

## MCDR INSPECTION REPORT

General

Date of Inspection: 27/07/2023

Sl. No.	Particulars	Details
1.	Name of the Mines	Antipani – Chirodih Bauxite Mine
2	Total Lease Area (Ha) with breakup of non-forest and forest land	Total Lease Area- 130.01 Ha. Raiyati land; 123.59 Ha. GM land; 6.42 Forest Land; Nil
3.	Mine code	07JHK331001
4	IBM Registration Number under rule 45 of MCDR, 1988	IBM/961/2011
5	Name of the lessee, Address, Phone, email and fax number	M/s Minerals & Minerals Limited Court Road, P.O.- Lohardaga, State- Jharkhand, 835302 Phone No.- 06526-224015, 224112, 223113 Fax No.- 06526224218 Email id; bijesh.jha@adityabirla.com
6	Village	Antipani Chirodih & Bahagara
7	Taluka/Mandal	Bishunpur
8	District	Gumla
9	Pin code	835208
10	State	Jharkhand
11	Post Office	Jobhipat
12	Nearest Police Station	Gurdari
13	Nearest Railway station	Lohardaga
14	Date of Grant of Mining Lease	10 <sup>th</sup> January 2017
15	Date of Execution	11 <sup>th</sup> January 2017
16	Date of Opening of Mine	10 <sup>th</sup> June 2022
17	Date of first renewal, if applicable and its period & expiry	NA
18	Date of second renewal, if applicable and its period & expiry	NA

19	Date of submission of renewal application if Mining operations are continuing under deemed extension	NA
20	Name of the Nominated Owner with Address, phone, email, fax number and date of appointment	<p>Bijesh Kumar Jha</p> <p>M/s Minerals &amp; Minerals Limited</p> <p>Court Road, P.O.- Lohardaga, State- Jharkhand, 835302</p> <p>Phone No.- 9668712646, 06526-224015, 224112, 223113</p> <p>Fax No.- 06526224218</p> <p>Email id; - <a href="mailto:bijesh.jha@adityabirla.com">bijesh.jha@adityabirla.com</a></p> <p>Date of appointment;- 30/07/2018</p>
21	Name of the Mine Agent with Address, phone email, fax number and date appointment in mines.	<p>Prateek Kumar</p> <p>M/s Minerals &amp; Minerals Limited</p> <p>Court Road, P.O.- Lohardaga, State- Jharkhand, 835302</p> <p>Phone No.- 7738368627</p> <p>Fax No.- 06526224218</p> <p>Email id; <a href="mailto:prateek.kumar@adityabirla.com">prateek.kumar@adityabirla.com</a></p> <p>Date of appointment;- 01/12/2022</p>
22	Name of the Mines Manager with Address, Phone, email, fax number and date of appointment	<p>Sanjay Kumar (Mine Manager)</p> <p>M/s Minerals &amp; Minerals Limited</p> <p>Court Road, P.O.- Lohardaga, State- Jharkhand, 835302</p> <p>Phone No.- 9668712646</p> <p>Fax No.- 06526224218</p> <p>Email id; <a href="mailto:sanjay.d.k@adityabirla.com">sanjay.d.k@adityabirla.com</a></p> <p>Date of appointment;- 18/06/2022</p>
23	Name of the mining engineer, qualification and total experience with Address, phone, email, fax number and date of appointment in Mines.	<p>Sanjay Kumar (Mining Engineer), BE in mining</p> <p>M/s Minerals &amp; Minerals Limited</p> <p>Court Road, P.O.- Lohardaga, State- Jharkhand, 835302</p> <p>Phone No.- 9668712646</p>

		Fax No.- 06526224218 Email id; <a href="mailto:sanjay.d.k@adityabirla.com">sanjay.d.k@adityabirla.com</a> Date of appointment;- 18/06/2022
24	Whether Geologist and Mining Engineer appointed in Mines satisfy the rule 42 & carrying out their duties as per rule 43 & 44.	Anupam Kumar (Geologist) Date of appointment;- 18/06/2022  Sanjay Kumar (Mining Engineer), Date of appointment;- 18/06/2022
25	Date of Approval of Mining Plan/Modified Mining Plan with five-year period and specific condition in approval letter, if any.	Modification in approved Mining Plan - 26/05/2017 (2016-17 to 2020-21)
26	Date of Approval of Scheme of Mining/Modified Scheme of Mining with five-year period and specific condition in approval letter, if any.	Review of Mining Plan - 03/08/2021 (2021-22 to 2025-26)
27	Mineral(s) granted in lease and proved for mining	Bauxite
28	Method of Mining (Opencast, Underground)	Opencast
29	Category (Fully Mechanized, Others or Manual)	A – Fully Mechanized
30	Captive/Non-Captive	Non-Captive

### Exploration

Sl.No.	Item	Proposals(2022-23)	Actual work(2022-23)	Remarks
1a	Backlog of previous year	88	Nil	Date of Opening of Mine was 10 <sup>th</sup> June 2022. Working has not been started during 2021-22.
1b	Exploration over lease area for Geological axis 1 or 2.	Geological axis 1	262 numbers of BH, 4608 m.	Total 262 nos. of Bore Holes have been drilled at 50X50m grid interval during 2022-23.
1c	Exploration Agency & Expenditure in lakh Rupee during the year	NA	Gems Project Pvt. Limited, Ranchi, Exploration cost Rs.- 13375502/-	Nil.
1d	Balance area to be explored to bring Geological axis in 1 or	NA	Nil	G-1- 117.130000, Area proved

	2			as Non-mineralized-10.08, Area to be explored - 2.80, Total= 130.01
1e	Balance reserves as on 01.04.2023...	810821 Ton	1156072 Ton	Due to less production during 2022-23 and no work during 2021-22.
1f	General remarks of inspecting officer on geology, exploration etc.	The proposal of working has been approved for the year 2021-22 to 2025-26.	Working has not been started during 2021-22. Date of Opening of Mine was 10 <sup>th</sup> June 2022.	Working has not been started during the proposal year 2021-22 and less production has been obtained during 2022-23.

### Development

Sl.No.	Item	Proposals (2022-23)	Actual work (2022-23)	Remarks
2a	Location of development w.r.t lease area	Quarry no – 2	Quarry no – 2	Quarry excavated in the proposed area.
2b	Separate benches in topsoil, overburden and mineral (Rule 15)	Soil;1 Laterite; 1 Bauxite; 1	Soil;1 Laterite; 1 Bauxite; 1	Nil
2c	Stripping ratio or ore to OB ratio	1:2.77	1:6.38	Production in high OB area based on purchased land.
2d	Quantity of topsoil generation in m <sup>3</sup>	127238 cum	71192 cum	Production in high OB area based on purchased land.
2e	Quantity of overburden generation in m <sup>3</sup>	511095 cum	110506 cum	Nil

2f	General remarks of inspecting officer on development etc.	Working has been proposed in quarry no. 2 with advancement from North to South direction.	Quarry no. 2 has not been developed as per the proposal, less working has been done during the year,	Production in high OB area based on purchased land.
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### **Exploitation**

Sl.No	Item	Proposals (2022-23)	Actual work (2022-23)	Remarks
3a	Number of pits proposal for production	One, Quarry no. 2	One, Quarry no. 2	Nil
3b	Quantity of ROM mineral production proposed	230123 Tonnes	28470 Tonnes	Less production achieved during the year.
3c	Recovery of salable/usable mineral from ROM production	70%	100%	Nil
3d	Quantity of mineral reject generation	37932	Nil	Nil
3e	Grade of mineral reject generation and threshold value declared	Below 30% Al2O3, more than 7% Silica	Below 30% Al2O3, more than 7% Silica	Nil
3f	Quantity of sub-grade mineral generation	Nil	Nil	Nil
3g	Grade of sub-grade mineral generation	NA	Nil	Nil
3h	Manual/Mechanized method adopted for segregating from ROM	Manual/Mechanical sorting & sizing	Manual/Mechanical sorting & sizing	Nil
3i	Any analysis or beneficiation study proposed & carried out for sub-grade mineral and reject	NA	Nil	Nil
3j	Provision of drilling & blasting in mineral benches	Deep hole blasting (100-115mm dia) Burden X Spacing (3m X 3.5m)	Deep hole blasting (100-115mm dia) Burden X Spacing (3m X 3.5m)	Drilling and Blasting is being done in mineral benches.
3k	Provision of mining machineries in mineral benches	HEMM & other mining equipment	HEMM & other mining equipment	Nil
3l	Whether height of benches in overburden and mineral	For OB removal: 0.5 to 6m, average	For OB removal: 0.5 to 6m, average	Nil

	suitable for method of mining proposed in MP/SOM	3m For Bauxite production: 0.5 to 3.3 m	3m For Bauxite production: 0.5 to 3.3 m			
3m	Total area covered under excavation/pits	10.98 ha.	2.08 ha.	Less excavation done during the year.		
3n	Ore to OB ratio for the pit/mine during the year	1:2.77	1:6.38	Production in high OB area based on purchased land.		
3o	Total area put in use under different heads at the end of year	25.83 Ha.	13.07 Ha.	Less excavation done during the year.		
3p	Production of ROM mineral during last five-year period, as applicable	2021-22	143598	2021-22	Nil	Working has been started in the financial year 2022-23.
		2022-23	230123	2022-23	28470	
		2023-24	302398	2023-24	N/A	
		2024-25	313794	2024-25	N/A	
		2020-21	194150	2020-21	N/A	
3q	General remarks of inspecting officer on method of mining etc.	Quarry no. 2 was proposed for working. Quantity of ROM mineral production proposed was 230123 T.	28470 T of production was achieved during the year.	Less excavation done during the year.		

### **Solid Waste Management-Dumping**

Sl.No	Item	Proposals (2022-23)	Actual work (2022-23)	Remarks
4a.	Separate dumping of topsoil, OB & mineral reject (Rule 32,33)	NIL	Temporary Soil dump	Violation of rule 11 (1) has been issued.
4b	Location of topsoil, & OB & mineral reject dumps	NIL	In between grid line E223220 to E223120 and N2584200 to N2584250, near the Borehole no. ATP/29E/3.	Violation of rule 11 (1) has been issued.
4c	Number of dumps within lease area and outside lease area	NIL	Within lease area- 03,	Violation of rule 11 (1) has

			Outside lease area - Nil	been issued.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	NA	NA	NIL
4e	Number of active & alive dumps	NIL	Within lease area- 03	Violation of rule 11 (1) has been issued.
4f	Number of dead dumps	NIL	NIL	NIL
4g	Number of dumps stabilized	NA	NA	NIL
4h	Whether Retaining wall or garland drain all along dumps are there	NA	Retaining wall or garland drain has not been made along the dump.	Violation of rule 11 (1) has been issued.
4i	Length of Retaining wall or garland drain all along dump	NA	NA	NIL
4j	Number of settling ponds	NA	NA	NIL
4k	Specific comments of inspecting officer on waste dump management	During the year 2022-23 concurrent backfilling was proposed but it was not being done.	The dump has been created on the same place by the working without proper parapet wall, terracing and Garland drain.	Violation of rule 11 (1) has been issued.

### **Solid Waste Management-Backfilling**

Sl.No	Item	Proposals (2022-23)	Actual work (2022-23)	Remarks
5a	Status on part or full extraction of mineral from mined out area before starting backfilling	Fully extracted	Less excavation done during the year.	Less production achieved during the year.
5b	Area under backfilling of mined out area	09.48 ha.	1.72 ha.	Violation of rule 11 (1) has been issued.
5c	Concurrent use of topsoil for restoration or rehabilitation of mined out area (Rule 32)	127238 cum	27626 cum	Violation of rule 11 (1) has been issued.
5d	Total area fully reclaimed & rehabilitated	09.48 ha.	1.72 ha.	Violation of rule 11 (1) has been issued.

5e	General remarks of inspecting officer on backfilling, reclamation etc.	Including Quarry 1 & 2, total 09.48 ha. area was proposed under backfilling of mined out area.	Quarry 1 was not excavated due to obtaining statutory clearances and procurement of land in mining lease area during the year 2021-22. During the year 2022-23, 1.72 ha. degraded area of quarry number 2 was backfilled.	Violation of rule 11 (1) has been issued.
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### **Progressive Mine Closure Plan**

Sl.No	Item	Proposals (2022-23)	Actual work (2022-23)	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly-Rule 23E(2). Details should be given in the format as given in Annexure-20	It should be on or before 1 <sup>st</sup> July every year.	Submitted on time.	Nil
6b	Management of worked/mined out benches			Working has been started during the financial year 2022-23.
	i) Area available for rehabilitation (ha)	Nil	Nil	
	ii) Afforestation done (ha)	Nil	Nil	
	iii) No. of sapling planted during the year	Nil	Nil	
	iv) Cumulative no. of plants			
	v) Any other specific method of rehabilitation	Nil	Nil	
	vi) Cost incurred on watch & care during the year	Nil	Nil	
6c	Compliance on reclamation and			



	rehabilitation by back filling			
	i) Voids available for backfilling (LxBxD)	3.05 ha. Q1=212x144x5.85 Q2=177x618x8	1.72 ha.	
	ii) Void filled by waste/tailings	9.48 Ha., 230213 cum	Yes, 1.72 ha. area has been backfilled	
	iii) Afforestation on the backfilled area	No proposal.	Nil	
	iv) Rehabilitation by making water reservoir	No proposal.	Nil	
	v) Any other specific means	No proposal.	Nil	
6d	Compliance of Rehabilitation of waste land within lease			Within 7.5m safety barrier & 10m road barrier.
	i) Afforestation	0.28 ha. 700 numbers of plants.	0.24 ha., 600 numbers of plants.	
	ii) Area rehabilitated (ha)	No proposal.	Nil	
	iii) Method of rehabilitation	No proposal.	Nil	
6e	Compliance of Environmental monitoring (core zone & buffer zone)	Environmental monitoring to be done.	Environmental monitoring of Air, Noise & Water in core & buffer zones are being carried out on quarterly basis.	Under limit.
6f	General remarks of inspecting & progressive closure operations.	Within 7.5m safety barrier & 10m road barrier, in 0.28 ha. area 700 numbers of plants proposed for plantation.	In 0.24 ha., 820 numbers of plants has been planted. Approx 600 numbers of plants have been survived.	Plantation has been started during the financial year 2022-23.

## Mineral Conservation

Sl.No	Item	Proposals (2022-23)	Actual work (2022-23)	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting	Grade wise sorting	Manual/Mechanical sorting.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical	Manual/Mechanical	Manual/Mechanical	Manual/Mechanical sorting & sizing has been done for separation of the silica & lateritic contamination from bauxite boulders.
7c	Different grade of mineral sorted out at mines	NA	Nil	Nil
7d	Any beneficiation process at mines	NIL	NIL	No mineral beneficiation as such is being done in the lease area because as of now this is a Greenfield project.
7e	General remarks of inspecting officer on Mineral conservation & beneficiation issues	Manual/Mechanical sorting & sizing has been done for separation of the silica & lateritic contamination from bauxite boulders.	Crushing, Screening & washing of low grade/sub-grade bauxite mineral has carried out as & when required for optimum use of mineral resources.	No mineral beneficiation as such is being done in the lease area because as of now this is a Greenfield project.

## Environment

Sl.No	Item	Proposals (2022-23)	Actual work (2022-23)	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Concurrent backfilling	Concurrent backfilling and formed temporary dumps.	Violation of rule 11(1) has been issued.
8b	Concurrent use or storage of topsoil	Concurrent backfilling	Concurrent backfilling and formed temporary dumps.	Violation of rule 11(1) has been

				issued.
8c	Separate dumps for overburden, waste rock rejects and fines (Rule 33)	No proposal.	A separate dump for overburden, waste rock rejects has made.	Violation of rule 11(1) has been issued.
8d	Use of overburden, waste rock, rejects and fines dump for restoring the land to its original use	Proposed.	OB and waste rock used for restoring the land to its original use.	Used for concurrent backfilling.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Proposed.	Simultaneous backfilling and reclamation.	Nil
8f	Baseline information on existence of plantation & additional plantation done (Rule 42)	700 numbers of plants.	Approx 600 numbers of plants has been survived out of 820 numbers of plantation.	Within 7.5m safety barrier & 10 m road barrier, in 0.24 ha. area.
8g	Survival rate	No proposal.	70%	The entire plantation has been done on 7.5m safety barrier & road barrier.
8h	Water sprinkling on roads to control airborne dust	Proposed.	Water sprinkling on roads to control airborne dust is done regularly.	Nil.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area.	Concurrent backfilling has been proposed during 2022-23.	Observed formation of dumps due to delay in starting of mining operation in the financial year 2022-23.	Concurrent backfilling has not been done properly in the mined out area.

### **Compliance of Rule 45**

Sl.No	Item	COMMENTS		Remarks
9a	Status of submission of Monthly and Annual returns	Submitted.		Submitted on time.
Sl.No.	Item			Remarks

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	As per Annual return 2022-23, Shri Sanjay Kumar is Mines manager cum Mining Engineer and Shri Anupam Kumar is Geologist.	As per record Mining Engineer and Geologist are present during Inspection.	Nil.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Land use Pattern as on 01.04.2023. Exploited area = 03.8 hect Current working = 02.08 hect Reclaimed = 01.72 hect Plant/ building/ Roads = 02.75 hect, any other purpose= 01.0 ha., Work done under PMCP= 01.72 ha.	Seems to be correct.	Nil.
9d	Scrutiny of Annual return on afforestation	During 2022-23, 600 saplings have been achieved with 70% of survival.	Seems to be correct.	Nil.
9e	Scrutiny of Annual return on mineral reject generation (Grade & Quantity)	No mineral reject generation reported.	Mineral Rejects Generation not shown.	Nil.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	Bauxite Stock as on 01.04.2023 ROM Closing stock = Nil Dispatches of Processed ore 45% to below 50% Al <sub>2</sub> O <sub>3</sub> = 28470 tons. Mine has produced 28470 tons of Production	Information furnished on ROM stock, grade etc. seems to be correct.	Nil.

		during 2022-2023.		
9g	Scrutiny of Annual return on sale value, Ex. Mine price & production cost.	Sale value - Rs.1464.00/ton for domestic captive consumption. Ex-mine price - 1464.00/ton ,	It is a captive mine of Hindalco, Cost of production- 1464.00/-MT seems to be correct.	Nil.
9h	Scrutiny of Annual return on fixed assets	The Value of fixed assets furnished as Rs.- 12933164.00/-.	Seems to be correct.	Nil.
9i	Scrutiny of Annual return on mining machineries	SHOVEL (HYDRAULIC)-4, AIR COMPRESSOR-2 DUMPER-10 Front End Loader-2, Water Tanker-2, Blast Hose Drill-2	Machineries were available in field.	Nil.

**Details of violations observed during current inspection and compliance position of earlier violation pointed out:** - Violation of rule 11(1) of MCDR, 2017 has been issued on 08/09/2023.

**Raghvendra Kumar**  
**Assistant Mining Engineer**  
**18/03/2024**

(Name of inspecting officer with designation and date)