

# 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/633

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 Bimarla (134.526 Ha) Bauxite Mining project of M/s Minerals & Minerals Limited, Gumla Jharkhand for the period from **October 2025 to March 2026**.

**Ref:** Environmental Clearance Letter No. J-11015/87/2009-IA II (M) dated 24<sup>th</sup> September 2013.

Dear Sir,

With reference to the above, we are submitting herewith the Compliance status report of EC conditions for **Bimarla (134.526 Ha)** Bauxite Mining project of **M/s Minerals & Minerals Limited**, Gumla 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
134.526	300000	18.07.2009 to 17.07.2059

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** : **Bimarla Bauxite Mine (134.526 ha)**  
**M/s Minerals & Minerals Ltd**

**Environment Clearance No & date** : **J-11015/87/2009-IA. II (M) dated 24.09.2013.**

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

**Specific Condition: -**

**Condition i: - The project proponent shall obtain Consent to Establish and Consent to Operate from the Jharkhand State Pollution Control Board and effectively implement all the conditions stipulated therein.**

**Reply: -** Consent to Establish (CTE) and Consent to Operate (CTO) have been obtained. The Stipulated conditions of CTE/CTO are being Implemented and complied with. The existing Consent to Operate (CTO) is valid till 30.09.2026.

**Condition ii: - Implementations of conditions laid down in the letter of the State Department of Forests vide dated 11.05.2012 with regard to permission for transportation of ore through the forest land.**

**Reply: -** The conditions laid down in the said letter are being implemented and complied with.

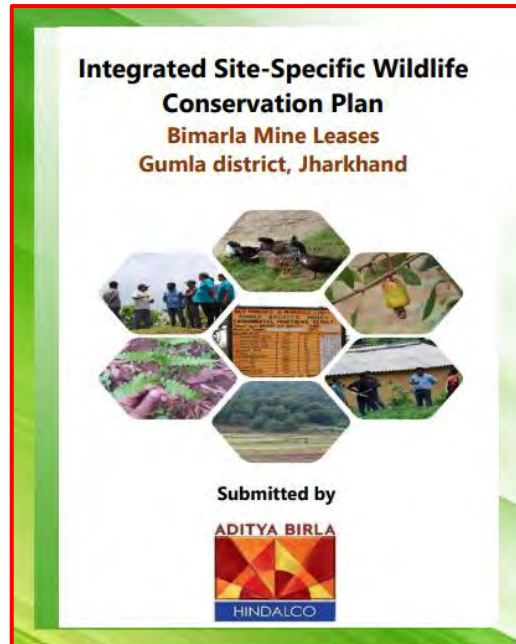
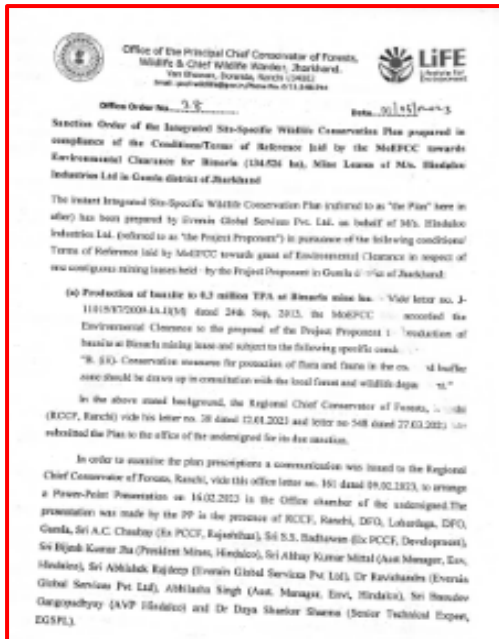
**Condition iii: - Necessary wildlife clearance as may be applicable to this project should be obtained. Measures for conservation of flora and fauna observed in the study area shall be undertaken. The Wildlife Conservation Plan shall be implemented in consultation with the State Forests and Wildlife Department.**

**Reply: -** We understand that Wildlife Clearance is not applicable to this project as the mine is located beyond the eco-sensitive zone.

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.

Also, we have been granted letter of approval for the Integrated Site-specific Wildlife Conservation Plan via Office Order No.28 dated 01.06.2023 by PCCF, Wildlife, Ranchi.



**Condition iv - Adequate measures for control of air pollution in the area shall be taken and it shall be ensured that the pollution levels do not exceed the prescribed limits.**

**Reply:** - Adequate Measures for control of air pollution in the area are being taken. Important measures are as follows.

1. Water sprinkling on haul roads and at places of source of pollution.
2. Control blasting practice.
3. Wet drilling is in practice.

Monitoring report of Ambient Air Quality is attached herewith as **Annexure - 2**.

**Condition v - No working shall be undertaken in the forest area for which forestry clearance has not been obtained.**

**Reply:** - Noted. However, there is no forest land within the lease hold area. Therefore, there is no need for forest clearance.

**Condition vi: - Necessary prior clearance, as applicable shall be obtained from CGWA for working below groundwater table.**

**Reply:** - Since shallow depth mining is being carried out, hence there is no intersection with the groundwater table. In the future also, the working zone will be restricted to above the groundwater table. We assure that no mining is/was carried out below the

groundwater table, and the same status will be maintained in the future also. Moreover, we are regularly monitoring the groundwater table through the installation of a piezometer. A copy of the water level report is attached herewith as **Annexure-1**. However, we have already obtained an NOC for the extraction of groundwater from CGWA/CGWB for drinking purposes only. A copy of the same NOC is attached below.

भारत सरकार केंद्रीय मंत्रालय जल संसाधन विभाग, केंद्रीय पृथ्वी खनन प्राधिकरण GOVERNMENT OF INDIA MINISTRY OF JAL SHAKTI DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION CENTRAL GROUND WATER AUTHORITY					
भूजल निकाली हेतु अनापत्ति प्रमाण पत्र NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION					
PROJECT NAME BIMARLA BAUXITE MINING PROJECT (134.37 HA)					
PROJECT ADDRESS BIMARLA BAUXITE MINING PROJECT VILL-BARANG,				PIN CODE 835302	
GHAGRA, KORLE AND BIMARLA DIST-GUMLA				TOWN/BLOCK GHAGHRA	
STATE JHARKHAND		DISTRICT GUMLA			
COMMUNICATION ADDRESS Court Road, P.O. Lohardaga					
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/2025/14723/R-3/3		2. DATE OF ISSUANCE 23/12/2025			
3. APPLICATION NO. MIN/JH/2025/14723/R-3		4. APPLICATION TYPE Mining			
5. PROJECT STATUS Existing Project		6. NOC TYPE Renew			
7. VALID FROM 16/01/2026		8. VALID UP TO 15/01/2028			
9. WATER QUALITY TYPE Fresh Water		10. AREA TYPE CATEGORY Safe IGWRE-2024			

NOC for Groundwater

**Condition vii : - The Company shall submit within 3 months their policy towards Corporate Environment Responsibility which should inter-alia provide for (i) Standard operating process / process to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions, (ii) Hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions and (iii) System of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders.**

**Reply: -** Policy towards Corporate Environment Responsibility is in place. A copy of our Environmental Policy has already been submitted to the relevant statutory authorities and attached herewith as **Annexure 6**. Company has implemented a system in line with the above policies which addresses following points. (i) Standard operating process / process to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions, (ii) Hierarchical system or administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions and (iii) System of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company.

**Condition viii : - The mining operations shall be restricted to above the groundwater table and it should not intersect the groundwater table, In case of working below the groundwater table, prior approval of the Ministry of Environment and Forests and the Central Ground Water Authority shall be obtained, for which a detailed hydrogeological study shall be carried out.**

**Reply:** - Noted. Since shallow depth mining is being carried out in Bimarla Bauxite Mine. Therefore, Mining operation does not involve intersection of ground water table. However, we are regularly monitoring the ground water table through installation of piezometer.

As the water table is not intersecting during mining operation, the detailed hydro-geological study is not applicable for this mine.

**Condition ix:** - **The project proponent shall ensure that no natural watercourse and/or water resources shall be obstructed due to any mining operations. The first order streams and the seasonal nallahs originating from the mining lease area shall be protected.**

**Reply:** - No natural watercourse and/or water resource is being and will be obstructed due to any mining operations.

**Condition x:** - **The topsoil, if any shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation.**

**Reply:** - Topsoil is being stacked temporarily properly with proper slope as and when required. Concurrent backfilling and reclamation of mined out area are being exercised for which topsoil is being spread on backfilled area for reclamation. No OB dump is present in mines. The mining is being carried out as per the approved mining plan. Monitoring and management of rehabilitated areas is being done through effective supervision.

**Condition xi:** - **Monitoring and management of rehabilitated areas should continue until vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional Office, Bhubaneswar on six monthly basis.**

**Reply:** - Monitoring and management of rehabilitated areas are being done through effective supervision. Concurrent Backfilling has already been started as per approved mining plan in scientific manner. The Data pertaining to status of backfilling is attached as **Annexure – 4**. Photographs of Reclaimed area are attached below.



Reclaimed Area

**Condition xii: - Catch drains and siltation ponds of appropriate size shall be constructed around the working pit, sub-grade dump, soil and mineral dumps to arrest flow of silt and sediment directly into the agricultural fields and the water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly de silted particularly after monsoon, and maintained properly, Garland drains settling tanks and check dams of appropriate size, gradient and length shall be constructed for both around the mine pit and sub-grade dump to prevent run off of water and flow sediments directly into the agricultural fields and the water bodies 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 settling of silt material. Sedimentation pits should be constructed at the corners of the garland drains and de silted 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 and maintained 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. Photographs of the same is attached below.



Rainwater Harvesting Pond



Catchment Drain



Garland Drain

**Condition xiii: - Dimension of the retaining wall at the toe of sub-grade dump and OB benches within the mine to check run-off and siltation should be based on the rain fall data.**

**Reply: -** There are no temporary dumps within the mining lease area. However, dimensions of the retaining wall of temporary OB dumps will be maintained based on average rain fall, if required.

**Condition xiv: - The plantation is proposed over an area of 24 ha with 2500 samplings per ha.**

**Reply: -** During FY 2025-26 till September, a total of 3530 nos. saplings have been planted in mining lease. Cumulative 12.31 ha areas have been planted till date. In addition to this agricultural activity is going on in reclaimed land as per the consent from landowners.

Green belt development programme is in progress with progress of mining activities



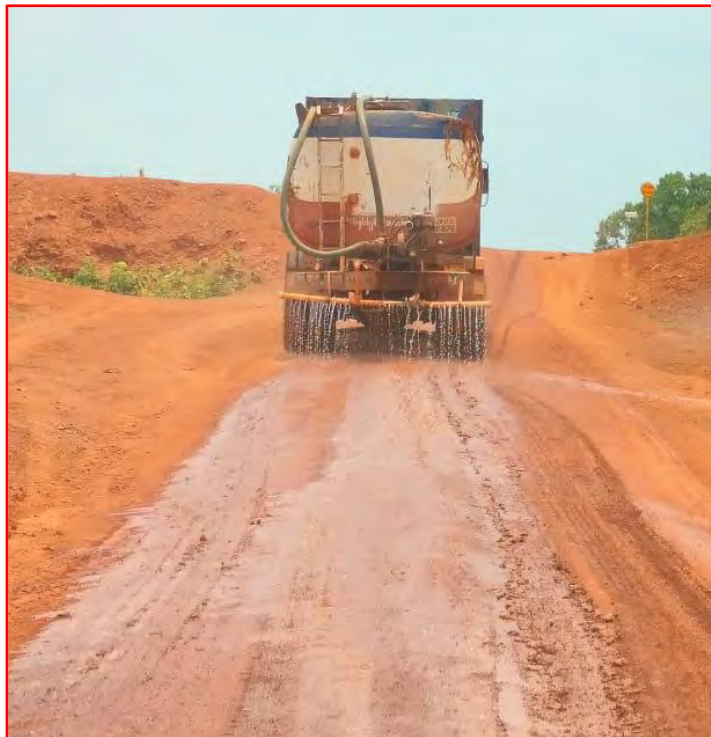
**Plantation at Mines**



**Agricultural activity**

**Condition xv: Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as around loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.**

**Reply:** - Effective safeguard measures, such as regular water sprinkling is being carried out on haul road and in critical areas prone to air pollution. Regular Ambient Air Quality (AAQ) monitoring is being carried out by NABL accredited Laboratory and all parameters are found within the prescribed limit. Monitoring report of AAQ is attached herewith as **Annexure-2**. Photographs of Water Tanker is attached herewith below.



Sprinkling of water on roads

**Condition xvi: 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:** - Effective measures have already been implemented. 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 the area in consultation with Central Ground Water Board. Photograph of Rainwater Harvesting Pond is already attached in **Condition xii**.

**Condition xvii: -Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and installing new piezometers during the mining operation. The periodic monitoring [(at least four times in a year- pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January); once in each season)] shall be carried out in consultation with the State Ground Water Board/Central Ground Water Authority and the data thus collected may be sent regularly to the Ministry of Environment and Forests and its Regional Office Bhubaneswar, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity, necessary corrective measures shall be carried out.**

**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 regular to regional office of Ministry, CGWA/CGWB and JSPCB. The same is attached herewith as **Annexure 1 & 2**. Now, Regional office of MoEF&CC is in Ranchi.



Piezometer

**Condition xviii: -Monitoring of the springs shall be carried out for the quality and quantity of water regularly so as to ensure that there is no adverse impact- on the same due to the project. Records in this regard shall be maintained.**

**Reply: -** Spring water is being monitored regularly, and Analysis report is attached as **Annexure 2**.

**Condition xix: -It shall be ensured that there is no change in the hydrology of the area due to the project.**

**Reply: -**Noted. We regularly monitor the ground water level and no adverse changes is observed.

**Condition xx: -Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.**

**Reply: -** Suitable rainwater harvesting measures like harvesting pond have been constructed on long term basis for augmentation of ground water in the area, in consultation with Central Ground Water Board. Photograph of Rainwater Harvesting Pond is already attached in reply to above condition xii.

**Condition xxi: - Appropriate mitigative measures shall be taken to prevent pollution of the all the water bodies, in consultation with the State Pollution Control Board.**

**Reply: -**We are not discharging any water outside mine lease area. Appropriate mitigative measures have been taken to prevent pollution of nearby water bodies. The drainage system in the mining lease area is designed to collect all rainwater within the lease into the pit/ rainwater harvesting pond only and ensuring that water does not flow outside the boundaries of the mine lease under any circumstances.

**Condition xxii: - Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral from mine face to the beneficiation plant. The vehicles shall be covered with a tarpaulin and shall not be overloaded.**

**Reply: -** Regular maintenance of vehicles is being undertaken to minimize vehicular emission. Measures are being taken to control emission. The vehicles are being covered with tarpaulin while transportation of mineral. Photograph of Tarpaulin Covered Vehicle and PUC Certificate are attached below.



Tarpaulin Covered Vehicle

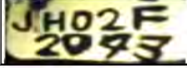
Form 59  
[See rules 115 (2)]

**Pollution Under Control Certificate**  
Authorised By: \_\_\_\_\_

Date : 16/03/2026  
Time : 10:13:10 AM  
Validity upto : 15/09/2026

Certificate No. : JH07400110019465  
Registration No. : JH02F2043  
Date of Registration : 29/Oct/2005  
Month & Year of Manufacturing : October-2005  
Vehic Mobile Number : -----8075  
Emission Norms : BHARAT STAGE II  
Fuel : DIESEL  
PUC Code : JH0010011  
GSTN :  
Fees : Rs. 300.00  
MVA observation : No.

Vehicle Photo with Registration plate  
60 mm x 30 mm



Sr. No.	Pollutant (as applicable)	Units (as applicable)	Emission limits	Measured Value (upto 2 decimal places)
1	Carbon Monoxide (CO)	percentage (%)		
Idling Emissions	Hydrocarbon, (THC/HC)	ppm		
	CO	percentage (%)		
High idling emissions	RPM	RPM	2500 ± 200	
	Lambda	-	1 ± 0.03	
Smoke Density	Light absorption coefficient	1/metre <sup>2</sup>	2.45	1.45

This PUC certificate is system generated through the national register of motor vehicles and does not require any signature.

Note : 1. Vehicle owners to link their mobile numbers to registered vehicle by logging to <https://puc.parivahan.gov.in>

Authorised Signature with stamp of PUC Operator  
50mm x 20 mm

PUC Certificate

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

**Reply:** - Blasting time is fixed during 1.00 PM -2.00 PM. Controlled blasting method is in practice. Ground vibration study has been conducted periodically. All efforts are being taken to mitigate impact of blasting.

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

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



Wet Drilling

**Condition xxv: - Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.**

**Reply: -** Water sprinkling is being carried out regularly at mineral handling area, loading and unloading areas to control the dust. Additionally, Fixed type water sprinkler has been installed near the weigh bridge to control dust emission.



Fixed Type Water Sprinkler

**Condition xxvi: - Sewage treatment plant shall be installed for the colony. ETP shall also be provided for the workshop and wastewater generated during the mining operation.**

**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 treatment of 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**.



Washing Ramp with Oil and Grease Trap System

**Condition xxvii: - The project authorities should undertake sample survey to generate data on pre project community health status within a radius of 1 km from proposed mine.**

**Reply: -** As a part of Community Health status check we regularly conduct medical camp in nearby areas.

**Condition xxviii: Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.**

**Reply: -** As a company, we are truly concerned about the health and safety of our on-site workers and in consideration to that, the health examination camps are being setup/scheduled on regularly basis.

**Condition xxix: - Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.**

**Reply: -** We believe that the wellbeing of all the labours working within the site should be taken care of on a priority basis, so that they can work in a stress-free environment. Therefore, all the necessary infrastructure and basic facilities are being taken care of. Safe drinking water and medical facilities already provided.

**Condition xxx: - The critical parameters such as RSPM (Particulate matter with size less than 10pm i.e. PM10) and NOx in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [(TDS, DO, PH and Total Suspended Solids (TSS)). The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The Circular No. 3-20012/1/2006- IA.11 (M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry [www.envfor.nic](http://www.envfor.nic) and shall also be referred in this regard for its compliance.**

**Reply:** Noted and being adhered. We have established four ambient air quality monitoring stations in the core zone as well as buffer zone. Monitoring of Ambient Air Quality and Treated Water is being carried out by NABL accredited Laboratory and reported to the concerned authorities. Monitoring Report is attached herewith as **Annexure 2**. Half-yearly EC compliance along with Environmental monitoring reports is being uploaded on company website regularly. A Display board is already installed near the mine gate office. We have also installed an online PM10 Analyzer at mine site.



PM10 Analyzer

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

**Reply: -** Noted and will be complied in due time. Progressive mine closure plan approved along Scheme of Mining. FMCP for total lease area will be prepared and submitted in due time as per applicable guideline and timelines mentioned in MCDR/IBM guideline who are competent authority to approve the same. Based on the present resource estimate, and peak rated production capacity mentioned in EC, Mining operation is being carried out.

**General Conditions: -**

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

**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. Report is attached herewith as **Annexure 4.**

**Condition iii: - Conservation measures for protection of flora and fauna in the core and buffer zone should be drawn up in consultation with the local forest and wildlife department.**

**Reply: -** Conservation measures for protection of flora and fauna in core & buffer zone has been drawn up in consultation with local forest and wildlife department. Also, we

prepared Integrated Site-specific Wildlife Conservation Plan (WLCP) and obtained approval from by PCCF, Wildlife, Ranchi vide Office Order No.28 dated 01.06.2023 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.

**Condition iv: - At least four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10 micron i.e., PM10) and NOx monitoring. Location of the stations should be decided based on the meteorological 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 of Ambient Air Quality is being carried out by NABL accredited Laboratory and reported to the concerned authorities. Monitoring Report is attached herewith as **Annexure - 2**.

**Condition v: - Data on ambient air quality [RSPM (Particulate matter with size less than 10micron i.e., PM10) and NOx] should be regularly submitted to the Ministry including its regional office located at: Bhubaneswar and the State Pollution Control Board / Central Pollution Control Board once in six months.**

**Reply: -** The monitoring of ambient air quality is being conducted by an NABL-accredited laboratory, and reports are regularly submitted to the MoEF&CC and JSPCB, Ranchi. The monitoring report is attached herewith as **Annexure - 2**. Now, Regional office of MoEF&CC is in Ranchi.

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

**Reply: -** Suitable water spraying arrangements are being made to control fugitive dust emissions from loading, unloading and transfer points as applicable. The photograph of the same is already attached in reply to specific condition no. xv.

**Condition vii: - Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / 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 has been attached as **Annexure - 2.**

**Condition viii: - Industrial wastewater (workshop and waste water from the Mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31' 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 treatment of 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.**



Washing Ramp with Oil and Grease Trap System

**Condition ix: - Personnel working in dusty areas should wear protective respiratory devices and they should also be 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 x:** - **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 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 Bhubaneswar.**

**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 project authorities should inform to the Regional Office located at Bhubaneswar 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:** - It is an operational mine. Hence provisions related to financial closure is not applicable. Now, the Regional Office of MoEF&CC is in Ranchi.

**Condition xiii:** - **The Regional Office of this Ministry located at Bhubaneswar 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:** - Agreed. Now, the Regional Office of MoEF&CC is in Ranchi.

**Condition xiv:** - **The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the Ministry of Environment and Forests, its Regional Office Bhubaneswar, the respective Zonal Office of Central Pollution Control Board and the State Pollution Control Board. The proponent shall upload the status of compliance of the environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the**

**Ministry of Environment and Forests, Bhubaneswar, the respective Zonal Officer of Central Pollution Control Board and the State Pollution Control Board.**

**Reply:** - Six monthly reports on status of compliance of the stipulated environmental clearance conditions including monitoring report are being submitted to the MoEF&CC, Zonal office of CPCB & JSPCB, Ranchi and also uploaded on the website of the Hindalco's website. Now, the Regional Office of MoEF&CC is in Ranchi.

**Condition xv:** - **The State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and the 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 xvi:** - **The environmental statement for each financial year ending 31 March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Office of the Ministry of Environment and Forests, Bhubaneswar by e-mail.**

**Reply:** - Environment statement is being submitted regularly to Member Secretary, JSPCB. Also, the status of compliance of environmental clearance conditions is being sent to MoEF&CC and JSPCB, Ranchi on regular basis. Now, the Regional Office of MoEF&CC is in Ranchi.

**Condition xvii:** - **The project authorities should advertise at least in two local newspapers of the which shall be in the vernacular language of the locality concerned, within 7 days 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 at Bhubaneswar.**

**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.

.....XXX.....

**Piezometer Monitoring Report**

**Mine: Bimarla Bauxite Mine (134.526 Ha)**

<b>S No</b>	<b>Month</b>	<b>Ground Water Level (BGL) in meter</b>
1	Oct-25	36.52
2	Nov-25	36.71
3	Dec-25	36.98
4	Jan-26	37.12
5	Feb-26	37.23
6	Mar-26	37.44



# EPIC LabTech Private Limited



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Jharkhand - 834005, India

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

CIN:-U74899JH2022PTC019683  
PAN:-AAHCE3611M  
GST:-20AAHCE3611M1ZX

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

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000001388	Discipline	Chemical
Report Unique ID	RL03332543018	Group	Atmospheric Pollution
Issue date/time	31.10.2025/ 16:30	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@adityabirta.com
MONITORING SITE : BIMARLA BAUXITE MINE		<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/0333	Sample Booking Number	EPIC-2543018
Sample(s) Code	2543018 (A) (B) (C) (D)	Sample Receipt (D/T)	25.10.2025/ 16:40

<b>Sampling References</b>			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	23.10.2025/ 12:05	Sampling End (D/T)	24.10.2025/ 09:00
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 %	57	Wind direction	90°-270°

<b>Sampling Location(s) with GPS coordinate(s)</b>			
S. Location A	Near Weigh Bridge	GPS coordinate	23° 17' 05.82" / 84° 25' 19.25"
S. Location B	Near Quarry No 1B	GPS coordinate	23° 17' 45.37" / 84° 25' 30.07"
S. Location C	Near Prathmik Vidyalaya Barang Path	GPS coordinate	23° 17' 20.07" / 84° 25' 30.41"
S. Location D	Near Mine Entry Gate	GPS coordinate	23° 16' 49.80" / 84° 25' 33.67"

<b>Date(s) of performance of the laboratory activities</b>			
Test start date	25.10.2025/ 17:15	Test completion date	31.10.2025/ 15:30

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>	52.64	52.07	53.96	56.88	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (P-24) 2019	µg/m <sup>3</sup>	27.15	23.85	21.99	22.44	60(24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	09.08	07.97	08.00	08.95	80(24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	18.91	20.04	15.88	18.37	80(24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	25.83	26.40	25.27	25.55	400(24 hr)
6.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m <sup>3</sup>	17.84	18.89	17.49	19.24	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 - Rajesh Verma



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

*[Signature]*  
 Issued by  
 (Irmesh Das)  
 Laboratory Head  
 Authorized Signatory  
 EPIC LabTech Pvt. Ltd.

**Contractual Note** | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility in 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 involved 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). | Page 1 of 1



# EPIC LabTech Private Limited

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☎ 93049 73994  
✉ epiclabtech@gmail.com

CIN:-U74899JH2022PTC019683  
PAN:-AANCE3611M  
GST:-20AAHCE3611M72X

Accredited by:-  
National 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	RL03332543018	Group	Atmospheric Pollution
Issue date/time	31.10.2025/ 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 : BIMARLA 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/0333	Sample Booking Number	EPIC-2543018
Sample(s) Code	2543018 (A) (B) (C) (D)	Sample Receipt (D/T)	25.10.2025/ 16:40

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	23.10.2025/ 12:05	Sampling End (D/T)	24.10.2025/ 09:00
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 %	57	Wind direction	90°-270°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Weigh Bridge	GPS coordinate	23° 17' 05.82" / 84° 25' 19.25"
S. Location B	Near Quarry No 1B	GPS coordinate	23° 17' 45.37" / 84° 25' 30.07"
S. Location C	Near Prathmik Vidyalaya Barang Path	GPS coordinate	23° 17' 20.07" / 84° 25' 30.41"
S. Location D	Near Mine Entry Gate	GPS coordinate	23° 16' 49.80" / 84° 25' 33.67"

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

Test start date	25.10.2025/ 17:15	Test completion date	31.10.2025/ 15:30
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### --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 - Rajesh Verma



Reviewed by  
(E.N. Kumar)  
Technical Head





# EPIC LabTech Private Limited



Address:-  
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Jharkhand - 834005, India

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CIN:-U74999JH2022PTC019885  
PAN:-AAHCE3611M  
GST:-20AAHCE3611M12X

Accredited by -  
NABL, with certificate number 'IL-12887'  
(Jharkhand State Pollution Control Board)  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000001389	Discipline	Chemical
Report Unique ID	RL03332543019	Group	Atmospheric Pollution
Issue date/time	31.10.2025/ 16:33	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 : BIMARLA 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
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### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0333	Sample Booking Number	EPIC-2543019
Sample(s) Code	2543019 (A) (B) (C) (D)	Sample Receipt (D/T)	25.10.2025/16:41

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	24.10.2025/ 11:55	Sampling End (D/T)	25.10.2025/ 08:55
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 %	57	Wind direction	90°-270°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Korle Village	GPS coordinate	23° 17' 26.81" / 84° 25' 55.18"
S. Location B	Near Barang Village	GPS coordinate	23° 16' 32.45" / 84° 25' 12.72"
S. Location C	Near Ghaghra Village	GPS coordinate	23° 16' 55.88" / 84° 23' 36.22"
S. Location D	Near Bimarla Village	GPS coordinate	23° 17' 05.62" / 84° 23' 25.75"

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

Test start date	25.10.2025/ 17:15	Test completion date	31.10.2025/ 15:30
-----------------	-------------------	----------------------	-------------------

### --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>	57.93	54.92	61.96	56.94	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (P-24) 2019	µg/m <sup>3</sup>	22.70	22.88	23.55	25.72	60(24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	07.16	07.97	08.04	08.10	80(24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	19.88	17.93	18.07	18.22	80(24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	26.68	25.55	25.27	24.98	400(24 hr)
6.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m <sup>3</sup>	22.04	20.99	19.94	18.89	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)	-

### --Test Results End --

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

Operational Status Unit was Operational During sampling.

Analysed by - Rajesh Verma



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

*[Signature]*  
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 conditions as mentioned 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:-U74999JH2022PTC019683  
PAN:-AAHCE3611M  
GST:-20AAHCE3611M1ZK

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

## Analytical Test Certificate

<b>Unique Lab Report No.</b>	N/A	<b>Discipline</b>	Chemical
<b>Report Unique ID</b>	RL03332543019	<b>Group</b>	Atmospheric Pollution
<b>Issue date/time</b>	31.10.2025/ 16:33	<b>Sub Group</b>	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 : BIMARLA BAUXITE MINE**

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

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

Customer Registration No.	EPIC/OTH/0333	Sample Booking Number	EPIC-2543019
Sample(s) Code	2543019 (A) (B) (C) (D)	Sample Receipt (D/T)	25.10.2025/16:41

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	24.10.2025/ 11:55	Sampling End (D/T)	25.10.2025/ 08:55
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 %	57	Wind direction	90°-270°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Korle Village	GPS coordinate	23° 17' 26.81" / 84° 25' 55.18"
S. Location B	Near Barang Village	GPS coordinate	23° 16' 32.45" / 84° 25' 12.72"
S. Location C	Near Ghaghra Village	GPS coordinate	23° 16' 55.88" / 84° 23' 36.22"
S. Location D	Near Bimarla Village	GPS coordinate	23° 17' 05.62" / 84° 23' 25.75"

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

Test start date	25.10.2025/ 17:15	Test completion date	31.10.2025/ 15:30
-----------------	-------------------	----------------------	-------------------

### --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 - Rajesh Verma



  
Reviewed by  
(R.N. Kumar)  
Technical Head





# EPIC LabTech Private Limited

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Jharkhand - 834005, India

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CIN - U74999JH2022PTC019885  
PAN - AAHCE3611M  
GST - 20AAHCE3611M1ZK

Accredited by -  
BIS (Bureau of Indian Standards)  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03332543020	Group	Atmospheric Pollution
Issue date/time	31.10.2025/ 16:36	Sub Group	Stack Emission

### Report Issue to

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

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

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

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

Customer Registration No.	EPIC/OTH/0333	Sample Booking Number	EPIC-2543020
Sample(s) Code	2543020	Sample Receipt (D/T)	25.10.2025/ 16:42

### Sampling References

Type of Industry	Bauxite Mine	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	24.10.2025/ 15:05	Sampling End (D/T)	24.10.2025/ 16:30
Mode of Sampling	Conducted by laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS: 11255 & CPCB Guideline (Lats/80/2013-14)		
Description/condition of sample	Receipt sample(s) were fit for analysis		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	57	Wind direction	90°-270°
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### Sampling Location(s) with GPS coordinate(s)

S. Location	25.10.2025/ 17:20	GPS coordinate	31.10.2025/ 15:25
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### Field observation by laboratory's personnel

Platform	Temporary
Stack Description (Shape & Material)	Circular/ Metal
Sampling port hole	Available
Pollution Controlling Device (if any)	N/A
Emission Source	DG
Total Number of Oven (if any)	N/A
Running Oven during sampling (if any)	N/A
Stack Gas Temperature (K)	398

### Data provided by customer

Type of fuel Used	HSD
Quantity of Fuel Used	N/A
Total production Capacity	20KVA
Height of Stack from ground level	N/A
Inner Diameter of Stack	N/A
Height of port hole from Ground level	N/A
ID fan capacity of PCD	N/A
Barometric Pressure (P Bar) mmHg	746.00

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

Test start date/time	25.10.2025/ 17:20	Test completion date/time	31.10.2025/ 15:25
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### --Test Result--


Sl	Parameters	Test Method	Units	Results	Limits
1.	Stack gas Velocity	IS 11255 (Part 3)2018	m/s	11.42	-
2.	Volumetric Flow Rate	IS 11255 (Part 3)2018	Nm <sup>3</sup> /hr	115.97	-
3.	Particulate Matter (PM)	IS 11255 (Part 1)2019	mg/Nm <sup>3</sup>	34.64	-
4.	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part 2)2019	mg/Nm <sup>3</sup>	24.39	-
5.	Oxides of Nitrogen (NO <sub>x</sub> )	IS 11255 (Part 7)2022	mg/Nm <sup>3</sup>	123.16	-
6.	Carbon Monoxide (CO)	IS 13270 2009	%	BDL (MDL-0.5)	-
7.	Carbon Dioxide (CO <sub>2</sub> )	IS 13270 2009	%	5.7	-

### --Test Result End--

Operational Status Unit was Operational during sampling.

Analysed by - Vishal Mangaraj



  
Reviewed by  
(E.N. Kumar)  
Technical Head

  
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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CIN - U74999JH2022PTC019685  
PAN - AAHCE3611M  
GST - Z0AAHCE3611M1Z3

Accredited by -  
NABL, wide certificate number IC-17503  
(National Bureau of Pollution Control Board)  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

TC-12887

## Analytical Test Report

Unique Lab Report No.	TC1288725000001514	Discipline	Chemical
Report Unique ID	RL03642548047	Group	Atmospheric Pollution
Issue date/time	29.11.2025/ 17:51	Sub Group	Ambient Air Quality

### Report Issue to

#### M/s - HINDALCO INDUSTRIES LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : JALIM & SANAI BAUXITE MINE

Contact Person Mr. Girija Tamrakar  
Contact Number +91 9111006074  
Email Id girija.tamrakar@adityabirla.com  
Order Date 31.03.2025/ 10:10  
Order Number 13612313868

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

Customer Registration No.	EPIC/OTH/0364	Sample Booking Number	EPIC2548047
Sample(s) Code	2548047 (A) (B) (C) (D)	Sample Receipt (D/T)	26.11.2025/ 11:14

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	24.11.2025/ 10:30	Sampling End (D/T)	25.11.2025/ 08:45
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 %	64	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Pit Quarry No 2	GPS coordinate	23° 25' 27.45" / 84° 26' 03.35"
S. Location B	Nava Prathmik Vidyalay (Dhanka Toli)	GPS coordinate	23° 25' 26.85" / 84° 25' 42.69"
S. Location C	Mine Pit Quarry No 3	GPS coordinate	23° 25' 24.41" / 84° 25' 56.29"
S. Location D	Near Colony	GPS coordinate	23° 24' 54.52" / 84° 25' 59.07"

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

Test start date	26.11.2025/ 11:30	Test completion date	29.11.2025/ 14:35
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### --Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits <small>(24 hr)</small>
					A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-23) 2022	µg/m <sup>3</sup>	10	57.73	54.60	54.12	62.57	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS:5182 (P-24) 2019	µg/m <sup>3</sup>	8	25.52	27.39	27.54	23.55	60 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	5	08.53	08.76	08.66	09.53	80 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	6	20.14	16.34	17.32	19.28	60 (24 hr)
5.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m <sup>3</sup>	10	20.64	20.29	19.59	19.24	180 (1 hr)
6.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	10	28.74	28.44	26.65	28.14	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



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

Test Report End

*Rajesh*  
29/11/25  
Issue by  
(Rajesh Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

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



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PAN:-AARCE3611M  
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	RL03642548047	Group	Atmospheric Pollution
Issue date/time	29.11.2025/ 17:51	Sub Group	Ambient Air Quality

### Report Issue to

#### M/s - HINDALCO INDUSTRIES LIMITED

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

MONITORING SITE : JALIM & SANAI BAUXITE MINE

#### Contact Person

Mr. Girija Tamrakar

#### Contact Number

+91 9111006074

#### Email Id

girija.tamrakar@adityabirla.com

#### Order Date

31.03.2025/ 10:10

#### Order Number

13612313868

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

Customer Registration No.	EPIC/OTH/0364	Sample Booking Number	EPIC2548047
Sample(s) Code	2548047 (A) (B) (C) (D)	Sample Receipt (D/T)	26.11.2025/ 11:14

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	24.11.2025/ 10:30	Sampling End (D/T)	25.11.2025/ 08:45
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 %	64	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Pit Quarry No 2	GPS coordinate	23° 25' 27.45"/84° 26' 03.35"
S. Location B	Nava Prathmik Vidyalay (Dhanka Toll)	GPS coordinate	23° 25' 26.85"/84° 25' 42.69"
S. Location C	Mine Pit Quarry No 3	GPS coordinate	23° 25' 24.41"/84° 25' 56.29"
S. Location D	Near Colony	GPS coordinate	23° 24' 54.52"/84° 25' 59.07"

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

Test start date	26.11.2025/ 11:30	Test completion date	29.11.2025/ 14:35
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### --Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits <small>(max. &amp; min.)</small>
					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  
(B.N. Kumar)  
Technical Head

Test Report End

Issue by  
(Rajesh Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt.Ltd.  
Ranchi, Jharkhand



# EPIC LabTech Private Limited



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 PAN - AAHCE3611M  
 GST - 20AAHCE3611M1CX  
 Accredited by - NABL with 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.	TC1288725000001515	Discipline	Chemical
Report Unique ID	RL03642548048	Group	Water
Issue date/time	29.11.2025/ 17:54	Sub Group	Drinking Water

### Report Issue to

<b>M/s - HINDALCO INDUSTRIES LIMITED</b> VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 <b>MONITORING SITE : JALIM &amp; SANAI 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 31.03.2025/ 10:10 13612313868
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### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0364	Sample Booking Number	EPIC-2548048
Sample(s) Code	2548048	Sample Receipt (D/T)	26.11.2025/ 11:15

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	24.11.2025/ 15:15	Sampling End (D/T)	24.11.2025/ 15:25
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 %	64	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Camp	GPS coordinate	23° 22' 27.52" / 84° 25' 24.22"
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### Date(s) of performance of the laboratory activities

Test start date	26.11.2025/ 11:25	Test completion date	29.11.2025/ 15:40
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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°C	IS 3025 (P-11) 2022	-	0.7	6.75	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.3	0.89	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	385.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	5	21.68	250	1000
8.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23) 2019	mg/l	10	64.00	200	600
9.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21) 2009	mg/l	10	182.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	10	54.51	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	2.97	200	400
13.	Nitrate (as NO <sub>3</sub> )	APHA 4500 B 2023	mg/l	0.4	1.71	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	11.18	30	100



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PAN:-AAHCE3611M  
GST:-20AAHCE3611M1ZK

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

TC-12887

## Analytical Test Report

Unique Lab Report No.	TC1288725000001515	Discipline	Chemical
Report Unique ID	RL03642548048	Group	Water
Issue date/time	29.11.2025/ 17:54	Sub Group	Drinking Water

### Report Issue to

#### M/s - HINDALCO INDUSTRIES LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : JALIM & SANAI BAUXITE MINE

Contact Person	Mr. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	girija.tamrakar@adityabirta.com
Order Date	31.03.2025/ 10:10
Order Number	13612313868

### Group - Residues and Contaminants in Water,

### Sub Group - Trace Metals Elements

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

--Test Result End --

Prescribed Limit IS 10500:2012

Analysed by - Pappu Kumar



*(Signature)*

Reviewed by  
(B.N. Kumar)  
Technical Head

Test Report End

*(Signature)*

Issued by  
(Umesh Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





# EPIC LabTech Private Limited

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PAN - AAHCE3611M  
GST - 20AAHCE3611M1Z3  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03642548048	Group	Water
Issue date/time	29.11.2025/ 17:54	Sub Group	Drinking Water

### Report Issue to

#### M/s - HINDALCO INDUSTRIES LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : JALIM & SANAI BAUXITE MINE

Contact Person Mr. Girija Tamrakar  
Contact Number +91 9111006074  
Email Id girija.tamrakar@adityabirla.com  
Order Date 31.03.2025/ 10:10  
Order Number 13612313868

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

Customer Registration No.	EPIC/OTH/0364	Sample Booking Number	EPIC-2548048
Sample(s) Code	2548048	Sample Receipt (D/T)	26.11.2025/ 11:15

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	24.11.2025/ 15:15	Sampling End (D/T)	24.11.2025/ 15:25
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 %	64	Wind direction	0°-180°
-------------------	--------	------------------	----	------------	----	----------------	---------

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

S. Location A	Camp	GPS coordinate	23° 22' 27.52"/ 84° 25' 24.22"
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### Date(s) of performance of the laboratory activities

Test start date	26.11.2025/ 11:25	Test completion date	29.11.2025/ 15:40
-----------------	-------------------	----------------------	-------------------

### --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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PAN--AAHCE3611M  
GST:-30AAHCE3611M1ZX

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	RL03642548048	Group	Water
Issue date/time	29.11.2025/ 17:54	Sub Group	Drinking Water

### Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : JALIM & SANAI BAUXITE MINE

Contact Person Mr. Girija Tamrakar  
Contact Number +91 9111006074  
Email Id girija.tamrakar@adityabirla.com  
Order Date 31.03.2025/ 10:10  
Order Number 13612313868

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

*Girija Tamrakar*  
29/11/25  
Issued by  
(Girija Tamrakar)  
Laboratory Head  
Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





# EPIC LabTech Private Limited

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CIN:- U74999JH2022PTC019885  
PAN:- AAHCE3611M  
GST:- 20AAHCE3611M1ZX

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

## Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL03642548049	Group	Water
Issue date/time	29.11.2025/ 17:57	Sub Group	Drinking Water

### Report Issue to

#### M/s - HINDALCO INDUSTRIES LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : JALIM & SANAI BAUXITE MINE

Contact Person	Mr. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	girija.tamrakar@adityabirla.com
Order Date	31.03.2025/ 10:10
Order Number	13612313868

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

Customer Registration No.	EPIC/OTH/0364	Sample Booking Number	EPIC-2548049
Sample(s) Code	2548049	Sample Receipt (D/T)	26.11.2025/ 11:16

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	24.11.2025/ 15:15	Sampling End (D/T)	24.11.2025/ 16:25
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 %	64	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Camp	GPS coordinate	23° 22' 27.52" / 84° 25' 24.22"
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### Date(s) of performance of the laboratory activities

Test start date	26.11.2025/ 13:15	Test completion date	29.11.2025/ 15:45
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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



# EPIC LabTech Private Limited



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epiclabtech@gmail.com

CIN: U74999JH2022PTC019683  
PAN: AARCE3611M  
GST: 20AARCE3611M1ZK

Accredited by - IASRI, with certificate number IC-12887 (National Metrology Accredited Board)  
Certified by - ISO 9001:2015 and ISO 45001:2018

TC-12887

## Analytical Test Report

Unique Lab Report No.	TC1288725000001516	Discipline	Chemical
Report Unique ID	RL03642548050	Group	Water
Issue date/time	29.11.2025/ 18:00	Sub Group	Ground Water

### Report Issue to

#### M/s - HINDALCO INDUSTRIES LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : JALIM & SANAI BAUXITE MINE

Contact Person Mr. Girija Tamrakar  
Contact Number +91 9111006074  
Email Id girija.tamrakar@adityabirla.com  
Order Date 31.03.2025/ 10:10  
Order Number 13612313868

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

Customer Registration No.	EPIC/OTH/0364	Sample Booking Number	EPIC-2548050
Sample(s) Code	2548050	Sample Receipt (D/T)	26.11.2025/ 11:17

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	24.11.2025/ 13:30	Sampling End (D/T)	24.11.2025/ 13:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SQP/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 %	64	Wind direction	0°-180°
-------------------	--------	------------------	----	------------	----	----------------	---------

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

S. Location A	Nava Prathmik Vidyalay (Dhanka Toli)	GPS coordinate	23° 25' 27.18"/ 84° 25' 42.77"
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### Date(s) of performance of the laboratory activities

Test start date	26.11.2025/ 11:37	Test completion date	29.11.2025/ 15:40
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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°C	IS 3025 (P-11) 2022	-	0.7	6.99	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.3	1.23	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	405.0	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	5	25.62	250	1000
8.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23) 2019	mg/l	10	70.00	200	600
9.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21) 2009	mg/l	10	190.0	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	10	55.31	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	0.5	BDL	0.2	1
12.	Sulphate (as SO <sub>4</sub> )	IS 3025 (P-24/Sec-1) 2022	mg/l	0.3	4.10	200	400
13.	Nitrate (as NO <sub>3</sub> )	APHA 4500 B 2023	mg/l	0.4	2.01	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	12.63	30	100



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PAN: AAHCE3811M  
GST: 39AAHCE3811M1ZK

Accredited by -  
NABL, accreditation Number IC-1387  
Bharat Heavy Electricals Limited  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

TC-12887

## Analytical Test Report

Unique Lab Report No.	TC1288725000001516	Discipline	Chemical
Report Unique ID	RL03642548050	Group	Water
Issue date/time	29.11.2025/ 18:00	Sub Group	Ground Water

<b>Report Issue to</b>	<b>Contact Person</b>	Mr. Girija Tamrakar
<b>M/s - HINDALCO INDUSTRIES 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 : JALIM &amp; SANAI BAUXITE MINE</b>	<b>Order Date</b>	31.03.2025/ 10:10
	<b>Order Number</b>	13612313868

Group - Residues and Contaminants in Water,				Sub Group - Trace Metals Elements			
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)*  
Issued by  
(Jimesh 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: U74999JH2022PTC019683  
PAN: AAHCE3611M  
GST: 20AAHCE3611M1ZV

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	RL03642548050	Group	Water
Issue date/time	29.11.2025/ 18:00	Sub Group	Ground Water

<b>Report Issue to</b>		<b>Contact Person</b>	Mr. Girija Tamrakar
<b>M/s - HINDALCO INDUSTRIES 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@adityabirta.com
<b>MONITORING SITE : JALIM &amp; SANAI BAUXITE MINE</b>		<b>Order Date</b>	31.03.2025/ 10:10
		<b>Order Number</b>	13612313868

<b>References of Quality Management System (Steps of Traceability Chain)</b>			
Customer Registration No.	EPIC/OTH/0364	Sample Booking Number	EPIC-2548050
Sample(s) Code	2548050	Sample Receipt (D/T)	26.11.2025/ 11:17

<b>Sampling References</b>			
Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	24.11.2025/ 13:30	Sampling End (D/T)	24.11.2025/ 13:45
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.		

<b>Environmental Condition during sampling</b>			
Weather condition	Cloudy	Temperature (°C)	24
		Humidity %	64
		Wind direction	0°-180°

<b>Sampling Location(s) with GPS coordinate(s)</b>			
S. Location A	Nava Prathmik Vidyalay (Dhanka Toli)	GPS coordinate	23° 25' 27.18"/ 84° 25' 42.77"

<b>Date(s) of performance of the laboratory activities</b>			
Test start date	26.11.2025/ 11:37	Test completion date	29.11.2025/ 15:40

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



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CIN:-U74899JH2022PTC019685  
PAN:-AAHCE3611M  
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	RL03642548050	Group	Water
Issue date/time	29.11.2025/ 18:00	Sub Group	Ground Water

### Report Issue to

<b>M/s - HINDALCO INDUSTRIES LIMITED</b> VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 <b>MONITORING SITE : JALIM &amp; SANAI BAUXITE MINE</b>	<b>Contact Person</b> Mr. Girija Tamrakar <b>Contact Number</b> +91 9111006074 <b>Email Id</b> girija.tamrakar@adityabirta.com <b>Order Date</b> 31.03.2025/ 10:10 <b>Order Number</b> 13612313868
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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



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

Test Report End

*[Signature]*  
**Issued By**  
(Umesh 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:-U74999JH2022PTC019685  
PAN:-AAHCE3811M  
GST:-20AAHCE3611M2X

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	Biological
Report Unique ID	RL03642548051	Group	Water
Issue date/time	29.11.2025/ 18:03	Sub Group	Ground Water

### Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : JALIM & SANAI BAUXITE MINE

Contact Person	Mr. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	girija.tamrakar@adityabirta.com
Order Date	31.03.2025/ 10:10
Order Number	13612313868

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

Customer Registration No.	EPIC/OTH/0364	Sample Booking Number	EPIC-2548051
Sample(s) Code	2548051	Sample Receipt (D/T)	26.11.2025/ 11:18

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	24.11.2025/ 13:30	Sampling End (D/T)	24.11.2025/ 13:45
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 %	64	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Nava Prathmik Vidyalay (Dhanka Toli)	GPS coordinate	23° 25' 27.18"/ 84° 25' 42.77"
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### Date(s) of performance of the laboratory activities

Test start date	26.11.2025/ 12:15	Test completion date	29.11.2025/ 16:00
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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



*B.N. Kumar*

Reviewed by  
(B.N. Kumar)  
Technical Head

Test Report End

*Umesh Das*  
29/11/25

Issued by  
(Umesh Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



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CIN:-UY4899JH2022PTC019885  
PAN:-AAHCE36T1M  
GST:-20AAHCE36T1M1EX

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

<b>Unique Lab Report No.</b>	TC1288725000001679	<b>Discipline</b>	Chemical
<b>Report Unique ID</b>	RL04112552038	<b>Group</b>	Atmospheric Pollution
<b>Issue date/time</b>	30.12.2025/ 17:42	<b>Sub Group</b>	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
<b>VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,</b>	<b>Email Id</b>	Girija.tamrakar@adityabirla.com
<b>DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302</b>	<b>Order Date</b>	05.04.2025/ 10:10
<b>MONITORING SITE : BIMARLA BAUXITE MINE</b>	<b>Order Number</b>	RP/MIJ/MM/25/0114/00

<b>References of Quality Management System (Steps of Traceability Chain)</b>			
Customer Registration No.	EPIC/OTH/0411	Sample Booking Number	EPIC-2552038
Sample(s) Code	2552038 (A) (B) (C) (D)	Sample Receipt (D/T)	27.12.2025/ 10:42

<b>Sampling References</b>			
Type of industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	24.12.2025/ 10:20	Sampling End (D/T)	25.12.2025/ 08:40
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.		

<b>Environmental Condition during sampling</b>			
Weather condition	Clear	Temperature (°C)	21
		Humidity %	63
		Wind direction	0°-180°

<b>Sampling Location(s) with GPS coordinate(s)</b>			
S. Location A	Near Weigh Bridge	GPS coordinate	23° 17' 05.82" / 84° 25' 19.25"
S. Location B	Near Quarry No.1B	GPS coordinate	23° 17' 45.37" / 84° 25' 30.07"
S. Location C	Near Prathmik Vidyalaya Barang Path	GPS coordinate	23° 17' 20.07" / 84° 25' 30.41"
S. Location D	Near Mine Entry Gate	GPS coordinate	23° 14' 49.80" / 84° 25' 33.67"

<b>Date(s) of performance of the laboratory activities</b>			
Test start date	27.12.2025/ 11:30	Test completion date	30.12.2025/ 14:30

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	56.43	55.61	57.25	60.20	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (P-24) 2019	µg/m <sup>3</sup>	6	30.20	27.09	25.92	26.51	60 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	5	10.19	09.35	08.91	09.83	60 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	6	22.26	17.32	18.27	20.34	60 (24 hr)
5.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m <sup>3</sup>	10	21.21	21.57	20.85	22.64	100 (1 hr)
6.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	10	30.53	30.24	29.65	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.	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 - Rajesh Varma



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

Test Report End

*Rajesh Varma*  
30/12/25  
Issued by  
(Rajesh Varma)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Jharkhand

**Contractual Notes** | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's possession 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 complaints 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 involved 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 -  
International Accreditation Centre (IAC)  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04112552038	Group	Atmospheric Pollution
Issue date/time	30.12.2025/ 17:42	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 : BIMARLA BAUXITE MINE		Order Number	RP/MJB/MM/25/0114/00

References of Quality Management System (Steps of Traceability Chain)			
Customer Registration No.	EPIC/OTH/0411	Sample Booking Number	EPIC-2552038
Sample(s) Code	2552038 (A) (B) (C) (D)	Sample Receipt (D/T)	27.12.2025/ 10:42

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)	24.12.2025/ 10:20	Sampling End (D/T)	25.12.2025/ 08:40
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	Clear	Temperature (°C)	21
		Humidity %	63
		Wind direction	0°-180°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Near Weigh Bridge	GPS coordinate	23° 17' 05.82"/ 84° 25' 19.25"
S. Location B	Near Quarry No 1B	GPS coordinate	23° 17' 45.37"/ 84° 25' 30.07"
S. Location C	Near Prathmik Vidyalaya Barang Path	GPS coordinate	23° 17' 20.07"/ 84° 25' 30.41"
S. Location D	Near Mine Entry Gate	GPS coordinate	23° 14' 49.80"/ 84° 25' 33.67"

Date(s) of performance of the laboratory activities			
Test start date	27.12.2025/ 11:30	Test completion date	30.12.2025/ 14:30

--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>Volatile 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  
(B.N. Kumar)  
Technical Head

Test Report End

Issue by  
(Anish 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 Quantization) |



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PAN: AAHCE3611M  
GST: 20AAHCE3611M12X

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NABL, ISO certificate Number TC-1887  
Jharkhand State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

TC-12887

## Analytical Test Report

Unique Lab Report No.	TC128872500001680	Discipline	Chemical
Report Unique ID	RL04112552039	Group	Atmospheric Pollution
Issue date/time	30.12.2025/ 17:45	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 : BIMARLA 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 (Stages of Traceability Chain)

Customer Registration No.	EPIC/OTH/0411	Sample Booking Number	EPIC-2552039
Sample(s) Code	2552039 (A) (B) (C) (D)	Sample Receipt (D/T)	22.12.2025/ 10:43

### 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)	25.12.2025/ 11:00	Sampling End (D/T)	26.12.2025/ 09:00
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	Clear	Temperature (°C)	22	Humidity %	65	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Korle Village	GPS coordinate	23° 17' 26.81" / 84° 25' 55.18"
S. Location B	Near Barang Village	GPS coordinate	23° 16' 32.45" / 84° 25' 12.72"
S. Location C	Near Ghaghra Village	GPS coordinate	23° 16' 55.88" / 84° 23' 36.22"
S. Location D	Near Bimarla Village	GPS coordinate	23° 16' 05.62" / 84° 23' 25.75"

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

Test start date	27.12.2025/ 11:30	Test completion date	30.12.2025/ 14:30
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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	61.28	58.55	65.10	60.35	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (P-24) 2019	µg/m <sup>3</sup>	8	25.98	24.34	27.09	29.44	50 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	5	09.24	09.84	09.35	10.28	80 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	6	23.10	21.68	19.63	20.56	80 (24 hr)
5.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m <sup>3</sup>	10	26.24	25.52	24.80	23.36	180 (1 hr)
6.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	10	31.40	30.53	29.65	29.36	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m <sup>3</sup>	0.2	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



Reviewed by  
(G.M. Kumar)  
Technical Head

Test Report End

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 required (required) and results relate only to the sample tested in prescribed Date & Time | 3. This 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. Option 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 Quantification). |



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CIN-UL4999JH2022PTC019685  
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	RL04112552039	Group	Atmospheric Pollution
Issue date/time	30.12.2025/ 17:45	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 : BIMARLA 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/0411	Sample Booking Number	EPIC-2552039
Sample(s) Code	2552039 (A) (B) (C) (D)	Sample Receipt (D/T)	22.12.2025/ 10:43

### 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)	25.12.2025/ 11:00	Sampling End (D/T)	26.12.2025/ 09:00
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	Clear	Temperature (°C)	22	Humidity %	65	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Karle Village	GPS coordinate	23° 17' 26.81" / 84° 25' 55.18"
S. Location B	Near Barang Village	GPS coordinate	23° 16' 32.45" / 84° 25' 12.72"
S. Location C	Near Ghaghra Village	GPS coordinate	23° 16' 55.88" / 84° 23' 36.22"
S. Location D	Near Bimarla Village	GPS coordinate	23° 16' 05.62" / 84° 23' 25.75"

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

Test start date	27.12.2025/ 11:30	Test completion date	30.12.2025/ 14:30
-----------------	-------------------	----------------------	-------------------

### --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>Perfluorohalobenzene</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



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

Test Report End

*(Signature)*  
**Issue by**  
(Umesh 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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PAN:-AAHCE3611M  
GST:-20AAHCE3611M1ZK

Accredited by -  
NABL vide certificate number IC-12027  
(Jharkhand) State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Report

<b>Unique Lab Report No.</b>	TC1288725000001681	<b>Discipline</b>	Chemical
<b>Report Unique ID</b>	RL04112552040	<b>Group</b>	Atmospheric Pollution
<b>Issue date/time</b>	30.12.2025/ 17:48	<b>Sub Group</b>	Ambient Noise

<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
<b>VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,</b>	<b>Email Id</b>	Girija.tamrakar@adityabirla.com
<b>DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302</b>	<b>Order Date</b>	05.04.2025/ 10:10
<b>MONITORING SITE : BIMARLA BAUXITE MINE</b>	<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/0411	Sample Booking Number	EPIC-2552040
Sample(s) Code	2552040 (A) (B) (C) (D)	Sample Receipt (D/T)	27.12.2025/ 10:45

<b>Sampling References</b>			
Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	24.12.2025/ 10:20	Sampling End (D/T)	25.12.2025/ 08:40
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.		

<b>Environmental Condition during sampling</b>			
Weather condition	Clear	Temperature (°C)	21
		Humidity %	63
		Wind direction	0°-180°

<b>Sampling Location(s) with GPS coordinate(s)</b>			
S. Location A	Near Weigh Bridge	GPS coordinate	23° 17' 05.82"/ 84° 25' 19.25"
S. Location B	Near Quarry No 1B	GPS coordinate	23° 17' 45.37"/ 84° 25' 30.07"
S. Location C	Near Prathmik Vidyalaya Barang Path	GPS coordinate	23° 17' 20.07"/ 84° 25' 30.41"
S. Location D	Near Mine Entry Gate	GPS coordinate	23° 14' 49.80"/ 84° 25' 33.67"

<b>Date(s) of performance of the laboratory activities</b>			
Test start date	27.12.2025/ 11:30	Test completion date	30.12.2025/ 14:30

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	L <sub>eq</sub> (Day time)	IS: 9989:1981	dB (A)	30	59.3	49.2	45.2	42.5	75
2.	L <sub>eq</sub> (Night time)	IS: 9989:1981	dB (A)	30	45.7	43.8	38.6	36.6	70

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



*[Signature]*  
Reviewed by  
(R.K. Kumar)  
Technical Head

Test Report End

*[Signature]*  
Issue by  
(Rajesh Varma)  
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).



# EPIC LabTech Private Limited

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CIN: U74899JH2022PTC019683  
PAN: AAHCE3611M  
GST: Z0AAHCE3611MTZX

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	RL04112552041	Group	Atmospheric Pollution
Issue date/time	30.12.2025/17:51	Sub Group	Work Zone Noise

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 : BIMARLA BAUXITE MINE		Order Number	RP/MJB/MM/25/0114/00

References of Quality Management System (Steps of Traceability Chain)			
Customer Registration No.	EPIC/OTH/0411	Sample Booking Number	EPIC-2552041
Sample(s) Code	2552041 (A) (B)	Sample Receipt (D/T)	27.12.2025/10:46

Sampling References			
Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D)	25.12.2025	Sampling End (D)	25.12.2025
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	Clear	Temperature (°C)	21
		Humidity %	63
		Wind direction	0°-180°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Near Quarr No 1B	GPS coordinate	23° 17' 46.30" / 84° 25' 30.16"
S. Location B	Bauxite Mine (134.526 Ha)	GPS coordinate	23° 17' 48.97" / 84° 25' 30.15"

Date(s) of performance of the laboratory activities			
Test start date	27.12.2025/11:30	Test completion date	30.12.2025/14:30

--Test Results Start--							
Sl	Tested Parameters	Method used	Unit	LoQ	A	Results	Limits
1.	L <sub>eq</sub> (Day time)	IS: 9989:1981	dB (A)	30	69.7	66.7	85
--Test Results End--							

Prescribed Limit NIOSH - Publication No. 99-126 in 1972  
Analysed by - Rajesh Varma



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

Test Report End

*[Signature]*  
30/12/25  
Issue by  
(Ajay Singh)  
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: U74999JH2022PLC019683  
PAN: AAAC8351M  
GST: 20AAACE3811M12X

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NABL 4293 certificate number: IL-12887-  
Pcd from NABL, Pralaya, Purnea, Bihar  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Test Report



Unique Lab Report No.	TC1288726000000083	Discipline	Chemical
Report Unique ID	RL04402604001	Group	Atmospheric Pollution
Issue date/time	21.01.2026/ 14:00	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 : BIMARLA 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/0440	Sample Booking Number	EPIC-2604001
Sample(s) Code	2604001 (A) (B) (C) (D)	Sample Receipt (D/T)	19.01.2026/ 11:29

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	16.01.2026/ 10:35	Sampling End (D/T)	17.01.2026/ 08:40
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 %	48	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Weigh Bridge	GPS coordinate	23° 17' 05.82" / 84° 25' 19.25"
S. Location B	Near Quarry No 1B	GPS coordinate	23° 17' 45.37" / 84° 25' 30.07"
S. Location C	Near Prathmik Vidyalaya Barang Path	GPS coordinate	23° 17' 20.07" / 84° 25' 30.41"
S. Location D	Near Mine Entry Gate	GPS coordinate	23° 16' 49.80" / 84° 25' 33.67"

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

Test start date	19.01.2026/ 12:30	Test completion date	22.01.2026/ 11:25
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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	57.52	57.31	58.26	61.50	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (P-24) 2019	µg/m <sup>3</sup>	8	31.11	28.23	26.78	27.10	60 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	5	11.06	10.10	09.53	10.38	60 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	6	23.79	18.64	19.54	21.63	60 (24 hr)
5.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2018	µg/m <sup>3</sup>	10	23.00	23.36	22.64	24.44	180 (1 hr)
6.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	10	31.40	31.11	30.53	31.69	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	-
10.	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	-
11.	Benzo(a) Pyrene (BaP)	IS 5182 (P-12): 2004	ng/m <sup>3</sup>	0.5	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  
(Girija Tamrakar)  
Laboratory Head

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

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

# EPIC LabTech Private Limited



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GST: 20AAHCE3611M1ZK

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

## Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04402604001	Group	Atmospheric Pollution
Issue date/time	21.01.2026/ 14:00	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 - BIMARLA 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/MIB/MM/25/0114/00

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

Customer Registration No.	EPIC/OTH/0440	Sample Booking Number	EPIC-2604001
Sample(s) Code	2604001 (A) (B) (C) (D)	Sample Receipt (D/T)	19.01.2026/ 11:29

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	16.01.2026/ 10:35	Sampling End (D/T)	17.01.2026/ 08:40
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 %	48	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Weigh Bridge	GPS coordinate	23° 17' 05.82"/84° 25' 19.25"
S. Location B	Near Quarry No 1B	GPS coordinate	23° 17' 45.37"/84° 25' 30.07"
S. Location C	Near Prathmik Vidyalaya Barang Path	GPS coordinate	23° 17' 20.07"/84° 25' 30.41"
S. Location D	Near Mine Entry Gate	GPS coordinate	23° 16' 49.80"/84° 25' 33.67"

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

Test start date	19.01.2026/ 12:30	Test completion date	22.01.2026/ 11:25
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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 Varma



  
Reviewed by  
(S.N. Kumar)  
Technical Head

  
Issued by  
(Himesh Das)  
Laboratory Head

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

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



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PAN-AAHCE3611M  
GST-20AAHCE3611M023

Accredited by -  
NABL with certificate number TC-1387  
Ranchi State Pollution Control Board  
Certified to -  
ISO 9001:2015 and ISO 45001:2018

## Test Report



Unique Lab Report No.	TC1288726000000084	Discipline	Chemical
Report Unique ID	RL04402604002	Group	Atmospheric Pollution
Issue date/time	21.01.2026/ 14:03	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 : BIMARLA 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/0440	Sample Booking Number	EPIC-2604002
Sample(s) Code	2604002 (A) (B) (C) (D)	Sample Receipt (D/T)	19.01.2026/ 11:30

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	17.01.2026/ 11:18	Sampling End (D/T)	18.01.2026/ 09:34
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	Clear	Temperature (°C)	23	Humidity %	44	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Korte Village	GPS coordinate	23° 17' 26.81" / 84° 25' 55.18"
S. Location B	Near Barang Village	GPS coordinate	23° 16' 32.45" / 84° 25' 12.72"
S. Location C	Near Ghaghra Village	GPS coordinate	23° 16' 55.88" / 84° 23' 36.22"
S. Location D	Near Bimarla Village	GPS coordinate	23° 17' 05.62" / 84° 23' 25.75"

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

Test start date	19.01.2026/ 12:55	Test completion date	22.01.2026/ 11:30
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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	62.17	59.45	66.28	61.32	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (P-24) 2019	µg/m <sup>3</sup>	8	26.87	25.35	27.98	30.31	50 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	5	10.30	10.79	10.18	11.45	50 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	6	24.27	22.17	20.61	21.54	50 (24 hr)
5.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m <sup>3</sup>	10	28.04	27.32	26.60	25.16	100 (1 hr)
6.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	10	32.56	31.40	30.82	30.24	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	-
10.	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	-
11.	Benzo(a) Pyrene (BaP)	IS 5182 (P-12): 2004	ng/m <sup>3</sup>	0.5	BDL	BDL	BDL	BDL	-

### --Test Results End--

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

Analysed by - Rajesh Varma



Reviewed by  
D.N. Kumar  
Technical Head

Issue by  
Girija Tamrakar  
Laboratory Head

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

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

# EPIC LabTech Private Limited



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PAN:AAACE3611M  
GST:26AAACE3611M12X

ISO 9001:2015 and ISO 45001:2018  
Certified by  
(ISO 9001:2015 and ISO 45001:2018)

## Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04402604002	Group	Atmospheric Pollution
Issue date/time	21.01.2026/ 14:03	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 : BIMARLA 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/0440	Sample Booking Number	EPIC-2604002
Sample(s) Code	2604002 (A) (B) (C) (D)	Sample Receipt (D/T)	19.01.2026/ 11:30

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	17.01.2026/ 11:18	Sampling End (D/T)	18.01.2026/ 09:34
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	Clear	Temperature (°C)	23	Humidity %	44	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Korte Village	GPS coordinate	23° 17' 26.81" / 84° 25' 55.18"
S. Location B	Near Barang Village	GPS coordinate	23° 16' 32.45" / 84° 25' 12.72"
S. Location C	Near Ghaghra Village	GPS coordinate	23° 16' 55.88" / 84° 23' 36.22"
S. Location D	Near Bimarla Village	GPS coordinate	23° 17' 05.62" / 84° 23' 25.75"

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

Test start date	19.01.2026/ 12:55	Test completion date	22.01.2026/ 11:30
-----------------	-------------------	----------------------	-------------------

### --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



Reviewed by  
(G.N. Kumar)  
Technical Head

Issued By  
(Girish 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 conditions 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 involved 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. | 8. Under no circumstances, laboratory accepts any caused by use or misuse of this report. | 9. 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: U74909JH2022PTC019685  
PAN: AAHCE3611M  
GST: 20AAHCE3611MT2X

Accredited by -  
NABL, certificate number: 41 - 1089  
Bachelors from Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Test Report



Unique Lab Report No.	TC1288726000000085	Discipline	Chemical
Report Unique ID	RL04402604003	Group	Water
Issue date/time	21.01.2026/ 14:06	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 : BIMARLA 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/0440	Sample Booking Number	EPIC-2604003
Sample(s) Code	2604003	Sample Receipt (D/T)	19.01.2026/ 11:31

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	17.01.2026/ 14:40	Sampling End (D/T)	17.01.2026/ 14:55
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 %	48	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Korte (Spring Water)	GPS coordinate	23° 17' 10.06" / 84° 25' 51.94"
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### Date(s) of performance of the laboratory activities

Test start date	19.01.2026/ 11:51	Test completion date	21.01.2026/ 12:00
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### --Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	pH value at 24.7°C	IS 3025 (P-11) 2022	-	0.7	6.75	-
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.3	0.13	-
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	196.00	+
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	5	13.79	+
8.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23) 2019	mg/l	10	30.00	+
9.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21) 2009	mg/l	10	40.16	+
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	10	12.02	+
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	2.10	+
13.	Nitrate (as NO <sub>3</sub> )	APHA 4500 B 2023	mg/l	0.4	2.11	+
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	2.46	-



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PAN: AANCE3611M  
GST: 20AANCE3611M1ZK

Accredited by -  
NABL, ISO 9001:2015 and ISO 17025:2018  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Test Report



Unique Lab Report No.	TC1288726000000085	Discipline	Chemical
Report Unique ID	RL04402604003	Group	Water
Issue date/time	21.01.2026/14:06	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 : BIMARLA 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	Standard	Unit	Result	Remarks
16.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	0.1	BDL
<b>Group - Residues and Contaminants in Water, 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, 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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PAN:-AAHCE3611M  
GST:-20AAHCE3611M1Z3

Accredited by :-  
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.	TC1288726000000085	Discipline	Chemical
Report Unique ID	RL04402604003	Group	Water
Issue date/time	21.01.2026/ 14:06	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 : BIMARLA 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

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--

### Prescribed Limit

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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GST: 20AAHCE361TM2X

Accredited by:  
National Quality Institute Limited Ranchi  
Certified by:  
ISO 9001:2015 and ISO 45001:2018

## Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04402604003	Group	Water
Issue date/time	21.01.2026/ 14:06	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 : BIMARLA 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/0440	Sample Booking Number	EPIC-2604003
Sample(s) Code	2604003	Sample Receipt (D/T)	19.01.2026/ 11:31

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	17.01.2026/ 14:40	Sampling End (D/T)	17.01.2026/ 14:55
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 %	48	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Korle (Spring Water)	GPS coordinate	23° 17' 10.06" / 84° 25' 51.94"
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### Date(s) of performance of the laboratory activities

Test start date	19.01.2026/ 11:51	Test completion date	21.01.2026/ 12:00
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### --Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	0.2	BDL	-
2.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	0.05	BDL	-
<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	-
4.	Boron	IS 3025 (P-57):2021	mg/l	0.1	BDL	-

### --Test Result End--

Analysed by - Pappu Kumar



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

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

*[Signature]*  
Issued By  
(Umesh Das)  
Laboratory Head

Authorized Signatory  
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PAN - AANCE3611M  
GST - ZDAAHCE3611M12X

Accredited by -  
Bureau of Indian Standards (BIS)  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Test Report

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL04402604004	Group	Water
Issue date/time	22.01.2026/ 16:00	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 : BIMARLA 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/0440	Sample Booking Number	EPIC-2604004
Sample(s) Code	2604004	Sample Receipt (D/T)	19.01.2026/ 11:32

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	17.01.2026/ 14:40	Sampling End (D/T)	17.01.2026/ 14:55
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 %	48	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Korle (Spring Water)	GPS coordinate	23° 17' 10.06"/ 84° 25' 51.94"
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### Date(s) of performance of the laboratory activities

Test start date	19.01.2026/ 11:52	Test completion date	22.01.2026/ 14:30
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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	-	360	
2.	E.Coli	IS 15185 2002	Per 100 ml	-	220	

### --Test Result End--

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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PAN: AAHCE3611M  
GST: 20AAHCE3611M1ZY

Accredited by -  
NABL vide certificate number 10, 12387  
Pollution Monitoring Centre (PCC)  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Test Report



Unique Lab Report No.	TC1288726000000238	Discipline	Chemical
Report Unique ID	RL04712609009	Group	Atmospheric Pollution
Issue date/time	28.02.2026/ 15:30	Sub Group	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 MONITORING SITE : BIMARLA BAUXITE MINE	<b>Contact Person</b> Mr. Girija Tamrakar <b>Contact Number</b> +91 9111006074 <b>Email Id</b> Girija.tamrakar@adityabirta.com <b>Order Date</b> 05.04.2025/ 10:10 <b>Order Number</b> RP/MJB/MM/25/0114/00
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### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0471	Sample Booking Number	EPIC-2609009
Sample(s) Code	2609009 (A) (B) (C) (D)	Sample Receipt (D/T)	24.02.2026/ 11:32

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	21.02.2026/ 10:45	Sampling End (D/T)	22.02.2026/ 08:35
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)	24	Humidity %	53	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Weigh Bridge	GPS coordinate	23° 17' 05.82" / 84° 25' 19.25"
S. Location B	Near Quarry No 1B	GPS coordinate	23° 17' 45.37" / 84° 25' 30.07"
S. Location C	Near Prathmik Vidyalaya Barang Path	GPS coordinate	23° 17' 20.07" / 84° 25' 30.41"
S. Location D	Near Mine Entry Gate	GPS coordinate	23° 16' 49.80" / 84° 25' 33.67"

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

Test start date	24.02.2026/ 13:35	Test completion date	28.02.2026/ 14:05
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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	56.47	56.71	57.63	60.46	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS:5182 (P-24): 2019	µg/m <sup>3</sup>	5	30.66	27.36	25.29	26.56	50 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02): 2023	µg/m <sup>3</sup>	5	11.59	10.67	10.05	11.30	50 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06): 2022	µg/m <sup>3</sup>	6	24.75	19.62	20.47	22.60	50 (24 hr)
5.	Ozone (O <sub>3</sub> )	IS:5182 (P-09): 2019	µg/m <sup>3</sup>	10	25.52	26.24	24.80	26.96	100 (1 hr)
6.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25): 2018	µg/m <sup>3</sup>	10	33.14	32.85	31.98	33.43	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	-
10.	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	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS:5182 (P-12): 2004	ng/m <sup>3</sup>	0.5	BDL	BDL	BDL	BDL	-

### --Test Results End --

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

Analysed by - Rajesh Varma

Reviewed by  
J. N. Kumar  
Technical Head

Issue By  
J. N. Kumar  
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 conditions as notified required and results relate only to the sample tested in prescribed Date & time | 3. The Test report shall not be reproduced (all 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 involved 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:-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	RL04712609009	Group	Atmospheric Pollution
Issue date/time	28.02.2026/ 15:30	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 : BIMARLA 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/0471	Sample Booking Number	EPIC-2609009
Sample(s) Code	2609009 (A) (B) (C) (D)	Sample Receipt (D/T)	24.02.2026/ 11:32

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	21.02.2026/ 10:45	Sampling End (D/T)	22.02.2026/ 08:35
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)	24	Humidity %	53	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Weigh Bridge	GPS coordinate	23° 17' 05.82"/ 84° 25' 19.25"
S. Location B	Near Quarry No 1B	GPS coordinate	23° 17' 45.37"/ 84° 25' 30.07"
S. Location C	Near Prathmik Vidyalaya Barang Path	GPS coordinate	23° 17' 20.07"/ 84° 25' 30.41"
S. Location D	Near Mine Entry Gate	GPS coordinate	23° 16' 49.80"/ 84° 25' 33.67"

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

Test start date	24.02.2026/ 13:35	Test completion date	28.02.2026/ 14:05
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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	-

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

Reviewed by  
(G.N. Kumar)  
Technical Head

Issue by  
(Umesh Das)  
Laboratory Head



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

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





# EPIC LabTech Private Limited



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CIN:-U74999/JH2022PTC019685  
PAN:-AAHCE3611M  
GST:-29AAHCE3611M1ZK

Accredited by -  
NABL with certificate number TC 12807  
(Jharkhand State Pollution Control Board)  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Test Report



Unique Lab Report No.	TC1288726000000239	Discipline	Chemical
Report Unique ID	RL04712609010	Group	Atmospheric Pollution
Issue date/time	28.02.2026/ 15:33	Sub Group	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 MONITORING SITE : BIMARLA BAUXITE MINE	<b>Contact Person</b> Mr. Girija Tamrakar <b>Contact Number</b> +91 9111006074 <b>Email Id</b> Girija.tamrakar@adityabirla.com <b>Order Date</b> 05.04.2025/ 10:10 <b>Order Number</b> RP/MB/MM/25/0114/00
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### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0471	Sample Booking Number	EPIC-2609010
Sample(s) Code	2609010 (A) (B) (C) (D)	Sample Receipt (D/T)	24.02.2026/ 11:33

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	22.02.2026/ 11:25	Sampling End (D/T)	23.02.2026/ 09:20
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)	23	Humidity %	55	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Korte Village	GPS coordinate	23° 17' 26.81"/ 84° 25' 55.18"
S. Location B	Near Barang Village	GPS coordinate	23° 16' 32.45"/ 84° 25' 12.72"
S. Location C	Near Ghaghra Village	GPS coordinate	23° 16' 55.88"/ 84° 23' 36.22"
S. Location D	Near Bimarla Village	GPS coordinate	23° 17' 05.62"/ 84° 23' 25.75"

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

Test start date	24.02.2026/ 14:20	Test completion date	28.02.2026/ 14:15
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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	61.54	58.76	65.46	60.64	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS:5182 (P-24) 2019	µg/m <sup>3</sup>	8	25.45	24.90	27.31	29.58	60 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	5	10.83	12.09	10.46	12.10	80 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	8	25.26	23.21	21.17	22.06	80 (24 hr)
5.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m <sup>3</sup>	10	30.91	29.83	28.75	27.68	180 (1 hr)
6.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2019	µg/m <sup>3</sup>	10	34.02	33.43	32.56	32.27	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	-
10.	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	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Matter</small>	IS:5182 (P-12): 2004	ng/m <sup>3</sup>	0.5	BDL	BDL	BDL	BDL	-

### --Test Results End --

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

Analysed by - Rajesh Varma



Reviewed by  
(G. H. Kumar)  
Technical Head

Issue by  
(G. H. Kumar)  
Laboratory Head

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

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

**Contractual Note** | 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 result/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



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CIN:-U74999JH2022PTC019685  
PAN:-AAHCE3613M  
GST:-20AAHCE3611M12X

Accredited by -  
Bureau of Metrology, Government of India  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RLD4712609010	Group	Atmospheric Pollution
Issue date/time	28.02.2026/ 15:33	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 : BIMARLA 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

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

Customer Registration No.	EPIC/OTH/0471	Sample Booking Number	EPIC-2609010
Sample(s) Code	2609010 (A) (B) (C) (D)	Sample Receipt (D/T)	24.02.2026/ 11:33

### 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)	22.02.2026/ 11:25	Sampling End (D/T)	23.02.2026/ 09:20
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)	23	Humidity %	55	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Korle Village	GPS coordinate	23° 17' 26.81"/84° 25' 55.18"
S. Location B	Near Barang Village	GPS coordinate	23° 16' 32.45"/84° 25' 12.72"
S. Location C	Near Ghaghra Village	GPS coordinate	23° 16' 55.88"/84° 23' 36.22"
S. Location D	Near Bimarla Village	GPS coordinate	23° 17' 05.62"/84° 23' 25.75"

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

Test start date	24.02.2026/ 14:20	Test completion date	28.02.2026/ 14:15
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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 Varma



Reviewed by  
(B.N. Kumar)  
Technical Head

Issue by  
(Anish 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 | 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 involved 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:-20AAHCE3611MTXK

Accredited by -  
NABL under Certificate Number TC-12081  
Jharkhand State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Test Report



Unique Lab Report No.	TC1288726000000240	Discipline	Chemical
Report Unique ID	RL04712609011	Group	Pollution & Environment
Issue date/time	28.02.2026/ 15:36	Sub Group	Waste Water (Effluent)

### Report Issue to

**M/s - MINERALS & MINERALS LIMITED**  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
**MONITORING SITE : BIMARLA 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/MIJ/MM/25/0114/00**

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

Customer Registration No.	EPIC/OTH/0471	Sample Booking Number	EPIC-2609011
Sample(s) Code	2609011	Sample Receipt (D/T)	24.02.2026/ 11:34

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	22.02.2026/ 13:50	Sampling End (D/T)	22.02.2026/ 14:05
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) *24* Humidity % *53* Wind direction *0°-180°*

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

S. Location A *Work Shop Outlet* GPS coordinate *23° 16' 55.92"/84° 25' 15.19"*

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

Test start date *24.02.2026/ 11:54* Test completion date *28.02.2026/ 14:00*

### --Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	pH value at 25.3°C	IS 3025 (P-11) 2022	-	1.5	6.92	6.5-9.0
2.	BOD (3 days at 27°C)	IS 3025 (P-44) 2000	mg/l	0.3	13.5	-
3.	COD	IS 3025 (P-58) 2006	mg/l	8.0	76.00	150.0
4.	Oil & Grease	IS 3025 (P-39) 2021	mg/l	4.0	BDL	10.0
5.	Total Suspended Solid	IS 3025 (P-17) 2022	mg/l	10.0	44.00	50.0
6.	Total Dissolve Solids (TDS)	IS 3025 (P-16) 2023	mg/l	10	175.00	-
7.	Phosphate	IS 3025 (P-31/Sec-1) 2022	mg/l	0.2	0.62	-
8.	Zinc (as Zn)	APHA 3111 B 2023	mg/l	0.04	BDL	5.0

### --Test Result End--

Prescribed Limit Environmental (Protection) Rules-1986, Schedule -I, Serial No.114

Analysed by - Pappu Kumar



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

*Umesh Das*  
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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CTN: (U74999JH2022PTC019665) / Accredited by :  
Jharkhand State Pollution Control Board  
PAN: AAHCE3611M  
GST: 20AAHCE3611M1ZK

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

## Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04712609011	Group	Pollution & Environment
Issue date/time	28.02.2026/ 15:36	Sub Group	Waste Water (Effluent)

### Report issue to

**M/s - MINERALS & MINERALS LIMITED**  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302  
**MONITORING SITE : BIMARLA 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/0471	Sample Booking Number	EPIC-2609011
Sample(s) Code	2609011	Sample Receipt (D/T)	24.02.2026/ 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)	22.02.2026/ 13:50	Sampling End (D/T)	22.02.2026/ 14:05
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)	24	Humidity %	53	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Work Shop Outlet	GPS coordinate	23° 16' 55.92" / 84° 25' 15.19"
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### Date(s) of performance of the laboratory activities

Test start date	24.02.2026/ 11:54	Test completion date	28.02.2026/ 14:00
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### --Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	Dissolve Oxygen (DO)	IS 3025 (P-38) 1986	mg/l	0.2	0.9	-

### --Test Result End --

**Prescribed Limit** Environmental (Protection) Rules-1986, Schedule -I, Serial No.114

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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CIN: U74999/JH2022PTC019685  
PAN: AAHCE3611M  
GST: 20AAHCE3611MT2X

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.	TC1288726000000465	Discipline	Chemical
Report Unique ID	RL05102613106	Group	Atmospheric Pollution
Issue date/time	31.03.2026/ 12:30	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 : BIMARLA BAUXITE MINE**

Contact Person	Mr. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	Girija.tamrakar@adityabiria.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/0510	Sample Booking Number	EPIC-2613106
Sample(s) Code	2613106 (A) (B) (C) (D)	Sample Receipt (D/T)	27.03.2026/ 13:36

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	24.03.2026/ 16:45	Sampling End (D/T)	25.03.2026/ 13:55
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)	26	Humidity %	52	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Weigh Bridge	GPS coordinate	23° 17' 05.82"/84° 25' 19.25"
S. Location B	Near Quarry No 1B	GPS coordinate	23° 17' 45.37"/84° 25' 30.07"
S. Location C	Near Prathmik Vidyalaya Barang Path	GPS coordinate	23° 17' 20.07"/84° 25' 30.41"
S. Location D	Near Mine Entry Gate	GPS coordinate	23° 16' 49.80"/84° 25' 33.67"

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

Test start date	27.03.2026/ 14:25	Test completion date	31.03.2026/ 10:40
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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	57.79	58.01	59.11	61.58	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (P-24) 2019	µg/m <sup>3</sup>	8	32.10	28.41	26.73	27.90	60 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	5	10.84	09.97	09.68	10.50	80 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	6	23.66	18.46	19.23	21.88	80 (24 hr)
5.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m <sup>3</sup>	10	27.68	28.39	26.60	29.47	180 (1 hr)
6.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	10	46.52	33.72	34.31	34.60	900 (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	-
10.	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	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m <sup>3</sup>	0.5	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

Issued by  
(Omesh Das)  
Laboratory Head

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

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

# EPIC LabTech Private Limited



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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	RL05102613106	Group	Atmospheric Pollution
Issue date/time	31.03.2026/ 12:30	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 : BIMARLA BAUXITE MINE**

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

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

Customer Registration No.	EPIC/OTH/0510	Sample Booking Number	EPIC-2613106
Sample(s) Code	2613106 (A) (B) (C) (D)	Sample Receipt (D/T)	27.03.2026/ 13:36

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	24.03.2026/ 16:45	Sampling End (D/T)	25.03.2026/ 13:55
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)	26	Humidity %	52	Wind direction	0°-180°
-------------------	-------	------------------	----	------------	----	----------------	---------

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

S. Location A	Near Weigh Bridge	GPS coordinate	23° 17' 05.82"/84° 25' 19.25"
S. Location B	Near Quarry No 1B	GPS coordinate	23° 17' 45.37"/84° 25' 30.07"
S. Location C	Near Prathmik Vidyalaya Barang Path	GPS coordinate	23° 17' 20.07"/84° 25' 30.41"
S. Location D	Near Mine Entry Gate	GPS coordinate	23° 16' 49.80"/84° 25' 33.67"

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

Test start date	27.03.2026/ 14:25	Test completion date	31.03.2026/ 10:40
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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 Varma



Reviewed by  
(R. H. Kumar)  
Technical Head

Issue by  
(Rupesh Prajapati)  
Laboratory Head

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

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





# EPIC LabTech Private Limited



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CIN: U74999JH2022PTC019885  
PAN: AAHCE3611M  
GST: 20AAHCE3611M1ZK

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

## Test Report



Unique Lab Report No.	TC1288726000000466	Discipline	Chemical
Report Unique ID	RL05102613107	Group	Atmospheric Pollution
Issue date/time	31.03.2026/ 12:33	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 : BIMARLA 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/0510	Sample Booking Number	EPIC-2613107
Sample(s) Code	2613107 (A) (B) (C) (D)	Sample Receipt (D/T)	27.03.2026/ 13:37

### 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)	25.03.2026/ 15:20	Sampling End (D/T)	26.03.2026/ 13:35
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)	28	Humidity %	48	Wind direction	40°-220°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Korle Village	GPS coordinate	23° 17' 26.81" / 84° 25' 55.18"
S. Location B	Near Barang Village	GPS coordinate	23° 16' 32.45" / 84° 25' 12.72"
S. Location C	Near Ghaghra Village	GPS coordinate	23° 16' 55.88" / 84° 23' 36.22"
S. Location D	Near Bimarla Village	GPS coordinate	23° 17' 05.62" / 84° 23' 25.75"

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

Test start date	27.03.2026/ 15:10	Test completion date	31.03.2026/ 10:50
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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	62.83	59.65	66.73	61.47	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS:5182 (P-24): 2019	µg/m <sup>3</sup>	8	26.44	25.55	28.89	30.66	90 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02): 2023	µg/m <sup>3</sup>	5	10.31	11.59	09.97	11.58	80 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06): 2022	µg/m <sup>3</sup>	6	24.88	22.94	20.31	21.17	80 (24 hr)
5.	Ozone (O <sub>3</sub> )	IS:5182 (P-09): 2019	µg/m <sup>3</sup>	10	33.43	31.27	30.55	29.83	180 (1 hr)
6.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25): 2018	µg/m <sup>3</sup>	10	35.76	34.60	33.72	33.43	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	-
10.	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	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS:5182 (P-12): 2004	ng/m <sup>3</sup>	0.5	BDL	BDL	BDL	BDL	-

### --Test Results End --

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

Analyzed by - Rajesh Varma



  
Reviewed by  
(B.N. Kumar)  
Technical Head

  
Issue by  
(Omeh Das)  
Laboratory Head

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

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

## Test Report

<b>Unique Lab Report No.</b>	N/A	<b>Discipline</b>	Chemical
<b>Report Unique ID</b>	RL05102613107	<b>Group</b>	Atmospheric Pollution
<b>Issue date/time</b>	31.03.2026/ 12:33	<b>Sub Group</b>	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 : BIMARLA BAUXITE MINE**

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

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

Customer Registration No.	EPIC/OTH/0510	Sample Booking Number	EPIC-2613107
Sample(s) Code	2613107 (A) (B) (C) (D)	Sample Receipt (D/T)	27.03.2026/ 13:37

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	25.03.2026/ 15:20	Sampling End (D/T)	26.03.2026/ 13:35
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)	28	Humidity %	48	Wind direction	40°-220°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Korte Village	GPS coordinate	23° 17' 26.81" / 84° 25' 55.18"
S. Location B	Near Barang Village	GPS coordinate	23° 16' 32.45" / 84° 25' 12.72"
S. Location C	Near Ghaghra Village	GPS coordinate	23° 16' 55.88" / 84° 23' 36.22"
S. Location D	Near Bimarla Village	GPS coordinate	23° 17' 05.62" / 84° 23' 25.75"

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

Test start date	27.03.2026/ 15:10	Test completion date	31.03.2026/ 10:50
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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>	1.0	BDL	BDL	BDL	BDL	-

### --Test Results End--

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

Analysed by - Rajesh Varma



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

*(Signature)*  
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 conditions 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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GST:-20AAHCE3611M1ZX

Accredited by :-  
NABL, acc. certificate number TC - 62937  
Jharkhand State Pollution Control Board  
Certified by :-  
ISO 9001:2015 and ISO 45001:2018

## Test Report



Unique Lab Report No.	TC1288726000000467	Discipline	Chemical
Report Unique ID	RL05102613108	Group	Water
Issue date/time	31.03.2026/ 12:36	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 : BIMARLA 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
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### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0510	Sample Booking Number	EPIC-2613108
Sample(s) Code	2613108	Sample Receipt (D/T)	27.03.2026/ 13:38

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	24.03.2026/ 17:15	Sampling End (D/T)	24.03.2026/ 17:35
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)	26	Humidity %	52	Wind direction	0°-180°
-------------------	-------	------------------	----	------------	----	----------------	---------

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

S. Location A	Near Mine Office	GPS coordinate	23° 17' 03.83" / 84° 25' 19.17"
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### Date(s) of performance of the laboratory activities

Test start date	27.03.2026/ 13:58	Test completion date	31.03.2026/ 11:15
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### --Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits	
						Acceptable Limit	Permissible limit
1.	pH value at 25.4°C	IS 3025 (P-11) 2022	-	1.5	7.12	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.3	0.81	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	205.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	5	21.68	250	1000
8.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23) 2019	mg/l	10	148.00	200	600
9.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21) 2009	mg/l	10	178.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	10	51.30	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	3.90	200	400
13.	Nitrate (as NO <sub>3</sub> -N)	IS 3025 (P-34/Sec-1) 2023	mg/l	0.4	1.94	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	12.15	30	100



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GST:-20AAHCE3611M12X

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

## Test Report



Unique Lab Report No.	TC1288726000000467	Discipline	Chemical
Report Unique ID	RL05102613108	Group	Water
Issue date/time	31.03.2026/ 12:36	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 : BIMARLA 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

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  
(E.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:-20AAHCE3611M1Z3

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	RL05102613108	Group	Water
Issue date/time	31.03.2026/ 12:36	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 : BIMARLA 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/0510	Sample Booking Number	EPIC-2613108
Sample(s) Code	2613108	Sample Receipt (D/T)	27.03.2026/ 13:38

### Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	24.03.2026/ 17:15	Sampling End (D/T)	24.03.2026/ 17:35
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)	26	Humidity %	52	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Office	GPS coordinate	23° 17' 03.83"/ 84° 25' 19.17"
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### Date(s) of performance of the laboratory activities

Test start date	27.03.2026/ 13:58	Test completion date	31.03.2026/ 11:15
-----------------	-------------------	----------------------	-------------------

### --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.	Chlopyrifos	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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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	RL05102613108	Group	Water
Issue date/time	31.03.2026/ 12:36	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 : BIMARLA 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

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  
(E.N. Kumar)  
Technical Head

  
Issued by  
(Umesh Das)  
Laboratory Head

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

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). |

# EPIC LabTech Private Limited



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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	Biological
Report Unique ID	RL05102613110	Group	Water
Issue date/time	31.03.2026/ 12:39	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 : BIMARLA 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/0510	Sample Booking Number	EPIC-2613110
Sample(s) Code	2613110	Sample Receipt (D/T)	27.03.2026/ 11:38

### 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)	24.03.2026/ 17:15	Sampling End (D/T)	24.03.2026/ 17:35
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)	26	Humidity %	52	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Office	GPS coordinate	23° 17' 03.83"/ 84° 25' 19.17"
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### Date(s) of performance of the laboratory activities

Test start date	27.03.2026/ 15:56	Test completion date	31.03.2026/ 11:15
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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 10500:2012  
Analysed by - Ishika Singh



  
Reviewed by  
(B.N. Kumar)  
Technical Head

  
Issued by  
(Umesh Das)  
Laboratory Head

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

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 Bimarla Bauxite Mine (Area – 134.526 ha). 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. Kiran Shankar Singh (Coordinator)
2. Mr. Pratyush Rout (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)

Production, Mined Out, Back Filled and Over Burden removal from October 2025 to March 2026								
S. No	Name of the Mines	Mining lease area (ha)	Production Capacity (MT)*	Lease Period*	Production (MT)	Mined out area (ha)	Backfilled area (ha)	Over burden (Cu.M)
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

Minerals & Minerals Limited								
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



## ENVIRONMENT POLICY

We, at Hindalco Industries Limited, operating across the process chain from mining to semi-fabricated products in non-ferrous metals, will strive to continually improve our environmental performance for sustainable operations and responsible growth globally, by integrating sound environmental systems & practices and Pollution Prevention approach.

To achieve this, we shall:

- Continue to comply with all applicable legal and other requirements on environment.
- Continually improve environmental performance by strengthening the Environmental Management System conforming to national /international standards, including setting up and reviewing targets and measuring, monitoring and reporting their progress.
- Allocate sufficient resources such as organisational structure, technology and funds for implementation of the policy and for regular monitoring of performance.
- Adopt pollution prevention approach for all our processes; enhance material efficiency and achieve high productivity.
- Conserve key resources like electricity, coal, water, oil, and raw materials, by promoting efficient technologies and manufacturing process improvements, water conservation programmes, and efficient use of raw materials.
- Adopt energy efficient and cleaner technologies based on techno-economic viability, appropriate to the region in which we operate, and in line with our growth and diversification plans.
- Promote the principles of waste prevention, reduction, reuse, recycling and recovery to minimize waste generation and strengthen the practices for management of wastes.
- Work in partnership with regulatory authorities, relevant suppliers, contractors, distributors and logistics partners and all other stakeholders, as applicable, to understand and initiate improvement actions.
- Engage with internal and external stakeholders including key business partners such as joint venture partners, licensees and outsourcing partners and wider communities, to broaden our understanding of environmental priorities and initiate actions on key environmental challenges.
- Adapt environmental performance over life cycle as an important input to the decision-making processes in the organization.
- Raise environmental awareness at all levels of our operations, through training and effective communication, participation and consultation.
- Communicate this Policy within the Organization. Develop and follow appropriate communication system to inform other stakeholders, as applicable, about our environmental commitment and performance.
- Conduct environmental, health and safety due diligence before undergoing any mergers and acquisitions.

This policy shall be made available to all employees, suppliers, customers, community and other stakeholders, as appropriate. The implementation of this policy is the responsibility of respective heads of units with the monitoring and tracking done by the Apex Sustainability Committee under the guidance of the Managing Director.

Satish Pai

MD, Hindalco Industries Limited

Date : 9<sup>th</sup> August, 2022