

# MINERALS & MINERALS LIMITED

Regd. Office- Court Road, P.O. & Distt.-Lohardaga, Jharkhand-835302

Tel.-06526-223163

CIN NO. U26990JH1970PLC000875

Ref. :

Date .....

M&M/LHD/ENV/MoEF&CC/627

Date: 26<sup>th</sup> May 2026

To,

**The Dy. Director General of Forest (C)**

**Ministry of Environment, Forests and Climate Changes**

**2<sup>nd</sup> Floor, Headquarter-Jharkhand State Housing Board**

**Harmu Chowk, Ranchi, Jharkhand-834002**

**Sub:** Six Monthly EC Compliance Report for Pakhar (15.58 Ha) Bauxite Mining Project of M/s Minerals & Minerals Limited, Lohardaga Jharkhand for the period from **October 2025 to March 2026**.

**Ref:** Environmental Clearance Letter No. J-11015/123/2009-IA.II (M) dated 24<sup>th</sup> January 2007.

Dear Sir,

With reference to the above, we are submitting herewith the Compliance status report of EC conditions for **Pakhar (15.58 ha)** Bauxite Mining Project of **M/s Minerals & Minerals Limited**, Lohardaga Jharkhand for the period from **October 2025 to March 2026** for your kind perusal please.

The lease details are below:

Lease area (ha)	Production Capacity (MT)	Lease Period
15.58	60000	28.04.1965 to 31.03.2030

Hope you will find the same in order.

Thanking You

Yours faithfully,

For **Minerals & Minerals Limited**



**R R P Ambastha**

**Head - Compliance**

Enclosure: - As Above

CC: [ro.ranchi-mef@gov.in](mailto:ro.ranchi-mef@gov.in), [mef@ori.nic.in](mailto:mef@ori.nic.in), [mef@nic.in](mailto:mef@nic.in), [mef.or@nic.in](mailto:mef.or@nic.in), [mescb.cpcb@nic.in](mailto:mescb.cpcb@nic.in), [zokolkatta.cpcb@nic.in](mailto:zokolkatta.cpcb@nic.in), [ranchijspcb@gmail.com](mailto:ranchijspcb@gmail.com), [roranchi47@gmail.com](mailto:roranchi47@gmail.com)

**Name of the Project** : **Pakhar Bauxite Mine (15.58 ha)**  
**M/s Minerals & Minerals Limited**

**Environment Clearance No. & date** : **J-11015/123/2006-IA.II(M), dated 24.01.2007**

**Period of compliance Report** : **From 1<sup>st</sup> October 2025 to 31<sup>st</sup> March 2026**

**Specific Conditions: -**

**Condition i: - All the conditions stipulated by SPCB in their NOC shall be effectively implemented.**

**Reply: -** Implementations of the stipulated conditions in NOC are fulfilled post which consent to operate has been obtained from time to time. Existing consent to operate is valid up to 31.03.2027. Productions of bauxite are within limits specified in consent to operate.

**Condition ii:-The environmental clearance is subject to approval of the state land use Department, Government of Jharkhand for diversion of agricultural land for non-agricultural use.**

**Reply: -** Land acquisition is being done with the permission of competent authority of State Government i.e. concerned Deputy Commissioner (D.C.) under CNT Act. The land lease agreement is being done with raiyat (Landowner) after permission of State Govt with provision of returning the land as per the norms set by D.C. The compensation and facilities are being provided as per norms set in agreement. Thus, land acquisition has the approval of the State Government.

**Condition iii: -Mining shall not intersect groundwater. The mine working shall be restricted to ground water table. Prior approval of the Ministry of Environment & Forests and Central Ground Water Authority shall be obtained for mining below water table.**

**Reply: -** The mining operation is confined within shallow depth and not intersected ground water. In future also, working zones will be restricted to above ground water table. We undertake that no mining is/was carried out below ground water table and the same status will be maintained in future also.

**Condition iv: - The project proponent shall ensure that no natural watercourse shall be obstructed due to any mining operation.**

**Reply: -** There is no natural watercourse and / or water resources within the mining lease area. Shallow depth mining methodology is adopted for mining process. Hence, there is no impact of mining operation on natural water courses.

**Condition v: - Topsoil shall be stacked properly with proper slope with adequate measures and should be used for reclamation and rehabilitation of mined out areas.**

**Reply:** - Topsoil is being stacked properly with proper slope as and when required for its use for reclamation and rehabilitation. Sequential backfilling and reclamation of the mined-out area are being exercised during mining operation. The mining is being carried out as per the approved mining plan. Monitoring and management of rehabilitated areas is being done through effective supervision.



Reclamation of mined our area

**Condition vi:** - The waste generated shall be concurrently backfilled in the mined-out area. There shall be no external OB dump. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forest on six monthly basis.

**Reply:** - Overburden and waste rock from the mining pit are being used for concurrent backfilling. A very small quantity of OB is left out, which will be used for concurrent backfilling and reclamation with the progress of mining activity in due course of time. Thus, there will not be any external dump at the end of mine life. Data pertaining to backfilling is enclosed as **Annexure 4**.

**Condition vii:** - Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from mine working. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted particularly after monsoon and maintained properly. Garland drain (size, gradient and length) shall be constructed for mine pit and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper setting of silt material. Sedimentation pits should be constructed at the corners of the garland drains and desilted at regular intervals.

**Reply:** - To collect & manage rainwater during monsoon, part of mined out area is used as settling tank for the runoff. Rainwater stored is being used for watering the mine area, roads, green belt development and sprinkling as necessary. Catch drains, Garland drains of appropriate size are being constructed in both around the mine pit to prevent runoff of water and flow of sediments directly into the agricultural field and water bodies, if applicable. Sump of adequate capacity is being provided and maintained as required.



Garland Drain

**Condition viii: - Plantation shall be raised in an area of 6.98 ha including a green belt of adequate width by planting the native species around the ML area, roads, reclaimed area etc. in consultation with the local DFO / Agriculture Department. The density of the trees should be around 1500 plants per ha.**

**Reply: -** Plantation is being carried out around ML area with progress of mining. During FY 2025–26, a total of 1050 saplings have been planted within the mining lease area. Cumulatively, plantation has been carried out over 4.17 acres till date. In addition to this agricultural activity is going on reclaimed land.



Plantation at Mines

**Condition ix: - The project proponent shall ensure that there shall be no discharge from the mine.**

**Reply: -** Ensured. There is no discharge from mine.

**Condition x: - The Project proponent shall carry out regular monitoring of spring discharge and its quality near Pakhar village on long term basis.**

**Reply: -** Water Quality near Pakhar village is being monitored. Analysis report is attached as Annexure 2.

**Condition xi: - The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.**

**Reply: -** A detailed rainwater harvesting plan to augment ground water has been prepared and suitable measures like water harvesting pond etc. are created for augmentation of ground water in our adjacent mine of Pakhar Plateau, in consultation with Central Ground Water Board.



Rainwater Harvesting Pond

**Condition xii: - Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring should be carried out four times in a year – pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to MOEF, Central Ground water Authority and Regional Director Central Ground Water Board.**

**Reply: -** We are not using ground water for any mining purpose. Since, Shallow depth mining is being carried out, hence there is no intersection of ground water table during the mining operation at present and in future also. A Piezometer has been installed for monitoring of ground water level.

Water level and water quality reports are being sent regularly to regional office of Ministry, CGWA and JSPCB. The Ground water level from October 2025 to March 2026 and quality Monitoring report of Post-Monsoon and Winter season are attached as **Annexure 1 & 2**. Now, Regional office of MoEF&CC is in Ranchi.



Piezometer

**Condition xiii: - Prior permission from the competent authority should be obtained for drawl of water from the surface water bodies.**

**Reply: -** We are not using any water from natural streams/ ground water for mining operation. Rainwater harvesting ponds with proper fencing have been already constructed water in our adjacent mine of Pakhar Plateau. Rainwater harvested during rainy season is being used for sprinkling on haul roads and raising plantation.

However, we have already obtained NOC for extraction of ground water from CGWA/ CGWB for drinking purposes only. The copy of same NOC is attached below.

भारत सरकार जल शक्ति मंत्रालय जल संवर्धन विभाग केन्द्रीय भूमि जल प्राधिकरण GOVERNMENT OF INDIA MINISTRY OF JAL SHAKTI DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION CENTRAL GROUND WATER AUTHORITY		 सत्यमेव जयते			
भूजल निकासी हेतु अनापत्ति प्रमाण पत्र NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION					
PROJECT NAME PAKHAR BAUXITE MINING PROJECT (15.58 HA)					
PROJECT ADDRESS PAKHAR BAUXITE MINING PROJECT VILL - PAKHAR, TEHSIL - KISKO				PIN CODE 835302	
STATE JHARKHAND		DISTRICT LOHARDAGA		TOWN/BLOCK KISKO	
COMMUNICATION ADDRESS COURT ROAD					
ADDRESS OF CGWB REGIONAL OFFICE 6th& 7th Floor, Lok Nayak Jai Prakash Bhawan, Frazer Road, Dak Banglow, Patna- 800011, Bihar.					
1. NOC NO. NOC/MIN/JH/2024/49/R-2/2		2. DATE OF ISSUANCE 13/02/2025			
3. APPLICATION NO. MIN/JH/2024/49/R-2		4. APPLICATION TYPE Mining			
5. PROJECT STATUS Existing Project		6. NOC TYPE Renew			
7. VALID FROM 16/02/2025		8. VALID UP TO 15/02/2027			
9. WATER QUALITY TYPE Fresh Water		10. AREA TYPE CATEGORY Safe (GWRE-2024)			

**Condition xiv: - Vehicular emissions should be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and transportation of mineral. The vehicles should be covered with a tarpaulin and shall not be overloaded.**

**Reply:** - To keep vehicular emissions under control, vehicles are periodically checked & repaired. All measures are being taken to control vehicular emission. All vehicles are covered with tarpaulins, and non-overloading guidelines are being followed during transportation of mineral.



Tarpaulin covered vehicles

**Condition xv:** - Drills should either be operated with dust extractors or should be equipped with water injection system.

**Reply:** - Wet drilling is in practice.



**Condition xvi:** - Blasting operation should be carried out only during the daytime. Controlled blasting should be practiced. The mitigative measures for control of ground vibration and to arrest fly rocks and boulders should be implemented.

**Reply:** - Blasting time is fixed during Lunch Time i.e. 1.00 PM-2.00 PM. We have control blasting permission. Controlled blasting method is in practice. Ground vibration study has been conducted periodically. Efforts and mitigative measures are being taken to mitigate the impact of the blast.

**Condition xvii:** - Consent to operate should be obtained from SPCB prior to start of enhanced production from the mine.

**Reply:** - We have already obtained the Consent to Operate for Bauxite Ore as per production capacity mentioned in EC.

**Condition xviii: - Sewage treatment plant should be installed for the colony. ETP should also be provided for workshop and wastewater generated from mining operations.**

**Reply:** - As of now there is no colony within the lease hold. However, Domestic Wastewater generated from mine office area is being collected through individual Septic Tank and followed by Soak Pit.

No wastewater is generated from our mining operation. However, only negligible amount of effluent is being generated from workshop and Oil & grease trap system is already installed for Pakhar group of mines to treat this effluent. The treated water is in close circuit and being reused for washing of vehicle in the workshop. We are not discharging any wastewater outside the mine lease area.

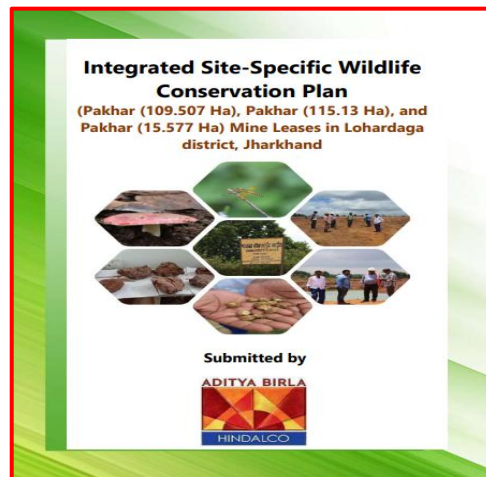
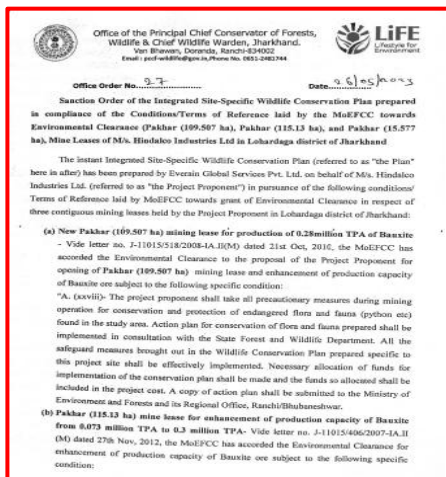
Furthermore, the quality of this treated water is being monitored regularly and the monitoring report is attached herewith as **Annexure 2**.

**Condition xix: - The project proponent should take all precautionary measures during mining operation for conservation and protection of endangered fauna such as Indian Python etc. Spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. Copy of action plan may be submitted to the Ministry and its Regional Office within 3 months.**

**Reply:** - Safeguard Measures already implemented and being implemented as suggested by forest department are as follows:

1. Minimum level of Noise during Mining.
2. Permanent pillars are established within in the mine lease area at 7.5m from the forest boundary.
3. Daily water sprinkling on haul road.
4. Transportation is carried out during daytime only.
5. Maintenance of mineral transportation road is being done regularly.
6. Social activities are being undertaken in nearby areas etc.

We have also prepared Integrated Site-specific Wildlife Conservation in consultation with State Forest Department and obtained approval letter from Principal Chief Conservator of Forest, Wildlife & Chief Wildlife Warden, Jharkhand via Office Order No.27 dated 26.05.2023 for conservation and protection of flora and fauna in the core and buffer zone for Pakhar Group of Mines.



Integrated Site-specific Wildlife Conservation for Pakhar Group of Mines

**Condition xx: - A Final Mine Closure plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forest 5 years in advance of final mine closure for approval.**

**Reply: -** The Final Mine Closure Plan (FMCP) has been approved by the Indian Bureau of Mines and subsequently submitted to the regional office of the Ministry of Environment, Forest and Climate Change (MoEF&CC).

**General Conditions: -**

**Condition i: - No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forest.**

**Reply: -** Noted.

**Condition ii: - No change in the calendar plan including excavation, quantum of mineral bauxite and waste should be made.**

**Reply: -** Calendar plan including excavation, quantum of mineral bauxite and waste is being done as per IBM approved mining scheme and in scientific manner. Data pertaining to excavation, quantum of mineral bauxite etc. are mentioned in the report attached as **Annexure 4**.

**Condition iii: - Four ambient air quality-monitoring station should be established in the core zone as well as in the buffer zone for RPM, SPM, SO<sub>2</sub>, NO<sub>x</sub> monitoring. Location of the stations should be decided based on the metrological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.**

**Reply:** - We have already established four ambient air quality monitoring stations in the core zone as well as buffer zone. Monitoring is being carried out and reported to the concerned authorities. Monitoring Report is attached as **Annexure 2**.

**Condition iv:** - **Data on ambient air quality (RPM, SPM, SO<sub>2</sub>, NO<sub>x</sub>) should be regularly submitted to the Ministry including its Regional office located at Bhubneshwar and the State Pollution Control Board / Central pollution Control Board once in six months.**

**Reply:** - Being adhered to. Monitoring Reports for the reporting period are attached as **Annexure-2**. Now, the Regional office of MoEF&CC is in Ranchi.

**Condition v:** - **Fugitive dust emission from all the sources should be controlled regularly. Water spraying arrangements on haul roads, loading and unloading and at transfer points should be provided and properly maintained.**

**Reply:** - Mobile water tanker with sprinkling facility has been provided along haul roads, at loading and unloading areas, and at transfer points to control dust emissions.



Water Tanker

**Condition vi:** - **Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operation of HEMM, etc. should be provided with ear plug / muffs.**

**Reply:** - Measures are being taken for control of noise levels below 85 dB (A) in the work environment. Workers engaged in operation of HEMM, etc. has been provided with ear plug / muffs. The noise level monitoring is being conducted at a regular interval. The noise level is within the prescribed norms. Report is attached as **Annexure 2**.

**Condition vii:** - **Industrial wastewater (workshops and wastewater from the mine) Should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19<sup>th</sup> May, 1993 and 31<sup>st</sup> December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.**

**Reply:** - No wastewater is generated from our mining operation. However, only negligible amount of effluent is being generated from workshop and Oil & grease trap system is already installed for Pakhar group of mines to treat this effluent. The treated water is in close circuit and being reused for washing of vehicle in the workshop. We are not discharging any wastewater outside the mine lease area.

Furthermore, the quality of this treated water is being monitored regularly and the monitoring report is attached herewith as **Annexure 2**.

**Condition viii: - Personnel working in dusty areas should wear protective respiratory devices and they should also provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.**

**Reply:** - All the workers have been provided with PPEs including dust mask and dust respirators. Apart from PPEs distribution to all workers, we are also providing adequate safety training and conducting awareness session on Safety and health aspects on regular basis. Periodical Occupational health surveillance program of the workers is being carried out and records maintained as per statute.

**Condition ix: - A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.**

**Reply:** - A separate environmental management cell with suitable qualified personnel has been set up under the control of a Senior Executive, who is reporting directly to the Head of the Organization. The same is being attached herewith as **Annexure 3**.

**Condition x: - The project authorities should inform to the Regional Office located at Bhubaneshwar regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.**

**Reply:** - The Final Mine Closure Plan (FMCP), along with the Financial Assurance, has been approved by the Indian Bureau of Mines and subsequently submitted to the Regional Office of the Ministry of Environment, Forest and Climate Change (MoEF&CC). The financial closure is planned for 31<sup>st</sup> March 2028. Now, the Regional office of MoEF&CC is in Ranchi.

**Condition xi: - The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional Office located at Bhubneshwar.**

**Reply:** - Every year, the funds earmarked for environmental protection measures is being budgeted separately and its expenditure is being reported to the Ministry. The copy of the same is attached as **Annexure 5**. Now, the Regional Office of MoEF&CC is in Ranchi.

**Condition xii: - The Regional Office of this Ministry located at Bhubneshwar shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.**

**Reply: -** Noted and Agreed. Now, the Regional Office of MoEF&CC is in Ranchi.

**Condition xiii: - A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.**

**Reply: -** Complied. A copy of clearance letter has already been submitted.

**Condition xiv: - State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Center and Collector's office / Tehsildar's Office for 30 days.**

**Reply: -** Noted. The EC Letter has been submitted to JSPCB for display of same at its Regional office and other government offices.

**Condition xv: - The project authorities should advertise at least in two local newspapers widely circulated, one of which locality concerned, within 7days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment and Forests at <http://envfor.nic.in> and a copy of the same should be forwarded to the Regional Office of this Ministry located Bhubneshwar.**

**Reply: -** Noted and complied. The information on grant of the EC has been published in two local newspapers. The copy of the advertisement has already been submitted to the Regional Office of the MoEF&CC. Now, the Regional office of MoEF&CC is in Ranchi.

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**Piezometer Monitoring Report**

**Mine: Pakhar Bauxite Mine (15.58 Ha)**

<b>S No</b>	<b>Month</b>	<b>Ground Water Level (BGL) in meter</b>
1	Oct-25	37.55
2	Nov-25	37.62
3	Dec-25	37.79
4	Jan-26	37.88
5	Feb-26	37.96
6	Mar-26	38.13



# EPIC LabTech Private Limited



Address:-  
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Road No. - 5, Ranchi,  
Jharkhand - 834005, India

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98357 86677  
93049 73994  
epiclabtech@gmail.com

CIN:-U74999JH2022PTC019685  
PAN:-AAHCE3611M  
GST:-20AAHCE3611M1ZX

Accredited by:-  
NABL vide certificate Number TC-12887  
Jharkhand State Pollution Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018

TC-12887

## Analytical Test Certificate

<b>Unique Lab Report No.</b>	TC1288725000001339	<b>Discipline</b>	Chemical
<b>Report Unique ID</b>	RL03352541038	<b>Group</b>	Atmospheric Pollution
<b>Issue date/time</b>	14.10.2025/ 15:45	<b>Sub Group</b>	Ambient Air Quality

### Report Issue to

<b>M/s - MINERALS &amp; MINERALS LIMITED</b> VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 <b>MONITORING SITE : PAKHAR 15.58 BAUXITE MINE</b>	<b>Contact Person</b> <b>Contact Number</b> <b>Email Id</b> <b>Order Date</b> <b>Order Number</b>	Mr. Girija Tamrakar +91 9111006074 Girija.tamrakar@adityabirla.com 05.04.2025/ 10:10 RP/MJB/MM/25/0114/00
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### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0335	Sample Booking Number	EPIC-2541038
Sample(s) Code	2541038 (A) (B) (C) (D)	Sample Receipt (D/T)	11.10.2025/ 11:10

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	09.10.2025/ 11:10	Sampling End (D/T)	10.10.2025/ 10:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	66	Wind direction	20°-220°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Office	GPS coordinate	23° 32' 22.71" / 84° 36' 34.81"
S. Location B	Near Weigh Bridge	GPS coordinate	23° 32' 25.07" / 84° 36' 35.09"
S. Location C	Near Mine Quarry No-M4	GPS coordinate	23° 32' 08.09" / 84° 36' 06.42"
S. Location D	Near Mine Quarry No-M1	GPS coordinate	23° 32' 07.68" / 84° 36' 04.96"

### Date(s) of performance of the laboratory activities

Test start date	11.10.2025/ 11:30	Test completion date	14.10.2025/ 15:00
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--Test Results--								
Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-23) 2022	µg/m <sup>3</sup>	52.23	51.57	52.01	54.45	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (P-24) 2019	µg/m <sup>3</sup>	23.25	22.30	24.10	24.03	60(24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	09.24	08.67	08.16	09.90	80(24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	16.79	15.77	17.73	18.66	80(24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	20.23	24.65	20.86	23.71	400(24 hr)
6.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m <sup>3</sup>	15.91	16.25	16.85	15.33	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m <sup>3</sup>	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	-

Prescribed Limit Environmental (Protection) Rules-1986, Schedule VII.

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by  
(R.N. Kumar)  
Technical Head

Issue by  
(Umesh Das)  
Laboratory Head  
Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

**Contractual Notes** | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility, at specific environmental condition as method required and results relate only to the sample tested in prescribed Date & time | 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law. | 4. Any complaint about this report should be communicated in writing within 10 days of its issue | 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to invoiced amount only. | 6. All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges | 7. Opinion does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any caused by use or misuse of this report. | 8. When the results are from external provider are marked as \* mark. |

**Abbreviation:** - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation). |



# EPIC LabTech Private Limited

Address:-  
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Jharkhand - 834005, India

☎ 0651 4666392  
📞 98357 86677  
📞 93049 73994  
✉ epiclabtech@gmail.com

CIN:-U74999JH2022PTC019685  
PAN:-AAHCE3611M  
GST:-20AAHCE3611M1ZX

Accredited by :-  
Jharkhand State Pollution Control Board  
Certified by :-  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03352541038	Group	Atmospheric Pollution
Issue date/time	14.10.2025/ 15:45	Sub Group	Ambient Air Quality

<b>Report issue to</b>		<b>Contact Person</b>	Mr. Girija Tamrakar
<b>M/s - MINERALS &amp; MINERALS LIMITED</b>		<b>Contact Number</b>	+91 9111006074
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302		<b>Email Id</b>	Girija.tamrakar@adityabirla.com
<b>MONITORING SITE : PAKHAR 15.58 BAUXITE MINE</b>		<b>Order Date</b>	05.04.2025/ 10:10
		<b>Order Number</b>	RP/MJB/MM/25/0114/00

<b>References of Quality Management System (Steps of Traceability Chain)</b>			
Customer Registration No.	EPIC/OTH/0335	Sample Booking Number	EPIC-2541038
Sample(s) Code	2541038 (A) (B) (C) (D)	Sample Receipt (D/T)	11.10.2025/ 11:10

<b>Sampling References</b>			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	09.10.2025/ 11:10	Sampling End (D/T)	10.10.2025/ 10:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

<b>Environmental Condition during sampling</b>							
Weather condition	Cloudy	Temperature (°C)	26	Humidity %	66	Wind direction	20°-220°

<b>Sampling Location(s) with GPS coordinate(s)</b>			
S. Location A	Near Mine Office	GPS coordinate	23° 32' 22.71"/ 84° 36' 34.81"
S. Location B	Near Weigh Bridge	GPS coordinate	23° 32' 25.07"/ 84° 36' 35.09"
S. Location C	Near Mine Quarry No-M4	GPS coordinate	23° 32' 08.09"/ 84° 36' 06.42"
S. Location D	Near Mine Quarry No-M1	GPS coordinate	23° 32' 07.68"/ 84° 36' 04.96"

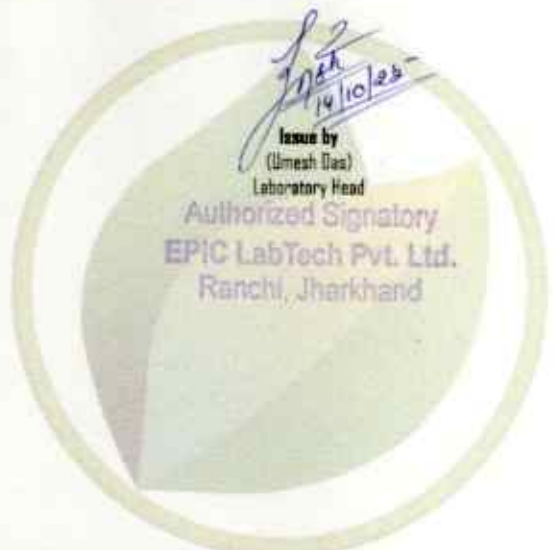
<b>Date(s) of performance of the laboratory activities</b>			
Test start date	11.10.2025/ 11:30	Test completion date	14.10.2025/ 15:00

--Test Results--								
Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS:5182(P-11) 2006	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12) 2004	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01/00	mg/m <sup>3</sup>	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-
--Test Results End --								

**Prescribed Limit** Environmental (Protection) Rules-1986, Schedule VII.  
**Operational Status** Unit was Operational During sampling.  
 Analysed by - Vishal Mangraj



*(Signature)*  
 Reviewed by  
 (B.N. Kumar)  
 Technical Head





# EPIC LabTech Private Limited



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CIN:-U74999JH2022PTC019685  
PAN:-AAHCE3611M  
GST:-20AAHCE3611M12X

Accredited by:-  
NABL vide certificate Number TC-12887  
Jharkhand State Pollution Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018

TC-12887

## Analytical Test Report

Unique Lab Report No.	TC1288725000001425	Discipline	Chemical
Report Unique ID	RL03752546019	Group	Atmospheric Pollution
Issue date/time	20.11.2025/ 17:35	Sub Group	Ambient Air Quality

### Report issue to

#### M/s - MINERALS & MINERALS LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : PAKHAR 15.58 BAUXITE MINE

Contact Person	Mr. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	Girija.tamrakar@adityabirla.com
Order Date	05.04.2025/ 10:10
Order Number	RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0375	Sample Booking Number	EPIC-2546019
Sample(s) Code	2546019 (A) (B) (C) (D)	Sample Receipt (D/T)	15.11.2025/ 11:34

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	13.11.2025/ 10:30	Sampling End (D/T)	14.11.2025/ 08:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	23	Humidity %	65	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Office	GPS coordinate	23° 32' 22.71" / 84° 36' 34.81"
S. Location B	Near Weigh Bridge	GPS coordinate	23° 32' 25.07" / 84° 36' 35.09"
S. Location C	Near Mine Quarry No-M1	GPS coordinate	23° 32' 08.09" / 84° 36' 06.42"
S. Location D	Near Mine Quarry No-M4	GPS coordinate	23° 32' 07.68" / 84° 36' 04.96"

### Date(s) of performance of the laboratory activities

Test start date	15.11.2025/ 11:50	Test completion date	18.11.2025/ 15:15
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### --Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits <small>(Reference)</small>
					A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-23) 2022	µg/m <sup>3</sup>	10	54.61	53.49	52.76	56.79	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (P-24) 2019	µg/m <sup>3</sup>	8	24.07	22.90	25.04	25.64	60 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	5	09.21	09.46	08.57	10.17	60 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	6	17.12	15.18	18.27	19.21	60 (24 hr)
5.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m <sup>3</sup>	10	16.44	17.84	17.49	16.79	160 (1 hr)
6.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	10	21.56	25.15	21.26	24.25	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m <sup>3</sup>	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m <sup>3</sup>	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m <sup>3</sup>	2	BDL	BDL	BDL	BDL	-

### --Test Results End --

Prescribed Limit Environmental (Protection) Rules-1986, Schedule -VII.

Analysed by - Rajesh Varma



*[Signature]*  
Reviewed by  
(B.N. Kumar)  
Technical Head

Test Report End

*[Signature]*  
Issue by  
(Rajesh Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

**Contractual Notes** | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility at specific environmental condition as method required and results relate only to the sample tested in prescribed Date & time | 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law. | 4. Any complaint about this report should be communicated in writing within 10 days of its issue | 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to invoiced amount only. | 6. All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges | 7. Opinion does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any caused by use or misuse of this report. | 8. When the results are from external provider are marked as \* mark. |

**Abbreviation:** - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation).



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PAN:-AAHCE3611M  
GST:-20AAHCE3611M12X

Accredited by :-  
Jharkhand State Pollution Control Board  
Certified by :-  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03752546019	Group	Atmospheric Pollution
Issue date/time	20.11.2025/ 17:35	Sub Group	Ambient Air Quality

### Report Issue to

#### M/s - MINERALS & MINERALS LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : PAKHAR 15.58 BAUXITE MINE

#### Contact Person

Mr. Girija Tamrakar

#### Contact Number

+91 9111006074

#### Email Id

Girija.tamrakar@adityabirla.com

#### Order Date

05.04.2025/ 10:10

#### Order Number

RP/MBJ/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0375	Sample Booking Number	EPIC-2546019
Sample(s) Code	2546019 (A) (B) (C) (D)	Sample Receipt (D/T)	15.11.2025/ 11:34

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	13.11.2025/ 10:30	Sampling End (D/T)	14.11.2025/ 08:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	23	Humidity %	65	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Office	GPS coordinate	23° 32' 22.71"/ 84° 36' 34.81"
S. Location B	Near Weigh Bridge	GPS coordinate	23° 32' 25.07"/ 84° 36' 35.09"
S. Location C	Near Mine Quarry No-M4	GPS coordinate	23° 32' 08.09"/ 84° 36' 06.42"
S. Location D	Near Mine Quarry No-M1	GPS coordinate	23° 32' 07.68"/ 84° 36' 04.96"

### Date(s) of performance of the laboratory activities

Test start date	15.11.2025/ 11:50	Test completion date	18.11.2025/ 15:15
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### --Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Benzene (as C <sub>6</sub> H <sub>6</sub> )	IS 5182 (P-11): 2006	µg/m <sup>3</sup>	1	BDL	BDL	BDL	BDL	-
2.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m <sup>3</sup>	0.5	BDL	BDL	BDL	BDL	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01	mg/m <sup>3</sup>	1.8	BDL	BDL	BDL	BDL	-

### --Test Results End --

### Prescribed Limit Environmental (Protection) Rules-1986, Schedule -VII.

Analysed by - Rajesh Varma



Reviewed by  
(S.N. Kumar)  
Technical Head

Test Report End

Issued by  
(Umesh Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

**Contractual Notes** | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility at specific environmental condition as method required and results relate only to the sample tested in prescribed Date & time | 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law | 4. Any complaint about this report should be communicated in writing within 10 days of its issue | 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to invoiced amount only. | 6. All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges | 7. Opinion does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any caused by use or misuse of this report. | 8. When the results are from external provider are marked as \* mark. |

**Abbreviation:** - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation). |



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GST:-20AAHCE3611M1ZK

Accredited by :-  
NABL, vide certificate number TC- 12887  
Jharkhand State Pollution Control Board  
Certified by :-  
ISO 9001:2015 and ISO 45001:2018

TC-12887

## Analytical Test Report

Unique Lab Report No.	TC1288725000001426	Discipline	Chemical
Report Unique ID	RL03752546020	Group	Water
Issue date/time	20.11.2025/ 17:37	Sub Group	Drinking Water

### Report Issue to

#### M/s - MINERALS & MINERALS LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : PAKHAR 15.58 BAUXITE MINE

Contact Person	Mr. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	Girija.tamrakar@adityabirla.com
Order Date	05.04.2025/ 10:10
Order Number	RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0375	Sample Booking Number	EPIC-2546020
Sample(s) Code	2546020	Sample Receipt (D/T)	15.11.2025/ 11:25

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	13.11.2025/ 16:30	Sampling End (D/T)	13.11.2025/ 16:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	23	Humidity %	65	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Canteen, Pakhar (15.58 ha)	GPS coordinate	23° 32' 23.49"/ 84° 36' 37.04"
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### Date(s) of performance of the laboratory activities

Test start date	15.11.2025/ 11:45	Test completion date	18.11.2025/ 16:30
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### --Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits	
						Acceptable Limit	Permissible limit
1.	pH value at 25.1°C	IS 3025 (P-11) 2022	-	0.7	6.89	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.3	0.84	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	5.0	5	5	15
4.	Odour	IS 3025 (P-05) 2018	-	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	10	225.0	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	5	39.42	250	1000
8.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23) 2019	mg/l	10	90.0	200	600
9.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21) 2009	mg/l	10	122.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	10	40.88	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	0.6	BDL	0.2	1
12.	Sulphate (as SO <sub>4</sub> )	IS 3025 (P-24/Sec-1)2022	mg/l	0.3	7.90	200	400
13.	Nitrate (as NO <sub>3</sub> )	APHA 4500 B 2023	mg/l	0.4	2.11	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	0.001	BDL	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	0.3	4.86	30	100



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NABL, vide certificate Number TC-12887  
Jharkhand State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

TC-12887

## Analytical Test Report

Unique Lab Report No.	TC1288725000001426	Discipline	Chemical
Report Unique ID	RL03752546020	Group	Water
Issue date/time	20.11.2025/ 17:37	Sub Group	Drinking Water

### Report Issue to

**M/s - MINERALS & MINERALS LIMITED**  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
**MONITORING SITE : PAKHAR 15.58 BAUXITE MINE**

Contact Person **Mr. Girija Tamrakar**  
Contact Number **+91 9111006074**  
Email Id **Girija.tamrakar@adityabirla.com**  
Order Date **05.04.2025/ 10:10**  
Order Number **RP/MJB/MM/25/0114/00**

### Group - Residues and Contaminants in Water,

### Sub Group - Trace Metals Elements

Sl. No.	Contaminant	Standard	Unit	Concentration	Limit	Remarks
16.	Copper (as Cu)	APHA 3111 B 2023	mg/l	0.1	BDL	0.05 1.5
17.	Iron (as Fe)	APHA 3111 B 2023	mg/l	0.1	BDL	1.0 No relaxation
18.	Lead (as Pb)	APHA 3111 B 2023	mg/l	0.01	BDL	0.01 No relaxation
19.	Cadmium (as Cd)	APHA 3111 B 2023	mg/l	0.003	BDL	0.003 No relaxation
20.	Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	0.01	BDL	0.05 No relaxation
21.	Nickel (as Ni)	APHA 3111 B 2023	mg/l	0.02	BDL	0.02 No relaxation
22.	Total Arsenic (as As)	APHA 3114 B 2023	mg/l	0.005	BDL	0.01 0.05
23.	Selenium (as Se)	APHA 3114 B 2023	mg/l	0.005	BDL	0.01 No relaxation
24.	Manganese (as Mn)	APHA 3111 B 2023	mg/l	0.09	BDL	0.1 0.3
25.	Zinc (as Zn)	APHA 3111 B 2023	mg/l	0.04	BDL	5 15

--Test Result End --

Prescribed Limit IS 10500:2012.

Analysed by - Pappu Kumar



*(Signature)*

Reviewed by  
(B.N. Kumar)  
Technical Head

Test Report End

*(Signature)*  
20/11/25

Issued by  
(Umesh Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





# EPIC LabTech Private Limited

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CIN:-U74999JH2022PTC019685  
PAN:-AAHCE3611M  
GST:-20AAHCE3611M1ZX

Accredited by :-  
Jharkhand State Pollution Control Board  
Certified by :-  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03752546020	Group	Water
Issue date/time	20.11.2025/ 17:37	Sub Group	Drinking Water

### Report Issue to

#### M/s - MINERALS & MINERALS LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : PAKHAR 15.58 BAUXITE MINE

Contact Person Mr. Girija Tamrakar  
Contact Number +91 9111006074  
Email Id Girija.tamrakar@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0375	Sample Booking Number	EPIC-2546020
Sample(s) Code	2546020	Sample Receipt (D/T)	15.11.2025/ 11:25

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	13.11.2025/ 16:30	Sampling End (D/T)	13.11.2025/ 16:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/035
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	23	Humidity %	65	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Canteen, Pakhar (15.58 ha)	GPS coordinate	23° 32' 23.49" / 84° 36' 37.04"
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### Date(s) of performance of the laboratory activities

Test start date	15.11.2025/ 11:45	Test completion date	18.11.2025/ 16:30
-----------------	-------------------	----------------------	-------------------

### --Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits	
						Acceptable Limit	Permissible limit
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	0.1	BDL	1.0	1.5
<b>Group-Residues and Contaminants in Water</b>						<b>Sub Group-Trace Metals Elements</b>	
2.	Aluminum	IS 3025 (P-55):2019	mg/l	0.1	BDL	0.03	0.2
3.	Boron	IS 3025 (P-57):2021	mg/l	0.1	BDL	0.5	1.0
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	0.2	BDL	0.5	No relaxation
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	0.05	BDL	0.1	No relaxation
<b>Group-Residues and Contaminants in Water</b>						<b>Sub Group-Pesticides</b>	
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	20	No relaxation
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	2.0	No relaxation
8.	Dieldrin	EPIC/LAB/SOP/WA/01/00	µg/l	0.02	BDL	0.03	No relaxation
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	0.005	BDL	0.01	No relaxation
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	0.02	BDL	0.04	No relaxation
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	125.0	No relaxation
12.	Chlopyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	30.0	No relaxation
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	0.02	BDL	0.04	No relaxation



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CIN:-U74999JH2022PTC019685  
PAN:-AAHCE3611M  
GST:-20AAHCE3611M1Zx

Accredited by -  
Jharkhand State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03752546020	Group	Water
Issue date/time	20.11.2025/ 17:37	Sub Group	Drinking Water

### Report Issue to

#### M/s - MINERALS & MINERALS LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302

MONITORING SITE : PAKHAR 15.58 BAUXITE MINE

#### Contact Person

Mr. Girija Tamrakar

#### Contact Number

+91 9111006074

#### Email Id

Girija.tamrakar@adityabirla.com

#### Order Date

05.04.2025/ 10:10

#### Order Number

RP/MJB/MM/25/0114/00

14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	3.0	No relaxation
15.	Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	2.0	No relaxation
16.	Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	190.0	No relaxation
17.	Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	0.2	BDL	0.3	No relaxation
18.	Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	1.0	No relaxation
19.	Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	2.0	No relaxation
20.	DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	1.0	No relaxation
21.	Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	0.05	BDL	0.4	No relaxation

--Test Result End --

Prescribed Limit

IS 10500:2012.

Analysed by - Pappu Kumar

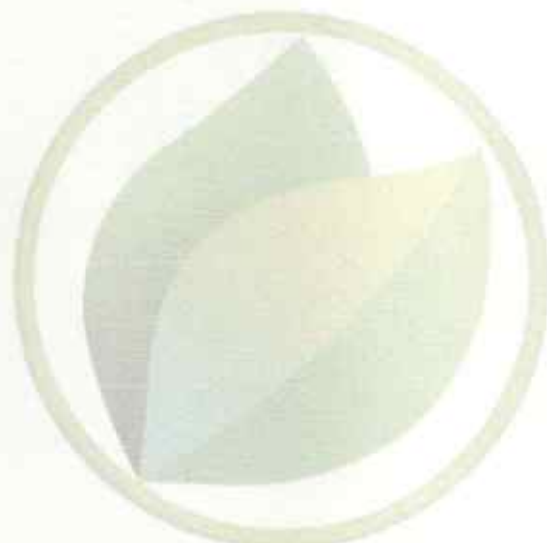


Reviewed by  
(B.N. Kumar)  
Technical Head

Test Report End

Issued by  
(Umesh Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



Page 2 of 2

**Contractual Notes** | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility at specific environmental condition as method required and results relate only to the sample tested in prescribed Date & time | 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law. | 4. Any complaint about this report should be communicated in writing within 10 days of its issue | 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to invoiced amount only. | 6. All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges | 7. Opinion does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any caused by use or misuse of this report. | 8. When the results are from external provider are marked as \* mark. |

**Abbreviation:** - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation). |



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GST:-20AAHCE3611M1ZX

Accredited by:-  
Jharkhand State Pollution Control Board  
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## Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL03752546021	Group	Water
Issue date/time	20.11.2025/ 17:39	Sub Group	Drinking Water

### Report Issue to

#### M/s - MINERALS & MINERALS LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : PAKHAR 15.58 BAUXITE MINE

Contact Person Mr. Girija Tamrakar  
Contact Number +91 9111006074  
Email Id Girija.tamrakar@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0375	Sample Booking Number	EPIC-2546020
Sample(s) Code	2546020	Sample Receipt (D/T)	15.11.2025/ 11:26

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	13.11.2025/ 16:30	Sampling End (D/T)	13.11.2025/ 16:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	23	Humidity %	65	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Canteen, Pakhar (15.58 ha)	GPS coordinate	23° 32' 23.49"/ 84° 36' 37.04"
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### Date(s) of performance of the laboratory activities

Test start date	15.11.2025/ 12:25	Test completion date	20.11.2025/ 15:10
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### --Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	Total Coliform	IS 15185 2002	Per 100 ml	1.1	Not Detected	Shall not be detectable in any 100 ml sample.
2.	E. Coli	IS 15185 2002	Per 100 ml	1.1	Not Detected	

### --Test Result End --

Prescribed Limit IS 10500:2012.

Analysed by - Ishika Singh



Reviewed by  
(B.N. Kumar)  
Technical Head

Test Report End

Issued by  
(Umesh Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



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GST:-20AAHCE36T1M1ZX

Accredited by :-  
NABL vide certificate Number TC- 12887  
Jharkhand State Pollution Control Board  
Certified by :-  
ISO 9001:2015 and ISO 45001:2018

TC-12887

## Analytical Test Report

Unique Lab Report No.	TC1288725000001427	Discipline	Chemical
Report Unique ID	RL03752546022	Group	Water
Issue date/time	20.11.2025/ 17:41	Sub Group	Ground Water

### Report Issue to

#### M/s - MINERALS & MINERALS LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : PAKHAR 15.58 BAUXITE MINE

Contact Person	Mr. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	Girija.tamrakar@adityabirla.com
Order Date	05.04.2025/ 10:10
Order Number	RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0375	Sample Booking Number	EPIC-2546022
Sample(s) Code	2546022	Sample Receipt (D/T)	15.11.2025/ 11:27

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	13.11.2025/ 15:15	Sampling End (D/T)	13.11.2025/ 15:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	23	Humidity %	65	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Office Pakhar (15.58 ha) Bauxite Mine	GPS coordinate	23° 32' 22.44"/ 84° 36' 35.70"
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### Date(s) of performance of the laboratory activities

Test start date	15.11.2025/ 11:47	Test completion date	20.11.2025/ 16:30
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### --Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits	
						Acceptable Limit	Permissible limit
1.	pH value at 25.5°C	IS 3025 (P-11) 2022	-	0.7	6.76	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.3	0.68	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	5.0	5	5	15
4.	Odour	IS 3025 (P-05) 2018	-	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	10	256.0	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	5	38.43	250	1000
8.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23) 2019	mg/l	10	126.00	200	600
9.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21) 2009	mg/l	10	172.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	10	49.70	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	0.6	BDL	0.2	1
12.	Sulphate (as SO <sub>4</sub> )	IS 3025 (P-24/Sec-1)2022	mg/l	0.3	13.10	200	400
13.	Nitrate (as NO <sub>3</sub> )	APHA 4500 B 2023	mg/l	0.4	5.31	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	0.001	BDL	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	0.3	11.66	30	100



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Accredited by :-  
NABL, vide certificate Number TC- 12887  
Jharkhand State Pollution Control Board  
Certified by :-  
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## Analytical Test Report

Unique Lab Report No.	TC1288725000001427	Discipline	Chemical
Report Unique ID	RL03752546022	Group	Water
Issue date/time	20.11.2025/ 17:41	Sub Group	Ground Water

### Report Issue to

#### M/s - MINERALS & MINERALS LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : PAKHAR 15.58 BAUXITE MINE

Contact Person	Mr. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	Girija.tamrakar@adityabirla.com
Order Date	05.04.2025/ 10:10
Order Number	RP/MBJ/MM/25/0114/00

### Group - Residues and Contaminants in Water,

### Sub Group - Trace Metals Elements

Sl. No.	Contaminant	Standard	Unit	Concentration	Limit	Remarks
16.	Copper (as Cu)	APHA 3111 B 2023	mg/l	0.1	BDL	0.05
17.	Iron (as Fe)	APHA 3111 B 2023	mg/l	0.1	BDL	1.0
18.	Lead (as Pb)	APHA 3111 B 2023	mg/l	0.01	BDL	0.01
19.	Cadmium (as Cd)	APHA 3111 B 2023	mg/l	0.003	BDL	0.003
20.	Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	0.01	BDL	0.05
21.	Nickel (as Ni)	APHA 3111 B 2023	mg/l	0.02	BDL	0.02
22.	Total Arsenic (as As)	APHA 3114 B 2023	mg/l	0.005	BDL	0.01
23.	Selenium (as Se)	APHA 3114 B 2023	mg/l	0.005	BDL	0.01
24.	Manganese (as Mn)	APHA 3111 B 2023	mg/l	0.09	BDL	0.1
25.	Zinc (as Zn)	APHA 3111 B 2023	mg/l	0.04	BDL	5

--Test Result End --

Prescribed Limit IS 10500:2012.

Analysed by - Pappu Kumar



*Pappu Kumar*

Reviewed by  
(P.N. Kumar)  
Technical Head

Test Report End

*Umesh Das*  
20/11/25

Issued by  
(Umesh Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





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GST:-20AAHCE3611M1ZK

Accredited by :-  
Jharkhand State Pollution Control Board  
Certified by :-  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03752546022	Group	Water
Issue date/time	20.11.2025/ 17:41	Sub Group	Ground Water

### Report Issue to

<b>M/s - MINERALS &amp; MINERALS LIMITED</b> VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 <b>MONITORING SITE : PAKHAR 15.58 BAUXITE MINE</b>	<b>Contact Person</b> <b>Contact Number</b> <b>Email Id</b> <b>Order Date</b> <b>Order Number</b>	Mr. Girija Tamrakar +91 9111006074 Girija.tamrakar@adityabirla.com 05.04.2025/ 10:10 RP/MB/MM/25/0114/00
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### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0375	Sample Booking Number	EPIC-2546022
Sample(s) Code	2546022	Sample Receipt (D/T)	15.11.2025/ 11:27

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	13.11.2025/ 15:15	Sampling End (D/T)	13.11.2025/ 15:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	23	Humidity %	65	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Office Pakhar (15.58 ha) Bauxite Mine	GPS coordinate	23° 32' 22.44"/ 84° 36' 35.70"
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### Date(s) of performance of the laboratory activities

Test start date	15.11.2025/ 11:47	Test completion date	20.11.2025/ 16:30
-----------------	-------------------	----------------------	-------------------

### --Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits	
						Acceptable Limit	Permissible limit
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	0.1	BDL	1.0	1.5
<b>Group-Residues and Contaminants in Water</b>						<b>Sub Group-Trace Metals Elements</b>	
2.	Aluminum	IS 3025 (P-55):2019	mg/l	0.1	BDL	0.03	0.2
3.	Boron	IS 3025 (P-57):2021	mg/l	0.1	BDL	0.5	1.0
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	0.2	BDL	0.5	No relaxation
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	0.05	BDL	0.1	No relaxation
<b>Group-Residues and Contaminants in Water</b>						<b>Sub Group-Pesticides</b>	
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	20	No relaxation
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	2.0	No relaxation
8.	Dieldrin	EPIC/LAB/SOP/WA/01/00	µg/l	0.02	BDL	0.03	No relaxation
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	0.005	BDL	0.01	No relaxation
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	0.02	BDL	0.04	No relaxation
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	125.0	No relaxation
12.	Chlopyriphos	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	30.0	No relaxation
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	0.02	BDL	0.04	No relaxation

**Contractual Notes** | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility at specific environmental condition as method required and results relate only to the sample tested in prescribed Date & time | 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law. | 4. Any complaint about this report should be communicated in writing within 10 days of its issue | 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to invoiced amount only. | 6. All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges | 7. Opinion does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any caused by use or misuse of this report. | 8. When the results are from external provider are marked as \* mark. |  
**Abbreviation:** - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation). |



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## Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03752546022	Group	Water
Issue date/time	20.11.2025/ 17:41	Sub Group	Ground Water

### Report Issue to

**M/s - MINERALS & MINERALS LIMITED**  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
**MONITORING SITE : PAKHAR 15.58 BAUXITE MINE**

**Contact Person** Mr. Girija Tamrakar  
**Contact Number** +91 9111006074  
**Email Id** Girija.tamrakar@adityabirla.com  
**Order Date** 05.04.2025/ 10:10  
**Order Number** RP/MJB/MM/25/0114/00

Sl. No.	Parameter	Method	Unit	Concentration	Standard	Relaxation
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	3.0 No relaxation
15.	Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	2.0 No relaxation
16.	Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	190.0 No relaxation
17.	Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	0.2	BDL	0.3 No relaxation
18.	Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	1.0 No relaxation
19.	Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	2.0 No relaxation
20.	DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	1.0 No relaxation
21.	Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	0.05	BDL	0.4 No relaxation

--Test Result End --

Prescribed Limit IS 10500:2012.

Analysed by - Pappu Kumar



*B.N. Kumar*  
Reviewed by  
(B.N. Kumar)  
Technical Head

Test Report End

*Umesh Das*  
20/11/25  
Issued by  
(Umesh Das)  
Laboratory Head  
Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





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## Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL03752546023	Group	Water
Issue date/time	20.11.2025/ 17:43	Sub Group	Ground Water

### Report Issue to

#### M/s - MINERALS & MINERALS LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : PAKHAR 15.58 BAUXITE MINE

Contact Person	Mr. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	Girija.tamrakar@adityabirla.com
Order Date	05.04.2025/ 10:10
Order Number	RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0375	Sample Booking Number	EPIC-2546023
Sample(s) Code	2546023	Sample Receipt (D/T)	15.11.2025/ 11:27

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	13.11.2025/ 15:15	Sampling End (D/T)	13.11.2025/ 15:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	23	Humidity %	65	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Office Pakhar (15.58 ha) Bauxite Mine	GPS coordinate	23° 32' 22.44"/84° 36' 35.70"
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### Date(s) of performance of the laboratory activities

Test start date	15.11.2025/ 12:20	Test completion date	20.11.2025/ 15:05
-----------------	-------------------	----------------------	-------------------

### --Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	Total Coliform	IS 15185 2002	Per 100 ml	1.1	Not Detected	Shall not be detectable in any 100 ml sample
2.	E.Coli	IS 15185 2002	Per 100 ml	1.1	Not Detected	

### --Test Result End --

Prescribed Limit IS 10500:2012.

Analysed by - Ishika Singh



  
Reviewed by  
(B.N. Kumar)  
Technical Head

Test Report End

  
Issued by  
(Umesh Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



# EPIC LabTech Private Limited



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CIN:-U74999JH2022PTC019685  
PAN:-AANCE3611M  
GST:-20AANCE3611M1Z

Accredited by -  
NABL wide certificate Number TC- 12887  
Jharkhand State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Report

Unique Lab Report No.	TC1288725000001614	Discipline	Chemical
Report Unique ID	RI 04132551001	Group	Atmospheric Pollution
Issue date/time	18.12.2025/ 16:30	Sub Group	Ambient Air Quality

Report Issue to	M/s - MINERALS & MINERALS LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE : PAKHAR 15.58 BAUXITE MINE	Contact Person	Mr. Girija Tamrakar
		Contact Number	+91 9111006074
		Email Id	girija.tamrakar@adityabirla.com
		Order Date	05.04.2025/ 10:10
		Order Number	RP/MJB/MM/25/0114/00

References of Quality Management System (Steps of Traceability Chain)			
Customer Registration No.	EPIC/OTH/0413	Sample Booking Number	EPIC-2551001
Sample(s) Code	2551001 (A) (B) (C) (D)	Sample Receipt (D/T)	15.12.2025/ 10:30

Sampling References			
Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	12.12.2025/ 10:00	Sampling End (D/T)	13.12.2025/ 08:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Cloudy	Temperature (°C)	22	Humidity %	63	Wind direction	90°-270°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Near Mine Office	GPS coordinate	23° 32' 22.71" / 84° 36' 34.81"
S. Location B	Near Weigh Bridge	GPS coordinate	23° 32' 25.07" / 84° 36' 35.09"
S. Location C	Near Mine Quarry No-M1	GPS coordinate	23° 32' 08.09" / 84° 36' 06.42"
S. Location D	Near Mine Quarry No-M4	GPS coordinate	23° 32' 07.68" / 84° 36' 04.96"

Date(s) of performance of the laboratory activities			
Test start date	15.12.2025/ 11:15	Test completion date	18.12.2025/ 15:05

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-23) 2022	µg/m <sup>3</sup>	10	55.45	54.59	53.77	58.84	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (P-24) 2019	µg/m <sup>3</sup>	8	25.35	23.59	26.62	27.04	60 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	5	10.07	09.93	11.86	11.68	80 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	6	19.77	17.78	20.39	20.71	80 (24 hr)
5.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m <sup>3</sup>	10	17.49	18.54	18.89	17.84	180 (1 hr)
6.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	10	23.00	27.07	23.29	25.91	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m <sup>3</sup>	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m <sup>3</sup>	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2-1999	ng/m <sup>3</sup>	2	BDL	BDL	BDL	BDL	-

Prescribed Limit Environmental (Protection) Rules-1986, Schedule -VII.  
Analysed by - Raish Varma



*[Signature]*  
Reviewed by  
(B.N. Kumar)  
Technical Head

Test Report End

*[Signature]*  
Issue by  
(Ajayesh Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

**Contractual Notes** | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility at specific environmental condition as method required and results relate only to the sample tested in prescribed Date & time | 3. The test report shall not be reproduced full or in part & can't be used as proof in the court | 4. Any complaint about this report should be communicated in writing within 10 days of its issue | 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to invoiced amount only. | 6. All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges | 7. Opinion does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any caused by use or misuse of this report. | 8. When the results are from external provider are marked as \* mark. |  
**Abbreviation:** - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation). |



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GST:-20AAHCE3611M1ZK

Accredited by :-  
Jharkhand State Pollution Control Board  
Certified by :-  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04132551001	Group	Atmospheric Pollution
Issue date/time	18.12.2025/16:30	Sub Group	Ambient Air Quality

Report Issue to		Contact Person	Mr. Girija Tamrakar
M/s - MINERALS & MINERALS LIMITED		Contact Number	+91 9111006074
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,		Email Id	girija.tamrakar@adityabirla.com
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302		Order Date	05.04.2025/10:10
MONITORING SITE : PAKHAR 15.58 BAUXITE MINE		Order Number	RP/MB/MM/25/0114/00

References of Quality Management System (Steps of Traceability Chain)			
Customer Registration No.	EPIC/OTH/0413	Sample Booking Number	EPIC-2551001
Sample(s) Code	2551001 (A) (B) (C) (D)	Sample Receipt (D/T)	15.12.2025/10:30

Sampling References			
Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	12.12.2025/10:00	Sampling End (D/T)	13.12.2025/08:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Cloudy	Temperature (°C)	22	Humidity %	63	Wind direction	90°-270°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Near Mine Office	GPS coordinate	23° 32' 22.71"/84° 36' 34.81"
S. Location B	Near Weigh Bridge	GPS coordinate	23° 32' 25.07"/84° 36' 35.09"
S. Location C	Near Mine Quarry No-M1	GPS coordinate	23° 32' 08.09"/84° 36' 06.42"
S. Location D	Near Mine Quarry No-M4	GPS coordinate	23° 32' 07.68"/84° 36' 04.96"

Date(s) of performance of the laboratory activities			
Test start date	15.12.2025/11:15	Test completion date	18.12.2025/15:05

--Test Results Start--									
Sl	Tested Parameters	Method used	Unit	LoQ	A	B	C	D	Limits
1.	Benzene (as C <sub>6</sub> H <sub>6</sub> )	IS 5182 (P-11): 2006	µg/m <sup>3</sup>	1	BDL	BDL	BDL	BDL	-
2.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2006	ng/m <sup>3</sup>	0.5	BDL	BDL	BDL	BDL	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01	mg/m <sup>3</sup>	1.8	BDL	BDL	BDL	BDL	-
--Test Results End--									

Prescribed Limit Environmental (Protection) Rules-1986, Schedule -VII.  
Analysed by - Rajesh Varma



*[Signature]*  
Authorized by  
(R.N. Kumar)  
Technical Head

Test Report End

*[Signature]*  
Authorized by  
(Girish Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



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PAN:-AAHCE3611M  
GST:-20AAHCE3611M1ZX

Accredited by -  
NABL, vide certificate Number TC - 12887  
Jharkhand State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Report

Unique Lab Report No.	TC1288725000001615	Discipline	Chemical
Report Unique ID	RI 04132551002	Group	Atmospheric Pollution
Issue date/time	18.12.2025/ 16:33	Sub Group	Ambient Noise

Report Issue to	M/s - MINERALS & MINERALS LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE : PAKHAR 15.58 BAUXITE MINE	Contact Person	Mr. Girija Tamrakar
		Contact Number	+91 9111006074
		Email Id	girija.tamrakar@adityabirla.com
		Order Date	05.04.2025/ 10:10
		Order Number	RP/MJB/MM/25/0114/00

References of Quality Management System (Steps of Traceability Chain)			
Customer Registration No.	EPIC/OTH/0413	Sample Booking Number	EPIC-2551002
Sample(s) Code	2551002 (A) (B) (C) (D)	Sample Receipt (D/T)	15.12.2025/ 10:31

Sampling References			
Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	12.12.2025/ 10:00	Sampling End (D/T)	13.12.2025/ 08:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Cloudy	Temperature (°C)	22	Humidity %	63	Wind direction	90°-270°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Near Mine Office	GPS coordinate	23° 32' 22.71" / 84° 36' 34.81"
S. Location B	Near Weigh Bridge	GPS coordinate	23° 32' 25.07" / 84° 36' 35.09"
S. Location C	Near Mine Quarry No-M1	GPS coordinate	23° 32' 08.09" / 84° 36' 06.42"
S. Location D	Near Mine Quarry No-M4	GPS coordinate	23° 32' 07.68" / 84° 36' 04.96"

Date(s) of performance of the laboratory activities			
Test start date	15.12.2025/ 11:50	Test completion date	18.12.2025/ 15:05

--Test Results Start--									
Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	L <sub>eq</sub> (Day time)	IS: 9869:1981	dB (A)	30	53.6	65.9	48.7	46.6	75
2.	L <sub>eq</sub> (Night time)	IS: 9869:1981	dB (A)	30	43.2	46.4	41.8	38.6	70
--Test Results End--									

Prescribed Limit Environmental (Protection) Rules-1986, Schedule -III.  
Analysed by - Rajesh Varma



Reviewed by  
(B.N. Kumar)  
Technical Head

Test Report End

Issue by  
(Ajitesh Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



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Abbreviation: - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantification). |



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PAN:-AAHCE3611M  
GST:-20AAHCE3611M1ZX

Accredited by :-  
Jharkhand State Pollution Control Board  
Certified by :-  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RI.04132551003	Group	Atmospheric Pollution
Issue date/time	18.12.2025/ 16:36	Sub Group	Work Zone Noise

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : PAKHAR 15.56 BAUXITE MINE

Contact Person Mr. Girija Tamrakar  
Contact Number +91 9111006074  
Email Id girija.tamrakar@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0413	Sample Booking Number	EPIC-2551003
Sample(s) Code	2551003 (A) (B)	Sample Receipt (D/T)	15.12.2025/ 10:32

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D)	12.12.2025	Sampling End (D)	12.12.2025
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	22	Humidity %	63	Wind direction	90°-270°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Weight Bride	GPS coordinate	23° 32' 25.03" / 84° 36' 35.47"
S. Location B	Near Mines Query No. M1	GPS coordinate	23° 32' 07.97" / 84° 36' 06.50"

### Date(s) of performance of the laboratory activities

Test start date	15.12.2025/ 11:50	Test completion date	18.12.2025/ 15:05
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### --Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results		Limits
					A	B	
1.	L <sub>eq</sub> (Day time)	IS: 9969:1981	dB (A)	30	68.0	71.4	85

### --Test Results End --

Prescribed Limit NIOSH - Publication No. 99-126 in 1972

Analysed by - Rajesh Varma



Reviewed by  
G.N. Kumar  
Technical Head

Test Report End

Issue by  
Omesh Das  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



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Abbreviation: - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation), |



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CIN:-U74999JH2022PTCO1968E  
PAN:-AAHCE3611M  
GST:-20AAHCE3611M12X

Accredited by :-  
NABL, wide certificate number TC-11887  
Jharkhand State Pollution Control Board  
Certified by :-  
ISO 9001:2015 and ISO 45001:2018

## Test Report

Unique Lab Report No.	TC128872600000039	Discipline	Chemical
Report Unique ID	RL04422602020	Group	Atmospheric Pollution
Issue date/time	13.01.2026/ 17:30	Sub Group	Ambient Air Quality

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : PAKHAR 15.58 BAUXITE MINE

Contact Person	Mr. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	girija.tamrakar@adityabirta.com
Order Date	05.04.2025/ 10:10
Order Number	RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0442	Sample Booking Number	EPIC-2602020
Sample(s) Code	2602020 (A) (B) (C) (D)	Sample Receipt (D/T)	10.01.2026/ 10:46

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	08.01.2026/ 10:42	Sampling End (D/T)	09.01.2026/ 08:34
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	21	Humidity %	59	Wind direction	40°-220°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Office	GPS coordinate	23° 32' 22.71" / 84° 36' 34.81"
S. Location B	Near Weigh Bridge	GPS coordinate	23° 32' 25.07" / 84° 36' 35.09"
S. Location C	Near Mine Quarry No-M1	GPS coordinate	23° 32' 08.09" / 84° 36' 06.42"
S. Location D	Near Mine Quarry No-M4	GPS coordinate	23° 32' 07.68" / 84° 36' 04.96"

### Date(s) of performance of the laboratory activities

Test start date	10.1.2026/ 12:40	Test completion date	13.01.2026/ 15:10
-----------------	------------------	----------------------	-------------------

### --Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-23) 2022	µg/m <sup>3</sup>	10	56.63	55.84	54.71	59.67	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (P-24) 2019	µg/m <sup>3</sup>	8	26.38	24.16	27.39	28.87	60 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	5	11.19	10.06	12.96	12.47	80 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	8	20.45	18.36	21.60	21.36	80 (24 hr)
5.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m <sup>3</sup>	10	19.41	20.13	20.49	19.77	180 (1 hr)
6.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	10	25.29	29.36	25.58	27.33	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m <sup>3</sup>	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Benzene (as C <sub>6</sub> H <sub>6</sub> )	IS 5182 (P-11): 2006	µg/m <sup>3</sup>	1	BDL	BDL	BDL	BDL	-
9.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m <sup>3</sup>	0.5	BDL	BDL	BDL	BDL	-
10.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m <sup>3</sup>	5	BDL	BDL	BDL	BDL	-
11.	Arsenic (As)	USEPA IO 3.2:1999	ng/m <sup>3</sup>	2	BDL	BDL	BDL	BDL	-

Test Results End

### Prescribed Limit Environmental (Protection) Rules-1986, Schedule -VII.

**Statement of conformity:** The sample(s) collected for analysis was tested in accordance with the requirements of Environmental (Protection) Rules, 1986, SCHEDULE VII. Based on the results obtained, the sample Comply with the specified limits for National Ambient Air Quality Standards, Page 398. This statement of conformity is based on the laboratory's established decision rule documented in EPIC/LAB/SOP/DR/01/01, which takes into account measurement uncertainty where applicable. This conformity assessment applies only to the parameters tested. No conclusion is drawn for the untested and unlisted parameters.

Analysed by - Rajesh Vaema



Reviewed by  
(B.K. Kumar)  
Technical Head

Issue by  
(Umesh Das)  
Laboratory Head

\*\*\*\*Test Report End\*\*\*\*

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



**Contractual Notes** | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility at specific environmental condition as method required and results relate only to the sample tested in prescribed Date & time | 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law | 4. Any complaint about this report should be communicated in writing within 10 days of its issue | 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to invoiced amount only. | 6. All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges | 7. Opinion does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any caused by use or misuse of this report. | 8. When the results are from external provider are marked as \* mark. |

**Abbreviation** - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation). |

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CIN:-U74999JH2022PTCO19685  
PAN:-AAHCE3611M  
GST:-20AAHCE3611M12X

Accredited by :-  
Jharkhand State Pollution Control Board  
Certified by :-  
ISO 9001:2015 and ISO 45001:2018

## Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RLD4422602020	Group	Atmospheric Pollution
Issue date/time	13.01.2026/ 17:30	Sub Group	Ambient Air Quality

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : PAKHAR 15.58 BAUXITE MINE

Contact Person Mr. Girija Tamrakar  
Contact Number +91 9111006074  
Email Id girija.tamrakar@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0442	Sample Booking Number	EPIC-2602020
Sample(s) Code	2602020 (A) (B) (C) (D)	Sample Receipt (D/T)	10.01.2026/ 10:46

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	08.01.2026/ 10:42	Sampling End (D/T)	09.01.2026/ 08:34
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	21	Humidity %	59	Wind direction	40°-220°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Office	GPS coordinate	23° 32' 22.71" / 84° 36' 34.81"
S. Location B	Near Weigh Bridge	GPS coordinate	23° 32' 25.07" / 84° 36' 35.09"
S. Location C	Near Mine Quarry No-M1	GPS coordinate	23° 32' 08.09" / 84° 36' 06.42"
S. Location D	Near Mine Quarry No-M4	GPS coordinate	23° 32' 07.68" / 84° 36' 04.96"

### Date(s) of performance of the laboratory activities

Test start date	10.1.2026/ 12:40	Test completion date	13.01.2026/ 15:10
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### --Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01	mg/m <sup>3</sup>	1.8	BDL	BDL	BDL	BDL	-

### --Test Results End--

### Prescribed Limit Environmental (Protection) Rules-1986, Schedule -VII.

**Statement of conformity:** The sample(s) collected for analysis was tested in accordance with the requirements of Environmental (Protection) Rules, 1986, SCHEDULE VII. Based on the results obtained, the sample Comply with the specified limits for National Ambient Air Quality Standards, Page 396. This statement of conformity is based on the laboratory's established decision rule documented in EPIC/LAB/SOP/DR/01/01, which takes into account measurement uncertainty where applicable. This conformity assessment applies only to the parameters tested. No conclusion is drawn for the untested and unlisted parameters.

Analysed by - Rajesh Varma



Reviewed by  
R.N. Kumar  
Technical Head

Issue by  
Rajesh Varma  
Laboratory Head

\*\*\*\*Test Report End\*\*\*\*

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

**Contractual Notes** | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility at specific environmental condition as method required and results relate only to the sample tested in prescribed Date & time | 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law. | 4. Any complaint about this report should be communicated in writing within 10 days of its issue | 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to invoiced amount only. | 6. All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges | 7. Opinion does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any caused by use or misuse of this report. | 8. When the results are from external provider are marked as \* mark. |  
**Abbreviation:** - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation).



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GST:-20AAHCE3611M1ZK

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NABL vide certificate Number TC- 12887  
Jharkhand State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Test Report



Unique Lab Report No.	TC1288726000000040	Discipline	Chemical
Report Unique ID	RL04422602021	Group	Water
Issue date/time	13.01.2026/ 17:33	Sub Group	Surface Water

### Report Issue to

**M/s - MINERALS & MINERALS LIMITED**  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
**MONITORING SITE : PAKHAR 15.58 BAUXITE MINE**

**Contact Person** Mr. Girija Tamrakar  
**Contact Number** +91 9111006074  
**Email Id** girija.tamrakar@adityabirla.com  
**Order Date** 05.04.2025/ 10:10  
**Order Number** RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0442	Sample Booking Number	EPIC- 2602021
Sample(s) Code	2602021	Sample Receipt (D/T)	10.01.2026/ 10:48

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	08.01.2026/ 15:40	Sampling End (D/T)	08.01.2026/ 15:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition Cloudy Temperature (°C) 21 Humidity % 59 Wind direction 40°-220°

### Sampling Location(s) with GPS coordinate(s)

S. Location A	Bungtapurt Village (Spring Water)	GPS coordinate	23° 32' 39.47"/ 84° 36' 32.01"
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### Date(s) of performance of the laboratory activities

Test start date	10.01.2026/ 11:10	Test completion date	13.01.2026/ 16:00
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### --Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	0.7	6.62	-
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.3	1.32	-
3.	Colour	IS 3025 (P-04) 2021	Hazen	5.0	5	-
4.	Odour	IS 3025 (P-05) 2018	-	-	Agreeable	-
5.	Taste	IS 3025 (P-07) 2017	-	-	Agreeable	-
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	10	298.0	-
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	5	21.68	-
8.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23) 2019	mg/l	10	72.00	-
9.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21) 2009	mg/l	10	88.35	-
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	10	16.03	-
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	0.6	BDL	-
12.	Sulphate (as SO <sub>4</sub> )	IS 3025 (P-24/Sec-1)2022	mg/l	0.3	9.10	-
13.	Nitrate (as NO <sub>3</sub> )	APHA 4500 B 2023	mg/l	0.4	3.73	-
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	0.001	BDL	-
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	0.3	11.74	-



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Jharkhand State Pollution Control Board  
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ISO 9001:2015 and ISO 45001:2018

## Test Report



Unique Lab Report No.	TC1288726000000040	Discipline	Chemical
Report Unique ID	RL04422602021	Group	Water
Issue date/time	13.01.2026/ 17:33	Sub Group	Surface Water

### Report Issue to

**M/s - MINERALS & MINERALS LIMITED**  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
**MONITORING SITE : PAKHAR 15.58 BAUXITE MINE**

**Contact Person** - Mr. Girija Tamrakar  
**Contact Number** +91 9111006074  
**Email Id** girija.tamrakar@adityabirta.com  
**Order Date** 05.04.2025/ 10:10  
**Order Number** RP/MJB/MM/25/0114/00

16. Fluoride (as F)	APHA 4500 F-C 2023	mg/l	0.1	BDL	-
<b>Group - Residues and Contaminants in Water,</b>					<b>Sub Group - Trace Metals Elements</b>
17. Copper (as Cu)	APHA 3111 B 2023	mg/l	0.1	BDL	-
18. Iron (as Fe)	APHA 3111 B 2023	mg/l	0.1	BDL	-
19. Lead (as Pb)	APHA 3111 B 2023	mg/l	0.01	BDL	-
20. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	0.003	BDL	-
21. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	0.01	BDL	-
22. Nickel (as Ni)	APHA 3111 B 2023	mg/l	0.02	BDL	-
23. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	0.005	BDL	-
24. Selenium (as Se)	APHA 3114 B 2023	mg/l	0.005	BDL	-
25. Manganese (as Mn)	APHA 3111 B 2023	mg/l	0.09	BDL	-
26. Zinc (as Zn)	APHA 3111 B 2023	mg/l	0.04	BDL	-
<b>Group - Residues and Contaminants in Water,</b>					<b>Sub Group - Pesticides</b>
27. a-BHC	USEPA 8081 B:2007	µg/l	0.1	BDL	-
28. Aldrin	USEPA 8081 B:2007	µg/l	0.03	BDL	-
29. b-BHC	USEPA 8081 B:2007	µg/l	0.1	BDL	-
30. Cis-Chlordane	USEPA 8081 B:2007	µg/l	0.1	BDL	-
31. d-BHC	USEPA 8081 B:2007	µg/l	0.1	BDL	-
32. dieldrin	USEPA 8081 B:2007	µg/l	0.1	BDL	-
33. Endosulfan I	USEPA 8081 B:2007	µg/l	0.1	BDL	-
34. Endosulfan Sulfate	USEPA 8081 B:2007	µg/l	0.1	BDL	-
35. Endosulfan II	USEPA 8081 B:2007	µg/l	0.1	BDL	-
36. Endrin aldehyde	USEPA 8081 B:2007	µg/l	0.1	BDL	-
37. Endrin Ketone	USEPA 8081 B:2007	µg/l	0.1	BDL	-
38. g-BHC	USEPA 8081 B:2007	µg/l	0.1	BDL	-
39. Heptachlor	USEPA 8081 B:2007	µg/l	0.1	BDL	-



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## Test Report

Unique Lab Report No.	TC128872600000040	Discipline	Chemical
Report Unique ID	RL04422602021	Group	Water
Issue date/time	13.01.2026/ 17:33	Sub Group	Surface Water

### Report Issue to

**M/s - MINERALS & MINERALS LIMITED**  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
**MONITORING SITE : PAKHAR 15.58 BAUXITE MINE**

Contact Person: Mr. Girija Tamrakar  
Contact Number: +91 9111006074  
Email Id: girija.tamrakar@adityabirla.com  
Order Date: 05.04.2025/ 10:10  
Order Number: RP/MJB/THH/25/G114/00

40.	Heptachlor epoxide isomer B	USEPA 8081 B:2007	µg/l	0.1	BDL	-
41.	Methoxychlor	USEPA 8081 B:2007	µg/l	0.1	BDL	-
42.	P,P-DDD	USEPA 8081 B:2007	µg/l	0.5	BDL	-
43.	P,P-DDE	USEPA 8081 B:2007	µg/l	0.5	BDL	-
44.	P,P-DDT	USEPA 8081 B:2007	µg/l	0.5	BDL	-
45.	transchlordane	USEPA 8081 B:2007	µg/l	0.1	BDL	-

---Test Result End---

Analysed by - Pappu Kumar

Reviewed by  
(B.N. Kumar)  
Technical Head

Issued by  
(Umesh Das)  
Laboratory Head

\*\*\*\*Test Report End\*\*\*\*

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



# EPIC LabTech Private Limited



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Accredited by :-  
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ISO 9001:2015 and ISO 45001:2018

## Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04422602021	Group	Water
Issue date/time	13.01.2026/ 17:33	Sub Group	Surface Water

### Report Issue to

**M/s - MINERALS & MINERALS LIMITED**  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
**MONITORING SITE : PAKHAR 15.58 BAUXITE MINE**

Contact Person Mr. Girija Tamrakar  
Contact Number +91 9111006074  
Email Id girija.tamrakar@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/IND/7/11/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0442	Sample Booking Number	EPIC- 2602021
Sample(s) Code	2602021	Sample Receipt (D/T)	10.01.2026/ 10:48

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	08.01.2026/ 15:40	Sampling End (D/T)	08.01.2026/ 15:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	21	Humidity %	59	Wind direction	40°-220°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Bunglapurt Village (Spring Water)	GPS coordinate	23° 32' 39.47"/ 84° 36' 32.01"
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### Date(s) of performance of the laboratory activities

Test start date	10.01.2026/ 11:10	Test completion date	13.01.2026/ 16:00
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### --Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
<b>Group-Residues and Contaminants in Water</b>			<b>Sub Group-Trace Metals Elements</b>			
1.	Aluminum	IS 3025 (P-55):2019	mg/l	0.1	BDL	-
2.	Barium	IS 3025 (P-57):2021	mg/l	0.1	BDL	-
3.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	0.2	BDL	-
4.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	0.05	BDL	-

### --Test Result End--

Analyzed by Pappu Kumar



  
Reviewed by  
(B.N. Kumar)  
Technical Head

\*\*\*\*Test Report End\*\*\*\*

  
Issued by  
(Umesh Des)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

# EPIC LabTech Private Limited



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Accredited by:-  
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Certified by:-  
ISO 9001:2015 and ISO 45001:2018

## Test Report

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL04422602022	Group	Water
Issue date/time	13.01.2026/ 17:36	Sub Group	Surface Water

### Report Issue to

**M/s - MINERALS & MINERALS LIMITED**  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
**MONITORING SITE : PAKHAR 15.58 BAUXITE MINE**

Contact Person: Mr. Girija Tamrakar  
Contact Number: +91 9111006074  
Email Id: girija.tamrakar@adityabirla.com  
Order Date: 05.04.2025/ 10:10  
Order Number: RP/11/20/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0442	Sample Booking Number	EPIC-2602022
Sample(s) Code	2602022	Sample Receipt (D/T)	10.01.2026/ 10:49

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	08.01.2026/ 15:40	Sampling End (D/T)	08.01.2026/ 15:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	59	Wind direction	40°-220°
-------------------	--------	------------------	----	------------	----	----------------	----------

### Sampling Location(s) with GPS coordinate(s)

S. Location A	Bunglapurt Village (Spring Water)	GPS coordinate	23° 32' 39.47"/ 84° 36' 32.01"
---------------	-----------------------------------	----------------	--------------------------------

### Date(s) of performance of the laboratory activities

Test start date	10.01.2026/ 11:10	Test completion date	13.01.2026/ 16:00
-----------------	-------------------	----------------------	-------------------

### --Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	Total Coliform	IS 15185 2002	Per 100 ml	-	316	
2.	E.Coli	IS 15185 2002	Per 100 ml	-	176	

### --Test Result End --

Analysed by - Ishika Singh



  
Reviewed by  
(B.N. Kumar)  
Technical Head

  
Issued by  
(Umesh Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





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Jharkhand State Pollution Control Board  
Certified by :-  
ISO 9001:2015 and ISO 45001:2018

## Test Report



Unique Lab Report No.	TC1288726000000178	Discipline	Chemical
Report Unique ID	RL04732608004	Group	Atmospheric Pollution
Issue date/time	19.02.2026/ 11:39	Sub Group	Ambient Air Quality

### M/s - MINERALS & MINERALS LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : PAKHAR 15.58 BAUXITE MINE

Contact Person	Mr. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	girija.tamrakar@adityabirla.com
Order Date	05.04.2025/ 10:10
Order Number	RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0473	Sample Booking Number	EPIC-2608004
Sample(s) Code	2608004 (A) (B) (C) (D)	Sample Receipt (D/T)	16.02.2026/ 11:03

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	13.02.2026/ 12:20	Sampling End (D/T)	14.02.2026/ 10:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	53	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Office	GPS coordinate	23° 32' 22.71" / 84° 36' 34.81"
S. Location B	Near Weigh Bridge	GPS coordinate	23° 32' 25.07" / 84° 36' 35.09"
S. Location C	Near Mine Quarry No-M1	GPS coordinate	23° 32' 08.09" / 84° 36' 06.42"
S. Location D	Near Mine Quarry No-M4	GPS coordinate	23° 32' 07.68" / 84° 36' 04.96"

### Date(s) of performance of the laboratory activities

Test start date	16.02.2026/ 13:25	Test completion date	19.02.2026/ 10:15
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### --Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-23) 2022	µg/m <sup>3</sup>	10	55.72	54.91	53.83	58.73	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (P-24) 2019	µg/m <sup>3</sup>	8	25.55	23.49	26.62	27.90	60 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	5	11.59	10.99	13.35	12.75	80 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	6	21.73	19.54	23.48	22.51	80 (24 hr)
5.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m <sup>3</sup>	10	22.28	23.36	22.64	21.93	180 (1 hr)
6.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	10	27.04	31.40	26.75	29.36	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m <sup>3</sup>	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Benzene (as C <sub>6</sub> H <sub>6</sub> )	IS 5182 (P-11): 2006	µg/m <sup>3</sup>	1	BDL	BDL	BDL	BDL	-
9.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m <sup>3</sup>	0.5	BDL	BDL	BDL	BDL	-
10.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m <sup>3</sup>	5	BDL	BDL	BDL	BDL	-
11.	Arsenic (As)	USEPA IO 3.2:1999	ng/m <sup>3</sup>	2	BDL	BDL	BDL	BDL	-

### --Test Results End --

Prescribed Limit Environmental (Protection) Rules-1986, Schedule -VII.

Analysed by - Rajesh Varma

  
Reviewed by  
(B.N. Kumar)  
Technical Head

  
Issue by  
(Gimesh Das)  
Laboratory Head

\*\*\*\*Test Report End\*\*\*\*

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



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**Abbreviation** - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation). |

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✉ epiclabtech@gmail.com

CIN:-U74999JH2022PTC019685 Accredited by :-  
Jharkhand State Pollution Control Board  
PAN:-AAHCE3611M Order Number :-  
GST:-20AAHCE3611M12X Certified by :-  
ISO 9001:2015 and ISO 45001:2018

## Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04732608004	Group	Atmospheric Pollution
Issue date/time	19.02.2026/11:39	Sub Group	Ambient Air Quality

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : PAKHAR 15.58 BAUXITE MINE

Contact Person Mr. Girija Tamrakar  
Contact Number +91 9111006074  
Email Id girija.tamrakar@adityabirla.com  
Order Date 05.04.2025/10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0473	Sample Booking Number	EPIC-2608004
Sample(s) Code	2608004 (A) (B) (C) (D)	Sample Receipt (D/T)	16.02.2026/11:03

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	13.02.2026/12:20	Sampling End (D/T)	14.02.2026/10:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	53	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Office	GPS coordinate	23° 32' 22.71" / 84° 36' 34.81"
S. Location B	Near Weigh Bridge	GPS coordinate	23° 32' 25.07" / 84° 36' 35.09"
S. Location C	Near Mine Quarry No-M1	GPS coordinate	23° 32' 08.09" / 84° 36' 06.42"
S. Location D	Near Mine Quarry No-M4	GPS coordinate	23° 32' 07.68" / 84° 36' 04.96"

### Date(s) of performance of the laboratory activities

Test start date	16.02.2026/13:25	Test completion date	19.02.2026/10:15
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### --Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01	mg/m <sup>3</sup>	1.8	BDL	BDL	BDL	BDL	-

### --Test Results End--

Prescribed Limit Environmental (Protection) Rules-1986, Schedule -VII.

Analysed by - Rajesh Verma

Reviewed by  
(G.N. Kumar)  
Technical Head

Issue by  
(Omesh Das)  
Laboratory Head

\*\*\*\*Test Report End\*\*\*\*



Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



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CIN:-U74999JH2022PTC019685  
PAN:-AAHCE3611M  
GST:-20AAHCE3611M1Zx

Accredited by -  
NABL (NABL Certificate Number TC- 12887  
Jharkhand State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Test Report



Unique Lab Report No.	TC1288726000000322	Discipline	Chemical
Report Unique ID	RL05123611025	Group	Atmospheric Pollution
Issue date/time	19.03.2026/ 16:20	Sub Group	Ambient Air Quality

**M/s - MINERALS & MINERALS LIMITED**  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : PAKHAR 15.58 BAUXITE MINE

**Contact Person** Mr. Girija Tamrakar  
**Contact Number** +91 9111006074  
**Email Id** girija.tamrakar@adityabirla.com  
**Order Date** 05.04.2025/ 10:10  
**Order Number** RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0512	Sample Booking Number	EPIC-2611025
Sample(s) Code	2611025 (A) (B) (C) (D)	Sample Receipt (D/T)	14.03.2026/ 12:15

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	12.03.2026/ 11:20	Sampling End (D/T)	13.03.2026/ 09:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	23	Humidity %	47	Wind direction	270°-90°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Office	GPS coordinate	23° 32' 22.71" / 84° 36' 34.81"
S. Location B	Near Weigh Bridge	GPS coordinate	23° 32' 25.07" / 84° 36' 35.09"
S. Location C	Near Mine Quarry No-M1	GPS coordinate	23° 32' 08.09" / 84° 36' 06.42"
S. Location D	Near Mine Quarry No-M4	GPS coordinate	23° 32' 07.68" / 84° 36' 04.96"

### Date(s) of performance of the laboratory activities

Test start date	14.03.2026/ 12:50	Test completion date	19.03.2026/ 13:20
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### --Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-23) 2022	µg/m <sup>3</sup>	10	56.84	55.97	54.77	59.59	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (P-24) 2019	µg/m <sup>3</sup>	8	26.94	25.10	27.31	29.09	80 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	5	10.87	09.97	12.70	11.34	80 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	6	20.53	18.46	21.80	21.43	80 (24 hr)
5.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m <sup>3</sup>	10	25.16	26.60	25.88	24.08	180 (1 hr)
6.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	10	28.78	31.69	27.33	30.82	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m <sup>3</sup>	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Benzene (as C <sub>6</sub> H <sub>6</sub> )	IS 5182 (P-11): 2006	µg/m <sup>3</sup>	1	BDL	BDL	BDL	BDL	-
9.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m <sup>3</sup>	0.5	BDL	BDL	BDL	BDL	-
10.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m <sup>3</sup>	5	BDL	BDL	BDL	BDL	-
11.	Arsenic (As)	USEPA IO 3.2:1999	ng/m <sup>3</sup>	2	BDL	BDL	BDL	BDL	-

### --Test Results End --

Prescribed Limit Environmental (Protection) Rules-1986, Schedule -VII.

Analyzed by - Rajesh Varma



*(Signature)*  
Reviewed by  
(R.N. Kumar)  
Technical Head

\*\*\*\*Test Report End\*\*\*\*

*(Signature)*  
Issued by  
(Umesh Gao)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

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CIN:-U74999JH2022PTC019685  
PAN:-AAHCE3611M  
GST:-20AAHCE3611MTZX

Accredited by :-  
Jharkhand State Pollution Control Board  
Certified by :-  
ISO 9001:2015 and ISO 45001:2018

## Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL05123611025	Group	Atmospheric Pollution
Issue date/time	19.03.2026/ 16:20	Sub Group	Ambient Air Quality

### Report Issue to

**M/s - MINERALS & MINERALS LIMITED**  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
**MONITORING SITE : PAKHAR 15.58 BAUXITE MINE**

**Contact Person** Mr. Girija Tamrakar  
**Contact Number** +91 9111006074  
**Email Id** girija.tamrakar@adityabirta.com  
**Order Date** 05.04.2025/ 10:10  
**Order Number** RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0512	Sample Booking Number	EPIC-2611025
Sample(s) Code	2611025 (A) (B) (C) (D)	Sample Receipt (D/T)	14.03.2026/ 12:15

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	12.03.2026/ 11:20	Sampling End (D/T)	13.03.2026/ 09:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	23	Humidity %	47	Wind direction	270°-90°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Office	GPS coordinate	23° 32' 22.71" / 84° 36' 34.81"
S. Location B	Near Weigh Bridge	GPS coordinate	23° 32' 25.07" / 84° 36' 35.09"
S. Location C	Near Mine Quarry No-M1	GPS coordinate	23° 32' 08.09" / 84° 36' 06.42"
S. Location D	Near Mine Quarry No-M4	GPS coordinate	23° 32' 07.68" / 84° 36' 04.96"

### Date(s) of performance of the laboratory activities

Test start date	14.03.2026/ 12:50	Test completion date	19.03.2026/ 13:20
-----------------	-------------------	----------------------	-------------------

### --Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01	mg/m <sup>3</sup>	1.8	BDL	BDL	BDL	BDL	-

### --Test Results End--

**Prescribed Limit** Environmental (Protection) Rules-1986, Schedule-VII.

Analysed by - Rajesh Varma



*(Signature)*  
Reviewed By  
(B.N. Kumar)  
Technical Head

*(Signature)*  
Issue by  
(Umesh Das)  
Laboratory Head

\*\*\*\*Test Report End\*\*\*\*

**Authorized Signatory**  
**EPIC LabTech Pvt. Ltd.**  
Ranchi, Jharkhand



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**Abbreviation:** - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation). |



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PAN:-AAHCE3611M  
GST:-20AAHCE3611M1ZK

Accredited by :-  
NABL vide certificate Number TC- 12887  
Jharkhand State Pollution Control Board  
Certified by :-  
ISO 9001:2015 and ISO 45001:2018

## Test Report



Unique Lab Report No.	TC1288726000000323	Discipline	Chemical
Report Unique ID	RL05123611026	Group	Water
Issue date/time	19.03.2026/ 16:23	Sub Group	Drinking Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : PAKHAR 15.58 BAUXITE MINE

Contact Person Mr. Girija Tamrakar  
Contact Number +91 9111006074  
Email Id Girija.tamrakar@adityabirla.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0512	Sample Booking Number	EPIC-3611026
Sample(s) Code	3611026 (A) (B) (C) (D)	Sample Receipt (D/T)	14.03.2026/ 12:16

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	12.03.2026/ 15:48	Sampling End (D/T)	12.03.2026/ 15:59
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	23	Humidity %	47	Wind direction	270°-90°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Canteen, Pakhar (15.58ha)	GPS coordinate	23° 32' 23.49"/ 84° 36' 37.04"
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### Date(s) of performance of the laboratory activities

Test start date	14.03.2026/ 12:36	Test completion date	19.03.2026/ 15:00
-----------------	-------------------	----------------------	-------------------

### --Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits	
						Acceptable Limit	Permissible limit
1.	pH value at 25.1°C	IS 3025 (P-11) 2022	-	1.5	6.92	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.3	0.91	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	5.0	5	5	15
4.	Odour	IS 3025 (P-05) 2018	-	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	10	232.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	5	40.40	250	1000
8.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23) 2019	mg/l	10	92.00	200	600
9.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21) 2009	mg/l	10	124.50	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	10	41.68	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	0.6	BDL	0.2	1
12.	Sulphate (as SO <sub>4</sub> )	IS 3025 (P-24/Sec-1)2022	mg/l	0.3	8.70	200	400
13.	Nitrate (as NO <sub>3</sub> -N)	IS 3025 (P-34/Sec-1) 2023	mg/l	0.4	2.11	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	0.001	BDL	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	0.3	4.98	30	100



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GST:-20AAHCE3611M1ZK

Accredited by:-  
NABL, vide certificate Number TC- 12887  
Jharkhand State Pollution Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018

## Test Report



Unique Lab Report No.	TC1288726000000323	Discipline	Chemical
Report Unique ID	RL05123611026	Group	Water
Issue date/time	19.03.2026/ 16:23	Sub Group	Drinking Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : PAKHAR 15.58 BAUXITE MINE

Contact Person  
Contact Number  
Email Id  
Order Date  
Order Number  
Mr. Girija Tamrakar  
+91 9111006074  
Girija.tamrakar@adityabirla.com  
05.04.2025/10:10  
RP/MJB/MM/25/0114/00

16. Fluoride (as F)	APHA 4500 F-D2023	mg/l	0.1	BDL	1.0	1.5
<b>Group - Residues and Contaminants in Water,</b>				<b>Sub Group - Trace Metals Elements</b>		
17. Copper (as Cu)	APHA 3111 B 2023	mg/l	0.1	BDL	0.05	1.5
18. Iron (as Fe)	APHA 3111 B 2023	mg/l	0.1	BDL	1.0	No relaxation
19. Lead (as Pb)	APHA 3111 B 2023	mg/l	0.01	BDL	0.01	No relaxation
20. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	0.003	BDL	0.003	No relaxation
21. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	0.01	BDL	0.05	No relaxation
22. Nickel (as Ni)	APHA 3111 B 2023	mg/l	0.02	BDL	0.02	No relaxation
23. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	0.005	BDL	0.01	0.05
24. Selenium (as Se)	APHA 3114 B 2023	mg/l	0.005	BDL	0.01	No relaxation
25. Manganese (as Mn)	APHA 3111 B 2023	mg/l	0.09	BDL	0.1	0.3
26. Zinc (as Zn)	APHA 3111 B 2023	mg/l	0.04	BDL	5	15
<b>Group - Residues and Contaminants in Water,</b>				<b>Sub Group - Pesticides</b>		
27. Aldrin	USEPA 8081 B:2007	µg/l	0.03	BDL	0.03	No relaxation
28. dieldrin	USEPA 8081 B:2007	µg/l	0.03	BDL	0.03	No relaxation

--Test Result End --

Prescribed Limit IS 10500:2012.

Analysed by - Pappu Kumar



Reviewed by  
(B.N. Kumar)  
Technical Head

\*\*\*\*Test Report End\*\*\*\*

Issued by  
(Umesh Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

# EPIC LabTech Private Limited



Address:-  
Indrapuri, Road No. - 5,  
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India

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CIN:-U74999JH2022PTC019683  
PAN:-AAHCE3611M  
GST:-20AAHCE3611M1ZX

Accredited by :-  
Jharkhand State Pollution Control Board  
Certified by :-  
ISO 9001:2015 and ISO 45001:2018

## Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL05123611026	Group	Water
Issue date/time	19.03.2026/ 16:23	Sub Group	Drinking Water

### Report Issue to

<b>M/s - MINERALS &amp; MINERALS LIMITED</b> VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE : PAKHAR 15.58 BAUXITE MINE	<b>Contact Person</b> <b>Contact Number</b> <b>Email Id</b> <b>Order Date</b> <b>Order Number</b>	Mr. Girija Tamrakar +91 9111006074 Girija.tamrakar@adityabirla.com 05.04.2025/ 10:10 RP/MJB/MM/25/0114/00
---	---	---

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0512	Sample Booking Number	EPIC-3611026
Sample(s) Code	3611026 (A) (B) (C) (D)	Sample Receipt (D/T)	14.03.2026/ 12:16

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	12.03.2026/ 15:48	Sampling End (D/T)	12.03.2026/ 15:59
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	23	Humidity %	47	Wind direction	270°-90°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Canteen, Pakhar (15.58ha)	GPS coordinate	23° 32' 23.49" / 84° 36' 37.04"
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### Date(s) of performance of the laboratory activities

Test start date	14.03.2026/ 12:36	Test completion date	19.03.2026/ 15:00
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### --Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits	
						Acceptable Limit	Permissible limit
1.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	0.2	BDL	0.5	No relaxation
2.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	0.05	BDL	0.1	No relaxation
<b>Group-Residues and Contaminants in Water</b>						<b>Sub Group- Trace Metals Elements</b>	
3.	Aluminum	IS 3025 (P-55):2019	mg/l	0.1	BDL	0.03	0.2
4.	Boron	IS 3025 (P-57):2021	mg/l	0.1	BDL	0.5	1.0
<b>Group-Residues and Contaminants in Water</b>						<b>Sub Group-Pesticides</b>	
5.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	20	No relaxation
6.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	2.0	No relaxation
7.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	0.005	BDL	0.01	No relaxation
8.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	0.02	BDL	0.04	No relaxation
9.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	125.0	No relaxation
10.	Chlopyriphos	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	30.0	No relaxation
11.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	0.02	BDL	0.04	No relaxation
12.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	3.0	No relaxation
13.	Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	2.0	No relaxation

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CIN:-U74999JH2022PTC019685  
PAN:-AAHCE3611M  
GST:-20AAHCE3611M1ZK

Accredited by :-  
Jharkhand State Pollution Control Board  
Certified by :-  
ISO 9001:2015 and ISO 45001:2018

## Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL05123611026	Group	Water
Issue date/time	19.03.2026/ 16:23	Sub Group	Drinking Water

### Report Issue to

**M/s - MINERALS & MINERALS LIMITED**  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
**MONITORING SITE : PAKHAR 15.58 BAUXITE MINE**

**Contact Person** Mr. Girija Tamrakar  
**Contact Number** +91 9111006074  
**Email Id** Girija.tamrakar@adityabirla.com  
**Order Date** 05.04.2025/ 10:10  
**Order Number** RP/MJB/MM/25/0114/00

14.	Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	190.0	No relaxation
15.	Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	0.2	BDL	0.3	No relaxation
16.	Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	1.0	No relaxation
17.	Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	2.0	No relaxation
18.	DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	1.0	No relaxation
19.	Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	0.05	BDL	0.4	No relaxation

--Test Result End --

Prescribed Limit IS 10500:2012.

Analysed by - Pappu Kumar



  
Reviewed by  
(B.N. Kumar)  
Technical Head

\*\*\*\*Test Report End\*\*\*\*

  
Issued by  
(Limesh Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



Page 2 of 2

**Contractual Notes** | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility - at specific environmental condition as method required and results relate only to the sample tested in prescribed Date & time | 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law. | 4. Any complaint about this report should be communicated in writing within 10 days of its issue | 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to invoiced amount only. | 6. All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges | 7. Opinion does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any caused by use or misuse of this report. | 8. When the results are from external provider are marked as \* mark. |

**Abbreviation:** - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation). |

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CIN:-U74999JH2022PTC019685  
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Accredited by :-  
Jharkhand State Pollution Control Board  
Certified by :-  
ISO 9001:2015 and ISO 45001:2018

## Test Report

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL05123611027	Group	Water
Issue date/time	19.03.2026/ 16:26	Sub Group	Drinking Water

### Report Issue to

M/s - MINERALS & MINERALS LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : PAKHAR 15.58 BAUXITE MINE

Contact Person Mr. Girija Tamrakar  
Contact Number +91 9111006074  
Email Id Girija.tamrakar@adityabirta.com  
Order Date 05.04.2025/ 10:10  
Order Number RP/MJB/MM/25/0114/00

### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0512	Sample Booking Number	EPIC-3611027
Sample(s) Code	3611027	Sample Receipt (D/T)	14.03.2026/ 12:17

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	12.03.2026/ 15:48	Sampling End (D/T)	12.03.2026/ 15:59
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	23	Humidity %	47	Wind direction	270°-90°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Canteen, Pakhar (15.58ha)	GPS coordinate	23° 32' 23.49"/ 84° 36' 37.04"
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### Date(s) of performance of the laboratory activities

Test start date	14.03.2026/ 12:37	Test completion date	19.03.2026/ 14:15
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### --Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	Coliform Bacteria	IS 15185 2016	Per 100 ml	-	Absent	Shall not be detectable in any 100 ml sample
2.	E. Coli	IS 15185 2016	Per 100 ml	-	Absent	

### --Test Result End --

Prescribed Limit IS 10500:2021.

Analysed by - Ishika Singh



Reviewed by  
(R.N. Kumar)  
Technical Head

\*\*\*\*Test Report End\*\*\*\*

Issued by  
(Imesh Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

# MINERALS & MINERALS LIMITED

Regd. Office- Court Road, P.O. & Distt.-Lohardaga, Jharkhand-835302

Tel.-06526-223163

CIN NO. U26990JH1970PLC000875

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Ref. :

Date .....

## Annexure 3

Date – 01.05.2025

### Office Order

Environmental Cell has been re-constituted for Pakhar Group of Mines (Pakhar – 109.507 ha, Pakhar – 15.58 ha Bauxite Mines). This cell consists of the following team members who will ensure compliance with the Environment Acts, Rules & Regulations in respect of the said mines of Minerals & Minerals Limited.

1. Mr. Jitendra Kumar (Coordinator)
2. Mr. Chandan Kumar (Geologist)
3. Mr. Girija Tamrakar (Environment Engineer)
4. Mr. Anand Prakash Tiwari (Environment Engineer)

The Undersigned is the in charge of above Environment Management Cell constituted for the purpose of ensuring compliances of environmental acts, rules and regulations for the above mines.



Basudev Gangopadhyay  
AVP (Planning, Environment & Compliance)

**Annexure 4**

<b>Production, Mined Out, Back Filled and Over Burden removal from October 2025 to March 2026</b>								
<b>S. No</b>	<b>Name of the Mines</b>	<b>Mining lease area (ha)</b>	<b>Production Capacity (MT)*</b>	<b>Lease Period*</b>	<b>Production (MT)</b>	<b>Mined out area (ha)</b>	<b>Backfilled area (ha)</b>	<b>Over burden (Cu.M)</b>
1	Bagru Bauxite Mine	75.41	85000	22.01.1974 to 31.03.2030	NIL	NIL	NIL	NIL
2	Bhusar Bauxite Mine	65.31	280000	11.07.1981 to 31.03.2030	89066	0.650	0.915	33436.80
3	Hisri (New) Bauxite Mine	14.55	100000	19.07.1981 to 31.03.2030	41184	0.655	0.920	996.270
4	Pakhar (8.09) Bauxite Mine	8.09	80000	16.05.1973 to 31.03.2030	NIL	NIL	NIL	NIL
5	Pakhar (35.12) Bauxite Mine	35.12	200000	17.04.1975 to 31.03.2030	NIL	NIL	NIL	NIL
6	Pakhar (115.13) Bauxite Mine	115.13	300000	19.07.1996 to 31.03.2030	171180	3.820	2.310	271049.97
7	Sherangdag-A Bauxite Mine	155.81	260000	16.10.1974 to 31.03.2030	75150	2.850	1.700	158752.125
8	Serangdag-B Bauxite Mine	77.89	100000	04.10.1978 to 31.03.2030	42330	0.860	0.730	47018.623
9	Jalim & Sanai Bauxite Mine	12.14	50000	16.10.1974 to 31.03.2030	NIL	NIL	NIL	NIL
10	Gurdari Bauxite Mine	584.19	325000	23.03.1985 to 22.03.2035	130240	4.520	4.270	225170.36
11	Kujam - I Bauxite Mine	80.87	150000	13.03.2006 to 12.03.2056	NIL	NIL	NIL	NIL
12	Kujam - II Bauxite Mine	157.38	300000	24.03.2006 to 23.03.2056	63685	3.120	4.284	65548.95
13	Amtipani Bauxite Mine	190.95	150000	13.03.2006 to 12.03.2056	55635	4.960	5.050	192519.545

**Annexure 4**

<b>Minerals &amp; Minerals Limited</b>								
14	Pakhar (109.507) Bauxite Mine	109.507	280000	26.07.2008 to 25.07.2058	178350	1.590	1.950	270329.705
15	Pakhar (15.58) Bauxite Mine	15.58	60000	28.04.1965 to 31.03.2030	46150	0.380	0.038	16378.345
16	Bimarla Bauxite Mine	134.526	300000	18.07.2009 to 17.07.2059	54300	3.871	0.910	114143.750
17	Amtipani Chirodih Bauxite Mine	130.01	450000	11.01.2017 to 10.01.2067	152300	5.600	4.860	299385.013

\*Static information about the mines included in the above table



R R P Ambastha  
Head - Compliance

**BREAK UP THE COST OF ENVIRONMENTAL MEASURES DURING THE YEAR 2025-26**

The composite cost during the year 2025-26 for environmental protection & pollution control by Jharkhand Mines division of M/s Hindalco Industries Ltd & M/s Minerals & Minerals Ltd for implementation of the suggested measures in EC at our all the operating mines in the state of Jharkhand-namely Bagru (75.41 ha), Hisri New (14.55 ha), Bhusar (65.31 ha), Pakhar (115.13 ha), Pakhars (109.507 ha), Pakhar (15.58 ha), Pakhar (8.09 ha), Pakhar (35.12 ha), Sherangdag (155.81 ha), Serangdag (77.89 ha), Jalim & Sanai (12.14 ha), Bimarla Bauxite Mines (134.526 ha), Gurdari (584.19 ha), Amtipani (190.95 ha), Kujam I (80.87 ha) Kujam II (157.38 ha), and Amtipani Chirodih (130.01 ha) Bauxite mines.

S. No	Description	Budget (in Rupees) FY 2025-26 (From Oct'25 to Mar'26)	Actual (in Rupees) FY 2025-26 (From Oct'25 to Mar'26)
1	Pollution Control and Environmental Monitoring	1,71,00,000	88,71,710
2	Reclamation/ Back filing & Rehabilitation**	2,04,00,000	34,88,940
3	Green belt, Plantation & Water sprinkling arrangement	1,20,00,000	87,33,877
4	Rural Development	7,92,00,000	7,39,52,956

\*\*Part of OB removed cost



R R P Ambastha  
Head - Compliance