

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

**Inspection under SDF for star rating of mines REPORT**

**Ranchi regional office**

**Mine file No :** BIH/LOH/BX/245/RRO

**Mine code :** 07JHK12007

- (i) Name of the Inspecting : **E025** ) **NAMAN EKKA**  
Officer and ID No.
- (ii) Designation : Junior Mining Geologist
- (iii) Accompanying mine :  
Official with  
Designation
- (iv) Date of Inspection : 17/02/2021
- (v) Prev.inspection date :

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **PAKHAR(115.13HCT[134.33])**
- (b) **Registration NO.** : **IBM/935/2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address  
State : JHARKHAND  
District : LOHARDAGA  
Village : PAKHAR  
Taluka : KISKO  
Post office : NARI NAWADIH  
Pin Code :  
FAX No. : 06526-224118  
E-mail : N.A.  
Phone : 06526-224112, 224015,22311
- (f) Police Station : KISKO
- (g) First opening date : 23/04/1996
- (h) Weekly day of rest : FRI
2. Address for : VILL.- PAKHAR,  
correspondance P.O.- KISKO - 835302, DISTT.- LOHARDAGA,  
JHARKHAND
3. (a) Lease Number : BHR0267
- (b) Lease area : 115.13
- (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 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 : Shil Prakash Jha, Full Time  
 Qualification : B.Thech (Mining)  
 Appointment/ : 01/07/2020  
 Termination date

## Geologist

Name : SRI TATHAGATA DAS, Full Time  
 Qualification : M.Sc (GEOLOGY)  
 Appointment/ : 22/05/2018 02/12/2018  
 Termination date

## Geologist

Name : CHANDAN KUMAR, Full Time  
 Qualification : MSc(Geo)  
 Appointment/ : 03/12/2018  
 Termination date

6. Date of approval of Mining : Existing rule 11 MCDR1988 13/01/1994  
 Plan/Scheme of Mining Renewal under rule 24 MCR1960 18/12/1995  
 Mining Scheme rule 12 MCDR1988 31/01/2001  
 Mining Scheme rule 12 MCDR1988 08/09/2006  
 Modif.approved Mining Scheme 26/04/2007  
 Modif.of approved Mining Plan 31/08/2010  
 Mining Scheme rule 12 MCDR1988 31/08/2010  
 Modif.approved Mining Scheme 30/06/2011  
 MP modif under MCR 1960 26/02/2016  
 MP review under 17(1) MCR 2016 22/01/2020

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

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Proposal for 120 BH	Only 81 BH Drilled	Raiyats do not allow to drill hole in their land ,Therefore,39 holes could not be drilled.
1b	Exploration over lease area for geological axis 1 or 2	No Proposal	Entire area haas been drilled in G1 Axis	There was proposal to drill 81 BH in the 50 m Grid previous year
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No Proposal	South West Pinnacle Exploration Limited. Expenditure:Rs47,88,841/- (including sampling cost)	
1d	Balance area to be explored to bring Geological axis in 1 or 2	No Proposal	Nil	Entire mineralised area has been covered upto G1 level.
1e	Balance reserve as on 01/04/20		111-3377651MT 211-822360MT	
1f	General remarks of inspecting officers on geology, exploration etc		Bauxite deposit of the area, occurs as irregular and discontinuous lenses or tabular bodies overlain by laterite capping and underlain by lithomarge. predominantly Gibbsitic (70%) and remaing 30% are boehemitic. The average thickness of various litho units are: - i. Lateritic soil: 1-5m; lateritic murum: 4.5 m, bauxite: about 6m.	Bauxite deposit of the area, occurs as irregular and discontinuous lenses or tabular bodies overlain by laterite capping and underlain by lithomarge. predominantly Gibbsitic (70%) and remaing 30% are boehemitic. The average thickness of various litho units are: - i. Lateritic soil: 1-5m; lateritic murum: 4.5 m, bauxite: about 6m.

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t. lease area	290N-435N to 00-191E, 100S-57N to 00-162W, 681N-755N to 100E-57W	290N-435N to 00-191E, 100S-57N to 00-162W, 681N-755N to 100E-57W	
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches to be made in top soil, overburden and mineral	Separate benches in top soil, overburden and mineral made.	
2c	Stripping ratio or ore to OB ratio	1:1.39	1:1.46	
2d	Quantity of topsoil generation in m3	197213 cum	21330 cum	
2e	Quantity of overburden generation in m3	490968 cum	143465 cum	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		The bench dimension was maintained as per proposal.	The bench dimension was maintained as per proposal.

### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	3 Pits proposed.	3 Pits were in Production.	
3b	Quantity of ROM mineral production proposed	298183MT	112200MT	
3c	Recovery of sailable/usable mineral from ROM production	70%	70%	
3d	Quantity of mineral reject generation	63578	NIL	
3e	Grade of mineral rejects generation and threshold value declared.	Al2O3% : 28%threshold valueAl2O3% , 30%(min)	Al2O3% : 28%threshold valueAl2O3% , 30% (min)	

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 Sub-grade Generation	All the excavated ore is dispatched after blending the subgrade mineral.
3j	Provision of drilling and blasting in mineral benches	Provision of drilling & blasting in mineral benches	Drilling & blasting done in mineral benches
3k	Provision of mining machineries in mineral benches	There is provision of mining machineries in mineral benches.	Shovel (Hydraulic) 0.9cum. bucket capacity, 25Te Dumper, Rock Drill (NonElectric) 100mm, Air Compressor 14.3cum/min are used.
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	30.64ha.	21.76Ha
3n	Ore to OB ratio for the pit/mine during the year.	1:1.39	1:1.46

3o Total area put in use under different heads at the end of year

(i) Already exploited & abandoned by opencast (O/C) mining 41.720ha  
(ii) Covered under current (O/C) Workings 21.760ha  
(iii) Reclaimed/Rehabilitated 19.960ha  
(iv) Used for waste disposal 0.00  
(v) Occupied by plant, buildings, residential, welfare buildings & roads 0.960ha  
(vi) Other Purpose 0.000  
(vii) Work done under progressive mine closure plan during the year 1.300ha

3p	Production of ROM mineral during the last five year period as applicable	2014-15 297654MT 2015-16 298185MT 2016-17 298752MT 2017-18 299656MT 2018-19 298335MT 2019-20 298183MT	2014-15 283210MT 2015-16 297265MT 2016-17 282190MT 2017-18 264508MT 2018-19 294000MT 2019-20 112200MT
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3q General remarks of inspecting officers on method of mining etc.

Production was less than as proposed in approved Modification in Approved Mining Plan and method of mining adopted was Fully Mechanised Open Cast Mining.

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Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Concurrent use for backfilling and reclamation	Concurrent use for backfilling and reclamation	
4b	Location of topsoil, OB and mineral reject dumps	Stacking of top soil OB not envisaged.	Nil	

4c	Number of dumps within lease area and outside of lease area	None	None
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	No proposal.	No dumps.
4e	Number of active and alive dumps.	None	None
4f	Number of dead dumps.	None	None
4g	Number of dumps established.	None	None
4h	Whether Retaining wall or garland drain all along dumps are there.	There is no dump therefore not applicable	There is no dump therefore not applicable
4i	Length of Retaining wall or garland drain all along dumps	There is no dump therefore not applicable	There is no dump therefore not applicable
4j	Number of settling ponds	None	None
4k	Specific comments of inspecting officer on waste dump management	Concurrent backfilling of waste envisaged	Concurrent backfilling done as proposed.

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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.	Concurrent backfilling of the mined out area after full extraction of mineral proposed.	Concurrent backfilling in the mined out area after full extraction of mineral is in practice.	
5b	Area under backfilling of mined out area	5.26ha.	1.30ha	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent use of top soil for reclamation of the mined out area proposed.	Spreading of top soil over backfilled area is in practice.	

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5d	Total area fully reclaimed and rehabilitated	NIL	NIL	Reclamation by backfilling proposed in the period under reporting. Rehabilitation not proposed. It was informed that after reclamation land is being handed over to land owners.
5e	General remarks of inspecting officers on backfilling and reclamation etc.		After complete extraction of minerals concurrent backfilling is in practice. After leveling and top soil carpetting the land is handed over to raiyats.	After complete extraction of minerals concurrent backfilling is in practice. After leveling and top soil carpetting the land is handed over to raiyats.

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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).		The Annual Report on PMCP under Rule- 23E(2) was submitted by the lessee.	
6b	Area available for rehabilitation (ha) .	5.26ha.	1.30ha	
6c	afforestation done (ha) .	1ha.	1ha.	
6d	No. of saplings planted during the year	2000nos.	2150nos.	
6e	Cumulative no .of plants	NA	18800 nos.	
6f	Any other method of rehabilitation	NA	NIL	
6g	Cost incurred on watch and care during the year	Not proposed	Rs.50000/-	



6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	5.26ha	1.30ha.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Voids to be filled by waste.	Voids filled by waste.
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	Not proposed	NIL
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	NA	NIL
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	0.80ha.	1.52ha.
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	5.26ha.	1.30ha.
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	By Afforestation.	By Afforestation.

6p	Compliance of environmental monitoring (core zone and buffer zone)	Proposal for enviromental monitoring in core zone and buffer zone is envisaged.	Monitoring of environmental parameters in core zone and buffer zone are in practice as per proposal.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		After complete extraction of mineral, simultaneous backfilling and top soil spreading is in practice.	After complete extraction of mineral, simultaneous backfilling and top soil spreading is in practice.

#### Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	There is no proposal for Grade wise Sorting of ROM before dispatch.	Lean grade material are blended with high gradeas per plants requirements	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	No such proposal.	Not done.	
7c	Different grade of mineral sorted out at mines.	No such proposal	Not done	
7d	Any beneficiation process at mines	No such proposal	No beneficiation facility is avilable at mine site.	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues		Beneficiation not done. Manual sorting of ore is in practice. The low grade ore (on visual perception) blended with high grade material, before dispatch to the Plant Situated at Muri, Jharkhand.	Beneficiation not done. Manual sorting of ore is in practice. The low grade ore (on visual perception) blended with high grade material, before dispatch to the Plant Situated at Muri, Jharkhand.

#### Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
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8a	Separate removal and utilization of topsoil (Rule 32)	There is proposal for separate removal and spreading of top soil and Morrum over backfilled area proposed.	Seperate removal of soil and spreading over backfilled area for reclamation of mined out areas is under practice.
8b	Concurrent use or storage of topsoil	Concurrent use for spreading over backfilled area	Concurrent use for spreading over backfilled area as per proposal.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No proposal for dumping of OB and waste	Concurrent backfilling of OB and waste are in practice
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Concurrent backfilling of OB and waste for restoring of mined out area to its original use	Concurrent backfilling is in practice as per approved proposal.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Phased restoration, reclamation, rehabilitation of lands proposed in PMCP	Phased restoration, reclamation, rehabilitation of land is in practice as proposed in PMCP
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Proposal for plantation of 2000 saplings envisaged	Plantation of 2150 saplings (approx) done during reporting period
8g	Survival rate	75%	75%
8h	Water sprinkling on roads to control airborne dust	Proposal for water sprinkling to control airborne dust envisaged	To control airborne dust water sprinkling on haul road side are being practiced.

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Mined out area are being restored by way of concurrent backfilling of generated OB and waste. After leveling and spreading Soil cover the land is hand over to raiyats.	Mined out area are being restored by way of concurrent backfilling of generated OB and waste. After leveling and spreading Soil cover the land is hand over to raiyats.
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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns		Monthly and Annual returns for 2019-20 submitted.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer in charge -Shri Gaurang Agarwala , Geologist in charge -Shri Chandan Kumar	Shri S.P.Jha, Mining Engineer appointed w.e.f.01/07/2020 and Geologist appointed	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Already exploited abandoned by (O/C) mining- 41.72Ha.Covered under current (O/C)Workings- 21.76Ha.Reclaimed/Rehabilitated- 19.96Ha.Used for waste disposal- nil, Occupied by buildings, residential, welfare & roads 0.960Ha.work done under progressive mine closure plan during year 1.3ha.	Details submitted in AR seems to be correct	

9d	Scrutiny of Annual return on afforestation	Aforestation: 2150 saplings	Aforestation: 2150 saplings	During current year 2020-21, out of 4000nos of saplings only 2148nos of saplings were planted. For it a violation letter even no. dated 06/11/2020 has been issued. Its compliance is awaited.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Mineral reject generation not reported	Low grade ore are being blended with high grade ore	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM opening and closing Stock: nil	Reported ROM stocks seems to be correct	
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Captive mine. Sale value is reported as NIL, Ex-Mine price & Cost of Production Rs.1019.22/te	Found to be correct.	
9h	Scrutiny of Annual return on fixed assets	In Capital Structure, Value of fixed assets is given as Nil. But in the description it has been given as Rs.629132486/-	No comments	
9k	Scrutiny of Annual return on mining machineries	Shovel(0.9cum, Hydraulic): 4 no. Dumper 25Te: 6 nos. Wheel Loader: 1 no. Water Tanker : 1 no Air compressor : 2 no Rock Drill (Non Electric, 100mm ) 2nos. Pumps (Non-Electric) 0.948L/Min :2nos.	Found correct.	

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**Details of violations observed during current inspection and compliance position of violation pointed out**

Violation observed		Show cause position	
Rule NO.	Issued on Compliance on	Rule NO.	Issued on Compliance on

Date :

(**NAMAN EKKA**)

Indian Bureau of Mines