIL	Nil
4g	Number of dumps established.	NIL	NIL	Nil
4h	Whether Retaining wall or garland drain all along dumps are there.	Not Proposed.	NA	Nil
4i	Length of Retaining wall or garland drain all along dumps	NIL	NIL	Nil
4j	Number of settling ponds	NIL	NIL	Nil
4k	Specific comments of inspecting officer on waste dump management	No dumps. Concurrent backfilling Proposed.	No dumps. Concurrent backfilling was under progress.	Nil

---

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.	Quarry no 2A and b are proposed for Mining and concurrent backfilling.	Concurrent backfilling was under progress.	Nil
5b	Area under backfilling of mined out area	proposed area for backfilling during 2015-16 was 1.49 ha	During the 2015-16 about 0.522 ha was backfilled. As on date of inspection a cumulative 1.77 ha has already been backfilled.	Nil
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent backfilling of the mined out quarriese and spread of top soil over them was proposed.	Concurrent backfilling of the mined out quarriese and spread of top soil over them is in practice.	Nil



5d	Total area fully reclaimed and rehabilitated	Proposed area for reclamation and rehabilitation was 1.49 ha.	Total area reclaimed is 0.26 ha.	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.	NA	By and large the backfilling and reclamation status w.r.t mined out area is found to be satisfactory.	Nil

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).	No such proposal	Annual report on PMCP is being submitted regularly.	Nil
6b	Area available for rehabilitation (ha) .	Proposed area for backfilling was 1.49 ha during 2015-16.	Area matured for rehabilitation was 0.26ha.	Nil
6c	afforestation done (ha).	Proposed afforestation during 2015-16 was 2175sqm area	0.08ha area covered under afforestation.	Mine was not in operation.
6d	No. of saplings planted during the year	It was proposed to plant 450 sapplings during 2015-16.	Total number of sapplings planted during 215-16 is 125nos.	Nil
6e	Cumulative no .of plants	Proposed cummulative plantation during ther plan period was 3920 sapplings.	only 125 sapplings were planted during the plan period. Cumulative figures of plantation is not available.	Nil
6f	Any other method of rehabilitation	No such oroposal.	Not applicable.	Nil
6g	Cost incurred on watch and care during the year	No such proposal.	Information not Available.	Nil

6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	NA	NA	Nil
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	NIL	NIL	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	NIL	NIL	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	NIL	NIL	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	NIL	NIL	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	NIL	NIL	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	NIL	NIL	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Proposal of Monitoring of air,water and noise was proposed on quaterly basis.	The ambient air quality ,water quality and noise level were moniterd on quaterly basis.	Nil

6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	NA	NA	Nil
----	---	----	----	-----

---

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	ROM mineral to be despatched after hand sorting.	No grade wise sorting is done	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical method was proposed for sorting & Screening of ROM.	The entire ROM produced from the mine was crushed and screened.	Nil
7c	Different grade of mineral sorted out at mines.	No proposal of gradewise sorting.	Not applicable	Nil
7d	Any beneficiation process at mines .	No beneficiation process at mine.	Not applicable	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Not applicable	No problem of mineral conservation in the mine. All produced ore is sent for consiption to its Muri plant.	Nil

---

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	It was proposed to remove soil seprately and spread over backfilled area.	OB and waste are backfilled and top soil spread over them.	Nil

---

8b	Concurrent use or storage of topsoil	Soil to be used concurrently over backfilled area.	Soil used concurrently over backfilled area.	Nil
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No such dump proposal.	Mined out areas are backfilled with OB and waste and top soil spread over them.	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	It was proposed to use wasterock, rejects and fine dumps for reclamation and rehabilitation	Mined out ares are backfilled with OB and waste and top soil spread over it	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Concurrent mining backfilling and rahabilitation proposed.	Concurrent mining backfilling and rahabilitation is in progress.	Nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	NA	NA	Nil
8g	Survival rate	No proposal.	survival rate was 75%.	Nil
8h	Water sprinkling on roads to control airborne dust	No such proposal in approved document.	Water sprinkling was done on the haulage road regularly.	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Not applicable	Concurrrent backfilling was done which enhances asthetic beauty.	Nil

---

Compliance of Rule 45:

---

Sl.No.	Item	Propasals	Actual work	Remarks
--------	------	-----------	-------------	---------

---

9a	Status of submission of Monthly and Annual returns	Lessee is submitting MR and AR regularly.	Lessee has submitted MR and AR regularly.	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	As per Annual Return Mr Sudeep Kumar is Mining engineer and Sri B K Mohapatra is Geologist.	Mr Sudeep Kumar is Mining engineer and Sri B K Mohapatra is Geologist.	Nil
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	As per Annual Return Area already exploited - 1.77ha, Area Reclaimed and Rehabilitated 0.26, Area used for waste disposal 0.12ha.	The details given in annual return seems to be correct.	Nil
9d	Scrutiny of Annual return on afforestation	As per annual return total plantation within lease area is 50.	Lessee has planted 125no of sapplings.	Nil
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	NIL	NIL	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	During 2015-16 total ROM production was 64488 MT	Figure seems to be correct.	Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	This is a captive mine, Cost of productin as shown in Annual return is Rs 829/-.	The figures seems to be correct.	Nil
9h	Scrutiny of Annual return on fixed assets	Depreciation in fixed assets as given in Annual Return is Rs 13257708/-	Depreciation in fixed assets as given in Annual Return is Rs 13257708/-	Nil

9k	Scrutiny of Annual return on mining machineries	As per Annual Return Mining Machinery used are Shovel Hyd 0.9cum-01, 1.5cum-0land 1.7cum- 01;Dumper 25t- 03 & 32T-01; air compressor450c um-01,365cum- 01.	The llist of Mining machinery provided in Annual return seems to be correct.	Nil
----	---	---	--	-----

---

**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

**Date :**

(SAGAR BODRA)

Indian Bureau of Mines