

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

**Review and updation of Mining Plan REPORT**

**Ranchi regional office**

**Mine file No :** JHK/GML/BX/249/RRO

**Mine code :** 07JHK12010

- (i) Name of the Inspecting : **G004** ) **OM PRAKASH GOPAL**  
Officer and ID No.
- (ii) Designation : Regional Mining Geologist
- (iii) Accompanying mine : Shri Baudev Gangopadhyay GM, Shri Sambhu Sharan Vasis  
Official with  
Designation
- (iv) Date of Inspection : 03/03/2020
- (v) Prev.inspection date :

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **SERANDAG (140.66 HCT.)**
- (b) **Registration NO.** : **IBM/935/2011**
- (c) **Category** : **A Other than Fully Mech.**
- (d) **Type of Working** : **Opencast**
- (e) **Postal address**
- State : **JHARKHAND**
- District : **LOHARDAGA**
- Village : **SERANDAG**
- Taluka : **LOHARDAGA**
- Post office : **GHAGHRA**
- Pin Code :
- FAX No. : **06526-224112/224015/223113**
- E-mail : **bijesh.jha@adityabirla.com**
- Phone : **06526-224118**
- (f) **Police Station** : **GHAGHRA**
- (g) **First opening date** : **25/04/1996**
- (h) **Weekly day of rest** : **SUN**
2. **Address for correspondance** : **MINES DIVISION, HINDALCO INDUSTRIES LTD.,  
HINDALCO COMPLEX, COURT ROAD,  
AT/P.O- LOHARDAGA-835302, JHARKHAND**
3. (a) **Lease Number** : **BHR0250**
- (b) **Lease area** : **140.07**
- (c) **Period of lease** :
- (d) **Date of Expiry** : **31/03/2030**
4. **Mineral worked** : **BAUXITE** **Main**

## 5. Name and Address of the

Lessee : M/S HINDALCO INDUSRIES LTD.  
 COURT ROAD, LOHARDAGA,  
 LOHARDAGA JHARKHAND  
 Phone:06526 - 224012 & 224118  
 FAX :06526-224112, 224016 & 0651- 2330782

Owner : A.K. AGARWALA  
 HINDALCO INDUSTRIES LIMITED  
 AT-RENUKOOT, P.O.-RENUKOOT  
 DIST. SNOEBHADRA, U.P  
 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 : SRI AMAR BHARTI,Full Time  
 Qualification : B.E(MIN)  
 Appointment/ : 04/05/2016  
 Termination date

## Geologist

Name : SRI RAMESH KUMAR,Full Time  
 Qualification : M.SC(GEOLOGY)  
 Appointment/ : 03/01/2014  
 Termination date

6. Date of approval of Mining	:	Existing rule 11 MCDR1988	18/01/1994
Plan/Scheme of Mining		Mining Scheme rule 12 MCDR1988	31/01/2001
		Mining Scheme rule 12 MCDR1988	24/10/2005
		Renewal under rule 24 MCR1960	07/06/2012
		MP modif under MCR 1960	31/05/2016

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

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No exploration Proposal for previous year	Exploration not done in previous year	
1b	Exploration over lease area for geological axis 1 or 2	No exploration proposal in 2018-19	There was no exploration in 2018-19. However, 43 boreholes were drilled in 2019-20.	-
1c	Exploration Agencies and Expenditure in lakh rupees during the year	NIL	NIL	-
1d	Balance area to be explored to bring Geological axis in 1 or 2	No such proposal	43 boreholes were drilled in 2019-20.	-
1e	Balance reserve as on 01/04/20	Reserves as on 1/4/2015 : 797305 tonnes.	-	-
1f	General remarks of inspecting officers on geology, exploration etc	-	-	The Serendag plateau has rolling topography having altitude varying from 1030m to 1070m above msl. The plateau is bounded with steep escarpments of laterite overlying on Chotanagpur granite gneiss. The plateau surface is covered by laterite profile of variable thickness. The bauxites of Serendag plateau are largely of ferruginous variety.

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	Development of quarry 4 and 5.	Pit no. 4 and 5 were developed as proposed .	-
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	It was proposed to develop sepeate benches in top soil OB and mineral	Development of seperate Benches for top soil OB and mineral is in practice.	-
2c	Stripping ratio or ore to OB ratio	1:2.28	1:3.49	-
2d	Quantity of topsoil generation in m3	148744 m3	50321 m3	-
2e	Quantity of overburden generation in m3	193579 m3	255468 m3	-
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	-	-	The OB concists of soil, murum and laterite. Average thickness of OB is about 5 to 6 m and of ore is about 1.5 to 2 m. seperate benches are developed in OB and ore.

### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Two	Two	-
3b	Quantity of ROM mineral production proposed	99815 Tonnes	73190 Tonnes	-
3c	Recovery of sailable/usable mineral from ROM production	About 60%	About 60%	-
3d	Quantity of mineral reject generation	NIL	NIL	-
3e	Grade of mineral rejects generation and threshold value declared.	Generation of mineral reject not envisaged	Generation of mineral reject not reported	-

3f	Quantity of sub grade mineral generation.	Generation of subgrade mineral not envisaged	Generation of subgrade mineral not reported.	-
3g	Grade of sub grade mineral generation	Not mentioned	-	-
3h	Manual / Mechanised method adopted for segregating from ROM	Manual sorting	Manual sorting	-
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No such proposal	Not done	-
3j	Provision of drilling and blasting in mineral benches	Proposal of Drilling and blasting in mineral benches envisaged.	Drilling and blasting in mineral benches done as per proposal	-
3k	Provision of mining machineries in mineral benches	Proposal for deployment of mining machineries in mineral benches envisaged.	Mine was not under operation and mining machineries were not available at the mine site at the time of inspection. Mine management informed that mining operations are being done as per approved proposals.	-
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	24.5 ha	-	-
3n	Ore to OB ratio for the pit/mine during the year.	0.52 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	Opencast workings: 24.5 ha, Storage of top soil 0.14 ha Roads 2.25 ha	Opencast workings: 13.56 ha, Storage of top soil 0.14 ha Roads 2.25 ha	-

3p	Production of ROM mineral during the last five year period as applicable	2014-15 99754 MT 2015-16 99671MT 2016-17 99815 MT 2017-18 98243 MT 2018-19 99815 MT	2014-15 49445 MT 2015-16 43675 MT 2016-17 45589 MT 2017-18 44624 MT 2018-19 73190 MT	-
3q	General remarks of inspecting officers on method of mining etc.	-	-	Mine was closed at the time of inspection.

## Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	There is no proposal for extenal dumping. Concurrent backfilling of exhausted pit is envisaged.	Concurrent backfilling is in practice.	-
4b	Location of topsoil, OB and mineral reject dumps	There is no proposal for extenal dumping.	External duming not done	-
4c	Number of dumps within lease area and outside of lease area	No proposal for external dumping	None	-
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	No proposal for external dumping	-	-
4e	Number of active and alive dumps.	None	None	-
4f	Number of dead dumps.	one	one	-
4g	Number of dumps established.	None	None	-
4h	Whether Retaining wall or garland drain all along dumps are there.	No such proposal	-	-

4i	Length of Retaining wall or garland drain all along dumps	No such proposal	-	-
4j	Number of settling ponds	None	-	-
4k	Specific comments of inspecting officer on waste dump management	-	-	There is no proposal of external dumping. Generated OB/ waste are utilised for backfilling in mined out area.

#### 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 of mineral before starting backfilling.	Backfilling are being done after Full extraction of mineral	-
5b	Area under backfilling of mined out area	1.86 Ha	3.54 Ha	-
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Concurrent use of top soil for spreading over backfilled area	Concurrent use of top soil for spreading over backfilled area	-
5d	Total area fully reclaimed and rehabilitated	1.14 ha	After backfilling and leveling reclaimed area was handed over to their owner for cultivation as per Rayat's demand.	-
5e	General remarks of inspecting officers on backfilling and reclamation etc.	-	-	-

#### Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
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6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	-	Yes	-
6b	Area available for rehabilitation (ha) .	1.14 ha	3.56 ha (backfilling and leveling)	-
6c	afforestation done (ha).	3525 saplings	Plantation not done as per approved proposal. It was informed by mines management that after backfilling and leveling the land was handed over to Rayats as per their demand.	-
6d	No. of saplings planted during the year	3525 saplings	1000saplings	-
6e	Cumulative no .of plants	NA	NA	-
6f	Any other method of rehabilitation	Not mentioned	-	-
6g	Cost incurred on watch and care during the year	1111225/-	NA	-
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	1.54 ha	3.56 ha	-
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Generation of tailings not envisaged	-	-
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	1.14 ha	After bacfilling and leveling, reclaimed area handed over to rayats for the purpose ofagriculture as per Rayat's demand.	-



6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No such proposal	-	-
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No such proposal	-	-
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No such proposal	-	-
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No such proposal	-	-
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No such proposal	-	-
6p	Compliance of environmental monitoring (core zone and buffer zone)	-	The mine was not under operation at the time of inspection. Accompanying officials informed that Environmental monitoring are being done regularly.	-
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	-	-	-

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Mineral Conservation:

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Sl.No.	Item	Propasals	Actual work	Remarks
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7a	ROM Mineral dispatch or grade-wise sorting within lease area	ROM dispatch	Dispatch of ROM after mannual 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	None	-
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	-	-	For the purpose of mineral conservation, blending of low grade with high grade material is in practice.

## Environment :

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Spreading and carpetting of soil over backfilled area.	Mine was not under operation at the time of inspection. However, spreading and carpetting of soil over backfilled area can be seen in the area already mined out and backfilled.	-
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 for external dumping.	Waste/OB utilised for concurrent backfilling of mined out area.	-
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No such proposal	-	-

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Proposal of Phased restoration envisaged	Phased restoration and rehabilitation of mined out area is in practice	-
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Proposal for plantation of 3525 saplings envisaged	Mine officials informed that Plantation not done as per propposal because Rayats insisted to hand over backfilled area after leveling for cultivation.	-
8g	Survival rate	Not mentioned	-	-
8h	Water sprinkling on roads to control airborne dust	Sprinkling on roads to control airborn dust envisaged.	Mine was not under opeartion at the time of inspection and no such macheneraires for sprinkling of water seen at mine site duing inspection.	-
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	-	MIne was closed at the time of inspection.	-

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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 to be submitted oonline within time frame.	Dually filled up Annual Return for the period 2018-19 was submitted oonline on 28/6/2019.	-
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mining Engineer : Mangal Hansda and Geologist : Shreya Jariwala	Mining Enginear and Geologist are appointed	-

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area already exploited and abandoned: 13.56 ha Area under working: 6.06 ha Reclaimed/Rehabilitated area : 7.5 ha	Details furnished in Annual Returns about land use pattern appears to be true.	-
9d	Scrutiny of Annual return on afforestation	1000 saplings	Details on plantation appears to be correct.	-
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Generation of mineral reject is reported as NIL	There is no reject generation.	-
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM Stock: NIL	Details on ROM stocks appears to be correct.	.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	As per submitted AR the ex-mine price is reported as Rs.1070/- per tonnes	It is captive mine and entire despatch is to captive plant at MURie.	-
9h	Scrutiny of Annual return on fixed assets	-	-	-
9k	Scrutiny of Annual return on mining machineries	Hydraulic shovell 2, Air Compressor 1 and dumper 5	Mine was closed and there were no machineries at mine site at the time of inspection.	-

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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 :**

(OM PRAKASH GOPAL)

Indian Bureau of Mines