

**REPORT ON CHECK INSPECTION OF PAKHAR BAUXITE MINE (109.507) OF LESSEE
M/s M&M LTD. IN VILLAG- PAKHAR, DISTRICT-LOHARDAGA**

Name and designation of inspecting officer : Shri Anupam Nandi (Regional controller of Mines,
Ranchi)

Date of Inspection : 07.03.2020

1. General information of the mine:

- i) Name of mine : Pakhar Bauxite Mines 109.507Ha
- ii) Owner : M/S Minerals & Minerals Limited
- iii) Nominated Owner : Mr. Bijesh Kumar Jha
- iv) Mining Engineer : Mr. Dillu Singh
- v) Agent : Mr. Manoj Kumar Nayak
- vi) Mine Manager : Mr. Kiran Shankar Singh
- vii) Lease Area : 109.507Ha
- viii) Location : Village – Pakhar, Post- Tisiya, Thana – Kisko,
Lohardaga, 835302
- ix) Lease Period : Upto 2058
- x) Date of Expiry : 25-07-2058
- xi) Date of approval of Mining Plan: Provisionally Approved on 03-04-2020
- xii) Date of approval of scheme :
- xiii) Period of Mining Plan : NA
Scheme of Mining
- xiv) Production (Year 2018-19) : 247130

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 $Al_2O_3=+ 38.00\%$, $SiO_2= 3.30\%$).

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

Contractual

Sl No	Machineries deployed	Capacity	Number of Units	In use	Idle	Percentage Of utilization	Brief description	Remarks
1	Excavator	1.9 cub mtr	1	Excavate the OB & ore		85%	Make - Volvo Model - EC360BLC	
2	Excavator	0.9 cub mtr	1	Excavate the OB & ore		83%	Make - Tata Hitachi Model - Hitachi 200	
3	Pay Loader	2.3 cub mtr	1	For leveling		70%	Make - Hindustan Machines Model - HM2021	
4	Hyva	25 ton	6	Dumb the material		80%	Make - Tata Model - 2518C	
5	Water Sprinkler	8KL	1	For dust suppression		85%	Tata	
6	Drill Compressor	450 cfm	1	For drilling		70%	IR 450	
7	Drill Compressor	330 cfm	1	For drilling		70%	IR 450B	
8	DTH Wagon Drill	100mm Dia	2	For drilling		70%	Make - Atlas Copco Model - AirROC D35	
9	Water Pump	0.948 ltr	2	To Pump out water		82%	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:	18 Boreholes- 373 meters (2018-19)	No 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 (2.82Ha) and restored by plantation (1.92 Ha) (2018-19)	
d)	Any other proposal for monitoring:		
3.	PROTECTION OF ENVIRONMENT		
a)	Afforestation:	2725 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	

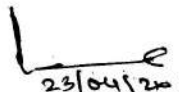
4. History of Violations after approval of Mining Plan or Scheme of Mining:

Sl. No.	Date of Inspection	Name of Inspecting Officer	Violations of MCDR,88 observed and Pointed out	Rectification of Violations	Remarks
1.	02-09-2019	Mr. B P Kerketta	Rule 11(1), Rule 35(2) Rule 55(1)(3)(iii)	Rule 35(2) & Rule 55(1)(3)(iii) Complied	

5. Socio-Economic Development Plan: Total 3.889 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	
	ii) Water Supply	4	4.5	761 beneficiaries

	iii) Sanitation	2.75	2.85	221 beneficiaries
	iv) Health, Safety and Medical Facilities	4	4.53	491 beneficiaries
2.	Education and Training	2.75	2.86	135 beneficiaries
3.	Employment to local inhabitants		92 local manpower	
4.	Public Transportation and communication	4	4.35	112 beneficiaries
5.	Recreation and other sports activities	2.75	2.8	170 beneficiaries
6.	Livelihood & Socio economic standard improvement support	2.75	2.9	84 beneficiaries
7.	Expenditure for environment management	0.845	0.959	
8.	Skill Development and Vocational training programmes for local communities	4	4.35	43 beneficiaries
	Total:	27.845	30.099	CSR activities.


23/04/2020

(Anupam Nandi)

Regional Controller of Mines & Inspecting Officer