

**REPORT ON CHECK INSPECTION OF PAKHAR BAUXITE MINE (115.13) OF LESSEE
M/s HINDALCO IND. LTD. IN VILLAG- PAKHAR, DISTRICT-LOHARDAGA**

Name and designation of inspecting officer : Shri Anupam Nandi (RCOM Ranchi)

Date of Inspection : 05.03.2020

1. General information of the mine:

- i) Name of mine : Pakhar Bauxite Mines 115.13 Ha
- ii) Owner : M/s. HINDALCO INDUSTRIES LIMITED
- iii) Nominated Owner : Shri A.K Agrawal
- iv) Mining Engineer : Shri Gaurang Agrawal
- v) Agent : Shri B. K. Jha
- vi) Mine Manager : Shri Ananda Sahu
- vii) Lease Area : 115.13Ha
- viii) Location : Village – Pakhar ,Post – Tisiya ,Thana – Kisko
Dist. – Lohardaga , Jharkhand , 835302
- ix) Lease Period : Upto 2030
- x) Date of Expiry : 31-03-2030
- xi) Date of approval of Mining Plan : 22-01-2020
- xii) Date of approval of scheme :
- xiii) Period of Mining Plan : valid up to 31-03-2025
Scheme of Mining
- xiv) Production (Year 2018-19) : 294000 tonne

2. Brief description of the mine:

The Pakhar Plateau is V shaped hillock. The plateau slopes gradually towards north. Steep gradients with cliff faces are characteristics of the south, east and west of the hillocks. The link of western plateau is known as Banglapat. The Bauxite lease area of the company mostly covers in Banglapat. The highest point is at 1068 m and lowest point towards the valley portion in south is about 1057 m above M.S.L. The top is table land (Plateau), locally called 'Pat' while the valleys are 'V' shaped with moderate gradient.

Occasional springs at the slopes provide water for human consumption. Main water sources are on the middle and foot of the hills. Cultivation depends mainly at the top of the plateau in monsoon. The hill slopes are under Pakhar Reserve Forest with Forest density of 0.2. Thick growth of Sal and other trees are common in the area.

General Geology :

The bauxites & laterite are exposed in the quarry face. In the area as seen in the NE and NW part of the area both in the escarpment sections. A general section is characterized as follows:

Lateritic Soil & Morrum	:	6 m
Laterite	:	3.5 m
Bauxite and Aluminous Laterite	:	About 6 m thick

Litho merge could be seen in a stream cutting in favour of clays substance (white to purple colored). Laterites are red, hard compact, massive masses with vesicles, scoriaceous, ferruginous laterite (morrum). Segregation of Bauxite has been found mostly just beneath the pisolitic laterite (morrum). The top surface, a perfect plateau is in general covered with lateritic soil.

It is evident from the Plate No. 4 that the entire laterite overlain by soil has been mapped. The laterite mass are sometimes Aluminous (about 38% Al_2O_3) whereas in the southern part quarry no K7, laterite, bauxite, and above all lateritic soil are exposed. Lithological section as measured in different old quarries in the area has been represented in Plate No. 4.

Two types of bauxite occurrences are observed in the area:

- i) Segregation in Laterites mainly metal grade massive bauxite in the entire area.
- (i) Boundary low-grade aluminous laterite occurring as valley deposit.

The Bauxite deposits in the area are not so extensive and continuous and limited in the area mainly. In the eastern side average 600m X 400m is mineralized zone and in the western side

450m X 400m mineralized zone and in the northern part 400m X 250m mineralize zone is there hence few non-mineralize patch included in this part.

Mineralogical, the bauxite is pre-dominantly Gibbsitic and therefore, is found suitable for low temperature and low pressure leaching by American Bayer's Process, which has been send to Renukoot for extraction of Alumina. The material at Pakhar Mine is quite suitable for supply to HINDALCO's plants at Renukoot. (Average feed grade $Al_2O_3=+ 38.00\%$, $SiO_2= 3.30\%$).

b. Description on deployment of mining machinery may be given in the following format

Contractual								
Sl No	Machineries deployed	Capacity	Number of Units	In use	Idle	Percentage Of utilization	Brief description	Remarks
1	Excavator	0.9 cub mtr	2	Excavate the OB & ore		81%	Make - Tata Hitachi Model - EX200LC	
2	Excavator	0.9 cub mtr	1	Excavate the OB & ore		84%	Make - Tata Hitachi Model - EX200iLC	
4	Pay Loader	2.3 cub mtr	1	For Leveling		70%	Make - Tata Model - TWL 3036	
5	Hyva	25 ton	2	Dumb the material		80%	Make - A Leyland Model - 2518T	
6	Hyva	25 ton	4	Dumb the material		76%	Make - Tata Model - TATA 2518C	
7	Water Sprinkler	8 KL	1	For dust suppression		85%	Make - Tata Model - Hyva 1613	
8	Drill Compressor	500 cfm	1	For drilling		77%	Make - Atlas Copco Model - XAH 236	
9	Drill Compressor	500 cfm	1	For drilling		75%	Make - Atlas Copco Model - XAH 210	
10	DTH Wagon Drill	100 mm Dia	2	For drilling		75%	Make - Atlas Copco Model - AirROC D35	
11	Water Pump	0.948 ltr	2	To Pump out water		83%	Make - Kirloskar Model - DM10	

3. Implementation of Mining Plan or scheme of Mining:

Sr. No.	Proposal in the approved Mining Plan or Scheme of mining (Period from 2015-16 to 2019-20)	Observations regarding implementation of proposals given in approved Mining Plan or Scheme of mining.	Remarks
1.	CONSERVATION OF MINERALS		
a)	Exploration:	155 Boreholes- 3255 meters (2018-19)	No specific proposal for 2018-19
b)	Utilization of subgrade mineral:	Simultaneously Blending	
c)	Any other proposal for monitoring:		
2.	SCIENTIFIC MINING		
a)	Mine Development and method of mining	Fully Mechanized mining with the combination of Dumper & Excavator.	
b)	Handling of Waste/subgrade material:	Waste is Used for back filling.	
c)	Area reclamation & restoration:	Reclaimed(2.43Ha) and restored by plantation.(1.76Ha) (2018-19)	
d)	Any other proposal for monitoring:		
3.	PROTECTION OF ENVIRONMENT		
a)	Afforestation:	2800 saplings (2018-19)	
b)	Quality of Air:	Within permissible limit	

c)	Quality of Water:	Within permissible limit	
d)	Noise Level:	Within permissible limit	
e)	Vibration:	Within permissible limit	
f)	Any other proposal for monitoring:	NA	

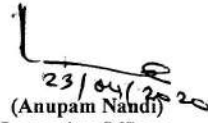
4. History of Violations after approval of Mining Plan or Scheme of Mining:

Sl. No.	Date of Inspection	Name of Inspecting Officer	Violations of MCDR,88 observed and Pointed out	Rectification of Violations	Remarks
1.	20-11-2019	Shri O P Gopal	Rule-11(1), Rule-28	29-01-2020	Complied

5. Socio-Economic Development Plan: Total 29.389 __ lakh spent for C S R activities during 2018-19.

Sl. No.	Proposed Action Plan towards Socio-Economic Development	Expenditure Proposed (In Rs. Lakh)	Expenditure Incurred (In Rs. Lakh)	Remarks
1.	General Development in the area			
	i) Housing	0	0	745 beneficiaries
	ii) Water Supply	4.5	4.56	231 beneficiaries
	iii) Sanitation	2.45	2.96	521 beneficiaries
	iv) Health, Safety and Medical Facilities	3.67	4.44	
2.	Education and Training	2.45	1.98	140 beneficiaries
3.	Employment to local inhabitants		92 local man power	
4.	Public Transportation and communication	3.65	4.5	150 beneficiaries

5.	Recreation and other sports activities	2.5	2.75	175 beneficiaries
6.	Expenditure for environment management	0.845	0.959	
7.	Skill Development and Vocational training programmes for local communities	3.67	4.44	40 beneficiaries
8.	Livelihood & Socio-Economic standard improvement support	2.5	2.8	85 beneficiaries
	Total:	26.235	29.389	CSR activities.


 23/04/2020
 (Anupam Nandi)
 Regional Controller of Mines & Inspecting Officer