

**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 : **S001**) **B K SINGH**
Officer and ID No.
- (ii) Designation : Assistant Mining Geologis
- (iii) Accompanying mine : Sri Victor Basu ,manager Geology,Sri ajay pandey Mana
Official with
Designation
- (iv) Date of Inspection : 03/02/2016
- (v) Prev.inspection date : 21/08/2015

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

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| 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 | |
| 1b | Exploration over lease area for geological axis 1 or 2 | Entire lease area already explored.during plan period 2015-16 to 2019-2013 additional boreholes havebeen proposed. | No boreholes drilled as mine was not working by the order of state Govt pending 2nd renewal.Mines 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 | |
| 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. | |
| 1e | Balance reserve as on 01/04/20 | Reservee as on 01.04.2015 as perModification in approved Mining Plan: (111) : 852382 MT | Reserve as on 01.04.2015 : (111) : 852382 MT No depletion in reserve has been done as mine reopene on 9.12.2015. | |

Development :

| Sl.No. | Item | Proposals | Actual work | Remarks |
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| 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. |
| 2b | Separate benches in topsoil, overburden and minerals (Rule 15) | Seprate benches for topsoil ,OB and Mineral have been proposed. | Two benches for OB and one Bench in Mineral were there. |
| 2c | Stripping ratio or ore to OB ratio | During 2014-15,Proposed stripping ratio was 1:0.53 as per approved document. | Stripping ratio achived was 1: 0.40.(production of bauxite-54529 MT and OB Generated -21827 MT. |
| 2d | Quantity of topsoil generation in m3 | Proposed Quantity of top soil generated during 2014-15 was 11866 cum. | Quantity of top soil generated during 2014-15 is 2744cum. |
| 2e | Quantity of overburden generation in m3 | Proposed quantity of Total OB was 58218 cum. | Actual quantity of Total OB and waste is 12183 cum. |
| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc | NA | NA |

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 startedproduction after reopening of since 9.12.2015. | |
| 3b | Quantity of ROM mineral production proposed | Proposed quantity ROM during 2015-16 was 54775 CUM | Mine has started working from 9.12.2015. | |
| 3c | Recovery of sailable/usable mineral from ROM production | Proposed recovery was 90% Bauxite from ROM. | Recovery was 90% Bauxite from ROM. | |

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| 3d | Quantity of mineral reject generation | No proposal for reject generation. | NA |
| 3e | Grade of mineral rejects generation and threshold value declared. | NO proposal for reject generation. | NA. |
| 3f | Quantity of sub grade mineral generation. | No proposal of subgrade generation. | The lower grade bauxite is blended with high grade bauxite to make the material salable and as such no subgrade ore in mine. |
| 3g | Grade of sub grade mineral generation | NA | NA |
| 3h | Manual / Mechanised method adopted for segregating from ROM | Crushing and sizing of the carried out mechanically proposed. | Ores is manually sorted and suitably blended to ensure metal grade requirement of the captive alumina plant . |
| 3i | Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects. | No such proposal | NA |
| 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 |
| 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. |

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| 3l | Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM | Asper 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 |
| 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. |
| 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 | NA ,Mine has started production after reopening from 9.12.2015. |
| 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 |
| 3p | Production of ROM mineral during the last five year period as applicable | Proposed Production of ROM during last five years was as given: 2010-11 : 96139 MT 2011-12 : 91882 MT 2012-13 : 92330 MT 2013-14 : 91498 MT 2014-15 : 109314 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 |
| 3q | General remarks of inspecting officers on method of mining etc. | NA | Mine started working after reopening from 9.12.2015. |

| 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 byspreading of top soil for reclamation. | Concurrent backfillingis proposed for the plan period followed byspreading of top soil for reclamation. | |
| 4b | Location of topsoil, OB and mineral reject dumps | No proposal for dumping. | NA | |
| 4c | Number of dumps within lease area and outside of lease area | Not Applicable. | N A | |
| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16) | Not Applicable. | NA | |
| 4e | Number of active and alive dumps. | NIL | NIL | |
| 4f | Number of dead dumps. | NIL | NIL | |
| 4g | Number of dumps established. | NIL | NIL | |
| 4h | Whether Retaining wall or garland drain all along dumps are there. | Not Proposed. | NA | |
| 4i | Length of Retaining wall or garland drain all along dumps | NIL | NIL | |
| 4j | Number of settling ponds | NIL | NIL | |
| 4k | Specific comments of inspecting officer on waste dump management | No dumps Concurrent backfilling Proposed. | No dumps Concurrent backfilling is in progress. | |

Solid Waste Management - Backfilling:

| Sl.No. | Item | Propasals | Actual work | Remarks |
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| 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 is in progress. |
| 5b | Area under backfilling of mined out area | proposed area for backfilling during 2015-16 was 1.49 ha | Mine has reopened on 09.12.2015. total backfilled area is 0.26ha |
| 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. |
| 5d | Total area fully reclaimed and rehabilitated | Proposed area for reclamation and rehabilitation was 1.49 ha. | Total area reclaimed is 0.26 ha. |
| 5e | General remarks of inspecting officers on backfilling and reclamation etc. | NA | Mine was closed since 9.9.2014 and reopene on 9.12.2015. |

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). | NA | annual report on PMCP is being submitted regularly. | |
| 6b | Area available for rehabilitation (ha) . | Proposed area for backfilling was 1.49 ha during 2015-16. | Area matured for rehabilitation aws 0.26ha. | |
| 6c | afforestation done (ha). | Proposed afforestation during 2015-16 was 2175sqm area | 0.08ha | Mine was not in operation. |

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| 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. |
| 6e | Cumulative no .of plants | Proposed cummulative plantation during ther plan period was3920 sapplings. | only 125 sapplings were planted during the plan period. |
| 6f | Any other method of rehabilitation | NO | NA |
| 6g | Cost incurred on watch and care during the year | NA | Not Available. |
| 6h | Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D | NA | NA |
| 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)Afforestati 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 |

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| 6m | Compliance of rehabilitation of waste land within lease (i)afforestation | NIL | NIL |
| 6n | Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha) | NIL | NIL |
| 6o | Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation | 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. |
| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. | NA | NA |

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. | |
| 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. | |
| 7c | Different grade of mineral sorted out at mines. | No proposal of gradewise sorting. | NA | |

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| 7d | Any beneficiation process at mines . | No beneficiation process at mine. | NA |
| 7e | General remarks of inspecting officer on Mineral conservation and beneficiation issues | NA | No problem of mineral conservation in the mine. |

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. | |
| 8b | Concurrent use or storage of topsoil | Soil to be used concurrently over backfilled area. | Soil used concurrently over backfilled area. | |
| 8c | Separate dumps for overburden, waste rock, rejects and fines (Rule 33) | No such dump proposal. | Mined out ares are backfilled with OB and waste and top soil spread over them. | |
| 8d | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use | It was proposed to use wasterock,reje cts and fine dumpsfor reclamation and rehabilitation . | Mined out ares are backfilled with OB and waste and top soil spread over them. | |
| 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. | |

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| 8f | Baseline information on existence of plantation and additional plantation done (Rule 41) | NA | NA |
| 8g | Survival rate | NA | survival rate was 75%. |
| 8h | Water sprinkling on roads to control airborne dust | No such proposal in approved document. | Water sprinkling was done on the haulage road regularly. |
| 8i | General remarks of inspecting officer on aesthetic beauty in and around mines area | NA | Concurrrent backfilling was done which enhances aesthetic beauty. |

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. | |
| 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. | |
| 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. | |
| 9d | Scrutiny of Annual return on afforestation | As per annual return total plantation within lease area is 50. | Lessee has planted 125no of sapplings. | |

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| 9e | Scrutiny of Annual return on mineral reject generation (Grade and quantity) | 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. |
| 9g | Scrutiny of Annual return on sale value, Ex. Mine price and production cost | This is a captive mine, Cost of production as shown in Annual return is Rs 829/-. | The figures seems to be correct. |
| 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/- |
| 9k | Scrutiny of Annual return on mining machineries | As per Annual Return Mining Machinery used are Shovel Hyd 0.9cum-01, 1.5cum-01 and 1.7cum-01; Dumper 25t-03 & 32T-01; air compressor 450cum-01, 365cum-01. | The list of Mining machinery provided in Annual return seems to be correct. |

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 :

(B K SINGH)

Indian Bureau of Mines