

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

**Mining Plan Modification REPORT**

**Ranchi regional office**

**Mine file No :** BIH/GLA/BX/205/RRO

**Mine code :** 07BHR32015

- (i) Name of the Inspecting : **K005** ) **B.P. KERKETTA**  
Officer and ID No.
- (ii) Designation : Deputy Controller Mines
- (iii) Accompanying mine : Sh. Vasudev Gangopadhyay, GM (Geo), Sh. Vidya Sagar Si  
Official with  
Designation
- (iv) Date of Inspection : 17/02/2020
- (v) Prev.inspection date : 21/09/2015

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **SHRENGDAG (402.67)**
- (b) **Registration NO.** : **IBM/935/2011**
- (c) **Category** : **A Other than Fully Mech.**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **JHARKHAND**
- District : **GUMLA**
- Village : **SHRENGDAG, TUIMU, ETC**
- Taluka : **BISHUNPUR**
- Post office : **SARANGO**
- Pin Code :
- FAX No. : **06526-224118**
- E-mail :
- Phone : **06526-224016, 224112 & 224**
- (f) **Police Station** :
- (g) **First opening date** : **25/05/1976**
- (h) **Weekly day of rest** : **SUN**
2. **Address for** : **VILL-SHRENDAG**  
**correspondance** : **BISHNUPUR**  
: **DIST-GUMLA**
3. (a) **Lease Number** : **BHR0247**
- (b) **Lease area** : **155.8**
- (c) **Period of lease** :
- (d) **Date of Expiry** : **31/03/2030**
4. **Mineral worked** : **BAUXITE** **Main**

## 5. Name and Address of the

Lessee : HINDALCO INDUSTRIES Ltd.  
M/s HINDALCO INDUSTRIES  
Ltd. AT & PO - COURT ROAD,  
LOHARDAGA LOHARDAGA  
JHARKHAND  
Phone:06526-224016 & 224112  
FAX :06526-224118

Owner : S.S.KOTHARI  
M/s HINDALCO INDUSTRIES  
Ltd., CENTURY BHAWAN,Dr.  
ANNIE BESANT Rd. MUMBAI  
(SUBURBAN) MAHARASHTRA  
Phone: 022- 24227586  
FAX : 022- 24308491

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 : VIDYA SAGAR SINGH,Full Time  
Qualification : B.Sc.(MINING)  
Appointment/ : 01/07/2017 01/07/2020  
Termination date

## Mining Engineer

Name : Pradeep Kumar,Full Time  
Qualification : B.Tech. (Mining)  
Appointment/ : 01/07/2020  
Termination date

## Geologist

Name : ONKAR NATH TIWARI,Full Time  
Qualification : M. Sc. (Geology)  
Appointment/ : 22/05/2018  
Termination date

6. Date of approval of Mining Plan/Scheme of Mining : Existing rule 11 MCDR1988 26/05/1992  
Renewal under rule 24 MCR1960 08/11/2004  
Mining Scheme rule 12 MCDR1988 08/04/2011  
FMCP under 23C(1) 09/05/2013  
MP modif under MCR 1960 23/05/2016

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

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	NA	NIL	
1b	Exploration over lease area for geological axis 1 or 2	NA	NIL	
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	NA	No exploration has been carried out in the area as no proposal is mentioned in the approved document. moreover, the area is already explored in 50mx50m & 25mx25m grid interval. G1 37.67ha. G2 3.87ha	
1e	Balance reserve as on 01/04/20	NA	Reserve as on 01/04/2019 Proved Reserve 111 : 793600MT Probable Reserve 122: 62649MT	
1f	General remarks of inspecting officers on geology, exploration etc	NA	No exploration has been carried out in the area as no proposal is mentioned in the approved Modification in Approved Mining Plan dated 23/05/2016. moreover, the area is already explored in 50mx50m & 25mx25m grid interval.	Serendag Plateau is situated at an altitude of 1030msl to 1070msl. The plateau is bounded with steep escarpments of laterite overlying on Chota Nagpur Granite Gneiss. Plateau surface is covered with laterite profile of variable thickness.

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	2 Nos. (Kechki-5 Location N 852-1041,W 194-422 & Shrengdag 1 Location N 538-675,W 1143-1458)& Tuimu 1,2,3.	Shrengdag 3,on the North West side of Boundary Pillar no. BP 62 i.e. on the Western side of DGPS Boundary no.BP 103 & BP 104 in Plot No. 1169.	A violation letter on 20/09/2019 and a Show-Cause- Notice on 29/11/2019 was issued. The Lessee submitted a draft Modification in the Approved Mining Plan on 17/12/2019,which has been approved on 07/10/2020.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Top soil-1 Bench OB-2 Benches	Top soil-1 Bench OB-2 Benches	
2c	Stripping ratio or ore to OB ratio	0.50 ton/m3	0.44 ton/m3	
2d	Quantity of topsoil generation in m3	108328cum.	198268cum.	
2e	Quantity of overburden generation in m3	512690cum	1048736cum	
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc		During the Modification in approved Mining Plan period the mine development was carried out almost as per the proposal except during 2019-20,as there was a little changes in the working area due to unavailability of land. The nature of Bauxite in this Plateau varies within a short distance as well as the thickness of Overburden also varies, due to this reason there is variation in removal of waste.	

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**Exploitation:**


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Sl.No.	Item	Propasals	Actual work	Remarks
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3a	Number of pit proposed for production	2 Nos. (Kechki-5 Location N 852-1041,W 194-422 & Shrengdag 1 Location N 538-675,W 1143-1458)& Tuimu 1,2,3.	Shrengdag 3, on the North West side of Boundary Pillar no. BP 62 i.e. on the Western side of DGPS Boundary no. BP 103 & BP 104 in Plot No. 1169.	A violation letter on 20/09/2019 and a Show-Cause- Notice on 29/11/2019 was issued. The Lessee submitted a draft Modification in the Approved Mining Plan on 17/12/2019, which has been approved on 07/10/2020.
3b	Quantity of ROM mineral production proposed	258074 Metric Tonne	255430 Metric Tonnes	
3c	Recovery of sailable/usable mineral from ROM production	91%	80%	
3d	Quantity of mineral reject generation	26883 Cum	11416 Cum	
3e	Grade of mineral rejects generation and threshold value declared.	Al2O3<30% Sio2- >7%	Al2O3<30% Sio2 > 7%	
3f	Quantity of sub grade mineral generation.	Nil	Nil	
3g	Grade of sub grade mineral generation	NA	NA	
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	Proposed.	Drilling and blasting in mineral benches carried out.	

3k	Provision of mining machineries in mineral benches	Hydraulic Shovel, Wheel Loader, Dumper, Air Compressor Proposed.	Hydraulic Shovel, Wheel Loader, Dumper, Air Compressor deployed.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	S&M -2 Bench Laterite-1 Bench Bauxite-1 Bench Size of Ore & O.B. benches 6m Height x 6m width	S&M -2 Bench Laterite-1 Bench Bauxite-1 Bench Size of Ore . benches 3m Height(Av) x 6m width OB . benches 4m Height (Av)x 6m width
3m	Total area covered under excavation/pits	98.04ha	7.17Ha
3n	Ore to OB ratio for the pit/mine during the year.	0.50 ton/m <sup>3</sup>	0.44 ton/m <sup>3</sup>
3o	Total area put in use under different heads at the end of year	Area under Mining 98.04ha. Waste dump Nil, Infrastructure( Work shop, administrative Building etc.)0.62ha, Roads 1.65ha	Area Already exploited & abandoned by opencast(O/C) mining 242.55ha, Covered under current (O/C) workings 7.17ha., Reclaimed/rehabilitated area 240.80ha., Occupied by Buildings, residential, welfare buildings & roads 14.65ha., work done under progressive mine closure plan during the year 3.65ha.
3p	Production of ROM mineral during the last five year period as applicable	2013-14 253610MT 2014-15 255035MT 2015-16 81890MT 2016-17 259729MT 2017-18 257604MT 2018-19 258074MT	2013-14 253610MT 2014-15 255035MT 2015-16 259113MT 2016-17 258487MT 2017-18 236504MT 2018-19 255430MT

3q	General remarks of inspecting officers on method of mining etc.	During the Modification in approved Mining Plan period the mine development was carried out almost as per the proposal except during 2019-20, as there was a little changes in the working area due to unavailability of land. The nature of Bauxite in this Plateau varies within a short distance as well as the thickness of Overburden also varies, due to this reason there is variation in removal of waste. But the production of Bauxite was as per target.
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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)	Simultaneously Backfilling proposed.	Simultaneously Backfilling is done.	
4b	Location of topsoil, OB and mineral reject dumps	NA	Simultaneously Backfilling is done.	There is no dump of top soil
4c	Number of dumps within lease area and outside of lease area	Not propsed.	Nil	Simultaneously Backfilling is done.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	NA	NA	Simultaneously Backfilling is done.
4e	Number of active and alive dumps.	NA	NA	Simultaneously Backfilling is done.
4f	Number of dead dumps.	NA	NA	Simultaneously Backfilling is done.
4g	Number of dumps established.	NA	NA	Simultaneously Backfilling is done.

4h	Whether Retaining wall or garland drain all along dumps are there.	Not proposed.	Nil
4i	Length of Retaining wall or garland drain all along dumps	Not proposed.	Nil
4j	Number of settling ponds	Not proposed.	Nil
4k	Specific comments of inspecting officer on waste dump management		There is no proposal for external dumping. Generated OB and top soil are backfilled in mined out area thus mined out area are being reclaimed simultaneously.

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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.	Full extraction	Full extraction	
5b	Area under backfilling of mined out area	7.08 Ha	3.56 ha	
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent use	Concurrent use	Top soil simultaneously spread over the matured backfilled area
5d	Total area fully reclaimed and rehabilitated	7.08 Ha	3.56 Ha	Hydro reclaimed area- 2.5 ha
5e	General remarks of inspecting officers on backfilling and reclamation etc.			After backfilling and leveling reclaimed area handed over to Raiyats for cultivation purpose as per Raiyat's demand.



Sl.No.	Item	Propasals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	PMCP Yearly Report to be submitted.	Yes, Yearly Report submitted.	
6b	Area available for rehabilitation (ha) .	Not proposed.	Nil	
6c	afforestation done (ha).	Not proposed.	Nil	
6d	No. of saplings planted during the year	Not Proposed.	nil	
6e	Cumulative no .of plants	Not Proposed.	nil	
6f	Any other method of rehabilitation	Not Proposed.	nil	
6g	Cost incurred on watch and care during the year	Not Proposed.	nil	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	1.29ha.	1.29ha	
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	1525nos.	1600nos.	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not proposed.	2.5 ha	Hydro reclaimed

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	NA	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	NA	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	NA	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly( Environmental monitoring Cost Rs293000/-)	Quarterly( Environmental monitoring Cost Rs293000/-)
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.		PMCP compliance and progressive closure operations are carried out as per approved Modification of Mining Plan as far as possible.

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Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	ROM dispatch	ROM dispatch after manual sorting	
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	No such proposal	Grade wise sorting not done	
7c	Different grade of mineral sorted out at mines.	No such proposal	Grade wise sorting not done	

7d	Any beneficiation process at mines	No such proposal	Not done	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues			For the purpose of mineral conservation low grade material are blended with high grade material depending upon plant's requirements.

## Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Seperate removal and utilisation of top soil for carpetting over backfilled area	Seperate removal and utilisation of top soil for carpetting over backfilled area is in practice	
8b	Concurrent use or storage of topsoil	Concurrent use.	Concurrent use.	Concurrent use.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No such proposal for external dumping	Waste was utilised for backfilling over mined out area.	No Dump
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	concurrent backfilling of generated OB	Concurrent backfilling as per proposal	We use in backfilling
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Phased Restoration, reclamation and rehabilitation	Phased Restoration and reclamation of mined out area is in practice	We do Simultaneously backfilling and reclamation

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Phased Restoration and reclamation of mined out area is in practice	1600nos.	
8g	Survival rate	70%	70%	
8h	Water sprinkling on roads to control airborne dust	On daily basis	On daily basis	
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area			The aesthetic beauty in and around mines area is good.

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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	AR for the year 2018-19 submitted on 11/07/2019.	Details are duly filled up	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer Vidya Sagar Singh, Geologist Onkar nath Tiwari	Mining Engineer and Geologist are appointed	

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area already exploited by O/C mining: 242.55ha. Area under current O/C workings: 7.170 ha Reclaimed area: 240.8 ha Occupied by buildings, residential, welfare buildings & roads:14.65ha. Dumps: NIL ha Work done under progressive mine closure plan during the year 3.65ha.	Details given in AR appears to be correct	
9d	Scrutiny of Annual return on afforestation	1600 saplings planted inside the lease area.	Afforestation done.	Complied on Timely
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Reject generation not reported	There is no reject generation.	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM Stock: NIL	ROM Stock: NIL	
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex mine Price is reported at Rs. 1037/tonnes	Exmine price appears to be correct.	
9h	Scrutiny of Annual return on fixed assets	Total Fixed Assets: Rs. 598030798/-	Appears to be correct.	

9k	Scrutiny of Annual return on mining machineries	Hydraulic Shovel (1.85cum) 2nos.,Hydrauli c Shovel (0.80cum) 1no. Wheel Loader (2cum) 2nos. Dumper (25te cap) 5nos.,Dumper (7.5te cap) 4nos.,Air Compressor (400cum/min) 4nos.	Hydraulic Shovel (1.85cum) 2nos.,Hydraulic Shovel (0.80cum) 1no. Wheel Loader (2cum) 2nos. Dumper (25te cap) 5nos.,Dumper (7.5te cap) 4nos.,Air Compressor (400cum/min) 4nos.
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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

Date :

(B.P. KERKETTA)

Indian Bureau of Mines