

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/412

Date: 24th November 2025

To,
The Dy. Director General of Forest (C)
Ministry of Environment, Forests and Climate Changes
2nd 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 April 2025 to September 2025.

Ref: Environmental Clearance Letter No. J-11015/87/2009-IA II (M) dated 24th 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 **April 2025 to September 2025** 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**



Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)

Enclosure: - As Above

CC: ro.ranchi-mef@gov.in, mef@ori.nic.in, mef@nic.in, mef.or@nic.in, mescb.cpcb@nic.in, zokolkatta.cpcb@nic.in, ranchijspcb@gmail.com, 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 1st April 2025 to 30th September 2025**

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.

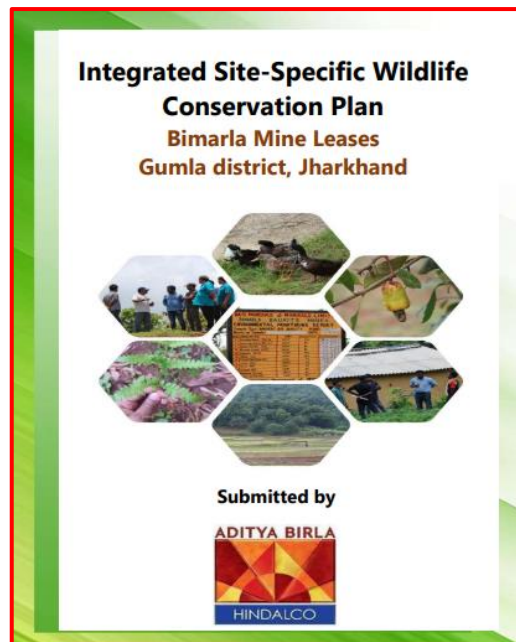
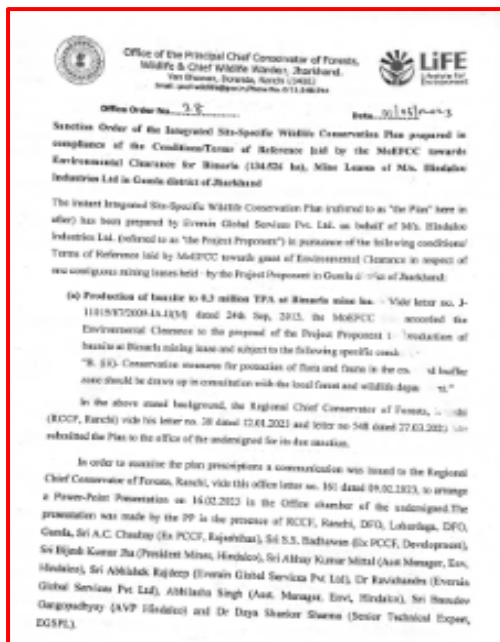
Condition iii: - Necessary wildlife clearance as may be applicable to this project should be obtained. Measures for conservation of flora and fauna observed in the study area shall be undertaken. The Wildlife Conservation Plan shall be implemented in consultation with the State Forests and Wildlife Department.

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.

				श्रीमान् महोदय जल संसाधन विभाग जल एवं नदी विकास और पानी संचालन विभाग भारत सरकार Government of India Ministry of Jal Shakti Department of Water Resources, River Development & Gangas Rejuvenation Central Ground Water Authority			
(प्रस्तावित निष्कासनी केन्द्र पर्यावरणीय प्रभाव विश्लेषण) NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION							
Project Name:		Bimanta Baunda Mining Project (134.37 Ha)					
Project Address:		Bimanta Baunda Mining Project, Vill:-Barang, Ghagra, Koria And Bimanta, Dist:-Gonda					
Village:		Bimanta		Block :- Ghagra			
District:		Gonda		State :- Jharkhand			
Pin Code:							
Communication Address:		Munira Minerals Ltd, Court Road, Lohardaga, Lohardaga, Lohardaga, Jharkhand - 833002					
Address of CGWB Regional Office:		Central Ground Water Board Mid Eastern Region, 6th & ramp; 7th Floor, Lok Nigraha, Lal Bahadur Shastri, P.O.Box-1020, New Delhi, India, Pin No. - 800011					
1. NOC No.:		CGWANOCA/NR/ENG/2023/S&I-1		2. Date of Issuance		26/11/2023	
3. Application No.:		21-4458/19/S&N/2019		4. Category		Renewal	
5. Project Status:		Existing Ground Water		6. NOC Type		Renewal	
7. Valid from:		16/01/2024		8. Valid up to:		15/01/2026	
9. Ground Water Abstraction Permitted		Fresh Water		Saline Water		Dewatering	
m³/day		m³/year		m³/day		m³/year	
9.50		3467.50					
10. Details of ground water abstraction / Dewatering structures						Total	
Total Existing No.:1						Total Proposed No.:9	
		DW	DCS	BW	TW	MP	MPU
Abstraction Structure*		0	0	1	0	0	0
*DW-Dug Well; DCS-Dug-on-Site Well; BW-Bore Well; TW-Tube Well; MPU-Mini PLP/MU-Pumps							
11. Ground Water Abstraction/Recharge Charges paid (Rs.)						0.00	
12. Environmental Compensation (if applicable) paid (Rs.)						0.00	

(Compliance Conditions shown overleaf)

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.

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.

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 temporally 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 5530 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 xvi.

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

Date : 19/08/2025
Time : 09:49:52 AM
Validity upto : 18/02/2026

Certificate SL No. : 07400140072377
Registration No. : JH11D7709
Date of Registration : 19/Feb/2008
Month & Year of Manufacturing : January-2008
Valid Mobile Number : *****97
Emission Norms : BHARAT STAGE II
Fuel : DIESEL
PUC Code : JH0010014
GSTIN :
Fees : Rs.300.00
ML 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 (%)		
	Hydrocarbon, (THC/HC)	ppm		
	CO	percentage (%)		
	RPM	RPM	2500 ± 200	
	Lambda	-	1 ± 0.03	
	Smoke Density	Light absorption coefficient	2.45	2.34

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
60mm x 30 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 10 μ m i.e. PM10) and NO_x 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 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 MCDDR/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.

Piezometer Monitoring Report**Mine: Bimarla Bauxite Mine (134.526 Ha)**

S No	Month	Ground Water Level (BGL) in meter
1	Apr-25	37.73
2	May-25	37.95
3	Jun-25	37.81
4	Jul-25	37.49
5	Aug-25	36.95
6	Sep-25	36.83



EPIC LabTech Private Limited

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

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☎ 98557 86072
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✉ epiclabtech@gmail.com

CIN:-U74999JH2022PTC018885
PAN:-AAHCE3811M
GST:-25AAHCE3811M1Z

Accredited by:-
NABL certificate number TC - 038
Hazardous Waste Pollution Control Board
Certified by:-
ISO 9001:2015 and ISO 45001:2018



Analytical Test Certificate

Annexure - 2

Unique Lab Report No.	TC1288725000000447	Discipline	Chemical
Report Unique ID	RL0150251806	Group	Atmospheric Pollution
Issue date/time	02.05.2025/11:54	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. Ankit Das +91 9971034775 ankit.das@adityabiria.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/0150	Sample Booking Number	EPIC-251806
Sample(s) Code	251806 (A) (B) (C) (D)	Sample Receipt (D/T)	28.04.2025/10:32

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Sampling Start (D/T)	25.04.2025/ 10:26	Sampling End (D/T)	26.04.2025/ 07:34
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling			
Weather condition	Clear	Temperature (°C)	28
		Humidity %	61
		Wind direction	270°-90°

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 16	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	28.04.2025/ 11:10	Test completion date	02.05.2025/ 10:00

--Test Result --								
Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	77.98	82.52	71.97	74.00	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	37.00	38.00	34.05	32.23	50(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	08.91	08.92	08.02	08.05	50(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	23.54	23.56	22.40	23.62	50(24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	33.98	34.04	34.68	33.82	180(1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	44.46	43.60	40.76	42.04	400(24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	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 ³	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 ³	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	-

--Test Result End --	
Prescribed Limit	Environmental (Protection) Rules-1986, Schedule VII.
Operational Status	Unit was Operational During sampling.
Analysed by - A. K. BHRA	



Checked by
(B.N. Kumar)
Technical Head

Verified/Issued by
(Anish Das)
Laboratory Head



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CIN - U74900JH2022PTC018683
PAN - AAHCE2811M
GST - 22AAHCE2811M1ZK

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0150251806	Group	Atmospheric Pollution
Issue date/time	02.05.2025/11:54	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 MINES	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +919971034775 ankit.das@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/0150	Sample Booking Number	EPIC-251806
Sample(s) Code	251806 (A) (B) (C) (D)	Sample Receipt (D/T)	26.04.2025/10:32

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Sampling Start (D/T)	25.04.2025/ 10:26	Sampling End (D/T)	26.04.2025/ 07:34
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Clear	Temperature (°C)	29	Humidity %	61	Wind direction	270°-90°

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	Nav Prathmik Vidyalaya Barang Path	GPS coordinate	23° 17' 20.07" / 84° 25' 30.41"
S. Location D	Near Mine Entry Gate	GPS coordinate	23° 18' 49.80" / 84° 25' 33.67"

Date(s) of performance of the laboratory activities			
Test start date	26.04.2025/ 11:10	Test completion date	02.05.2025/ 10:00

--Test Result --

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	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 ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SDP/AP/01/00	mg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-

--Test Result End --

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



Checked by
(B.N. Koser)
Technical Head





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CIN - (U74999)JH2022PTC018643 Accredited by -
NABL, regd. no. 4038 Number TL- 0387
PAN - AAHCC56TMM
Bharat's Day Innovation Content Board
GST - 25AAHCC56TMM12X
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000448	Discipline	Chemical
Report Unique ID	RL0150251807	Group	Atmospheric Pollution
Issue date/time	02.05.2025/11:56	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. Ankit Das +91 9971034775 ankit.das@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/0150	Sample Booking Number	EPIC-251807
Sample(s) Code	251807 (A) (B) (C) (D)	Sample Receipt (D/T)	28.04.2025/10:38

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Sampling Start (D/T)	26.04.2025/ 11:15	Sampling End (D/T)	27.04.2025/ 08:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling			
Weather condition	Clear	Temperature (°C)	28
		Humidity %	62
		Wind direction	270° 90°

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	28.04.2025/ 11:00	Test completion date	02.05.2025/ 10:00

--Test Result --

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m³	67.01	67.91	68.99	67.97	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m³	30.02	29.17	29.77	29.92	50(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m³	07.02	07.06	07.08	07.12	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m³	21.89	20.84	20.91	19.85	80(24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m³	31.82	30.56	30.52	29.66	180(1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m³	41.29	39.91	39.86	39.28	400(24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m³	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/m³	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/m³	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	-

--Test Result End --

Prescribed Limit	Environmental (Protection) Rules-1986, Schedule VII.
Operational Status	Unit was Operational During sampling.

Analysed by - LC 2084



Checked by
(E.X. Kumar)
Technical Head

Verified & Issued by
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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CIN - U74999(JH2022)PTC019083
PAN - AANICE1811M
GST - 20AANCE1811M12X

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0150251807	Group	Atmospheric Pollution
Issue date/time	02.05.2025/11:56	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. Ankit Das +919971034775 ankit.das@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/0150	Sample Booking Number	EPIC-251807
Sample(s) Code	251807 (A) (B) (C) (D)	Sample Receipt (D/T)	28.04.2025/10:38

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Sampling Start (D/T)	26.04.2025/ 11:15	Sampling End (D/T)	27.04.2025/ 08:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Clear	Temperature (°C)	28	Humidity %	62	Wind direction	270°-90°

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	26.04.2025/ 11:00	Test completion date	02.05.2025/ 10:00

--Test Result --

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	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 ³	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 ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-

--Test Result End --

Prescribed Limit	Environmental (Protection) Rules-1986, Schedule VI.
Operational Status	Unit was Operational During sampling.
Analysed by -A.S.200	



Checked by
(B.A. Kumar)
Technical Head





EPIC LabTech Private Limited



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CIN: U74999JH2022PFC010682
PAN: RANCB011M
GST: 22AAHC3811M1ZK

Accredited by -
NABL ISO 9001:2015 (Lab No: TC-13467)
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000449	Discipline	Chemical
Report Unique ID	RL0150251808	Group	Water
Issue date/time	02.05.2025/11:58	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. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@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/0150	Sample Booking Number	EPIC-251808
Sample(s) Code	251808	Sample Receipt (D/T)	28.04.2025/ 10:41

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Sampling Start (D/T)	26.04.2025/ 14:15	Sampling End (D/T)	26.04.2025/ 14:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	29	Humidity %	61	Wind direction	270°-90°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mines Office	GPS coordinate	23° 17' 03.63" / 84° 25' 19.17"
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Date(s) of performance of the laboratory activities

Test start date	28.04.2025/ 10:55	Test completion date	02.04.2025/ 10:30
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--Test Result --

Sl.	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible limit
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.95	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.52	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	<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	197.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	20.69	250	1000
8.	Total Alkalinity(as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	150.00	200	800
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	176.0	200	800
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	51.30	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	BDL(MDL-0.4)	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1)2022	mg/l	03.80	200	400
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	01.98	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL(MDL-0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	11.55	30	100



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CIN-U74999JH2022PTC015623
PAN-AAACE3611M
GST-28AAHCE3611M128

Approved by -
NABL ACCREDITED Number TC-12887
Pathand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000449	Discipline	Chemical
Report Unique ID	RL0150251808	Group	Water
Issue date/time	02.05.2025/11:58	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. Ankit Das +91 9971034775 ankit.das@adityabirla.com 05.04.2025/ 10:10 RP/MJB/MM/25/0114/00
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Group - Residues and Contaminants in Water			Sub Group- Trace Metals Elements		
16. Copper(as Cu)	APHA 3111 B 2023	mg/l	BDL(MDL-0.2)	0.05	1.5
17. Iron (as Fe)	APHA 3111 B 2023	mg/l	BDL(MDL-0.1)	1.0	No relaxation
18. Lead (as Pb)	APHA 3111 B 2023	mg/l	BDL(MDL-0.01)	0.01	No relaxation
19. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BDL(MDL-0.003)	0.003	No relaxation
20. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	0.05	No relaxation
21. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BDL(MDL-0.02)	0.02	No relaxation
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	0.05
23. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	No relaxation
24. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	0.1	0.3
25. Zinc(as Zn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	5	15

—Test Result End—

Prescribed Limit	IS 10300:2021
Operational Status	Unit was Operational During sampling.
Analyzed by - Pratik Kumar/ Anup Kumar	



Checked by
(P.K. Kumar)
Technical Head

Verified & Issued by
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Page 2 of 2

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



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epiclabtech@gmail.com

CIN: -U74999JH0302PTC019685
PAN: -AARCE3411M
GST: -28AARCE3411M12X

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0150251808	Group	Water
Issue date/time	02.05.2025/11:58	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. Ankit Das +91 9971034775 ankit.das@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/0150	Sample Booking Number	EPIC-251808
Sample(s) Code	251808	Sample Receipt (D/T)	28.04.2025/10:41

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Sampling Start (D/T)	26.04.2025/ 14:15	Sampling End (D/T)	26.04.2025/ 14:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Clear	Temperature (°C)	29	Humidity %	61	Wind direction	270°-90°

Sampling Location(s) with GPS coordinate(s)			
S. Location-A	Near Mines Office	GPS coordinate	23° 17' 03.83" / 84° 25' 19.17"

Date(s) of performance of the laboratory activities			
Test start date	28.04.2025/ 10:55	Test completion date	02.04.2025/ 10:30

--Test Result --

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



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CIN: U74999JH2022PTC019685
PAN: AAHCE3611M
GST: 20AAHCE3611M1Z6

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0150251808	Group	Water
Issue date/time	02.05.2025/11:58	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. Ankit Das
+91 9971034775
ankit.das@adityabiria.com
05.04.2025/ 10:10
RP/MJB/MM/25/0114/00

15.	Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
16.	Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	190.0	No relaxation
17.	Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.3	No relaxation
18.	Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	1.0	No relaxation
19.	Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	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	BDL(MDL-0.5)	1.0	No relaxation
21.	Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.4	No relaxation

--Test Result End --

Prescribed Limit
Operational Status
IS 10500:2021
Unit was Operational During sampling.
Analyzed by - Praveen Kumar/ Anshu Kumar



Checked by
(B.N. Kumar)
Technical Head

Verified & Issue by
(Anish Das)
Laboratory Head
Anish Das
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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CIN:-U74999JH2022PFC018685
PAN:-AAHCE3811M
GST:-20AAHCE3811M1ZK

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Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL0150251809	Group	Water
Issue date/time	02.05.2025/12:02	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. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@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/0150	Sample Booking Number	EPIC-251809
Sample(s) Code	251809	Sample Receipt (D/T)	28.04.2025/ 10:45

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS : 3025 (Part-1) 1987, R-2003& IS 1822 1981		
Sampling Start (D/T)	28.04.2025/ 14:15	Sampling End (D/T)	28.04.2025/ 14:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	29	Humidity %	61	Wind direction	270°-90°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mines 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	28.04.2025/ 10:55	Test completion date	02.04.2025/ 10:30
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--Test Result --

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

--Test Result End --

Prescribed Limit IS 10500:2021
Operational Status Unit was Operational During sampling.
Analyzed by -Pratima Kumar/ Anupam Kumar



Checked by
(S.N. Kumar)
Technical Head

Verified & Issue by
(Anupam Kumar)
Laboratory Head





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CIN: U74300JH2022PTC019685
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GST: 20AAHCE3811M1ZK

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Bharat Heavy Industries Control Board
Certified by -
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TC-12887

Analytical Test Certificate

Unique Lab Report No. TC1288725000000450
Report Unique ID RL0150251810
Issue date/time 02.05.2025/12:04

Discipline Chemical
Group Water
Sub Group Ground Water

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabirla.com
Order Date 05.04.2025/ 10:10
Order Number RP/MUB/MM/25/0114/00

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0150	Sample Booking Number	EPIC-251810
Sample(s) Code	251810	Sample Receipt (D/T)	28.04.2025/10:45

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS: 3025 (Part-1) 1987, R-2003		
Sampling Start (D/T)	26.04.2025 /16:00	Sampling End (D/T)	28.04.2025/ 16:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	29	Humidity %	61	Wind direction	270°-90°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Nav Prathmik Vidyalaya Barang Path	GPS coordinate	23° 17' 22.57" /84° 25' 28.81"
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Date(s) of performance of the laboratory activities

Test start date	26.04.2025/ 10:55	Test completion date	02.04.2025/ 10:30
-----------------	-------------------	----------------------	-------------------

--Test Result --

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible limit
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.69	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.80	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	<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	258.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	23.65	250	1000
8.	Total Alkalinity(as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	192.00	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	202.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	55.31	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	BDL(MDL 0.4)	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1)2022	mg/l	5.00	200	400
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	2.16	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL(MDL 0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	15.55	30	100



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CIN: U14899JH2022PTC019683
PAN: AAHCE8811M
GST: 25AAHCE8811M1ZK

Assured by:
HAR, Har Certified for ISO 9001:2015
Jharkhand State Pollution Control Board
Certified by:
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No. TC1288725000000450
Report Unique ID RL0150251810
Issue date/time 02.05.2025/12:04

Discipline Chemical
Group Water
Sub Group Ground Water

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabirla.com
Order Date 05.04.2025/ 10:10
Order Number RP/MJB/MM/25/0114/00

Group - Residues and Contaminants in Water

Sub Group- Trace Metals Elements

16. Copper(as Cu)	APHA 3111 B 2023	mg/l	BDL(MDL-0.2)	0.05	1.5
17. Iron (as Fe)	APHA 3111 B 2023	mg/l	BDL(MDL-0.1)	1.0	No relaxation
18. Lead (as Pb)	APHA 3111 B 2023	mg/l	BDL(MDL-0.01)	0.01	No relaxation
19. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BDL(MDL-0.003)	0.003	No relaxation
20. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	0.05	No relaxation
21. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BDL(MDL-0.02)	0.02	No relaxation
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	0.05
23. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	No relaxation
24. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.09)	0.1	0.3
25. Zinc(as Zn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	5	15

-Test Result End-

Prescribed Limit IS 10500:2021
Operational Status Unit was Operational During sampling.
Analysed by -Pratim Kumar/ Anshu Kumar



Checked by
(B.A. Kumar)
Technical Head

Verified & Issued by
(Anshu Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Page 2 of 2

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



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CIN: U74999JH2022PFC016620
PAN: AAHCE3811M
GST: 23AAHCE3811M12X

Accredited by -
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Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0150251810	Group	Water
Issue date/time	02.05.2025/12:04	Sub Group	Ground Water

Report Issue to MM/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. Ankit Das +91 9971034775 ankit.das@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/0150	Sample Booking Number	EPIC-251810
Sample(s) Code	251810	Sample Receipt (D/T)	26.04.2025/10:45

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Sampling Start (D/T)	26.04.2025 /16:00	Sampling End (D/T)	26.04.2025/ 16:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Clear	Temperature (°C)	29	Humidity %	61	Wind direction	270°-90°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Nav Prathmik Vidyalaya Barang Path	GPS coordinate	23° 17' 22.57" N 84° 25' 28.81" E

Date(s) of performance of the laboratory activities			
Test start date	26.04.2025/ 10:55	Test completion date	02.04.2025/ 10:30

--Test Result --

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible limit
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	BDL(MDL-0.1)	1.0	1.5
Group-Residues and Contaminants in Water				Sub Group-Trace Metals Elements		
2.	Aluminum	IS 3025 (P-55):2019	mg/l	BDL(MDL-0.1)	0.03	0.2
3.	Boron	IS 3025 (P-57):2021	mg/l	BDL(MDL-0.1)	0.5	1.0
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.5	No relaxation
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.1	No relaxation
Group-Residues and Contaminants in Water				Sub Group-Pesticides		
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	20	No relaxation
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
8.	Dieldrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.03	No relaxation
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.005)	0.01	No relaxation
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	125.0	No relaxation
12.	Chlopyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	30.0	No relaxation
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	3.0	No relaxation



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PAN - AAHCE3811M
GST - 20AAHCE3811M1ZK

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0150251810	Group	Water
Issue date/time	02.05.2025/12:04	Sub Group	Ground Water

Report issue to MM/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. Ankit Das +91 9971034775 ankit.das@adityabiria.com 05.04.2025/ 10:10 RP/MJB/MM/25/0114/00
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15. Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
16. Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	190.0	No relaxation
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.3	No relaxation
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	1.0	No relaxation
19. Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	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	BDL(MDL-0.5)	1.0	No relaxation
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.4	No relaxation

-Test Result End -

Prescribed Limit
Operational Status
Analysed by -Pratim Kumar/ Anup Kumar

IS 10500:2021
Unit was Operational During sampling.



Checked by
(B.N. Kumar)
Technical Head

Verified Issue by
(Anish Das)
Laboratory Head
Anish Das
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Page 3 of 3

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



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CIN - U74999JH2022PTC019583
PAN - AANICE3611M
GST - 22AANICE3611M1ZK

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL0150251811	Group	Water
Issue date/time	02.05.2025/12:06	Sub Group	Ground Water

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9971034775
ankit.das@adityabiria.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/0150	Sample Booking Number	EPIC-251811
Sample(s) Code	251811	Sample Receipt (D/T)	28/04/2025/10:46

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS : 3025 (Part-1) 1967, R-2003& IS 1622 1981		
Sampling Start (D/T)	26.04.2025 /16:00	Sampling End (D/T)	26.04.2025/ 16:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	29	Humidity %	61	Wind direction	270°-90°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Nav Prathamik Vidyalaya Barang Path	GPS coordinate	23° 17' 22.57" / 84° 26' 28.61"
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Date(s) of performance of the laboratory activities

Test start date	28.04.2025/ 10:55	Test completion date	02.04.2025/ 18:30
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--Test Result --

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

--Test Result End --

Prescribed Limit IS 10900:2021
Operational Status Unit was Operational During sampling.
Analysed by -Pratim Kumar/ Anshu Kumar



Checked by
(B.N. Kumar)
Technical Head

Verified & Issue by
(Anshu Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited



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CIN:-U74900JH2022PTC046685
PAN:-AANCC2611M
GST:-22AANCC2611M124

Accredited by -
NABL, acc. certificate number TC-12887
Forstand: State Pollution Control Board
Certified by -
ISO 15189:2013 and ISO 4020:2018

TC-12887

Analysed Test Certificate

Unique Lab Report No.	TC1288725000000628	Discipline	Chemical
Report Unique ID	RL01832621118	Group	Atmospheric Pollution
Issue date/time	27.05.2025/ 10:42	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. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@bactyabiria.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/0183	Sample Booking Number	EPIC-2521118
Sample(s) Code	2521118 (A) (B) (C) (D)	Sample Receipt (D/T)	23.05.2025/ 11:48

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	20.05.2025/ 11:30	Sampling End (D/T)	21.05.2025/ 08:00
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	Clear	Temperature (°C)	31	Humidity %	48	Wind direction	20°-200°
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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 18	GPS coordinate	23° 17' 45.37" / 84° 25' 30.07"
S. Location C	Near Prathamik Vidyalaya Barang Path	GPS coordinate	23° 17' 20.07" / 84° 25' 30.41"
S. Location D	Near Mine Entry Gate	GPS coordinate	23° 18' 49.80" / 84° 25' 33.67"

Date(s) of performance of the laboratory activities

Test start date	23.05.2025/ 11:55	Test completion date	26.05.2025/ 17:20
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	90.26	88.82	71.67	79.00	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	46.63	43.56	37.13	40.91	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	12.44	09.95	08.66	10.16	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	24.64	17.59	18.15	20.36	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	51.30	48.05	44.80	38.31	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-08) 2019	µg/m ³	39.34	35.77	32.19	28.61	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	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 ³	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 ³	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 - AK Sirha



Reviewed by
(B.K. Kumar)
Technical Head

Issue by
(Smruti Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.

Page 2 of 2

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Abbreviations : BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LQ (Limit of Quantitation).



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CIN:-U74999JH2022PTC029625
PAN:-AAHCE3871M
GST:-22AAHCE3871M1G2R

Accredited by:-
Bharatpur 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	RL01632521118	Group	Atmospheric Pollution
Issue date/time	27.05.2025/ 10:42	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. Ankit Das
Contact Number +91 9871034775
Email Id ankit.das@edityabirfa.com
Order Date 05.04.2025/ 10:10
Order Number RP/HUB/MM/25/0114/00

References of Quality Management System (Steps of Irrevocability Decl)

Customer Registration No.	EPIC/OTH/0183	Sample Booking Number	EPIC-2521118
Sample(s) Code	2521118 (A) (B) (C) (D)	Sample Receipt (D/T)	23.05.2025/ 11:48

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	20.05.2025/ 11:30	Sampling End (D/T)	21.05.2025/ 08:00
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/06/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	31	Humidity %	48	Wind direction	20°-200°
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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 Prathamik 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	23.05.2025/ 11:55	Test completion date	26.05.2025/ 17:20
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	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 ³	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 ³	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 - AK Sinha

Reviewed by
(E.K. Kumar)
Technical Head



Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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CIN - U74999JH2022PTC010681
PAN - AARCE2611M
GST - 20AARCE3019M12X

Accredited by :-
NABL, Accreditation Number TC-13307
Jharkhand State Pollution Control Board
Certified by :-
ISO 9001:2015 and ISO 45001:2018



TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000629	Discipline	Chemical
Report Unique ID	RL01832521119	Group	Atmospheric Pollution
Issue date/time	27.05.2025/ 10:44	Sub Group	Ambient Noise

Report Issue to

M/s - MINERALS & MINERALS LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE : BIMARLA BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +91 9971034775 ankit.das@adityabirla.com 05.04.2025/ 10:10 RP/408/MM/25/0114/00
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References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0183	Sample Booking Number	EPIC-2521119
Sample(s) Code	2521119 (A) (B) (C) (D)	Sample Receipt (D/T)	23.05.2025/ 11:54

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	20.05.2025/ 11:30	Sampling End (D/T)	21.05.2025/ 08:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 9889:1981 (RA 2020) & CPCB Method S.O.50 (E) dated 11/01/2010		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	31	Humidity %	48	Wind direction	20°-200°
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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' 33.87"

Date(s) of performance of the laboratory activities

Test start date	23.05.2025/ 12:05	Test completion date	26.05.2025/ 17:30
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-Test Results-

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	L _{eq} (Day time)	IS: 9889:1981	dB (A)	58.3	48.4	43.7	45.7	75
2.	L _{eq} (Night time)	IS: 9889:1981	dB (A)	43.4	41.4	36.9	37.1	70

-Test Results End-

Prescribed Limit	Environmental (Protection) Rules-1986, Schedule III.
Operational Status	Unit was Operational During sampling.

Analyzed by - AK Sinha



Reviewed by
(R.K. Kumar)
Technical Head



Page 1 of 1

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Abbreviations: - BOD (Biomass Detachable Units), MDC (Microscopic Detachable Units), LuQ (Unit of Quantification).



EPIC LabTech Private Limited



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CIN - U74999JH002379PC000005
PAN - AANCE5011M
GST - 22AAHCE5011M1Z9

Accredited by -
NABL, Accreditation Number IC-1587
Jharkhand State Pollution Control Board
Certified by -
ISO 15189:2013 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000630	Discipline	Chemical
Report Unique ID	RL01832521120	Group	Pollution & Environment
Issue date/time	27.05.2025/ 10:46	Sub Group	Waste Water (Sewage)

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. Ankit Das +91 9971034775 ankit.das@adityabirla.com 05.04.2025/ 10:10 RP/MJB/MM/25/0114/00
---	--	---

References of Quality Management System (Days of Traceability Chain)

Customer Registration No.	EPIC/OTH/0183	Sample Booking Number	EPIC-2521120
Sample(s) Code	2521120	Sample Receipt (D/T)	23.05.2025/ 11:58

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	21.05.2025/ 16:25	Sampling End (D/T)	21.05.2025/ 16:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1967, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	31	Humidity %	49	Wind direction	20°-200°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	STP Outlet	GPS coordinate	23° 16' 59.06" / 84° 25' 18.09"
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Data(s) of performance of the laboratory activities

Test start date	23.05.2025/ 12:10	Test completion date	26.05.2025/ 10:50
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--Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2002	-	6.88	6.5-8.0
2.	BOD (3 days at 27°C)	IS 3025 (P-44) 2000	mg/l	8.00	30
3.	COD	IS 3025 (P-58) 2006	mg/l	40.00	-
4.	Oil & Grease	IS 3025 (P-39) 2021	mg/l	BDL(MDL-04)	-
5.	Total Suspended Solid	IS 3025 (P-17) 2002	mg/l	13.00	100
6.	Iron (as Fe)	APHA 3111 B 2003	mg/l	BDL(MDL-0.1)	-

--Test result End--

Prescribed Limit	Environmental (Protection) Rules-1986, Schedule I, Serial No. 105.
Operational Status	Unit was Operational During sampling.

Analyzed by - Anjali Kumari



Reviewed by
(S.K. Kumar)
Technical Feed

Issued by
(Ankit Das)
Laboratory Feed
Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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CIN - U74999JH2022PTC019685
PAN - AAKHC3001N
GST - 25AAHCE3001N12X

Accredited by :-
Bharatpur 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	RL01832521120	Group	Pollution & Environment
Issue date/time	27.05.2025/ 10:48	Sub Group	Waste Water (Sewage)

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. Ankit Das +91 9971034775 ankit.das@edityabirra.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/0183	Sample Booking Number	EPIC-2521120
Sample(s) Code	2521120	Sample Receipt (D/T)	23.05.2025/ 11:58

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	21.05.2025/ 15:25	Sampling End (D/T)	21.05.2025/ 15:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	31	Humidity %	49	Wind direction	20°-200°
-------------------	-------	------------------	----	------------	----	----------------	----------

Sampling Location(s) with GPS coordinate(s)

S. Location A	STP Outlet	GPS coordinate	23° 16' 59.06" / 84° 25' 18.09"
---------------	------------	----------------	---------------------------------

Date(s) of performance of the laboratory activities

Test start date	23.05.2025/ 12:10	Test completion date	26.05.2025/ 10:50
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--Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Calcium	IS 3025 (P-40) 2022	mg/l	74.00	-
2.	Aluminum	IS 3025 (P-55) 2003	mg/l	BOL (MDL 0.1)	-

--Test result End --

Prescribed Limit Environmental (Protection) Rules-1986, Schedule I, Serial No. 105.

Operational Status Unit was Operational During sampling.

Analyzed by - Anjali Kumar



Reviewed by
(B.N. Kumar)
Technical Head

Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited



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CIN: U74999JH2022PTC019683
FAN: RAHCE351M
GST: 22AARCE351M1L2X

Accredited by:
NABL with certificate number TC-1381
Pathways State Pollution Control Board
Certified by:
ISO 9001:2015 and ISO 14001:2015

YC-12857

Analytical Test Certificate

Unique Lab Report No.	TC1286725000000632	Discipline	Chemical
Report Unique ID	RL01832501122	Group	Atmospheric Pollution
Issue date/time	27.05.2025/ 10:50	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. Ankit Das Contact Number +91 9971034775 Email Id ankit.das@adityabirla.com Order Date 05.04.2025/ 10:10 Order Number RP/HJB/HM/25/0114/00
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References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0103	Sample Booking Number	EPIC- 2521122
Sample(s) Code	2521122 (A) (B) (C) (D)	Sample Receipt (D/T)	23.05.2025/ 12:00

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	21.05.2025/ 11:50	Sampling End (D/T)	22.05.2025/ 08:56
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	Clear	Temperature (°C)	32	Humidity %	46	Wind direction	220°-40°
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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 Bahang 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"

Data(s) of performance of the laboratory activities

Test start date	23.05.2025/ 12:10	Test completion date	26.05.2025/ 17:25
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--Test Results--

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	64.99	61.49	68.68	74.94	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-34) 2019	µg/m ³	28.22	26.41	30.06	32.02	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	07.99	08.28	09.23	10.63	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	22.60	22.12	21.93	18.23	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-35) 2018	µg/m ³	49.03	45.76	42.53	39.29	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-08) 2019	µg/m ³	30.04	35.07	36.48	40.78	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL23.96 (MDL-0.1)	BDL (MDL-0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
9.	Arsenic (As)	USEPA IO 3.2:1989	ng/m ³	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 VIII.
Operational Status	Unit was Operational During sampling.
Analyzed by - AK Sinha	



Reviewed by
(S.K. Kumar)
Technical Head

Issued By
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.

Ranchi, Jharkhand Page 2 of 2

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Abbreviation: STD (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantification)



EPIC LabTech Private Limited

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CIN: U74999JH2022PTC019681
PAN: AARICE2611M
GST: 20AAHCE3611M1ZK

Accredited by -
Bharat Heavy Industries Control Bureau
Certified by -
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL01802521122	Group	Atmospheric Pollution
Issue date/time	27.05.2025/ 10:50	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. Ankit Das +91 9971034775 ankit.das@adityabirla.com 05.04.2025/ 10:10 RP/MB/MM/25/0114/00
--	--	--

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0183	Sample Booking Number	EPIC- 2521122
Sample(s) Code	2521122 (A) (B) (C) (D)	Sample Receipt (D/T)	23.05.2025/ 12:00

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	21.05.2025/ 11:50	Sampling End (D/T)	22.05.2025/ 08:56
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	Clear	Temperature (°C)	32	Humidity %	46	Wind direction	220°-40°
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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° 18' 32.45" / 84° 25' 12.72"
S. Location C	Near Ghaghra Village	GPS coordinate	23° 18' 55.86" / 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	23.05.2025/ 12:10	Test completion date	26.05.2025/ 17:25
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- Test Results -

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	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 ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOR/AP/01/00	mg/m ³	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 - AK Sirha	



Reviewed by
(AK Sirha)
Technical Head





EPIC LabTech Private Limited



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CIN - U74999JH2022PTC019685
PIN - AAMCE3011M
GST - 20AAWCE3670M123

Accredited by -
NABL, ISO 15189:2013 Number IC-12687
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12687

Analytical Test Certificate

Unique Lab Report No.	TC1268725000000728	Discipline	Chemical
Report Unique ID	RL02162525031	Group	Atmospheric Pollution
Issue date/time	25.06.2025/ 10:30	Sub Group	Ambient Air Quality

Report Issued 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. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@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/0216	Sample Booking Number	EPIC-2525031
Sample(s) Code	2525031 (A) (B) (C) (D)	Sample Receipt (D/T)	20.06.2025/ 11:31

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	17.06.2025/ 11:40	Sampling End (D/T)	18.06.2025/ 08:17
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	Clear	Temperature (°C)	26	Humidity %	76	Wind direction	270°-90°
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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	20.06.2025/ 12:15	Test completion date	24.06.2025/ 12:00
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS-5182 (P-23) 2022	µg/m ³	88.29	86.83	69.80	77.66	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	44.34	41.57	34.36	38.80	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS-5182 (P-02) 2023	µg/m ³	10.96	07.44	07.05	08.22	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS-5182 (P-06) 2022	µg/m ³	22.20	14.80	15.66	17.97	80(24 hr)
5.	Ammonia (NH ₃)	IS-5182 (P-25) 2018	µg/m ³	49.38	46.67	42.67	36.16	400(24 hr)
6.	Ozone (O ₃)	IS-5182 (P-09) 2019	µg/m ³	37.23	33.14	30.35	26.48	180(1 hr)
7.	Lead (Pb)	IS-5182(P-22) 2018	µg/m ³	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 ³	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 ³	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.

Analyzed by - Vishal Mangaraj



Reviewed by
(B.R. Kumar)
Technical Head

Issued by
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.

Ranchi, Jharkhand

Page 1 of 1

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CIN - U74999JH2022PTC019885
PIN - AANCE2011M
GST - 20AAICB5619M1ZK

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02162525031	Group	Atmospheric Pollution
Issue date/time	25.06.2025/ 10:30	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. Ankit Das
Contact Number +91 9871034775
Email Id ankit.das@edityabiria.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/0216	Sample Booking Number	EPIC-2525031
Sample(s) Code	2525031 (A) (B) (C) (D)	Sample Receipt (D/T)	20.06.2025/ 11:31

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	17.06.2025/ 11:40	Sampling End (D/T)	18.06.2025/ 08:17
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	Clear	Temperature (°C)	26	Humidity %	78	Wind direction	270°-90°
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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	20.06.2025/ 12:15	Test completion date	24.06.2025/ 12:00
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS 5182(P-11) 2006	µg/m ³	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 ³	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 ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

-Test Results End -

Prescribed Limit Environmental (Protection) Rules-1986, Schedule VII.
Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by
(B.R. Kumar)
Technical Head





EPIC LabTech Private Limited



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CIN:-U74999JH2022PTC019683
PAN:-AAHCE2611M
GST:-22AAHCE2611M12X

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

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000729	Discipline	Chemical
Report Unique ID	RL02162525032	Group	Atmospheric Pollution
Issue date/time	25.06.2025/ 10:32	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. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@edityabirra.com
Order Date 05.04.2025/ 10:10
Order Number RP/MJB/MM/25/0114/00

References of Quality Management System (Status of Traceability Data)

Customer Registration No.	EPIC/OTH/0216	Sample Booking Number	EPIC- 2525032
Sample(s) Code	2525032 (A) (B) (C) (D)	Sample Receipt (D/T)	20.06.2025/ 11:33

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.06.2025/ 12:08	Sampling End (D/T)	19.06.2025/ 09:06
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	Clear	Temperature (°C)	26	Humidity %	78	Wind direction	270°-90°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Korie 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 Ghagira Village	GPS coordinate	23° 16' 55.88" / 84° 23' 36.22"
S. Location D	Near Bimarla Village	GPS coordinate	23° 17' 05.82" / 84° 23' 25.75"

Date(s) of performance of the laboratory activities

Test start date	20.06.2025/ 12:23	Test completion date	24.06.2025/ 12:03
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	62.20	59.76	66.52	72.47	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	27.05	24.94	28.66	30.25	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	06.26	06.66	07.44	09.01	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	20.08	19.03	17.97	15.86	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	47.40	43.83	40.58	37.34	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	28.61	33.26	34.69	33.00	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL23.96 (MDL-0.1)	BDL (MDL-0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	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 ³	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 - Vishal Mangaraj



Reviewed by
(S.K. Kumar)
Technical Head

Done by
(Suresh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

Page 1 of 1

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



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CIN - U14999JH2022PTC010685
PAN - AAWCE2610M
GST - 22AAWCE2610M1Z9

Accredited by -
Bharat 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	RL02162525032	Group	Atmospheric Pollution
Issue date/time	25.06.2025/ 10:32	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 : BIMARIA BAUXITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number
Mr. Ankit Das
+91 9971034775
ankit.das@adityabiria.com
05.04.2025/ 10:10
RP/MJB/MM/25/0114/00

References of Quality Management System (Steps of Traceability Detail)

Customer Registration No.	EPIC/OTH/0216	Sample Booking Number	EPIC- 2525032
Sample(s) Code	2525032 (A) (B) (C) (D)	Sample Receipt (D/T)	20.06.2025/ 11:33

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.06.2025/ 12:08	Sampling End (D/T)	19.06.2025/ 09:06
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	Clear	Temperature (°C)	32	Humidity %	46	Wind direction	220°-40°
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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 Bimaria Village	GPS coordinate	23° 17' 05.62" / 84° 23' 25.75"

Date(s) of performance of the laboratory activities

Test start date	20.06.2025/ 12:23	Test completion date	24.06.2025/ 12:03
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	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 ³	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 ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

-Test Results End-

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by
(S.K. Kumar)
Technical Head

Issued by
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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CIN - U74999JH2022PTC019585
FEN - AACCE3611M
GST - 22AAHCE3611M1Z9

Permitted by -
Hathnani State Pollution Control Board
Certified by -
ISO 18001:2015 and ISO 45001:2018

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02162529033	Group	Atmospheric Pollution
Issue date/time	25.06.2025/ 10:34	Sub Group	Work Zone Noise

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9971034775
ankit.das@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/0216	Sample Booking Number	EPIC-2525033
Sample(s) Code	2525033 (A) (B)	Sample Receipt (D/T)	20.06.2025/ 11:38

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D)	17.06.2025	Sampling End (D)	17.06.2025
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 9989:1981 (RA 2020) & CPCB Method S.O.50 (E) dated 11/01/2010		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	78	Wind direction	270°-90°
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Sampling Location(s) with GPS coordinate(s)

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

Date(s) of performance of the laboratory activities

Test start date	20.06.2025/ 12:40	Test completion date	24.06.2025/ 12:15
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results		Limits
				A	B	
1.	L _{eq}	IS: 9989:1981	dB (A)	71.3	63.9	85

-Test Results End -

Prescribed Limit
Operational Status
NIOSH - Publication No. 98-126 in 1972, Table 1-1
Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by
(S.K. Kumar)
Technical Head

12
Ankit Das
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited



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✉ epiclabtech@gmail.com

CIN - U74999JH2022PTC096825
PIN - 834001M
GST - 22AAHCE3879M1Z8

Accredited by -
NABL, with Certificate Number TC - 1087
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC128872500000919	Discipline	Chemical
Report Unique ID	RL02432529064	Group	Atmospheric Pollution
Issue date/time	23.07.2025/ 17:30	Sub Group	Ambient Air Quality

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabirla.com
Order Date 05.04.2025/ 10:10
Order Number RP/MB/MM/25/0114/00

References of Quality Management System (Scope of Traceability Chain)

Customer Registration No.	EPIC/OTH/0243	Sample Booking Number	EPIC-2529064
Sample(s) Code	2529064 (A) (B) (C) (D)	Sample Receipt (D/T)	19.07.2025/ 10:40

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	16.07.2025/ 12:05	Sampling End (D/T)	17.07.2025/ 10:09
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	66	Wind direction	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° 18' 49.80" / 84° 25' 33.67"

Date(s) of performance of the laboratory activities

Test start date	19.07.2025/ 11:00	Test completion date	23.07.2025/ 16:00
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	84.63	82.84	65.03	73.50	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	40.53	37.91	30.19	34.01	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	09.38	06.52	06.55	08.03	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	20.05	11.07	12.13	15.21	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	44.94	42.39	38.88	32.19	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	34.74	30.04	26.78	22.44	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	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 ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
9.	Arsenic (As)	USEPA IO 3.2-1998	ng/m ³	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 VI.

Operational Status Unit was Operational During sampling.

Analyzed by - Vishal Mangera



Reviewed by
(S.N. Kumar)
Technical Head

Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.

Page 1 of 1

Contracted Notes: 1. The Laboratory accepts responsibility for contents of this report. 2. Test performed at laboratory's permanent facility. 3. Sample collection and handling conditions as method required and results relate only to the sample tested in prescribed date & time. 4. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law. 5. Any complaint about this report should be communicated in writing within 10 days of its issue. 6. Total liability of EPIC LabTech Pvt. Ltd. will be limited to involved amount only. 7. All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges. 8. Opinion does not supply endorsement of the tested product by laboratory. 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. 10. Abbreviation: SPM (Suspended Particulate Matter), TSP (Total Suspended Particulate Matter), SO₂ (Sulphur Dioxide), NO₂ (Nitrogen Dioxide), CO (Carbon Monoxide).



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CIN - U17499JB12022PTC016685
PAN - AAAYC2810M
GST - 22AAAYC2810M1G2R

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

Analysis Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02432529064	Group	Atmospheric Pollution
Issue date/time	23.07.2025/ 17:30	Sub Group	Ambient Air Quality

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9871034775
Email Id ankit.das@adityabirla.com
Order Date 06.04.2025/ 10:10
Order Number RP/MJB/MM/25/0114/00

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0243	Sample Booking Number	EPIC-2529064
Sample(s) Code	2529064 (A) (B) (C) (D)	Sample Receipt (D/T)	19.07.2025/ 10:40

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	16.07.2025/ 12:05	Sampling End (D/T)	17.07.2025/ 10:09
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	66	Wind direction	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	19.07.2025/ 11:00	Test completion date	23.07.2025/ 16:00
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	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 ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01/05	mg/m ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

-Test Results End -

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by
(E.N. Kumar)
Technical Head





EPIC LabTech Private Limited



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CIN-U74999JH2022PTC099485
PAN-AAMCE3611M
GST-20AARCE3611M12X

Accredited by -
NABL, lab certificate number IC-13867
Hazardous Waste Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000920	Discipline	Chemical
Report Unique ID	RL02432529065	Group	Atmospheric Pollution
Issue date/time	23.07.2025/ 17:33	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. Ankit Das
Contact Number +91 9871034775
Email Id ankit.das@edityabirra.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/0243	Sample Booking Number	EPIC-2529065
Sample(s) Code	2529065 (A) (B) (C) (D)	Sample Receipt (D/T)	19.07.2025/ 10:41

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	17.07.2025/ 11:50	Sampling End (D/T)	18.07.2025/ 06:55
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	66	Wind direction	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 Sarang Village	GPS coordinate	23° 16' 32.45" / 84° 25' 12.72"
S. Location C	Near Ghagtra Village	GPS coordinate	23° 18' 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	19.07.2025/ 11:01	Test completion date	23.07.2025/ 16:01
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-Test Results-

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	58.25	55.96	62.15	68.62	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2018	µg/m ³	23.31	20.53	24.32	26.68	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	06.48	06.85	06.23	08.43	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	18.27	16.25	14.25	12.22	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	43.35	38.88	36.65	35.06	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	23.88	29.31	30.40	33.65	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	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 ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	
9.	Arsenic (As)	USEPA 10.3.2:1999	ng/m ³	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.

Analyzed by - Vishal Mangaraj



Reviewed by
(R.K. Kumar)
Technical Head

Issue by
(Ankit Das)
Laboratory Head

Authorized Signatory



EPIC LabTech Private Limited

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CIN - U74999JH2022PTC036483 Accredited by -
Jharkhand State Pollution Control Board
PAN - AAMCE3611M
GST - 22AARCE3611M1ZK
Certified by -
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02432529065	Group	Atmospheric Pollution
Issue date/time	23.07.2025/ 17:33	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. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabirla.com
Order Date 05.04.2025/ 10:10
Order Number RP/MIS/MM/25/0114/00

References of Quality Management System (Steps of Traceability Chart)

Customer Registration No.	EPIC/OTH/0243	Sample Booking Number	EPIC-2529065
Sample(s) Code	2529065 (A) (B) (C) (D)	Sample Receipt (D/T)	19.07.2025/ 10:41

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	17.07.2025/ 11:50	Sampling End (D/T)	18.07.2025/ 08:55
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal 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 %	86	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' 38.22"
S. Location D	Near Binaria Village	GPS coordinate	23° 17' 05.62" / 84° 23' 25.75"

Date(s) of performance of the laboratory activities

Test start date	19.07.2025/ 11:01	Test completion date	23.07.2025/ 16:01
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS 5182(P-11) 2006	µg/m ³	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 ³	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 ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

-Test Results End-

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by
(E.K. Kumar)
Technical Head





EPIC LabTech Private Limited



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CIN - U74999JH2022PTC019625
PAN - AAKCE3811M
GST - 20AAWCE3811M12X

Accredited by -
NABL, acc. certificate Number TC - 5387
Jharkhand State Industrial Corridor Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analysis Test Certificate

Unique Lab Report No.	TC128872500000921	Discipline	Chemical
Report Unique ID	RL02432529066	Group	Water
Issue date/time	23.07.2025/ 17:36	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 : BHARLA BAUXITE MINE

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email id ankit.das@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/0243	Sample Booking Number	EPIC-2529066
Sample(s) Code	2529066	Sample Receipt (D/T)	19.07.2025/ 10:43

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	17.07.2025/ 13:30	Sampling End (D/T)	17.07.2025/ 13:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity%	66	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mines 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	19.07.2025/ 11:03	Test completion date	23.07.2025/ 18:00
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--Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible Limit
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.99	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.66	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	<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-18) 2023	mg/l	181.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	19.19	250	1000
8.	Total Alkalinity(as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	145.00	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	174.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	49.8	75	200
11.	Free Residual Chlorine	IS 3025 (P-35) 1986	mg/l	BDL(MDL-0.4)	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1) 2022	mg/l	3.88	200	400
13.	Nitrate (as NO ₃)	APHA 4500-B 2023	mg/l	1.79	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL(MDL-0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500-Mg E 2023	mg/l	10.55	30	100



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CIN - U74900JH2022PTC039485
PAN - AARCE3611M
GST - 20AARCE3611M12X

Accredited by -
NABL, with certificate number TC-1581
Pollution Data Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000921	Discipline	Chemical
Report Unique ID	RL02432529066	Group	Water
Issue date/time	23.07.2025/ 17:36	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 : BHARLA BAUXITE MINE

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabirla.com
Order Date 05.04.2025/ 10:10
Order Number RP/MJB/MM/25/0114/00

Group - Residues and Contaminants in Water

Sub Group - Trace Metals Elements

16. Copper(as Cu)	APHA 3111 B 2023	mg/l	BDL(MDL-0.2)	0.05	1.5
17. Iron (as Fe)	APHA 3111 B 2023	mg/l	BDL(MDL-0.1)	1.0	No relaxation
18. Lead (as Pb)	APHA 3111 B 2023	mg/l	BDL(MDL-0.01)	0.01	No relaxation
19. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BDL(MDL-0.003)	0.003	No relaxation
20. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	0.05	No relaxation
21. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BDL(MDL-0.02)	0.02	No relaxation
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	0.05
23. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	No relaxation
24. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	0.1	0.3
25. Zinc(as Zn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	5	15

--Test result End --

Prescribed Limit IS 10500:2021
Operational Status Unit was Operational During sampling.
Analysed by - Vishal Mangaraj



Reviewed by
(E.R. Kumar)
Technical Head

Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Page 2 of 2

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CIN - U74999JH2022PTC010585 Accredited by -
Jharkhand State Pollution Control Board
PAN - AANCE2611M
Certified by -
GST - 20AAWCE3670N123 ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02432529066	Group	Water
Issue date/time	23.07.2025/ 17:36	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. Ankit Das
+91 9971034775
ankit.das@adityabirla.com
05.04.2025/ 10:10
RP/HUB/MM/25/0114/00

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0243	Sample Booking Number	EPIC-2529066
Sample(s) Code	2529066	Sample Receipt (D/T)	19.07.2025/ 10:43

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	17.07.2025/ 13:30	Sampling End (D/T)	17.07.2025/ 13:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	66	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mines Office	GPS coordinate	23° 17' 03.83" / 84° 26' 19.17"
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Date(s) of performance of the laboratory activities

Test start date	19.07.2025/ 11:03	Test completion date	23.07.2025/ 16:00
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--Test Result--

Sl.	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible Limit
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	BDL(MDL-0.1)	1.0	1.5
Group-Residues and Contaminants in Water				Sub Group-Trace Metals Elements		
2.	Aluminum	IS 3025 (P-55):2019	mg/l	BDL(MDL-0.1)	0.03	0.2
3.	Boron	IS 3025 (P-57):2021	mg/l	BDL(MDL-0.1)	0.5	1.0
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.5	No relaxation
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.1	No relaxation
Group-Residues and Contaminants in Water				Sub Group-Pesticides		
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	20	No relaxation
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.5	No relaxation
8.	Dieldrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.03	No relaxation
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.005)	0.01	No relaxation
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	125.0	No relaxation
12.	Chlorpyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	30.0	No relaxation
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	3.0	No relaxation



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CIN:-U74999JH2022PTC019683
PIN:-JHANCE01TM
GST:-35AAHCE3678F1Z9

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02432529066	Group	Water
Issue date/time	23.07.2025/ 17:36	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. Ankit Das
+91 9971034775
ankit.das@edityabirfa.com
05.04.2025/ 10:10
RP/MB/MM/25/0114/00

15. Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
16. Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	190.0	No relaxation
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.3	No relaxation
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	1.0	No relaxation
19. Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	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	BDL(MDL-0.5)	1.0	No relaxation
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.4	No relaxation

—Test result End—

Prescribed Limit
Operational Status
Analyzed by - Vishal Mangraj

IS 10500:2021
Unit was Operational During sampling.



Reviewed by
(E.K. Kumar)
Technical Head

Issued by
(Girish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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CIN - U74999JH2022PTC019625
PAN - AARICE1871M
GST - 20AAWCE307M12X

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

Environmental Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL02432529067	Group	Water
Issue date/time	23.07.2025/ 17:39	Sub Group	Drinking Water

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email id ankit.das@pedityabirla.com
Order Date 06.04.2025/ 10:10
Order Number RP/MJB/MM/25/0114/00

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0243	Sample Booking Number	EPIC-2529067
Sample(s) Code	2529067	Sample Receipt (D/T)	19.07.2025/ 10:43

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/038
Sampling Start (D/T)	17.07.2025/ 13:30	Sampling End (D/T)	17.07.2025/ 13:46
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	66	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mines 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	19.07.2025/ 11:03	Test completion date	23.07.2025/ 16:00
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--Test Result--

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

--Test result End--

Prescribed Limit IS 10500:2021
Operational Status Unit was Operational During sampling.
Analyzed by - Sujata Kumari



Reviewed by
(S.K. Kumar)
Technical Head

Issued by
(Suresh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited



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CIN - U74999JH2022PTC019685
PAN - AAHCE3870M
GST - 20AAHCE3870M1Z9

Accredited by -
NABL, accreditation Number: 1, 1391
Pollution Control Laboratory
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000001089	Discipline	Chemical
Report Unique ID	RL02752535067	Group	Atmospheric Pollution
Issue date/time	01.09.2025/ 17:00	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. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabirla.com
Order Date 05.04.2025/ 10:10
Order Number BP/MUB/MM/25/0114/00

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0275	Sample Booking Number	EPIC-2535067
Sample(s) Code	2535067 (A) (B) (C) (D)	Sample Receipt (D/T)	28.08.2025/ 10:18

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	25.08.2025/ 12:06	Sampling End (D/T)	26.08.2025/ 10:20
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)	27	Humidity %	70	Wind direction	45°-225°
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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° 18' 49.80" / 84° 25' 33.67"

Date(s) of performance of the laboratory activities

Test start date	28.08.2025/ 10:38	Test completion date	01.09.2025/ 16:00
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-Test Results-

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS 5182 (P-23) 2022	µg/m ³	84.02	81.98	64.29	73.02	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	40.06	37.27	29.89	33.97	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS 5182 (F-02) 2023	µg/m ³	09.02	06.13	06.31	07.56	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS 5182 (F-06) 2022	µg/m ³	19.05	10.52	12.01	14.99	80 (24 hr)
5.	Ammonia (NH ₃)	IS 5182 (P-25) 2018	µg/m ³	44.62	42.07	38.57	31.67	400 (24 hr)
6.	Ozone (O ₃)	IS 5182 (P-08) 2019	µg/m ³	34.38	29.67	26.42	22.07	180 (1 hr)
7.	Lead (Pb)	IS 5182 (P-22) 2018	µg/m ³	BDL	BDL	BDL	BDL	1.0 (24 hr)
			(MDL 0.1)	(MDL 0.1)	(MDL 0.1)	(MDL 0.1)	(MDL 0.1)	
8.	Nickel (Ni)	IS 5182 (P-26) 2020	ng/m ³	BDL	BDL	BDL	BDL	
			(MDL 0.1)	(MDL 0.1)	(MDL 0.1)	(MDL 0.1)	(MDL 0.1)	
9.	Arsenic (As)	USEPA IO 3.2-1996	ng/m ³	BDL	BDL	BDL	BDL	
			(MDL 0.001)	(MDL 0.001)	(MDL 0.001)	(MDL 0.001)	(MDL 0.001)	

-Test Results End -

Prescribed Limit Environmental (Protection) Rules-1986, Schedule VII.
Operational Status Unit was Operational During sampling.

Analysed by - Vidul Mangraj



Reviewed by
(R.K. Kumar)
Technical Head

Issue by
(Omish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.

Ranchi, Jharkhand

Page 1 of 1

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



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CIN - U74900JH2022PTC019685
PAN - AAHCE281M
GST - 20AAHCE281M1Z9

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02752535067	Group	Atmospheric Pollution
Issue date/time	01.09.2025/ 17:00	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 : BIMALA BAUXITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9971034775
ankit.das@adityabirla.com
05.04.2025/ 10:10
RP/MJB/MM/25/0114/00

References of Quality Management System (Class of Traceability Chain)

Customer Registration No.	EPIC/OTH/0275	Sample Booking Number	EPIC-2535067
Sample(s) Code	2535067 (A) (B) (C) (D)	Sample Receipt (D/T)	28.08.2025/ 10:18

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/038
Sampling Start (D/T)	25.08.2025/ 12:06	Sampling End (D/T)	26.08.2025/ 10:20
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/06/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	45°-225°
-------------------	--------	------------------	----	------------	----	----------------	----------

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 Prithmik Vidyalaya Barang Path	GPS coordinate	23° 17' 20.07" / 84° 25' 30.41"
S. Location D	Near Mine Entry Gate	GPS coordinate	23° 16' 49.00" / 84° 25' 33.67"

Data(s) of performance of the laboratory activities

Test start date	26.08.2025/ 10:36	Test completion date	01.09.2025/ 16:00
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--Test Results--

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS 5182(P-11) 2006	µg/m ³	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 ³	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 ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

--Test Results End--

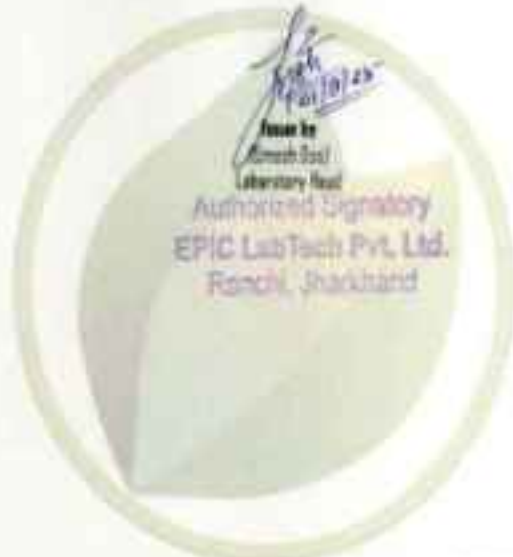
Prescribed Limit
Operational Status

Environmental (Protection) Rules-1986, Schedule VI,
Unit was Operational During sampling.

Analysed by - Vishal Mangraj



Reviewed by
(R. Kumar)
Technical Head





EPIC LabTech Private Limited



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CIN - U74999JH2022PT0319885
PIN - JAAHCE331M
GST - 20AAHCE3679M2Z

Accredited by -
NABL, REG. NO. 10705, 24/04/2021, TC - 1287
National State Pollution Control Board
Certified by -
ISO 9001:2015 ANN ISO 4000:2018

TC-12887

Analysis Test Certificate

Unique Lab Report No.	TC1288725000001100	Discipline	Chemical
Report Unique ID	RL02752535068	Group	Atmospheric Pollution
Issue date/time	01.09.2025/ 17:03	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
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9971034775
ankit.das@edityabirla.com
05.04.2025/ 10:10
RR/MB/MM/25/0114/00

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0275	Sample Booking Number	EPIC-2535068
Sample(s) Code	2535068 (A) (B) (C) (D)	Sample Receipt (D/T)	28.08.2025/ 10:20

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	26.08.2025/ 11:51	Sampling End (D/T)	27.08.2025/ 09:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	45°-225°
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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 Basing Village	GPS coordinate	23° 16' 32.45" / 84° 25' 12.72"
S. Location C	Near Ohaghra 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	28.08.2025/ 10:40	Test completion date	01.09.2025/ 16:00
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS 5182 (P-23) 2022	µg/m ³	57.82	55.01	61.20	67.81	109 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	22.98	20.07	23.82	26.18	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS 5182 (P-62) 2023	µg/m ³	06.00	06.37	06.35	07.83	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS 5182 (P-06) 2022	µg/m ³	18.03	15.92	14.00	11.92	80(24 hr)
5.	Ammonia (NH ₃)	IS 5182 (P-23) 2018	µg/m ³	43.03	36.57	36.33	34.74	400(24 hr)
6.	Ozone (O ₃)	IS 5182 (P-09) 2019	µg/m ³	23.52	28.95	30.04	33.29	180(1 hr)
7.	Lead (Pb)	IS 5182(P-22) 2019	µg/m ³	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 ³	BDL (MDL 0.1)	BDL (MDL 0.1)	BDL (MDL 0.1)	BDL (MDL 0.1)	-
9.	Arsenic (As)	USEPA IO 3.2.1099	ng/m ³	BDL (MDL 0.001)	BDL (MDL 0.001)	BDL (MDL 0.001)	BDL (MDL 0.001)	-

-Test Results End -

Prescribed Limit
Operational Status

Environmental (Protection) Rules-1986, Schedule VII.
Unit was Operational During sampling.

Analysed by - Tishal Mangaraj



Reviewed by
(S.K. Kumar)
Technical Lead

Issue by
(Shresh Das)
Laboratory Lead

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

Page 1 of 1

Continued Notes : 1. The laboratory accepts responsibility for the 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 as presented Date & time. 3. The Test report shall not be reproduced full or in part & can't be sent, as print in the form 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 amount sent 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 liability by use or misuse of this report. 8. Where the results are from external provider are marked as "such".

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



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CGN - U74999JH2022PTC019685
RAN - RANCE3511M
GST - 23AAWCE301M129

Accredited by:
Bharatpur 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	RL02752535066	Group	Atmospheric Pollution
Issue date/time	01.09.2025/ 17:03	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 : BIMALA BAUXITE MINE

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabirla.com
Order Date 05.04.2025/ 10:10
Order Number RP/MB/MM/25/0114/00

References of Quality Management System (Days of Traceability Data)

Customer Registration No.	EPIC/OTH/0275	Sample Booking Number	EPIC-2535066
Sample(s) Code	2535066 (A) (B) (C) (D)	Sample Receipt (D/T)	28.08.2025/ 10:20

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/006
Sampling Start (D/T)	26.08.2025/ 11:51	Sampling End (D/T)	27.08.2025/ 09:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	45°-225°
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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 Ghughra Village	GPS coordinate	23° 16' 55.86" / 84° 23' 36.22"
S. Location D	Near Dimaria Village	GPS coordinate	23° 17' 05.62" / 84° 23' 25.75"

Date(s) of performance of the laboratory activities

Test start date	26.08.2025/ 10:40	Test completion date	01.09.2025/ 16:00
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS 5182(P-11) 2006	µg/m ³	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 ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB-SOP/AF/01/00	mg/m ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

-Test Results End -

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangera



Reviewed by
(E.N. Kumar)
Technical Head





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CIN - U74999JH2022PTC200483
PAN - AARCE3611M
GST - 20AARCE3611M1Z8

Accredited by -
NABL, with certificate number TC-12887
Performance Excellence Centre India
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC128872500001101	Discipline	Chemical
Report Unique ID	RL02752535069	Group	Water
Issue date/time	01.09.2025/ 17:06	Sub Group	Ground Water

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9871034775
Email id ankit.das@adityabinia.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/0275	Sample Booking Number	EPIC-2535069
Sample(s) Code	2535069	Sample Receipt (D/T)	28.08.2025/ 10:21

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	26.08.2025/ 12:10	Sampling End (D/T)	26.08.2025/ 12:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	45°-225°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Prathmik Vidyalaya Barang Path	GPS coordinate	23° 17' 22.57" / 84° 25' 28.81"
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Date(s) of performance of the laboratory activities

Test start date	28.08.2025/ 11:15	Test completion date	01.09.2025/ 16:00
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--Test Result--

Sl.	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible limit
1.	pH value at 25.70C	IS 3025 (P-11) 2022	-	6.88	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.82	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	<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	244.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2018	mg/l	22.22	250	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-33) 2018	mg/l	187.00	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	199.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	53.84	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	BDL(MDL-0.4)	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1) 2022	mg/l	4.85	200	400
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	2.00	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL(MDL-0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg F 2023	mg/l	14.85	30	100



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CIN - U74999JH2022PTC019685
PAN - AANCC3810M
GST - 20RAWCR2811M1C2

Accredited by -
NABL, Laboratory Number: 1515891
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No. TC1288725000001101
Report Unique ID RLO2752535069
Issue date/time 01.09.2025/ 17:06

Discipline Chemical
Group Water
Sub Group Ground Water

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9871034775
Email id ankit.das@edityabirra.com
Order Date 05.04.2025/ 10:10
Order Number RP/MUB/MM/25/0114/00

Group - Residues and Contaminants in Water,

Sub Group - Trace Metals Elements

16. Copper (as Cu)	APHA 3111 B 2023	mg/l	BDL(MDL-0.2)	0.05	1.5
17. Iron (as Fe)	APHA 3111 B 2023	mg/l	BDL(MDL-0.1)	1.0	No relaxation
18. Lead (as Pb)	APHA 3111 B 2023	mg/l	BDL(MDL-0.01)	0.01	No relaxation
19. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BDL(MDL-0.003)	0.003	No relaxation
20. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	0.05	No relaxation
21. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BDL(MDL-0.02)	0.02	No relaxation
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	0.05
23. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	No relaxation
24. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.09)	0.1	0.3
25. Zinc(as Zn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	5	15

--Test result End--

Prescribed Limit
Operational Status
Analysed by - Pappu Kumar

IS 10500:2021
Unit was Operational During sampling.



Reviewed by
(J.K. Kumar)
Technical Head

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



Page 4 of 4

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



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CIN: U74900JH2022PTC019685 Accredited By:
Jharkhand State Pollution Control Board
PAN: LAHCE361M
Certified by:
GST: 22A/HCE/011M/22
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RLO2752535069	Group	Water
Issue date/time	01.09.2025/ 17:06	Sub Group	Ground Water

Report Issue to

M/s - MINERALS & MINERALS LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST -LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE: BIMARLA BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +91 9971034775 ankit.das@edityabirja.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/0275	Sample Booking Number	EPIC-2505069
Sample(s) Code	2535069	Sample Receipt (D/T)	28.08.2025/ 10:21

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	25.08.2025/ 12:10	Sampling End (D/T)	25.08.2025/ 12:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	45°-225°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Prathmik Vidyalaya Barang Path	GPS coordinate	23° 17' 22.57" / 84° 25' 28.81"
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Date(s) of performance of the laboratory activities

Test start date	28.08.2025/ 11:15	Test completion date	01.09.2025/ 16:00
-----------------	-------------------	----------------------	-------------------

-Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible Limit
1.	Fluoride (as F)	APHA 4500, F-C 2023	mg/l	BDL(MDL-0.1)	1.0	1.5
Group-Residues and Contaminants in Water				Sub Group-Trace Metals Elements		
2.	Aluminum	IS 3025 (P-55):2019	mg/l	BDL(MDL-0.1)	0.03	0.2
3.	Boron	IS 3025 (P-57):2021	mg/l	BDL(MDL-0.1)	0.5	1.0
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.5	No relaxation
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.1	No relaxation
Group-Residues and Contaminants in Water				Sub Group-Pesticides		
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	20	No relaxation
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
8.	Dieldrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.03	No relaxation
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.005)	0.01	No relaxation
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.3)	125.0	No relaxation
12.	Chlorpyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	30.0	No relaxation
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	3.0	No relaxation



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CIN - U74999JH2022PTC019085
PAN - LAANCC3611M
GST - 22AAJNC2301M1C2

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

Analytical Test Certificate

Unique Lab Report No. N/A
Report Unique ID RL02752535069
Issue date/time 01.09.2025/ 17:06

Discipline Chemical
Group Water
Sub Group Ground Water

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email id ankit.das@adityabirsa.com
Order Date 06.04.2025/ 10:10
Order Number RP/MJB/MM/25/0114/00

15. Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
16. Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	100.0	No relaxation
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.3	No relaxation
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	1.0	No relaxation
19. Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	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	BDL(MDL-0.5)	1.0	No relaxation
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.06)	0.4	No relaxation

--Test result End--

Prescribed Limit IS 10500:2021
Operational Status Unit was Operational During sampling.
Analysed by - Pappu Kumar



Reviewed by
(R.K. Kumar)
Technical Head

Issued by
(Pappu Kumar)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Page 6 of 8

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



EPIC LabTech Private Limited

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CIN - U74999JH2022PTC019685
PAN - AANCC2870M
GST - 22AAWCR3875M12X

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL02752535070	Group	Water
Issue date/time	01.09.2025/ 17:09	Sub Group	Ground Water

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9971034775
ankit.das@edityabirra.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/0275	Sample Booking Number	EPIC-2535070
Sample(s) Code	2535070	Sample Receipt (D/T)	28.08.2025/ 10:21

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	25.08.2025/ 12:10	Sampling End (D/T)	25.08.2025/ 12:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	45°-225°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Prathmik Vidyalaya Barang Path	GPS coordinate	23° 17' 22.67" / 84° 25' 28.81"
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Date(s) of performance of the laboratory activities

Test start date	28.08.2025/ 11:10	Test completion date	01.09.2025/ 1:35
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--Test Result--

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

--Test result End--

Prescribed Limit
Operational Status

IS 10500:2021
Unit was Operational During sampling.

Analysed by - Sujata Kumari




Reviewed by
(R.K. Kumar)
Technical Head


Issued by
(Omesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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CIN: U74909JH2022PTC019685
PAN: RAHCE3611M
GST: 22ARHCE3611M1Z9

Accredited by -
NABL with certificate number JC, 1380
National Quality Assurance Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018



TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000001102	Discipline	Chemical
Report Unique ID	RL02752535071	Group	Water
Issue date/time	01.09.2025/ 17:12	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
Contact Number
Email Id
Order Date
Order Number
Mr. Ankit Das
+91 9971034775
ankit.das@edityabiria.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/0275	Sample Booking Number	EPIC-2535071
Sample(s) Code	2535071	Sample Receipt (D/T)	28.08.2025/ 10:22

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	25.08.2025/ 12:30	Sampling End (D/T)	25.08.2025/ 12:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	45°-225°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Korle (Spring Water)	GPS coordinate	23° 17' 10.06" / 84° 26' 51.94"
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Date(s) of performance of the laboratory activities

Test start date	28.08.2025/ 11:30	Test completion date	01.09.2025/ 15:30
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-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.73	-
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.09	-
3.	Colour	IS 3025 (P-04) 2021	Hazen	5	-
4.	Odour	IS 3025 (P-06) 2018	-	Agreeable	-
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	-
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	193.0	-
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	13.3	-
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	30.0	-
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2019	mg/l	24.16	-
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	12.83	-
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	BDL(MDL 0.4)	-
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1) 2022	mg/l	1.90	-
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	2.09	-
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL(MDL 0.001)	-
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	1.98	-



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CIN: U14301JH2022PTC019645
PAN: AAHCE381YM
GST: 20AAHCE381WY2K

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

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1268725000001102	Discipline	Chemical
Report Unique ID	RL02752535071	Group	Water
Issue date/time	01.09.2025/ 17:12	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
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9871034775
ankit.das@edityabirfa.com
05.04.2025/ 10:10
RP/MJB/MM/25/0114/00

Group - Residues and Contaminants in Water,

Sub Group - Trace Metals Elements

16. Copper (as Cu)	APHA 3111 B 2023	mg/l	BDL(MDL-0.2)	-
17. Iron (as Fe)	APHA 3111 B 2023	mg/l	BDL(MDL-0.1)	-
18. Lead (as Pb)	APHA 3111 B 2023	mg/l	BDL(MDL-0.01)	-
19. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BDL(MDL-0.003)	-
20. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	-
21. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BDL(MDL-0.02)	-
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	-
23. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	-
24. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.09)	-
25. Zinc (as Zn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	-

-Test result End -

Prescribed Limit

Operational Status

Analysed by - Pappa Kumar

Unit was Operational During sampling.



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

[Signature]
Issued by
(Jyeshtha Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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CIN: U74999JH2022PT0076685
PAN: AAHCE3810M
GST: 22AAWC3807W124

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02792530071	Group	Water
Issue date/time	01.09.2025/ 17:12	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
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9971034775
ankit.das@edityabirja.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/0075	Sample Booking Number	EPIC-2535071
Sample(s) Code	2535071	Sample Receipt (D/T)	28.08.2025/ 10:22

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	25.08.2025/ 12:30	Sampling End (D/T)	25.08.2025/ 12:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS - 3025 (Part-1) 1987, R-3003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	45°-225°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Korie (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	28.08.2025/ 11:30	Test completion date	01.09.2025/ 15:30
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-Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Fluoride (as F)	APHA 4500 F-C 2003	mg/l	BDL(MDL-0.1)	-
Group-Residues and Contaminants in Water			Sub Group-Trace Metals Elements		
2.	Aluminum	IS 3025 (P-56):2019	mg/l	BDL(MDL-0.1)	-
3.	Boron	IS 3025 (P-67):2021	mg/l	BDL(MDL-0.1)	-
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	-
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	-
Group-Residues and Contaminants in Water			Sub Group-Pesticides		
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
8.	Dieldrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	-
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.005)	-
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	-
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
12.	Chlorpyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	-
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-



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CIN - U74999JH2022PTC019685
PAN - AANCC2919M
GST - 22AAWCR3817M1C2

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RLQ2752535071	Group	Water
Issue date/time	01.09.2025/ 17:12	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
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9971034775
ankit.das@adityabirla.com
06.04.2025/ 10:10
RP/MJB/MM/25/0114/00

15. Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	ug/l	BOL(MDL-0.5)	-
16. Malathion	EPIC/LAB/SOP/WA/01/00	ug/l	BOL(MDL-0.5)	-
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	ug/l	BOL(MDL-0.2)	-
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	ug/l	BOL(MDL-0.5)	-
19. Phorate	EPIC/LAB/SOP/WA/01/00	ug/l	BOL(MDL-0.5)	-
20. DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	ug/l	BOL(MDL-0.5)	-
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	ug/l	BOL(MDL-0.65)	-

—Test result End—

Prescribed Limit

Operational Status

Analyzed by - Pooja Kumar

Unit was Operational During sampling.



Reviewed by
(B.K. Kumar)
Technical Head

Issued by
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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CIN - U74999JH2022PTC019685
PAN - AAHCE3873M
GST - 20AAHCE3873MY2X

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL02752536072	Group	Water
Issue date/time	01.09.2025/ 17:15	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. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@edityabirla.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/0275	Sample Booking Number	EPIC-2536072
Sample(s) Code	2536072	Sample Receipt (D/T)	28.08.2025/ 10:22

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	25.08.2025/ 12:30	Sampling End (D/T)	25.08.2025/ 12:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS - 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	45°-225°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Korte (Spring Water)	GPS coordinate	23° 17' 10.06" / 84° 26' 51.94"
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Date(s) of performance of the laboratory activities

Test start date	28.08.2025/ 11:30	Test completion date	01.09.2025/ 15:30
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--Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Total Coliform	IS 15185:2002	Per 100 ml	380	—
2.	F.Coli	IS 15185:2002	Per 100 ml	260	—

--Test result End --

Prescribed Limit

Operational Status

Unit was Operational During sampling.

Analysed by - Sojita Kumari



Reviewed by
(S.K. Kumar)
Technical Head

Issued by
(Shreshth Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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CIN: U74900JH2022PTC019585
PAN: AAHCE2810M
GST: 20AAHCE2810M1ZK

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



Analytical Test Certificate

Unique Lab Report No.	TC1286725000001103	Discipline	Chemical
Report Unique ID	RL02752535073	Group	Pollution & Environment
Issue date/time	01.09.2025/ 17:18	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. Ankit Das
Contact Number	+91 9971034775
Email Id	ankit.das@edityabirfa.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/0275	Sample Booking Number	EPIC-2535073
Sample(s) Code	2535073	Sample Receipt (D/T)	28.08.2025/ 10:23

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	25.08.2025/ 12:30	Sampling End (D/T)	25.08.2025/ 12:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS: 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	45°-225°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Work Shop (Outlet)	GPS coordinate	23° 18' 59" / 84° 25' 18.09"
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Data(s) of performance of the laboratory activities

Test start date	26.08.2025/ 10:43	Test completion date	01.09.2025/ 15:15
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-Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.73	6.5-8.5
2.	BOD (3 days at 27°C)	IS 3025 (P-44) 2008	mg/l	13.5	-
3.	COD	IS 3025 (P-58) 2008	mg/l	94.0	150
4.	Oil & Grease	IS 3025 (P-39) 2021	mg/l	BDL(MDL-04)	10.0
5.	Total Suspended Solid	IS 3025 (P-17) 2022	mg/l	48.0	50
6.	Phosphate	IS 3025 (P-31/Sec-1) 2022	mg/l	0.56	-
7.	Zinc	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	-

-Test result End-

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

Operational Status Unit was Operational During sampling.

Analysed by - Pappu Kumar



P.K. Kumar
Reviewed by
(P.K. Kumar)
Technical Head





EPIC LabTech Private Limited

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CIN: U74909/JH2022PTC019485 Accredited by:-
Jharkhand State Pollution Control Board
PAN: AAHCE281M
Certified by:-
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02752535073	Group	Pollution & Environment
Issue date/time	01.09.2025/ 17:18	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
Contact Number
Email id
Order Date
Order Number

Mr. Ankit Das
+91 9971034775
ankit.das@adityabirla.com
05.04.2025/ 10:10
RP/MB/MM/25/0114/00

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0275	Sample Booking Number	EPIC-2535073
Sample(s) Code	2535073	Sample Receipt (D/T)	28.08.2025/ 10:23

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	25.08.2025/ 12:30	Sampling End (D/T)	25.08.2025/ 12:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity%	70	Wind direction	45°-225°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Work Shop (Outlet)	GPS coordinate	23° 16' 59" / 84° 25' 18.09"
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Date(s) of performance of the laboratory activities

Test start date	28.08.2025/ 10:43	Test completion date	01.09.2025/ 15:15
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--Test Result--

Sl	Test Parameters	Method used	UNIT	Results	Limits
1.	Total Dissolve Solids (TDS)	IS-3025 (P-18) 2023	mg/l	168.00	-

--Test result End--

Prescribed Limit
Operational Status

Environmental (Protection) Rules 1986, Schedule I, Serial No.114
Unit was Operational During sampling.

Analysed by - Pappu Kumar

Reviewed by
(B.R. Kumar)
Technical Head

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





EPIC LabTech Private Limited

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Accredited by:-
NABL (ISO 17025) Number TC-12887
Jharkhand State Pollution Control Board
Certified by:-
ISO 9001:2015 and ISO 45001:2018



Analytical Test Certificate

Unique Lab Report No.	TC1288725000001259	Discipline	Chemical
Report Unique ID	RL03032530001	Group	Atmospheric Pollution
Issue date/time	25.09.2025/ 17:30	Sub Group	Ambient Air Quality

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@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/0303	Sample Booking Number	EPIC-2539001
Sample(s) Code	2539001 (A) (B) (C) (D)	Sample Receipt (D/T)	22.09.2025/ 10:29

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.09.2025/ 12:15	Sampling End (D/T)	19.09.2025/ 10:58
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)	27	Humidity %	66	Wind direction	200°-20°
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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.18	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° 18' 49.80" / 84° 25' 33.67"

Date(s) of performance of the laboratory activities

Test start date	22.09.2025/ 10:49	Test completion date	25.09.2025/ 17:00
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	54.92	53.89	55.92	58.96	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	28.56	25.33	23.47	24.64	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	09.71	07.18	07.54	09.33	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	20.97	12.97	13.96	16.94	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	27.09	27.41	26.45	27.09	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	19.54	20.27	20.63	20.99	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	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 ³	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 ³	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 - Vishal Mangaraj



Reviewed by
(S.R. Kumar)
Technical Head

Done by
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

Page 1 of 1

Contractual Terms: 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 as presented here & 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 correction 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 amount received 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 involvement of the tested product by laboratory. Under no circumstances, laboratory accepts any claims by use or misuse of this report. 8. When the results are from external provider are marked as "as recd.".

Abbreviations: BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LQ (Limit of Quantification).



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CIN - U74999JH2022PTC019685
FEN - AAHCE3811M
GST - 22AAHCE3811M2B

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03032539001	Group	Atmospheric Pollution
Issue date/time	25.09.2025/ 17:30	Sub Group	Ambient Air Quality

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9971034776
Email Id ankit.das@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/0303	Sample Booking Number	EPIC-2539001
Sample(s) Code	2539001 (A) (B) (C) (D)	Sample Receipt (D/T)	22.09.2025/ 10:29

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/030
Sampling Start (D/T)	18.09.2025/ 12:15	Sampling End (D/T)	19.09.2025/ 10:58
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)	27	Humidity %	66	Wind direction	200°-20°
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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	22.09.2025/ 10:49	Test completion date	25.09.2025/ 17:00
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2008	µg/m ³	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 ³	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 ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

-Test Results End-

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by
(B.K. Kumar)
Technical Head





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CIN: U74999JH2022PTC018845
PAN: RAHC2381M
GST: 25AAHCE201M2Z

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



Analytical Test Certificate

Unique Lab Report No.	TC1288725000001260	Discipline	Chemical
Report Unique ID	RL03032539002	Group	Atmospheric Pollution
Issue date/time	25.09.2025/ 17:33	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. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@edityabirka.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/OTM/0003	Sample Booking Number	EPIC-2539002
Sample(s) Code	2539002 (A) (B) (C) (D)	Sample Receipt (D/T)	22.09.2025/ 10:30

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	19.09.2025/ 12:00	Sampling End (D/T)	20.09.2025/ 08:56
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)	27	Humidity %	66	Wind direction	340°-160°
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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 Batang 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' 05.82" / 84° 23' 25.75"

Date(s) of performance of the laboratory activities

Test start date	22.09.2025/ 10:50	Test completion date	25.09.2025/ 17:00
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	59.06	56.61	63.34	58.86	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	24.91	21.95	25.27	27.16	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	06.35	07.07	07.44	08.55	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	19.72	17.58	15.50	13.42	80 (24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	28.05	27.09	26.77	27.41	400 (24 hr)
6.	Ozone (O ₃)	IS:5182 (P-08) 2019	µg/m ³	24.25	22.80	22.07	21.71	180 (1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	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 ³	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 ³	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 VI.
Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



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

[Signature]
Issued by
(Rishi Das)
Laboratory Head

Authorized Signatory
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CIN: U74909JH2022PTC010683 Accredited by:

PAN: AAHCE3811M

GST: 22AAHCE3811MCE9

Background State Pollution Control Board

Certified by:

ISO 9001:2015 and ISO 15001:2015

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03032539002	Group	Atmospheric Pollution
Issue date/time	25.09.2025/ 17:30	Sub Group	Ambient Air Quality

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabirla.com
Order Date 05.04.2025/ 10:10
Order Number RP/MIS/MM/25/0114/00

References of Quality Management System (Steps of Traceability Data)

Customer Registration No.	EPIC/OTH/0303	Sample Booking Number	EPIC-2539002
Sample(s) Code	2539002 (A) (B) (C) (D)	Sample Receipt (D/T)	22.09.2025/ 10:30

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	19.09.2025/ 12:00	Sampling End (D/T)	20.09.2025/ 09:55
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)	27	Humidity %	66	Wind direction	340°-160°
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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° 26' 12.72"
S. Location C	Near Ghaghra Village	GPS coordinate	23° 16' 55.88" / 84° 23' 38.22"
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	22.09.2025/ 10:50	Test completion date	25.09.2025/ 17:00
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	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 ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AR/01/00	mg/m ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

-Test Results End-

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangera



Reviewed by
(S.K. Kumar)
Technical Head





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CIN: U24000JH2022PTC019685
PAN: AAHCE3810M
GST: ZGDARHC3810M129

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



Analytical Test Certificate

Unique Lab Report No.	TC1288725000001261	Discipline	Chemical
Report Unique ID	RL03032539003	Group	Pollution & Environment
Issue date/time	25.09.2025/ 17:36	Sub Group	Sol/Sediment

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. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabirla.com
Order Date 05.04.2025/ 10:10
Order Number RF/MB/MM/25/0114/00

References of Quality Management System (Days of Traceability Data)

Customer Registration No.	EPIC/OTH/0303	Sample Booking Number	EPIC-2539003
Sample(s) Code	2539003	Sample Receipt (D/T)	22.09.2025/ 10:31

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/006
Sampling Start (D/T)	18.09.2025/ 15:10	Sampling End (D/T)	18.09.2025/ 15:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/LAB/SOP/PE/01/00		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	60	Wind direction	200°-20°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Quarry NO.18	GPS coordinate	23° 17' 46.17" / 84° 25' 31.27"
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Date(s) of performance of the laboratory activities

Test start date	22.09.2025/10:40	Test completion date	25.09.2025/16:30
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-Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25.7°C	MAGI 2011	-	6.82	-
2.	Available Phosphorus	MAGI 2011	kg/ha	2.7	-
3.	Available Potassium	MAGI 2011	kg/ha	92.50	-
4.	Organic Carbon	MAGI 2011	%	1.50	-
5.	Electrical Conductivity	MAGI 2011	µs/cm	140.9	-
6.	Magnesium	MAGI 2011	mg/kg	37.83	-
7.	Nitrogen	MAGI 2011	%	0.02	-
8.	Arsenic (as As)	USEPA 3050 B 1996	mg/kg	BDL(MDL-0.005)	-
9.	Cadmium (as Cd)	USEPA 3050 B 1996	mg/kg	0.65	-
10.	Selenium (as Se)	USEPA 3050 B 1996	mg/kg	BDL(MDL-0.006)	-

-Test result End -

Operational Status Unit was Operational During sampling.

Analyzed by - Ishika Singh



Reviewed by
(R.K. Kumar)
Technical Head





EPIC LabTech Private Limited

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CIN: U74999JH2022PTC019685
PAN: KAHC2351M
GST: 25AAWCE267WVZ9

Accredited by:
National Green Pollution Control Board
Certified by:
ISO 9001:2015 and ISO 45001:2018

Environmental Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03032539003	Group	Pollution & Environment
Issue date/time	25.09.2025/ 17:36	Sub Group	Soil/Sediments

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. Ankit Das
Contact Number: +91 9871034775
Email Id: ankit.das@edityabirra.com
Order Date: 05.04.2025/ 10:10
Order Number: RP/MUB/MM/25/0114/00

References of Quality Management System (Steps of Traceability Data)

Customer Registration No.	EPIC/OTH/0303	Sample Booking Number	EPIC-2539003
Sample(s) Code	2539003	Sample Receipt (D/T)	22.09.2025/ 10:31

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.09.2025/ 15:10	Sampling End (D/T)	18.09.2025/ 15:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/LAB/SOP/PE/01/00		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	200°-20°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Quarry NO.1B	GPS coordinate	23° 17' 46.17" N 84° 25' 31.27" E
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Date(s) of performance of the laboratory activities

Test start date	22.09.2025/10:40	Test completion date	25.09.2025/16:30
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-Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Chloride (as Cl)	EPIC/LAB/SOP/PE/01/00	%	0.035	-
2.	Mercury (as Hg)	USEPA 3050 B 1996	mg/kg	BDL (MDL <0.005)	-

-Test result End-

Operational Status

Unit was Operational During sampling.

Analyzed by - Ishika Singh



Reviewed by
(E.R. Kumar)
Technical Head

Issued by
(Omish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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CIN: U74999JH2022PTC011685
PAN: AAACE2611M
GST: 22AAACE2611M1ZK

Accredited by -
NABL, with Certificate Number TC-12867
Hazardous Waste Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018



Analytical Test Certificate

Unique Lab Report No.	TC1288725000001282	Discipline	Chemical
Report Unique ID	RL03032539004	Group	Water
Issue date/time	25.09.2025/ 17:39	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. Ankit Das
Contact Number +91 9971034775
Email id ankit.das@odityabirla.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/0303	Sample Booking Number	EPIC-2539004
Sample(s) Code	2539004	Sample Receipt (D/T)	22.09.2025/ 10:32

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.09.2025/ 16:10	Sampling End (D/T)	18.09.2025/ 16:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	200°-20°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Quarry No.1B	GPS coordinate	23° 17' 46.60" / 84° 25' 29.17"
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Date(s) of performance of the laboratory activities

Test start date	22.09.2025/ 10:52	Test completion date	25.09.2025/ 16:10
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-Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.71	-
2.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2022	mg/l	15.0	-
3.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	7.40	-

Group - Residues and Contaminants in Water,

Sub Group - Trace Metals Elements

4.	Iron (as Fe)	APHA 3111 B 2023	-	BDL (MDL 0.1)	-
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-Test result End-

Operational Status Unit was Operational During sampling.

Analysed by - Pooja Kumar



Reviewed by
(B.K. Kumar)
Technical Head





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Jharkhand - 834005, India

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CIN: U74900JH2022PTC016685
PAN: AANCE3811M
GST: 22AANCE3811M1ZK

Accredited by:-
NABL and 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	RL03032539004	Group	Water
Issue date/time	25.09.2025/ 17:39	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. Ankit Das
Contact Number +91 9871034775
Email id ankit.das@edityabiria.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/0303	Sample Booking Number	EPIC-2539004
Sample(s) Code	2539004	Sample Receipt (D/T)	22.09.2025/ 10:32

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.09.2025/ 16:10	Sampling End (D/T)	18.09.2025/ 16:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	200°-20°
-------------------	--------	------------------	----	------------	----	----------------	----------

Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Quarry No.1B	GPS coordinate	23° 17' 46.60" / 84° 25' 29.17"
---------------	-------------------	----------------	---------------------------------

Date(s) of performance of the laboratory activities

Test start date	22.09.2025/ 10:52	Test completion date	25.09.2025/ 16:10
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-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	Dissolve Oxygen (DO)	IS 3025 (P-38) 1968	mg/l	4.2	-
2.	Temperature	IS 3025 (P-89) 1986	°C	24.2	-
3.	BOD (3days at 27°C)	IS 3025 (P-44) 2000	mg/l	2.0	-
4.	COD	IS 3025 (P-58) 2000	mg/l	32.0	-
5.	Total Suspended Solids (TSS)	IS 3025 (P-17) 2022	mg/l	12.00	-
6.	Oil & Grease	IS 3025 (P39) 2021	mg/l	BOL(MDL-04)	-

Group - Residues and Contaminants in Water,

7.	Aluminium (as Al)	IS 3025 (P-55) 2003	-		
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Sub Group - Trace Metals Elements

BOL(MDL-0.1)

-Test result End-

Operational Status

Unit was Operational During sampling.

Analysed by - Pappu Kumar



Reviewed by
(P.K. Kumar)
Technical Head



Page 1 of 1

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 valid only to the sample tested in prescribed date & time. 3. The test report shall not be reproduced full or in part & (not) be used as proof in the court of law. 4. Any complaint about this report should be communicated in writing within thirty days of its issue. 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to amount only. 6. All disputes are subjected to Ranchi, Jharkhand and exclusive jurisdiction of the laboratory does not covered the testing and sampling charges. 7. Opinion does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any liability by use or misuse of this report. 8. When the results are from external provider are marked as * mark. 9.

Abbreviations - BOL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantification).



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CIN:-U74999JH2022PTC018885
PAN:-AAHCE3811M
GST:-25AAHCE3811M1Z

Accredited by:-
NABL certificate Number TC - 0380
Hazardous Waste Pollution Control Board
Certified by:-
ISO 9001:2015 and ISO 45001:2018



Analytical Test Certificate

Unique Lab Report No.	TC1288725000000447	Discipline	Chemical
Report Unique ID	RL0150251806	Group	Atmospheric Pollution
Issue date/time	02.05.2025/11:54	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. Ankit Das +91 9971034775 ankit.das@adityabiria.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/0150	Sample Booking Number	EPIC-251806
Sample(s) Code	251806 (A) (B) (C) (D)	Sample Receipt (D/T)	28.04.2025/10:32

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Sampling Start (D/T)	25.04.2025/ 10:26	Sampling End (D/T)	26.04.2025/ 07:34
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling			
Weather condition	Clear	Temperature (°C)	28
		Humidity %	61
		Wind direction	270°-90°

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 16	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	28.04.2025/ 11:10	Test completion date	02.05.2025/ 10:00

--Test Result --								
Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	77.98	82.52	71.97	74.00	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	37.00	38.00	34.05	32.23	50(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	08.91	08.92	08.02	08.05	50(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	23.54	23.56	22.40	23.62	50(24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	33.98	34.04	34.68	33.82	180(1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	44.46	43.60	40.76	42.04	400(24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	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 ³	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 ³	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	-

--Test Result End --	
Prescribed Limit	Environmental (Protection) Rules-1986, Schedule VII.
Operational Status	Unit was Operational During sampling.
Analysed by - A. K. JENA	



Checked by
(B.N. Kumar)
Technical Head

Verified/Issued by
(Anish Das)
Laboratory Head



EPIC LabTech Private Limited

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CIN - U74900JH2022PTC018683
PAN - AAHCE2811M
GST - 22AAHCE2811M1ZK

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Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0150251806	Group	Atmospheric Pollution
Issue date/time	02.05.2025/11:54	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 MINES	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +919971034775 ankit.das@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/0150	Sample Booking Number	EPIC-251806
Sample(s) Code	251806 (A) (B) (C) (D)	Sample Receipt (D/T)	26.04.2025/10:32

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Sampling Start (D/T)	25.04.2025/ 10:26	Sampling End (D/T)	26.04.2025/ 07:34
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Clear	Temperature (°C)	29	Humidity %	61	Wind direction	270°-90°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Near Weigh Bridge	GPS coordinate	23° 17' 05.82" N 84° 25' 19.25" E
S. Location B	Near Quarry No 1B	GPS coordinate	23° 17' 45.37" N 84° 25' 30.07" E
S. Location C	Nav Prathmik Vidyalaya Barang Path	GPS coordinate	23° 17' 20.07" N 84° 25' 30.41" E
S. Location D	Near Mine Entry Gate	GPS coordinate	23° 18' 49.80" N 84° 25' 33.67" E

Date(s) of performance of the laboratory activities	
Test start date	26.04.2025/ 11:10
Test completion date	02.05.2025/ 10:00

--Test Result --

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	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 ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SDP/AP/01/00	mg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-

--Test Result End --

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



Checked by
(B.N. Koser)
Technical Head





EPIC LabTech Private Limited



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CIN - (U74999)JH2022PTC018643 Accredited by -
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PAN - AAHCC56TMM
Bharat's Day Innovation Content Board
GST - 25AAHCC56TMM12X
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TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000448	Discipline	Chemical
Report Unique ID	RL0150251807	Group	Atmospheric Pollution
Issue date/time	02.05.2025/11:56	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. Ankit Das +91 9971034775 ankit.das@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/0150	Sample Booking Number	EPIC-251807
Sample(s) Code	251807 (A) (B) (C) (D)	Sample Receipt (D/T)	28.04.2025/10:38

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Sampling Start (D/T)	26.04.2025/ 11:15	Sampling End (D/T)	27.04.2025/ 08:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Clear	Temperature (°C)	28	Humidity %	62	Wind direction	270° 90°

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	28.04.2025/ 11:00	Test completion date	02.05.2025/ 10:00

--Test Result --

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m³	67.01	67.91	68.99	67.97	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m³	30.02	29.17	29.77	29.92	50(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m³	07.02	07.06	07.08	07.12	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m³	21.89	20.84	20.91	19.85	80(24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m³	31.82	30.56	30.52	29.66	180(1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m³	41.29	39.91	39.86	39.28	400(24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m³	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/m³	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/m³	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	-

--Test Result End --

Prescribed Limit	Environmental (Protection) Rules-1986, Schedule VII.
Operational Status	Unit was Operational During sampling.

Analysed by - LC 2084



Checked by
(E.X. Kumar)
Technical Head

Verified & Issued by
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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CIN - U74999(JH2022)PTC019083
PAN - AANICE1811M
GST - 20AANCE1811M12X

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0150251807	Group	Atmospheric Pollution
Issue date/time	02.05.2025/11:56	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. Ankit Das +919971034775 ankit.das@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/0150	Sample Booking Number	EPIC-251807
Sample(s) Code	251807 (A) (B) (C) (D)	Sample Receipt (D/T)	28.04.2025/10:38

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Sampling Start (D/T)	26.04.2025/ 11:15	Sampling End (D/T)	27.04.2025/ 08:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Clear	Temperature (°C)	28	Humidity %	62	Wind direction	270°-90°

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	26.04.2025/ 11:00	Test completion date	02.05.2025/ 10:00

--Test Result --

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	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 ³	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 ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-

--Test Result End --

Prescribed Limit	Environmental (Protection) Rules-1986, Schedule VI.
Operational Status	Unit was Operational During sampling.
Analysed by -A.S.2060	



Checked by
(B.A. Kumar)
Technical Head





EPIC LabTech Private Limited



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C/o - R.K. Tripathi, Indrapuri,
Road No. - 5, Barchi,
Jharkhand - 834005, India

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CIN: U74999JH2022PFC010682
PAN: RANCB811M
GST: 22AAHCE3811M1ZK

Accredited by -
BIS (ISO 9001) State Institute (SI - 1347)
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000449	Discipline	Chemical
Report Unique ID	RL0150251808	Group	Water
Issue date/time	02.05.2025/11:58	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. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@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/0150	Sample Booking Number	EPIC-251808
Sample(s) Code	251808	Sample Receipt (D/T)	28.04.2025/ 10:41

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Sampling Start (D/T)	26.04.2025/ 14:15	Sampling End (D/T)	26.04.2025/ 14:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	29	Humidity %	61	Wind direction	270°-90°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mines Office	GPS coordinate	23° 17' 03.63" / 84° 25' 19.17"
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Date(s) of performance of the laboratory activities

Test start date	26.04.2025/ 10:55	Test completion date	02.04.2025/ 10:30
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--Test Result --

Sl.	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible limit
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.95	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.52	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	<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	197.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	20.69	250	1000
8.	Total Alkalinity(as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	150.00	200	800
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	176.0	200	800
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	51.30	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	BDL(MDL-0.4)	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1)2022	mg/l	03.80	200	400
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	01.98	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL(MDL-0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	11.55	30	100



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CIN-U74999JH2022PTC056823
PAN-AAACE3611M
GST-28AAACE3611M1Z8

Approved by -
NABL ACCREDITED NUMBER TC-12887
Pathand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000449	Discipline	Chemical
Report Unique ID	RL0150251808	Group	Water
Issue date/time	02.05.2025/11:58	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. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabirla.com
Order Date 05.04.2025/ 10:10
Order Number RP/MJB/MM/25/0114/00

Group - Residues and Contaminants in Water

Sub Group- Trace Metals Elements

16. Copper(as Cu)	APHA 3111 B 2023	mg/l	BDL(MDL-0.2)	0.05	1.5
17. Iron (as Fe)	APHA 3111 B 2023	mg/l	BDL(MDL-0.1)	1.0	No relaxation
18. Lead (as Pb)	APHA 3111 B 2023	mg/l	BDL(MDL-0.01)	0.01	No relaxation
19. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BDL(MDL-0.003)	0.003	No relaxation
20. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	0.05	No relaxation
21. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BDL(MDL-0.02)	0.02	No relaxation
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	0.05
23. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	No relaxation
24. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.06)	0.1	0.3
25. Zinc(as Zn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	5	15

-Test Result End -

Prescribed Limit IS 10300:2021
Operational Status Unit was Operational During sampling.
Analyzed by -Pratim Kumar/ Anup Kumar



[Signature]
Checked by
(B.R. Kumar)
Technical Head

[Signature]
Verified & Issued by
(Anish Das)
Laboratory Head

[Signature]
Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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C/o - R.K. Tripathi, Indrapuri,
Road No. - 5, Ranchi,
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epiclabtech@gmail.com

CIN: -U74999JH0322PTC019685
PAN: -AARCE3411M
GST: -28AARCE3411M1ZK

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0150251808	Group	Water
Issue date/time	02.05.2025/11:58	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. Ankit Das +91 9971034775 ankit.das@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/0150	Sample Booking Number	EPIC-251808
Sample(s) Code	251808	Sample Receipt (D/T)	28.04.2025/10:41

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Sampling Start (D/T)	26.04.2025/ 14:15	Sampling End (D/T)	26.04.2025/ 14:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Clear	Temperature (°C)	29	Humidity %	61	Wind direction	270°-90°

Sampling Location(s) with GPS coordinate(s)			
S. Location-A	Near Mines Office	GPS coordinate	23° 17' 03.83" / 84° 25' 19.17"

Date(s) of performance of the laboratory activities			
Test start date	28.04.2025/ 10:55	Test completion date	02.04.2025/ 10:30

--Test Result --

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



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✉ epiclabtech@gmail.com

CIN: U74999JH2022PTC019685
PAN: AAHCE3611M
GST: 20AAHCE3611M1Z6

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0150251808	Group	Water
Issue date/time	02.05.2025/11:58	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. Ankit Das
+91 9971034775
ankit.das@adityabiria.com
05.04.2025/ 10:10
RP/MJB/MM/25/0114/00

15. Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
16. Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	190.0	No relaxation
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.3	No relaxation
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	1.0	No relaxation
19. Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	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	BDL(MDL-0.5)	1.0	No relaxation
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.4	No relaxation

--Test Result End --

Prescribed Limit
Operational Status
IS 10500:2021
Unit was Operational During sampling.
Analyzed by - Praveen Kumar/ Anshu Kumar



Checked by
(B.N. Kumar)
Technical Head

Verified & Issue by
(Anish Das)
Laboratory Head

Aditya Biriya
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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CIN:-U74999JH2022PFC018685
PAN:-AAHCE3811M
GST:-20AAHCE3811M1ZK

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL0150251809	Group	Water
Issue date/time	02.05.2025/12:02	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. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@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/0150	Sample Booking Number	EPIC-251809
Sample(s) Code	251809	Sample Receipt (D/T)	28.04.2025/ 10:45

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS : 3025 (Part-1) 1987, R-2003& IS 1822 1981		
Sampling Start (D/T)	28.04.2025/ 14:15	Sampling End (D/T)	28.04.2025/ 14:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	29	Humidity %	61	Wind direction	270°-90°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mines 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	28.04.2025/ 10:55	Test completion date	02.04.2025/ 10:30
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--Test Result --

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

--Test Result End --

Prescribed Limit IS 10500:2021
Operational Status Unit was Operational During sampling.
Analysed by :-Pratima Kumar/ Anjali Kumar



Checked by
(S.N. Kumar)
Technical Head

Verified & Issued by
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited



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CIN: U74300JH2022PTC019685
FAN: RAHCE3811M
GST: 20AAHCE3811M1ZK

Accredited by -
ISO 9001:2015 Number TC-12887
Bharat Heavy Industries Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No. TC128872500000450
Report Unique ID RL0150251810
Issue date/time 02.05.2025/12:04

Discipline Chemical
Group Water
Sub Group Ground Water

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabirla.com
Order Date 05.04.2025/ 10:10
Order Number RP/MUB/MM/25/0114/00

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0150	Sample Booking Number	EPIC-251810
Sample(s) Code	251810	Sample Receipt (D/T)	28.04.2025/10:45

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS: 3025 (Part-1) 1987, R-2003		
Sampling Start (D/T)	26.04.2025 /16:00	Sampling End (D/T)	28.04.2025/ 16:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	29	Humidity %	61	Wind direction	270°-90°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Nav Prathmik Vidyalaya Barang Path	GPS coordinate	23° 17' 22.57" /84° 25' 28.81"
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Date(s) of performance of the laboratory activities

Test start date	26.04.2025/ 10:55	Test completion date	02.04.2025/ 10:30
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--Test Result --

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible limit
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.69	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.80	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	<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	258.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	23.65	250	1000
8.	Total Alkalinity(as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	192.00	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	202.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	55.31	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	BDL(MDL 0.4)	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1)2022	mg/l	5.00	200	400
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	2.16	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL(MDL 0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	15.55	30	100



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CIN: U74999JH2022PTC019683
PAN: AAHCE8811M
GST: 25AAHCE8811M1ZK

Accredited by:
NABL, Accredited as per ISO 9001:2015
Jharkhand State Pollution Control Board
Certified by:
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No. TC1288725000000450
Report Unique ID RL0150251810
Issue date/time 02.05.2025/12:04

Discipline Chemical
Group Water
Sub Group Ground Water

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabirla.com
Order Date 05.04.2025/ 10:10
Order Number RP/MJB/MM/25/0114/00

Group - Residues and Contaminants in Water

Sub Group- Trace Metals Elements

16. Copper(as Cu)	APHA 3111 B 2023	mg/l	BDL(MDL-0.2)	0.05	1.5
17. Iron (as Fe)	APHA 3111 B 2023	mg/l	BDL(MDL-0.1)	1.0	No relaxation
18. Lead (as Pb)	APHA 3111 B 2023	mg/l	BDL(MDL-0.01)	0.01	No relaxation
19. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BDL(MDL-0.003)	0.003	No relaxation
20. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	0.05	No relaxation
21. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BDL(MDL-0.02)	0.02	No relaxation
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	0.05
23. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	No relaxation
24. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.09)	0.1	0.3
25. Zinc(as Zn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	5	15

-Test Result End-

Prescribed Limit IS 10500:2021
Operational Status Unit was Operational During sampling.
Analysed by -Pratim Kumar/ Anshu Kumar



Checked by
(B.A. Kumar)
Technical Head

Verified & Issued by
(Anshu Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Page 2 of 2

Disclaimer: 1. The laboratory accepts responsibility for content of this report & Test performed at laboratory's permanent facility. At specific environmental condition as method required and results relate only to the sample tested in prescribed time & time. 2. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law. 3. Any complaint about this report should be communicated in writing within 10 days of its issue. 4. Total liability of EPIC LabTech Pvt. Ltd. will be limited to involved amount only. 5. All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges. 6. 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. 7. 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: U74999JH2022PFC016620
PAN: AAHCE3811M
GST: 23AAHCE3811M12X

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0150251810	Group	Water
Issue date/time	02.05.2025/12:04	Sub Group	Ground Water

Report Issue to MM/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. Ankit Das +91 9971034775 ankit.das@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/0150	Sample Booking Number	EPIC-251810
Sample(s) Code	251810	Sample Receipt (D/T)	26.04.2025/10:45

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Sampling Start (D/T)	26.04.2025 /16:00	Sampling End (D/T)	26.04.2025/ 16:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Clear	Temperature (°C)	29	Humidity %	61	Wind direction	270°-90°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Nav Prathamik Vidyalaya Barang Path	GPS coordinate	23° 17' 22.57" N 84° 25' 28.81" E

Date(s) of performance of the laboratory activities			
Test start date	26.04.2025/ 10:55	Test completion date	02.04.2025/ 10:30

--Test Result --

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible limit
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	BDL(MDL-0.1)	1.0	1.5
Group-Residues and Contaminants in Water				Sub Group-Trace Metals Elements		
2.	Aluminum	IS 3025 (P-55):2019	mg/l	BDL(MDL-0.1)	0.03	0.2
3.	Boron	IS 3025 (P-57):2021	mg/l	BDL(MDL-0.1)	0.5	1.0
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.5	No relaxation
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.1	No relaxation
Group-Residues and Contaminants in Water				Sub Group-Pesticides		
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	20	No relaxation
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
8.	Dieldrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.03	No relaxation
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.005)	0.01	No relaxation
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	125.0	No relaxation
12.	Chlopyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	30.0	No relaxation
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	3.0	No relaxation



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CIN - U74999JH2022PTC015585
PAN - AAHCE3811M
GST - 20AAHCE3811M1ZK

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0150251810	Group	Water
Issue date/time	02.05.2025/12:04	Sub Group	Ground Water

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabiria.com
Order Date 05.04.2025/ 10:10
Order Number RP/MJB/MM/25/0114/00

15. Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
16. Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	190.0	No relaxation
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.3	No relaxation
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	1.0	No relaxation
19. Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	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	BDL(MDL-0.5)	1.0	No relaxation
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.4	No relaxation

-Test Result End -

Prescribed Limit IS 10500:2021
Operational Status Unit was Operational During sampling.
Analysed by -Pratim Kumar/ Anup Kumar



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

[Signature]
Verified Issue by
(Anish Das)
Laboratory Head
Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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CIN - U74999JH2022PTC019583
PAN - AANICE3611M
GST - 22AANICE3611M1ZK

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL0150251811	Group	Water
Issue date/time	02.05.2025/12:06	Sub Group	Ground Water

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9971034775
ankit.das@adityabiria.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/0150	Sample Booking Number	EPIC-251811
Sample(s) Code	251811	Sample Receipt (D/T)	28/04/2025/10:46

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS : 3025 (Part-1) 1967, R-2003& IS 1622 1981		
Sampling Start (D/T)	26.04.2025 /16:00	Sampling End (D/T)	26.04.2025/ 16:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	29	Humidity %	61	Wind direction	270°-90°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Nav Prathamik Vidyalaya Barang Path	GPS coordinate	23° 17' 22.57" / 84° 26' 28.61"
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Date(s) of performance of the laboratory activities

Test start date	28.04.2025/ 10:55	Test completion date	02.04.2025/ 18:30
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--Test Result --

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

--Test Result End --

Prescribed Limit IS 10900:2021
Operational Status Unit was Operational During sampling.
Analysed by -Pratim Kumar/ Anshu Kumar



Checked by
(B.N. Kumar)
Technical Head

Verified & Issue by
(Anshu Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited



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CIN:-U74900JH2022PTC046825
PAN:-AANCC2611M
GST:-22AANCC2611M124

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

TC-12887

Analysed Test Certificate

Unique Lab Report No.	TC1288725000000628	Discipline	Chemical
Report Unique ID	RL01832621118	Group	Atmospheric Pollution
Issue date/time	27.05.2025/ 10:42	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. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@bactyabiria.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/0183	Sample Booking Number	EPIC-2521118
Sample(s) Code	2521118 (A) (B) (C) (D)	Sample Receipt (D/T)	23.05.2025/ 11:48

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	20.05.2025/ 11:30	Sampling End (D/T)	21.05.2025/ 08:00
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	Clear	Temperature (°C)	31	Humidity %	48	Wind direction	20°-200°
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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 18	GPS coordinate	23° 17' 45.37" / 84° 25' 30.07"
S. Location C	Near Prathamik Vidyalaya Barang Path	GPS coordinate	23° 17' 20.07" / 84° 25' 30.41"
S. Location D	Near Mine Entry Gate	GPS coordinate	23° 18' 49.80" / 84° 25' 33.67"

Date(s) of performance of the laboratory activities

Test start date	23.05.2025/ 11:55	Test completion date	26.05.2025/ 17:20
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	90.26	88.82	71.67	79.00	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	46.63	43.56	37.13	40.91	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	12.44	09.95	08.66	10.16	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	24.64	17.59	18.15	20.36	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	51.30	48.05	44.80	38.31	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-08) 2019	µg/m ³	39.34	35.77	32.19	28.61	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	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 ³	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 ³	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 - AK Sirha



Reviewed by
(B.K. Kumar)
Technical Head

Issue by
(Smruti Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.

Page 2 of 3

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Abbreviations : BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LQ (Limit of Quantification).



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CIN:-U74999JH2022PTC029625
PAN:-AAHCE3871M
GST:-22AAHCE3871M1G2R

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL01632521118	Group	Atmospheric Pollution
Issue date/time	27.05.2025/ 10:42	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. Ankit Das
+91 9871034775
ankit.das@edityabirfa.com
05.04.2025/ 10:10
RP/HUB/MM/25/0114/00

References of Quality Management System (Steps of Irrevocability Decl)

Customer Registration No.	EPIC/OTH/0183	Sample Booking Number	EPIC-2521118
Sample(s) Code	2521118 (A) (B) (C) (D)	Sample Receipt (D/T)	23.05.2025/ 11:48

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	20.05.2025/ 11:30	Sampling End (D/T)	21.05.2025/ 08:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCS Air Manual Volume - 1 (NAAQM/06/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	31	Humidity %	48	Wind direction	20°-200°
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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 18	GPS coordinate	23° 17' 45.37" / 84° 25' 30.07"
S. Location C	Near Prathamik 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	23.05.2025/ 11:55	Test completion date	26.05.2025/ 17:20
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	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 ³	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 ³	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 VI.

Operational Status Unit was Operational During sampling.

Analysed by - AK Sinha

Reviewed by
(E.K. Kumar)
Technical Head



Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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CIN - U74999JH2022PTC010681
PAN - AARCE2611M
GST - 20AARCE2611M12X

Accredited by :-
NABL, Accreditation Number TC-13307
Pollution Control Board
Certified by :-
ISO 9001:2015 and ISO 45001:2018



TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000629	Discipline	Chemical
Report Unique ID	RL01832521119	Group	Atmospheric Pollution
Issue date/time	27.05.2025/ 10:44	Sub Group	Ambient Noise

Report Issue to

M/s - MINERALS & MINERALS LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE : BIMARLA BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +91 9971034775 ankit.das@adityabirla.com 05.04.2025/ 10:10 RP/HUB/MM/25/0114/00
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References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0183	Sample Booking Number	EPIC-2521119
Sample(s) Code	2521119 (A) (B) (C) (D)	Sample Receipt (D/T)	23.05.2025/ 11:54

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	20.05.2025/ 11:30	Sampling End (D/T)	21.05.2025/ 08:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 9889:1981 (RA 2020) & CPCB Method S.O.50 (E) dated 11/01/2010		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	31	Humidity %	48	Wind direction	20°-200°
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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' 33.87"

Date(s) of performance of the laboratory activities

Test start date	23.05.2025/ 12:05	Test completion date	26.05.2025/ 17:30
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-Test Results-

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	L _{eq} (Day time)	IS: 9889:1981	dB (A)	58.3	48.4	43.7	45.7	75
2.	L _{eq} (Night time)	IS: 9889:1981	dB (A)	43.4	41.4	36.9	37.1	70

-Test Results End-

Prescribed Limit	Environmental (Protection) Rules-1986, Schedule III.
Operational Status	Unit was Operational During sampling.

Analysed by - AK Sinha



Reviewed by
(R.K. Kumar)
Technical Head



Page 1 of 1

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Abbreviations: - BOD (Biochemical Oxygen Demand), COD (Chemical Oxygen Demand), L_{eq} (Level of Quantification).



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CIN - U74999JH002379PC000025
PAN - AANCE8011M
GST - 22AAHCE1479F1Z9

Accredited by -
NABL, Accreditation Number IC-1587
Jharkhand State Pollution Control Board
Certified by -
ISO 15189:2013 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000630	Discipline	Chemical
Report Unique ID	RL01832521120	Group	Pollution & Environment
Issue date/time	27.05.2025/ 10:46	Sub Group	Waste Water (Sewage)

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. Ankit Das +91 9971034775 ankit.das@adityabirla.com 05.04.2025/ 10:10 RP/MJB/MM/25/0114/00
---	--	---

References of Quality Management System (Days of Traceability Chain)

Customer Registration No.	EPIC/OTH/0183	Sample Booking Number	EPIC-2521120
Sample(s) Code	2521120	Sample Receipt (D/T)	23.05.2025/ 11:58

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	21.05.2025/ 16:25	Sampling End (D/T)	21.05.2025/ 16:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1967, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	31	Humidity %	49	Wind direction	20°-200°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	STP Outlet	GPS coordinate	23° 16' 59.06" / 84° 25' 18.09"
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Data(s) of performance of the laboratory activities

Test start date	23.05.2025/ 12:10	Test completion date	26.05.2025/ 10:50
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--Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2002	-	6.88	6.5-8.0
2.	BOD (3 days at 27°C)	IS 3025 (P-44) 2000	mg/l	8.00	30
3.	COD	IS 3025 (P-58) 2006	mg/l	40.00	-
4.	Oil & Grease	IS 3025 (P-39) 2021	mg/l	BDL(MDL-04)	-
5.	Total Suspended Solid	IS 3025 (P-17) 2002	mg/l	13.00	100
6.	Iron (as Fe)	APHA 3111 B 2003	mg/l	BDL(MDL-0.1)	-

--Test result End--

Prescribed Limit	Environmental (Protection) Rules-1986, Schedule I, Serial No. 105.
Operational Status	Unit was Operational During sampling.

Analyzed by - Anjali Kumari



Reviewed by
(S.K. Kumar)
Technical Feed

Issued by
(Ankit Das)
Laboratory Feed
Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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CIN - U74999JH2022PTC019685
PAN - AAKHC3001N
GST - 25AAHCE3078P12X

Accredited by :-
Bharat Heavy Industries 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	RL01832521120	Group	Pollution & Environment
Issue date/time	27.05.2025/ 10:48	Sub Group	Waste Water (Sewage)

Report Issue to

M/s - MINERALS & MINERALS LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE : DIMARLA BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +91 9971034775 ankit.das@edityabirra.com 05.04.2025/ 10:10 RP/MSB/MP/25/0114/00
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References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0183	Sample Booking Number	EPIC-2521120
Sample(s) Code	2521120	Sample Receipt (D/T)	23.05.2025/ 11:58

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	21.05.2025/ 15:25	Sampling End (D/T)	21.05.2025/ 15:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	31	Humidity %	49	Wind direction	20°-200°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	STP Outlet	GPS coordinate	23° 16' 59.06"/ 84° 25' 18.09"
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Date(s) of performance of the laboratory activities

Test start date	23.05.2025/ 12:10	Test completion date	26.05.2025/ 10:50
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--Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Calcium	IS 3025 (P-40) 2022	mg/l	74.00	-
2.	Aluminum	IS 3025 (P-55) 2003	mg/l	BOL (MDL 0.1)	-

--Test result End --

Prescribed Limit Environmental (Protection) Rules-1986, Schedule I, Serial No. 105.

Operational Status Unit was Operational During sampling.

Analyzed by - Anjali Kumar



Reviewed by
(B.N. Kumar)
Technical Head

Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited



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CIN: U74999JH2022PTC019683
FAN: RAHCE351M
GST: 22AARCE351M1L2X

Accredited by:
NABL with certificate number TC-1381
Pathology State Pollution Control Board
Certified by:
ISO 9001:2015 and ISO 15001:2015

YC-12857

Analytical Test Certificate

Unique Lab Report No.	TC1286725000000632	Discipline	Chemical
Report Unique ID	RL01832501122	Group	Atmospheric Pollution
Issue date/time	27.05.2025/ 10:50	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. Ankit Das Contact Number +91 9971034775 Email Id ankit.das@adityabirla.com Order Date 05.04.2025/ 10:10 Order Number RP/HJB/HM/25/0114/00
---	---

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0103	Sample Booking Number	EPIC- 2521122
Sample(s) Code	2521122 (A) (B) (C) (D)	Sample Receipt (D/T)	23.05.2025/ 12:00

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	21.05.2025/ 11:50	Sampling End (D/T)	22.05.2025/ 08:56
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	Clear	Temperature (°C)	32	Humidity %	46	Wind direction	220°-40°
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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 Bahang 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"

Data(s) of performance of the laboratory activities

Test start date	23.05.2025/ 12:10	Test completion date	26.05.2025/ 17:25
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--Test Results--

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	64.99	61.49	68.68	74.94	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-34) 2019	µg/m ³	28.22	26.41	30.06	32.02	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	07.99	08.28	09.23	10.63	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	22.60	22.12	21.93	18.23	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-35) 2018	µg/m ³	49.03	45.76	42.53	39.29	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-08) 2019	µg/m ³	30.04	35.07	36.48	40.78	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL23.96 (MDL-0.1)	BDL (MDL-0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
9.	Arsenic (As)	USEPA IO 3.2:1989	ng/m ³	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 VIII.
Operational Status	Unit was Operational During sampling.
Analyzed by - AK Sinha	



Reviewed by
(S.K. Kumar)
Technical Head

Issued By
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

Page 2 of 2

Contracted Notes: 1. The laboratory accepts responsibility for content of this report. 2. Test performed at laboratory's permanent facility or specific facilities under conditions as notified in report 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 30 days of its issue. 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to amount contract only. 6. All disputes are subject 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 revised by use or misuse of this report. 8. Where the results are from external provider are marked as "mark".

Abbreviation: STD (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantification)



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CIN: U74999JH2022PTC019681
PAN: AARICE2611M
GST: 20AAHCE3611M1ZK

Accredited by -
Bharat Heavy Industries Limited
Certified by -
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL01802521122	Group	Atmospheric Pollution
Issue date/time	27.05.2025/ 10:50	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. Ankit Das +91 9971034775 ankit.das@adityabirla.com 05.04.2025/ 10:10 RP/MB/MM/25/0114/00
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References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0183	Sample Booking Number	EPIC- 2521122
Sample(s) Code	2521122 (A) (B) (C) (D)	Sample Receipt (D/T)	23.05.2025/ 12:00

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	21.05.2025/ 11:50	Sampling End (D/T)	22.05.2025/ 08:56
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	Clear	Temperature (°C)	32	Humidity %	46	Wind direction	220°-40°
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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° 18' 32.45" / 84° 25' 12.72"
S. Location C	Near Ghaghra Village	GPS coordinate	23° 18' 55.86" / 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	23.05.2025/ 12:10	Test completion date	26.05.2025/ 17:25
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- Test Results -

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	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 ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOR/AP/01/00	mg/m ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

- Test Results End -

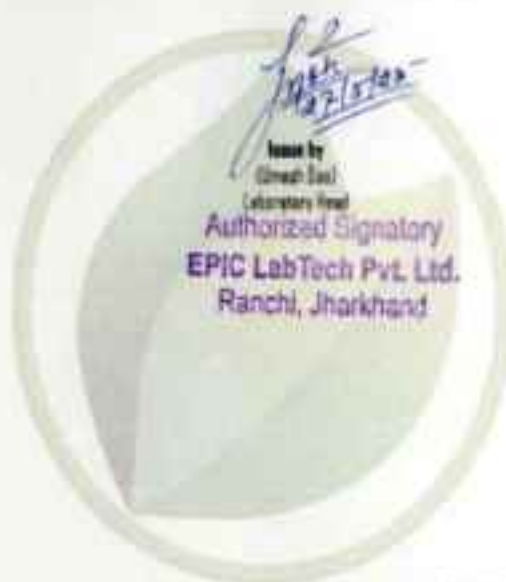
Prescribed Limit Environmental (Protection) Rules-1986, Schedule VII.

Operational Status Unit was Operational During sampling.

Analysed by - AK Sirha



Reviewed by
(AK Sirha)
Technical Head





EPIC LabTech Private Limited



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CIN - U74999JH2022PTC019685
PIN - AAMCE3011M
GST - 20AAWCE3670M123

Accredited by -
NABL, ISO 15189:2013 Number IC-12687
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12687

Analytical Test Certificate

Unique Lab Report No.	TC1268725000000728	Discipline	Chemical
Report Unique ID	RL02162525031	Group	Atmospheric Pollution
Issue date/time	25.06.2025/ 10:30	Sub Group	Ambient Air Quality

Report Issued 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. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@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/0216	Sample Booking Number	EPIC-2525031
Sample(s) Code	2525031 (A) (B) (C) (D)	Sample Receipt (D/T)	20.06.2025/ 11:31

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	17.06.2025/ 11:40	Sampling End (D/T)	18.06.2025/ 08:17
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	Clear	Temperature (°C)	26	Humidity %	76	Wind direction	270°-90°
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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	20.06.2025/ 12:15	Test completion date	24.06.2025/ 12:00
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS-5182 (P-23) 2022	µg/m ³	88.29	86.83	69.80	77.66	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	44.34	41.57	34.36	38.80	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS-5182 (P-02) 2023	µg/m ³	10.96	07.44	07.05	08.22	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS-5182 (P-06) 2022	µg/m ³	22.20	14.80	15.66	17.97	80(24 hr)
5.	Ammonia (NH ₃)	IS-5182 (P-25) 2018	µg/m ³	49.38	46.67	42.67	36.16	400(24 hr)
6.	Ozone (O ₃)	IS-5182 (P-09) 2019	µg/m ³	37.23	33.14	30.35	26.48	180(1 hr)
7.	Lead (Pb)	IS-5182(P-22) 2018	µg/m ³	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 ³	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 ³	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.

Analyzed by - Vishal Mangaraj



Reviewed by
(B.R. Kumar)
Technical Head

Issued by
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.

Ranchi, Jharkhand

Page 1 of 1

Contracted Notes : 1. The laboratory accepts responsibility for content of this report. 2. Test performed at laboratory's permanent facility located at Ranchi, Jharkhand and then as per need required and results relate only to the sample tested as prescribed time & 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 30 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 exclusive 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. No responsibility, laboratory accepts any caused by use or misuse of this report. 9. When the results are from external provider are marked as "x" mark. 10. Information - BDL (Below Detectable Limit), MDL (Maximum Detectable Limit), LoQ (Limit of Quantitation).



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CIN - U74903JH2022PTC019885
PIN - AANCE2011M
GST - 20AAICB5619M1ZK

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02162525031	Group	Atmospheric Pollution
Issue date/time	25.06.2025/ 10:30	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. Ankit Das
Contact Number +91 9871034775
Email Id ankit.das@edityabiria.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/0216	Sample Booking Number	EPIC-2525031
Sample(s) Code	2525031 (A) (B) (C) (D)	Sample Receipt (D/T)	20.06.2025/ 11:31

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	17.06.2025/ 11:40	Sampling End (D/T)	18.06.2025/ 08:17
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	Clear	Temperature (°C)	26	Humidity %	78	Wind direction	270°-90°
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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	20.06.2025/ 12:15	Test completion date	24.06.2025/ 12:00
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS 5182(P-11) 2006	µg/m ³	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 ³	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 ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

-Test Results End -

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by
(B.R. Kumar)
Technical Head





EPIC LabTech Private Limited



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CIN:-U74999JH2022PTC019683
PAN:-AAHCE2611M
GST:-22AAHCE2611M12X

Approved by -
NAB, New Delhi under IC-1267
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12687

Analytical Test Certificate

Unique Lab Report No.	TC1268725000000729	Discipline	Chemical
Report Unique ID	RL02162525032	Group	Atmospheric Pollution
Issue date/time	25.06.2025/ 10:32	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. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@edityabirra.com
Order Date 05.04.2025/ 10:10
Order Number RP/MJB/MM/25/0114/00

References of Quality Management System (Status of Traceability Data)

Customer Registration No.	EPIC/OTH/0216	Sample Booking Number	EPIC- 2525032
Sample(s) Code	2525032 (A) (B) (C) (D)	Sample Receipt (D/T)	20.06.2025/ 11:33

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.06.2025/ 12:08	Sampling End (D/T)	19.06.2025/ 09:06
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	Clear	Temperature (°C)	26	Humidity %	78	Wind direction	270°-90°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Korie 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 Ghagira Village	GPS coordinate	23° 16' 55.88" / 84° 23' 36.22"
S. Location D	Near Bimarla Village	GPS coordinate	23° 17' 05.82" / 84° 23' 25.75"

Date(s) of performance of the laboratory activities

Test start date	20.06.2025/ 12:23	Test completion date	24.06.2025/ 12:03
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	62.20	59.76	66.52	72.47	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	27.05	24.94	28.66	30.25	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	06.26	06.66	07.44	09.01	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	20.08	19.03	17.97	15.86	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	47.40	43.83	40.58	37.34	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	28.61	33.26	34.69	33.00	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL23.96 (MDL-0.1)	BDL (MDL-0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	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 ³	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 - Vishal Mangaraj



Reviewed by
(S.K. Kumar)
Technical Head

Done by
(Suresh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

Page 1 of 1

Contractual Notes : 1. The Laboratory accepts responsibility for content of this report. 2. Test performed at laboratory's permanent facility at Ranchi, Jharkhand. 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 amount stated 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 liability for 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).



EPIC LabTech Private Limited

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✉ epiclabtech@gmail.com

CIN - U74999JH2022PTC039683
PAN - AAWCE2611M
GST - 22AAWCE2611M1Z9

Accredited by -
Bharat 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	RL02162525032	Group	Atmospheric Pollution
Issue date/time	25.06.2025/ 10:32	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 : BIMARIA BAUXITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number
Mr. Ankit Das
+91 9971034775
ankit.das@adityabiria.com
05.04.2025/ 10:10
RP/MJB/MM/25/0114/00

References of Quality Management System (Steps of Traceability Detail)

Customer Registration No.	EPIC/OTH/0216	Sample Booking Number	EPIC- 2525032
Sample(s) Code	2525032 (A) (B) (C) (D)	Sample Receipt (D/T)	20.06.2025/ 11:33

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.06.2025/ 12:08	Sampling End (D/T)	19.06.2025/ 09:06
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	Clear	Temperature (°C)	32	Humidity %	46	Wind direction	220°-40°
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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 Bimaria Village	GPS coordinate	23° 17' 05.62" / 84° 23' 25.75"

Date(s) of performance of the laboratory activities

Test start date	20.06.2025/ 12:23	Test completion date	24.06.2025/ 12:03
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	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 ³	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 ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

-Test Results End-

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by
(S.K. Kumar)
Technical Head





EPIC LabTech Private Limited

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CIN - U74999JH2022PTC019585
FEN - AANCC3611M
GST - 22AAHCC3619M1Z9

Permitted by -
Hathnori State Pollution Control Board
Certified by -
ISO 18001:2015 and ISO 45001:2018

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02162529033	Group	Atmospheric Pollution
Issue date/time	25.06.2025/ 10:34	Sub Group	Work Zone Noise

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number
Mr. Ankit Das
+91 9971034775
ankit.das@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/0216	Sample Booking Number	EPIC-2525033
Sample(s) Code	2525033 (A) (B)	Sample Receipt (D/T)	20.06.2025/ 11:38

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D)	17.06.2025	Sampling End (D)	17.06.2025
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 9989:1981 (RA 2020) & CPCB Method S.O.50 (E) dated 11/01/2010		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	78	Wind direction	270°-90°
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Sampling Location(s) with GPS coordinate(s)

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

Date(s) of performance of the laboratory activities

Test start date	20.06.2025/ 12:40	Test completion date	24.06.2025/ 12:15
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results		Limits
				A	B	
1.	L _{eq}	IS: 9989:1981	dB (A)	71.3	63.9	85

-Test Results End -

Prescribed Limit
Operational Status
NIOSH - Publication No. 98-126 in 1972, Table 1-1
Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by
(B.K. Kumar)
Technical Head

12
Ankit Das
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited



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CIN - U74999JH2022PTC096825
PIN - 834001M
GST - 22AAHCE387M1Z8

Accredited by -
NABL, with Certificate Number TC - 1087
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC128872500000919	Discipline	Chemical
Report Unique ID	RL02432529064	Group	Atmospheric Pollution
Issue date/time	23.07.2025/ 17:30	Sub Group	Ambient Air Quality

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabirla.com
Order Date 05.04.2025/ 10:10
Order Number RP/MB/MM/25/0114/00

References of Quality Management System (Scope of Traceability Chain)

Customer Registration No.	EPIC/OTH/0243	Sample Booking Number	EPIC-2529064
Sample(s) Code	2529064 (A) (B) (C) (D)	Sample Receipt (D/T)	19.07.2025/ 10:40

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	16.07.2025/ 12:05	Sampling End (D/T)	17.07.2025/ 10:09
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	66	Wind direction	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° 18' 49.80" / 84° 25' 33.67"

Date(s) of performance of the laboratory activities

Test start date	19.07.2025/ 11:00	Test completion date	23.07.2025/ 16:00
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	84.63	82.84	65.03	73.50	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	40.53	37.91	30.19	34.01	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	09.38	06.52	06.55	08.03	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	20.05	11.07	12.13	15.21	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	44.94	42.39	38.88	32.19	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	34.74	30.04	26.78	22.44	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	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 ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
9.	Arsenic (As)	USEPA IO 3.2-1998	ng/m ³	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 VI.

Operational Status Unit was Operational During sampling.

Analyzed by - Vishal Mangera



Reviewed by
(B.N. Kumar)
Technical Head

Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.

Page 1 of 1

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EPIC LabTech Private Limited

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✉ epiclabtech@gmail.com

CIN - U17499JB12022PTC016685
PAN - AAAYC2810M
GST - 22AAAYC2810M1G2R

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

Analysis Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02432529064	Group	Atmospheric Pollution
Issue date/time	23.07.2025/ 17:30	Sub Group	Ambient Air Quality

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9871034775
Email Id ankit.das@adityabirla.com
Order Date 06.04.2025/ 10:10
Order Number RP/MJB/MM/25/0114/00

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0243	Sample Booking Number	EPIC-2529064
Sample(s) Code	2529064 (A) (B) (C) (D)	Sample Receipt (D/T)	19.07.2025/ 10:40

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	16.07.2025/ 12:05	Sampling End (D/T)	17.07.2025/ 10:09
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	66	Wind direction	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	19.07.2025/ 11:00	Test completion date	23.07.2025/ 16:00
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	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 ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01/05	mg/m ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

-Test Results End -

Prescribed Limit Environmental (Protection) Rules-1986, Schedule VII.
Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by
(E.N. Kumar)
Technical Head





EPIC LabTech Private Limited



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CIN-U74999JH2022PTC099485
PAN-AAMCE3611M
GST-20AAHCE3611M12X

Accredited by -
NABL, lab certificate number IC-13867
Hazardous Waste Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000920	Discipline	Chemical
Report Unique ID	RL02432529065	Group	Atmospheric Pollution
Issue date/time	23.07.2025/ 17:33	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. Ankit Das
Contact Number +91 9871034775
Email Id ankit.das@edityabirra.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/0243	Sample Booking Number	EPIC-2529065
Sample(s) Code	2529065 (A) (B) (C) (D)	Sample Receipt (D/T)	19.07.2025/ 10:41

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	17.07.2025/ 11:50	Sampling End (D/T)	18.07.2025/ 06:55
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	66	Wind direction	0°-180°
-------------------	--------	------------------	----	------------	----	----------------	---------

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 Sarang Village	GPS coordinate	23° 16' 32.45" / 84° 25' 12.72"
S. Location C	Near Ghagtra Village	GPS coordinate	23° 18' 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	19.07.2025/ 11:01	Test completion date	23.07.2025/ 16:01
-----------------	-------------------	----------------------	-------------------

-Test Results-

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m³	58.25	55.96	62.15	68.62	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2018	µg/m³	23.31	20.53	24.32	26.68	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m³	06.48	06.85	06.23	08.43	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m³	18.27	16.25	14.25	12.22	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m³	43.35	38.88	36.65	35.06	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m³	23.88	29.31	30.40	33.65	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m³	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/m³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	
9.	Arsenic (As)	USEPA 10.3.2:1999	ng/m³	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.

Analyzed by - Vishal Mangaraj



Reviewed by
(R.K. Kumar)
Technical Head

Issue by
(Ankit Das)
Laboratory Head

Authorized Signatory

Contractual Notes : 1. The Laboratory accepts responsibility for content of this report. 2. Test performed at laboratory's permanent facility. 3. Sample collection and analysis as per method required and results relate only to the sample tested as prescribed Date & time. 4. The Test report shall not be reproduced full or in part & used for legal or other purpose without the consent of law. 5. Any complaint about this report should be communicated in writing within 10 days of its issue. 6. Total liability of EPIC LabTech Pvt. Ltd. will be limited to invoice amount only. 7. All disputes are subjected to Jurisdiction and exclusive liability of the laboratory does not exceed the testing and sampling charges. 8. Opinion does not imply endorsement of the method/product by laboratory. Under no circumstances, laboratory accepts any liability of this report. 9. When the results are from external provider are reached to us* each. 10. When the results are from external provider are reached to us* each.

Abbreviation : BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), Sd (Unit of Quantification)



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CIN - U74999JH2022PTC036483 Accredited by -
Jharkhand State Pollution Control Board
PAN - AAMCE3611M
GST - 22AARCE3611M1Z9
Certified by -
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02432529065	Group	Atmospheric Pollution
Issue date/time	23.07.2025/ 17:33	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. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabirla.com
Order Date 05.04.2025/ 10:10
Order Number RP/MIS/MM/25/0114/00

References of Quality Management System (Steps of Traceability Chart)

Customer Registration No.	EPIC/OTH/0243	Sample Booking Number	EPIC-2529065
Sample(s) Code	2529065 (A) (B) (C) (D)	Sample Receipt (D/T)	19.07.2025/ 10:41

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	17.07.2025/ 11:50	Sampling End (D/T)	18.07.2025/ 08:55
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal 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 %	86	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' 38.22"
S. Location D	Near Binaria Village	GPS coordinate	23° 17' 05.62" / 84° 23' 25.75"

Date(s) of performance of the laboratory activities

Test start date	19.07.2025/ 11:01	Test completion date	23.07.2025/ 16:01
-----------------	-------------------	----------------------	-------------------

-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS 5182(P-11) 2006	µg/m ³	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 ³	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 ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

-Test Results End -

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by
(E.K. Kumar)
Technical Head





EPIC LabTech Private Limited



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CIN - U74999JH2022PTC019625
PAN - AAKCE3811M
GST - 20AAWCE3811M12X

Accredited by -
NABL, ISO certificate Number IC - 5387
Jharkhand State Industrial Corridor Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analysis Test Certificate

Unique Lab Report No.	TC128872500000921	Discipline	Chemical
Report Unique ID	RL02432529066	Group	Water
Issue date/time	23.07.2025/ 17:36	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 : BHARLA BAUXITE MINE

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email id ankit.das@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/0243	Sample Booking Number	EPIC-2529066
Sample(s) Code	2529066	Sample Receipt (D/T)	19.07.2025/ 10:43

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	17.07.2025/ 13:30	Sampling End (D/T)	17.07.2025/ 13:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity%	66	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mines 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	19.07.2025/ 11:03	Test completion date	23.07.2025/ 18:00
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--Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible Limit
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.99	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.66	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	<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-18) 2023	mg/l	181.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	19.19	250	1000
8.	Total Alkalinity(as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	145.00	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	174.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	49.8	75	200
11.	Free Residual Chlorine	IS 3025 (P-35) 1986	mg/l	BDL(MDL-0.4)	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1) 2022	mg/l	3.88	200	400
13.	Nitrate (as NO ₃)	APHA 4500-B 2023	mg/l	1.79	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL(MDL-0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500-Mg E 2023	mg/l	10.55	30	100



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CIN - U74900JH2022PTC039485
PAN - AARCE3611M
GST - 20AARCE3611M12X

Accredited by -
NABL, with certificate number TC-1581
Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC128872500000921	Discipline	Chemical
Report Unique ID	RL02432529066	Group	Water
Issue date/time	23.07.2025/ 17:36	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 : BHARLA BAUXITE MINE

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabirla.com
Order Date 05.04.2025/ 10:10
Order Number RP/MJB/MM/25/0114/00

Group - Residues and Contaminants in Water

Sub Group - Trace Metals Elements

16. Copper(as Cu)	APHA 3111 B 2023	mg/l	BDL(MDL-0.2)	0.05	1.5
17. Iron (as Fe)	APHA 3111 B 2023	mg/l	BDL(MDL-0.1)	1.0	No relaxation
18. Lead (as Pb)	APHA 3111 B 2023	mg/l	BDL(MDL-0.01)	0.01	No relaxation
19. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BDL(MDL-0.003)	0.003	No relaxation
20. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	0.05	No relaxation
21. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BDL(MDL-0.02)	0.02	No relaxation
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	0.05
23. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	No relaxation
24. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	0.1	0.3
25. Zinc(as Zn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	5	15

--Test result End--

Prescribed Limit IS 10500:2021
Operational Status Unit was Operational During sampling.
Analysed by - Vishal Mangaraj



Reviewed by
(E.R. Kumar)
Technical Head

Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Page 2 of 2

Contracted 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 fully 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 30 days of its issue. 5. There liability of EPIC LabTech Pvt. Ltd. will be limited to recovered 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. Disbar or discontinuance, laboratory accepts any caused by use or misuse of this report. 8. When the results are time external provides are marked as * mark. 9. Abbreviation :- BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantification).



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CIN - U74999JH2022PTC010585
PAN - AAMCE2911M
GST - 20AAWCE3875N123

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02432529066	Group	Water
Issue date/time	23.07.2025/ 17:35	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. Ankit Das
+91 9971034775
ankit.das@adityabirla.com
05.04.2025/ 10:10
RP/HUB/MM/25/0114/00

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0243	Sample Booking Number	EPIC-2529066
Sample(s) Code	2529066	Sample Receipt (D/T)	19.07.2025/ 10:43

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	17.07.2025/ 13:30	Sampling End (D/T)	17.07.2025/ 13:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	66	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mines Office	GPS coordinate	23° 17' 03.83" / 84° 26' 19.17"
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Date(s) of performance of the laboratory activities

Test start date	19.07.2025/ 11:03	Test completion date	23.07.2025/ 16:00
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--Test Result--

Sl.	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible Limit
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	BDL(MDL-0.1)	1.0	1.5
Group-Residues and Contaminants in Water				Sub Group-Trace Metals Elements		
2.	Aluminum	IS 3025 (P-55):2019	mg/l	BDL(MDL-0.1)	0.03	0.2
3.	Boron	IS 3025 (P-57):2021	mg/l	BDL(MDL-0.1)	0.5	1.0
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.5	No relaxation
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.1	No relaxation
Group-Residues and Contaminants in Water				Sub Group-Pesticides		
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	20	No relaxation
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.5	No relaxation
8.	Dieldrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.03	No relaxation
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.005)	0.01	No relaxation
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	125.0	No relaxation
12.	Chlorpyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	30.0	No relaxation
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	3.0	No relaxation



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PIN:-JHANCE01TM
GST:-35AAHCE3678F1Z9

Accredited by:-
National State Reference Council Board
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ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical			
Report Unique ID	RL02432529066	Group	Water			
Issue date/time	23.07.2025/ 17:36	Sub Group	Drinking Water			
Report Issue to		Contact Person	Mr. Ankit Das			
M/s - MINERALS & MINERALS LIMITED		Contact Number	+91 9971034775			
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,		Email Id	ankit.das@adityabirfa.com			
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302		Order Date	05.04.2025/ 10:10			
MONITORING SITE : BIMARLA BAUXITE MINE		Order Number	RP/MB/MM/25/0114/00			
15.	Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
16.	Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	190.0	No relaxation
17.	Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.3	No relaxation
18.	Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	1.0	No relaxation
19.	Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	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	BDL(MDL-0.5)	1.0	No relaxation
21.	Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.4	No relaxation

—Test result End—

Prescribed Limit
Operational Status
Unit was Operational During sampling.

Analysed by - Vishal Mangraj



Reviewed by
(E.K. Kumar)
Technical Head

Issued by
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Page 2 of 2

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



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CIN: U74900JH2022PTC019625
PAN: AARICE1871M
GST: 20AAWCE307M12X

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

Environmental Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL02432529067	Group	Water
Issue date/time	23.07.2025/ 17:39	Sub Group	Drinking Water

Report Issue to

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

Contact Person
Contact Number
Email id
Order Date
Order Number

Mr. Ankit Das
+91 9971034775
ankit.das@peditryabirfa.com
06.04.2025/ 10:10
RP/MJB/MM/25/0114/00

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0243	Sample Booking Number	EPIC-2529067
Sample(s) Code	2529067	Sample Receipt (D/T)	19.07.2025/ 10:43

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/038
Sampling Start (D/T)	17.07.2025/ 13:30	Sampling End (D/T)	17.07.2025/ 13:46
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	66	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mines 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	19.07.2025/ 11:03	Test completion date	23.07.2025/ 16:00
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--Test Result--

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

--Test result End--

Prescribed Limit
Operational Status
Analyzed by - Sujata Kumari

IS 10500:2021
Unit was Operational During sampling.



Reviewed by
(S.K. Kumar)
Technical Head

Issued by
(Suresh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited



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CIN: U74999JH2022PTC019685
PAN: AAHCE3870M
GST: 20AAHCE3870M1Z9

Accredited by -
NABL, accreditation Number: 111391
Pollution Control Laboratory
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000001089	Discipline	Chemical
Report Unique ID	RL02752535067	Group	Atmospheric Pollution
Issue date/time	01.09.2025/ 17:00	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. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabirla.com
Order Date 05.04.2025/ 10:10
Order Number BP/MUB/MM/25/0114/00

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0275	Sample Booking Number	EPIC-2535067
Sample(s) Code	2535067 (A) (B) (C) (D)	Sample Receipt (D/T)	28.08.2025/ 10:18

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	25.08.2025/ 12:06	Sampling End (D/T)	26.08.2025/ 10:20
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)	27	Humidity %	70	Wind direction	45°-225°
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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° 18' 49.80" / 84° 25' 33.67"

Date(s) of performance of the laboratory activities

Test start date	28.08.2025/ 10:38	Test completion date	01.09.2025/ 16:00
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-Test Results-

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS 5182 (P-23) 2022	µg/m ³	84.02	81.98	64.29	73.02	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	40.06	37.27	29.89	33.97	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS 5182 (F-02) 2023	µg/m ³	09.02	06.13	06.31	07.56	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS 5182 (F-06) 2022	µg/m ³	19.05	10.52	12.01	14.99	80 (24 hr)
5.	Ammonia (NH ₃)	IS 5182 (P-25) 2018	µg/m ³	44.62	42.07	38.57	31.67	400 (24 hr)
6.	Ozone (O ₃)	IS 5182 (P-08) 2019	µg/m ³	34.38	29.67	26.42	22.07	180 (1 hr)
7.	Lead (Pb)	IS 5182 (P-22) 2018	µg/m ³	BDL	BDL	BDL	BDL	1.0 (24 hr)
			(MDL 0.1)	(MDL 0.1)	(MDL 0.1)	(MDL 0.1)	(MDL 0.1)	
8.	Nickel (Ni)	IS 5182 (P-26) 2020	ng/m ³	BDL	BDL	BDL	BDL	
			(MDL 0.1)	(MDL 0.1)	(MDL 0.1)	(MDL 0.1)	(MDL 0.1)	
9.	Arsenic (As)	USEPA IO 3.2-1996	ng/m ³	BDL	BDL	BDL	BDL	
			(MDL 0.001)	(MDL 0.001)	(MDL 0.001)	(MDL 0.001)	(MDL 0.001)	

-Test Results End -

Prescribed Limit	Environmental (Protection) Rules-1986, Schedule VII.
Operational Status	Unit was Operational During sampling.

Analysed by - Vidul Mangaraj



Reviewed by
(R.K. Kumar)
Technical Head

Issue by
(Smesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.

Ranchi, Jharkhand

Page 1 of 1

Confidential Notes : 1. The laboratory accepts responsibility for content of this report. 2. Test performed at laboratory's permanent facility. 3. The laboratory shall not be held responsible for any error or omission in the report. 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 amount earned 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. Unless so communicated, laboratory accepts no responsibility for 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 - U74900JH2022PTC019685
PAN - AAHCE281M
GST - 20AAHCE281M1Z9

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02752535067	Group	Atmospheric Pollution
Issue date/time	01.09.2025/ 17:00	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 : BIMALA BAUXITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9971034775
ankit.das@adityabirla.com
05.04.2025/ 10:10
RP/MJB/MM/25/0114/00

References of Quality Management System (Class of Traceability Chain)

Customer Registration No.	EPIC/OTH/0275	Sample Booking Number	EPIC-2535067
Sample(s) Code	2535067 (A) (B) (C) (D)	Sample Receipt (D/T)	28.08.2025/ 10:18

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/038
Sampling Start (D/T)	25.08.2025/ 12:06	Sampling End (D/T)	26.08.2025/ 10:20
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/06/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	45°-225°
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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 Prithmik Vidyalaya Barang Path	GPS coordinate	23° 17' 20.07" / 84° 25' 30.41"
S. Location D	Near Mine Entry Gate	GPS coordinate	23° 16' 49.00" / 84° 25' 33.67"

Data(s) of performance of the laboratory activities

Test start date	26.08.2025/ 10:36	Test completion date	01.09.2025/ 16:00
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--Test Results--

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS 5182(P-11) 2006	µg/m ³	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 ³	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 ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

--Test Results End--

Prescribed Limit
Operational Status

Environmental (Protection) Rules-1986, Schedule VI,
Unit was Operational During sampling.

Analysed by - Vishal Mangraaj



Reviewed by
(R. Kumar)
Technical Head





EPIC LabTech Private Limited



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CIN - U74999JH2022PT0319685
PIN - JAAHCE331M
GST - 20AAHCE3679H123

Accredited by -
NABL, No. 10705, 24/04/2021, TC: 1207
National State Reference Control Board
Certified by -
ISO 15189:2013, NABL ISO 4008:2018

TC-12887

Analysis Test Certificate

Unique Lab Report No. TC1288725000001100
Report Unique ID RL02752535068
Issue date/time 01.09.2025/ 17:03

Discipline Chemical
Group Atmospheric Pollution
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. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@edityabirla.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/0275 Sample Booking Number EPIC-2535068
Sample(s) Code 2535068 (A) (B) (C) (D) Sample Receipt (D/T) 28.08.2025/ 10:20

Sampling References

Type of Industry Bauxite Mines Ref. of Sampling Plan EPIC/LAB/R/036
Sampling Start (D/T) 26.08.2025/ 11:51 Sampling End (D/T) 27.08.2025/ 09:15
Mode of Sampling Conducted by Laboratory Sample collected by Mr. Akash Kumar & Team
Sampling method used IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)
Description/condition of sample Receipt sample(s) were fit for analysis.

Environmental Condition during sampling

Weather condition Cloudy Temperature (°C) 27 Humidity % 70 Wind direction 45°-225°

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 Basing Village GPS coordinate 23° 16' 32.45" / 84° 25' 12.72"
S. Location C Near Ohaghra 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 28.08.2025/ 10:40 Test completion date 01.09.2025/ 16:00

-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	57.82	55.01	61.20	67.81	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	22.98	20.07	23.82	26.18	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-62) 2023	µg/m ³	06.00	06.37	06.35	07.83	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	18.03	15.92	14.00	11.92	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-23) 2018	µg/m ³	43.03	36.57	36.33	34.74	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	23.52	28.95	30.04	33.29	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	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 ³	BDL (MDL:0.1)	BDL (MDL:0.1)	BDL (MDL:0.1)	BDL (MDL:0.1)	-
9.	Arsenic (As)	USEPA IO 3.2-1099	ng/m ³	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 - Tishal Mangaraj



Reviewed by
(S.K. Kumar)
Technical Lead

Issue by
(Shresh Das)
Laboratory Lead

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

Page 1 of 1

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



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CGN - U74999JH2022PTC019685
RAN - RANCS3511M
GST - 23AAWCE301M129

Accredited by:
Bharatpur 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	RL02752535066	Group	Atmospheric Pollution
Issue date/time	01.09.2025/ 17:03	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 : BIMALA BAUXITE MINE

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabirla.com
Order Date 05.04.2025/ 10:10
Order Number RP/MB/MM/25/0114/00

References of Quality Management System (Days of Traceability Data)

Customer Registration No.	EPIC/OTH/0275	Sample Booking Number	EPIC-2535066
Sample(s) Code	2535066 (A) (B) (C) (D)	Sample Receipt (D/T)	28.08.2025/ 10:20

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/006
Sampling Start (D/T)	26.08.2025/ 11:51	Sampling End (D/T)	27.08.2025/ 09:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	45°-225°
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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 Ghughra Village	GPS coordinate	23° 16' 55.86" / 84° 23' 36.22"
S. Location D	Near Dimaria Village	GPS coordinate	23° 17' 05.62" / 84° 23' 25.75"

Date(s) of performance of the laboratory activities

Test start date	26.08.2025/ 10:40	Test completion date	01.09.2025/ 16:00
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS 5182(P-11) 2006	µg/m ³	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 ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB-SOP/AF/01/00	mg/m ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

-Test Results End -

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangera



Reviewed by
(E.N. Kumar)
Technical Head





EPIC LabTech Private Limited



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CIN - U74999JH2022PTC269483
PAN - AARCE3611M
GST - 20AARCE3611M1Z8

Accredited by -
NABL, with certificate number TC-12887
Performance Excellence Centre Award
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC128872500001101	Discipline	Chemical
Report Unique ID	RL02752535069	Group	Water
Issue date/time	01.09.2025/ 17:06	Sub Group	Ground Water

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9871034775
Email id ankit.das@adityabinia.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/0275	Sample Booking Number	EPIC-2535069
Sample(s) Code	2535069	Sample Receipt (D/T)	28.08.2025/ 10:21

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	26.08.2025/ 12:10	Sampling End (D/T)	26.08.2025/ 12:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	45°-225°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Prathmik Vidyalaya Barang Path	GPS coordinate	23° 17' 22.57" / 84° 25' 28.81"
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Date(s) of performance of the laboratory activities

Test start date	28.08.2025/ 11:15	Test completion date	01.09.2025/ 16:00
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--Test Result--

Sl.	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible limit
1.	pH value at 25.70C	IS 3025 (P-11) 2022	-	6.88	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.82	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	<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	244.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2018	mg/l	22.22	250	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-33) 2018	mg/l	187.00	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	199.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	53.84	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	BDL(MDL-0.4)	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1) 2022	mg/l	4.85	200	400
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	2.00	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL(MDL-0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg F 2023	mg/l	14.85	30	100



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CIN-U74999JH2022PTC019685
PAN-AAHCE3810M
GST-20RAWCR2811M1Z3

Accredited by -
NABL, Lab No. 225 Number 10, 12881
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000001101	Discipline	Chemical
Report Unique ID	RL02752535069	Group	Water
Issue date/time	01.09.2025/ 17:06	Sub Group	Ground Water

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9871034775
ankit.das@edityabirra.com
05.04.2025/ 10:10
RP/MUB/MM/25/0114/00

Group - Residues and Contaminants in Water,

Sub Group - Trace Metals Elements

16. Copper (as Cu)	APHA 3111 B 2023	mg/l	BDL(MDL-0.2)	0.05	1.5
17. Iron (as Fe)	APHA 3111 B 2023	mg/l	BDL(MDL-0.1)	1.0	No relaxation
18. Lead (as Pb)	APHA 3111 B 2023	mg/l	BDL(MDL-0.01)	0.01	No relaxation
19. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BDL(MDL-0.003)	0.003	No relaxation
20. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	0.05	No relaxation
21. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BDL(MDL-0.02)	0.02	No relaxation
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	0.05
23. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	No relaxation
24. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.09)	0.1	0.3
25. Zinc(as Zn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	5	15

--Test result End--

Prescribed Limit
Operational Status
Analysed by - Pappu Kumar

IS 10500:2021
Unit was Operational During sampling.



Reviewed by
(J.K. Kumar)
Technical Head

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



Page 4 of 4

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



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CIN: U74900JH2022PTC019685 Accredited By:
Jharkhand State Pollution Control Board
PAN: LAHCE361M
Certified by:
GST: 22A/HCE/011M/22
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02752535069	Group	Water
Issue date/time	01.09.2025/ 17:06	Sub Group	Ground Water

Report Issue to

M/s - MINERALS & MINERALS LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST -LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE: BIMARLA BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +91 9971034775 ankit.das@edityabirla.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/0275	Sample Booking Number	EPIC-2505069
Sample(s) Code	2535069	Sample Receipt (D/T)	28.08.2025/ 10:21

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	25.08.2025/ 12:10	Sampling End (D/T)	25.08.2025/ 12:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	45°-225°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Prathmik Vidyalaya Barang Path	GPS coordinate	23° 17' 22.57" / 84° 25' 28.81"
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Date(s) of performance of the laboratory activities

Test start date	28.08.2025/ 11:15	Test completion date	01.09.2025/ 16:00
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-Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible Limit
1.	Fluoride (as F)	APHA 4500, F-C 2023	mg/l	BDL(MDL-0.1)	1.0	1.5
Group-Residues and Contaminants in Water				Sub Group-Trace Metals Elements		
2.	Aluminum	IS 3025 (P-55):2019	mg/l	BDL(MDL-0.1)	0.03	0.2
3.	Boron	IS 3025 (P-57):2021	mg/l	BDL(MDL-0.1)	0.5	1.0
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.5	No relaxation
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.1	No relaxation
Group-Residues and Contaminants in Water				Sub Group-Pesticides		
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	20	No relaxation
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
8.	Dieldrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.03	No relaxation
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.005)	0.01	No relaxation
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.3)	125.0	No relaxation
12.	Chlorpyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	30.0	No relaxation
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	3.0	No relaxation



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CIN - U74999JH2022PTC019085
PAN - LAANCC3611M
GST - 22AAJNC2301M1C2

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

Analytical Test Certificate

Unique Lab Report No. N/A
Report Unique ID RL02752535069
Issue date/time 01.09.2025/ 17:06

Discipline Chemical
Group Water
Sub Group Ground Water

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email id ankit.das@adityabirsa.com
Order Date 06.04.2025/ 10:10
Order Number RP/MJB/MM/25/0114/00

15. Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
16. Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	100.0	No relaxation
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.3	No relaxation
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	1.0	No relaxation
19. Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	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	BDL(MDL-0.5)	1.0	No relaxation
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.06)	0.4	No relaxation

--Test result End--

Prescribed Limit IS 10500:2021
Operational Status Unit was Operational During sampling.
Analysed by - Pappu Kumar



Reviewed by
(R.K. Kumar)
Technical Head

Issued by
(Pappu Kumar)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Page 6 of 8

Confidential Notice | 1. The laboratory accepts responsibility for accuracy 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 30 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 liability for use or misuse of this report. | 8. When the results are from external provider are marked as "such".

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



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CIN - U74999JH2022PTC019685
PAN - AAHCC2870M
GST - 22AAHCC2870M1ZK

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL02752535070	Group	Water
Issue date/time	01.09.2025/ 17:09	Sub Group	Ground Water

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9971034775
ankit.das@edityabirra.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/0275	Sample Booking Number	EPIC-2535070
Sample(s) Code	2535070	Sample Receipt (D/T)	28.08.2025/ 10:21

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	25.08.2025/ 12:10	Sampling End (D/T)	25.08.2025/ 12:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	45°-225°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Prathmik Vidyalaya Barang Path	GPS coordinate	23° 17' 22.67" / 84° 25' 28.81"
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Date(s) of performance of the laboratory activities

Test start date	28.08.2025/ 11:10	Test completion date	01.09.2025/ 1:35
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--Test Result--

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

--Test result End--

Prescribed Limit
Operational Status

IS 10500:2021
Unit was Operational During sampling.

Analysed by - Sujata Kumari



Reviewed by
(R.K. Kumar)
Technical Head

Issued by
(Omash Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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CIN: U74909JH2022PTC019685
PAN: RAHCE3611M
GST: 22AAHCE3611M1Z9

Accredited by -
NABL with certificate number JC, 1380
National Quality Foundation Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018



TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000001102	Discipline	Chemical
Report Unique ID	RL02752535071	Group	Water
Issue date/time	01.09.2025/ 17:12	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
Contact Number
Email Id
Order Date
Order Number
Mr. Ankit Das
+91 9971034775
ankit.das@edityabiria.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/0275	Sample Booking Number	EPIC-2535071
Sample(s) Code	2535071	Sample Receipt (D/T)	28.08.2025/ 10:22

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	25.08.2025/ 12:30	Sampling End (D/T)	25.08.2025/ 12:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	45°-225°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Korle (Spring Water)	GPS coordinate	23° 17' 10.06" / 84° 26' 51.94"
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Date(s) of performance of the laboratory activities

Test start date	28.08.2025/ 11:30	Test completion date	01.09.2025/ 15:30
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-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.73	-
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.09	-
3.	Colour	IS 3025 (P-04) 2021	Hazen	5	-
4.	Odour	IS 3025 (P-06) 2018	-	Agreeable	-
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	-
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	193.0	-
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	13.3	-
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	30.0	-
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2019	mg/l	24.16	-
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	12.83	-
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	BDL(MDL 0.4)	-
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1) 2022	mg/l	1.90	-
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	2.09	-
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL(MDL 0.001)	-
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	1.98	-



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✉ epiclabtech@gmail.com

CIN: U14300JH2022PTC019645
PAN: AAHCE381YM
GST: 20AAHCE381WY2K

Accredited by -
NABL, Laboratory Number: LC-13801
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1268725000001102	Discipline	Chemical
Report Unique ID	RL02752535071	Group	Water
Issue date/time	01.09.2025/ 17:12	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
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9871034775
ankit.das@edityabirfa.com
05.04.2025/ 10:10
RP/MJB/MM/25/0114/00

Group - Residues and Contaminants in Water,

Sub Group - Trace Metals Elements

16. Copper (as Cu)	APHA 3111 B 2023	mg/l	BDL(MDL-0.2)	-
17. Iron (as Fe)	APHA 3111 B 2023	mg/l	BDL(MDL-0.1)	-
18. Lead (as Pb)	APHA 3111 B 2023	mg/l	BDL(MDL-0.01)	-
19. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BDL(MDL-0.003)	-
20. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	-
21. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BDL(MDL-0.02)	-
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	-
23. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	-
24. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.09)	-
25. Zinc (as Zn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	-

-Test result End -

Prescribed Limit

Operational Status

Analysed by - Pappa Kumar

Unit was Operational During sampling.



Reviewed by
(P.K. Kumar)
Technical Head

Analysed by
(Pappa Kumar)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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CIN: U74999JH2022PT0019685
PAN: AAHCE3810M
GST: 22AAWC3807W1Z4

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02792530071	Group	Water
Issue date/time	01.09.2025/ 17:12	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
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9971034775
ankit.das@edityabirja.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/0075	Sample Booking Number	EPIC-2535071
Sample(s) Code	2535071	Sample Receipt (D/T)	28.08.2025/ 10:22

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	25.08.2025/ 12:30	Sampling End (D/T)	25.08.2025/ 12:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS - 3025 (Part-1) 1987, R-3003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	45°-225°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Korie (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	28.08.2025/ 11:30	Test completion date	01.09.2025/ 15:30
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-Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Fluoride (as F)	APHA 4500 F-C 2003	mg/l	BDL(MDL-0.1)	-
Group-Residues and Contaminants in Water			Sub Group-Trace Metals Elements		
2.	Aluminum	IS 3025 (P-56):2019	mg/l	BDL(MDL-0.1)	-
3.	Boron	IS 3025 (P-67):2021	mg/l	BDL(MDL-0.1)	-
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	-
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	-
Group-Residues and Contaminants in Water			Sub Group-Pesticides		
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
8.	Dieldrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	-
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.005)	-
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	-
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
12.	Chlorpyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	-
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-



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CIN - U74999JH2022PTC019685
PAN - AANCC2919M
GST - 22AAWCR3017M1C2

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RLQ2752530071	Group	Water
Issue date/time	01.09.2025/ 17:12	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
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9971034775
ankit.das@adityabirla.com
06.04.2025/ 10:10
RP/MJB/MM/25/0114/00

15. Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	ug/l	BOL(MDL-0.5)	-
16. Malathion	EPIC/LAB/SOP/WA/01/00	ug/l	BOL(MDL-0.5)	-
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	ug/l	BOL(MDL-0.2)	-
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	ug/l	BOL(MDL-0.5)	-
19. Phorate	EPIC/LAB/SOP/WA/01/00	ug/l	BOL(MDL-0.5)	-
20. DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	ug/l	BOL(MDL-0.5)	-
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	ug/l	BOL(MDL-0.65)	-

—Test result End—

Prescribed Limit

Operational Status

Analyzed by - Pappu Kumar

Unit was Operational During sampling.



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

[Signature]
Analyzed by
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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CIN - U74999JH2022PTC019685
PAN - AAHCC2873M
GST - 20AAHCC2873MY2X

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL02752536072	Group	Water
Issue date/time	01.09.2025/ 17:15	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
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9971034775
ankit.das@edityabirra.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/0275	Sample Booking Number	EPIC-2536072
Sample(s) Code	2536072	Sample Receipt (D/T)	28.08.2025/ 10:22

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	25.08.2025/ 12:30	Sampling End (D/T)	25.08.2025/ 12:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS - 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	45°-225°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Korte (Spring Water)	GPS coordinate	23° 17' 10.06" / 84° 26' 51.94"
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Date(s) of performance of the laboratory activities

Test start date	28.08.2025/ 11:30	Test completion date	01.09.2025/ 15:30
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--Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Total Coliform	IS 15185:2002	Per 100 ml	380	—
2.	F.Coli	IS 15185:2002	Per 100 ml	260	—

--Test result End --

Prescribed Limit

Operational Status

Unit was Operational During sampling.

Analysed by - Sojita Kumari



Reviewed by
(S.K. Kumar)
Technical Head

Issued by
(Shrestha Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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Road No. - 3, Ranchi,
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✉ epiclabtech@gmail.com

CIN: U74900JH2022PTC019585
PAN: AAHC2381M
GST: 20AA-HCB 361N1P2R

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



Analytical Test Certificate

Unique Lab Report No.	TC1286725000001103	Discipline	Chemical
Report Unique ID	RL02752535073	Group	Pollution & Environment
Issue date/time	01.09.2025/ 17:18	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. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@edityabirfa.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/0275	Sample Booking Number	EPIC-2535073
Sample(s) Code	2535073	Sample Receipt (D/T)	28.08.2025/ 10:23

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	25.08.2025/ 12:30	Sampling End (D/T)	25.08.2025/ 12:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS: 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	45°-225°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Work Shop (Outlet)	GPS coordinate	23° 18' 59" / 84° 25' 18.09"
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Data(s) of performance of the laboratory activities

Test start date	26.08.2025/ 10:43	Test completion date	01.09.2025/ 15:15
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-Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2002	-	6.73	6.5-8.5
2.	BOD (3 days at 27°C)	IS 3025 (P-44) 2008	mg/l	13.5	-
3.	COD	IS 3025 (P-58) 2008	mg/l	94.0	150
4.	Oil & Grease	IS 3025 (P-39) 2021	mg/l	BDL(MDL-04)	10.0
5.	Total Suspended Solid	IS 3025 (P-17) 2002	mg/l	48.0	50
6.	Phosphate	IS 3025 (P-31/Sec-1) 2002	mg/l	0.56	-
7.	Zinc	APHA 3111 B 2003	mg/l	BDL(MDL-0.04)	-

-Test result End-

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

Operational Status Unit was Operational During sampling.

Analysed by - Pappu Kumar



Reviewed by
(S.K. Kumar)
Technical Head





EPIC LabTech Private Limited

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Jharkhand - 834003, India

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CIN: U74909/JH2022PTC019485 Accredited by -
Jharkhand State Pollution Control Board
PAN: AAHCE281M
Certified by -
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02752535073	Group	Pollution & Environment
Issue date/time	01.09.2025/ 17:18	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
Contact Number
Email id
Order Date
Order Number

Mr. Ankit Das
+91 9971034775
ankit.das@adityabirla.com
05.04.2025/ 10:10
RP/MB/MM/25/0114/00

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0275	Sample Booking Number	EPIC-2535073
Sample(s) Code	2535073	Sample Receipt (D/T)	28.08.2025/ 10:23

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	25.08.2025/ 12:30	Sampling End (D/T)	25.08.2025/ 12:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity%	70	Wind direction	45°-225°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Work Shop (Outlet)	GPS coordinate	23° 16' 59" / 84° 25' 18.09"
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Date(s) of performance of the laboratory activities

Test start date	28.08.2025/ 10:43	Test completion date	01.09.2025/ 15:15
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--Test Result--

Sl	Test Parameters	Method used	UNIT	Results	Limits
1.	Total Dissolve Solids (TDS)	IS-3025 (P-18) 2023	mg/l	168.00	-

--Test result End--

Prescribed Limit
Operational Status

Environmental (Protection) Rules 1986, Schedule I, Serial No.114
Unit was Operational During sampling.

Analysed by - Pappu Kumar

Reviewed by
(B.R. Kumar)
Technical Head

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





EPIC LabTech Private Limited

Address:
C/o - S.S. Singhani, Indrapuri,
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✉ epiclabtech@gmail.com

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PAN - AAHCE3815M
GST - 20AAHCE3815M2K

Accredited by -
NABL (ISO 17025) Number TC- 5887
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018



Analytical Test Certificate

Unique Lab Report No.	TC1288725000001259	Discipline	Chemical
Report Unique ID	RL03032530001	Group	Atmospheric Pollution
Issue date/time	25.09.2025/ 17:30	Sub Group	Ambient Air Quality

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@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/0303	Sample Booking Number	EPIC-2539001
Sample(s) Code	2539001 (A) (B) (C) (D)	Sample Receipt (D/T)	22.09.2025/ 10:29

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.09.2025/ 12:15	Sampling End (D/T)	19.09.2025/ 10:58
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)	27	Humidity %	66	Wind direction	200°-20°
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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.18	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° 18' 49.80" / 84° 25' 33.67"

Date(s) of performance of the laboratory activities

Test start date	22.09.2025/ 10:49	Test completion date	25.09.2025/ 17:00
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	54.92	53.89	55.92	58.96	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	28.56	25.33	23.47	24.64	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	09.71	07.18	07.54	09.33	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	20.97	12.97	13.96	16.94	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	27.09	27.41	26.45	27.09	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	19.54	20.27	20.63	20.99	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	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 ³	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 ³	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 -	Vishal Mangaraj



Reviewed by
(S.R. Kumar)
Technical Head

Done by
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

Address:
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Jharkhand - 834005, India.

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CIN - U74999JH2022PTC019685
FEN - AAHCE3811M
GST - 22AAHCE3811M1Z8

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03032539001	Group	Atmospheric Pollution
Issue date/time	25.09.2025/ 17:30	Sub Group	Ambient Air Quality

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9971034776
Email Id ankit.das@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/0303	Sample Booking Number	EPIC-2539001
Sample(s) Code	2539001 (A) (B) (C) (D)	Sample Receipt (D/T)	22.09.2025/ 10:29

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/030
Sampling Start (D/T)	18.09.2025/ 12:15	Sampling End (D/T)	19.09.2025/ 10:58
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)	27	Humidity %	66	Wind direction	200°-20°
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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	22.09.2025/ 10:49	Test completion date	25.09.2025/ 17:00
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2008	µg/m ³	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 ³	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 ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

-Test Results End-

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by
(B.K. Kumar)
Technical Head





EPIC LabTech Private Limited

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CIN: U74999JH2022PTC018845
PAN: RAHC2381M
GST: 25AAHCE201M2Z

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



Analytical Test Certificate

Unique Lab Report No.	TC1288725000001260	Discipline	Chemical
Report Unique ID	RL03032539002	Group	Atmospheric Pollution
Issue date/time	25.09.2025/ 17:33	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. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@edityabirka.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/OTM/0303	Sample Booking Number	EPIC-2539002
Sample(s) Code	2539002 (A) (B) (C) (D)	Sample Receipt (D/T)	22.09.2025/ 10:30

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	19.09.2025/ 12:00	Sampling End (D/T)	20.09.2025/ 09:56
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)	27	Humidity %	66	Wind direction	340°-160°
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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 Batang 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' 05.82" / 84° 23' 25.75"

Date(s) of performance of the laboratory activities

Test start date	22.09.2025/ 10:50	Test completion date	25.09.2025/ 17:00
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	59.06	56.61	63.34	58.86	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	24.91	21.95	25.27	27.16	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	06.35	07.07	07.44	08.55	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	19.72	17.58	15.50	13.42	80 (24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	28.05	27.09	26.77	27.41	400 (24 hr)
6.	Ozone (O ₃)	IS:5182 (P-08) 2019	µg/m ³	24.25	22.80	22.07	21.71	180 (1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	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 ³	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 ³	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 VI.
Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



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

[Signature]
Issued by
(Rishi Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

Address:
C/o - R.R. Tripathi, Indrapuri,
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Jharkhand - 834005, India

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CIN: U74909JH2022PTC019683 Accredited by:

PAN: AAHCE3811M

GST: 22AAHCE3811MCE9

Background State Pollution Control Board

Certified by:

ISO 9001:2015 and ISO 15001:2015

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03032539002	Group	Atmospheric Pollution
Issue date/time	25.09.2025/ 17:30	Sub Group	Ambient Air Quality

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabirla.com
Order Date 05.04.2025/ 10:10
Order Number RP/MIS/MM/25/0114/00

References of Quality Management System (Steps of Traceability Data)

Customer Registration No.	EPIC/OTH/0303	Sample Booking Number	EPIC-2539002
Sample(s) Code	2539002 (A) (B) (C) (D)	Sample Receipt (D/T)	22.09.2025/ 10:30

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	19.09.2025/ 12:00	Sampling End (D/T)	20.09.2025/ 09:55
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)	27	Humidity %	66	Wind direction	340°-160°
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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° 26' 12.72"
S. Location C	Near Ghaghra Village	GPS coordinate	23° 16' 55.88" / 84° 23' 38.22"
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	22.09.2025/ 10:50	Test completion date	25.09.2025/ 17:00
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	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 ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AR/01/00	mg/m ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

-Test Results End-

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangera



Reviewed by
(S.K. Kumar)
Technical Head

Issue by
(Ajay Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

Address:
C/o - R.K. Tripathi, Indraprastha,
Road No. - 3, Ranchi,
Jharkhand - 834005, India

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CIN: U24000JH2022PTC019685
PAN: AAHCE3810M
GST: ZGDARHC3810M129

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



Analytical Test Certificate

Unique Lab Report No.	TC1288725000001261	Discipline	Chemical
Report Unique ID	RL03032539003	Group	Pollution & Environment
Issue date/time	25.09.2025/ 17:36	Sub Group	Sol/Sediment

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. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabirla.com
Order Date 05.04.2025/ 10:10
Order Number RF/MB/MM/25/0114/00

References of Quality Management System (Days of Traceability Data)

Customer Registration No.	EPIC/OTH/0303	Sample Booking Number	EPIC-2539003
Sample(s) Code	2539003	Sample Receipt (D/T)	22.09.2025/ 10:31

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/006
Sampling Start (D/T)	18.09.2025/ 15:10	Sampling End (D/T)	18.09.2025/ 15:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/LAB/SOP/PE/01/00		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	60	Wind direction	200°-20°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Quarry NO.18	GPS coordinate	23° 17' 46.17" / 84° 25' 31.27"
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Date(s) of performance of the laboratory activities

Test start date	22.09.2025/10:40	Test completion date	25.09.2025/16:30
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-Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25.7°C	MAGI 2011	-	6.82	-
2.	Available Phosphorus	MAGI 2011	kg/ha	2.7	-
3.	Available Potassium	MAGI 2011	kg/ha	92.50	-
4.	Organic Carbon	MAGI 2011	%	1.50	-
5.	Electrical Conductivity	MAGI 2011	µs/cm	140.9	-
6.	Magnesium	MAGI 2011	mg/kg	37.83	-
7.	Nitrogen	MAGI 2011	%	0.02	-
8.	Arsenic (as As)	USEPA 3050 B 1996	mg/kg	BDL(MDL-0.005)	-
9.	Cadmium (as Cd)	USEPA 3050 B 1996	mg/kg	0.65	-
10.	Selenium (as Se)	USEPA 3050 B 1996	mg/kg	BDL(MDL-0.006)	-

-Test result End -

Operational Status Unit was Operational During sampling.

Analysed by - Ishika Singh



Reviewed by
(R.K. Kumar)
Technical Head





EPIC LabTech Private Limited

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CIN: U74999JH2022PTC019685
PAN: RAHC2351M
GST: 25AAWCE267WVZ9

Accredited by:
National Green 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	RL03032539003	Group	Pollution & Environment
Issue date/time	25.09.2025/ 17:36	Sub Group	Soil/Sediments

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. Ankit Das
Contact Number: +91 9871034775
Email Id: ankit.das@edityabirra.com
Order Date: 05.04.2025/ 10:10
Order Number: RP/MUB/MM/25/0114/00

References of Quality Management System (Steps of Traceability Data)

Customer Registration No.	EPIC/OTH/0303	Sample Booking Number	EPIC-2539003
Sample(s) Code	2539003	Sample Receipt (D/T)	22.09.2025/ 10:31

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.09.2025/ 15:10	Sampling End (D/T)	18.09.2025/ 15:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/LAB/SOP/PE/01/00		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	200°-20°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Quarry NO.1B	GPS coordinate	23° 17' 46.17" / 84° 25' 31.27"
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Date(s) of performance of the laboratory activities

Test start date	22.09.2025/10:40	Test completion date	25.09.2025/16:30
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-Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Chloride (as Cl)	EPIC/LAB/SOP/PE/01/00	%	0.035	-
2.	Mercury (as Hg)	USEPA 3050 B 1996	mg/kg	BDL (MDL-0.005)	-

-Test result End-

Operational Status

Unit was Operational During sampling.

Analysed by - Ishika Singh



Reviewed by
(E.R. Kumar)
Technical Head

Issued by
(Omish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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Road No. - 3, Ranchi,
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CIN: U74999JH2022PTC011685
PAN: AAACE2611M
GST: 22AAACE2611M1ZK

Accredited by -
NABL, with certificate number TC-12867
Hazardous Waste Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018



Analytical Test Certificate

Unique Lab Report No.	TC1288725000001282	Discipline	Chemical
Report Unique ID	RL03032539004	Group	Water
Issue date/time	25.09.2025/ 17:39	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. Ankit Das
Contact Number +91 9971034775
Email id ankit.das@odityabirla.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/0303	Sample Booking Number	EPIC-2539004
Sample(s) Code	2539004	Sample Receipt (D/T)	22.09.2025/ 10:32

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.09.2025/ 16:10	Sampling End (D/T)	18.09.2025/ 16:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	200°-20°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Quarry No.1B	GPS coordinate	23° 17' 46.60" / 84° 25' 29.17"
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Date(s) of performance of the laboratory activities

Test start date	22.09.2025/ 10:52	Test completion date	25.09.2025/ 16:10
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-Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.71	-
2.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2022	mg/l	15.0	-
3.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	7.40	-

Group - Residues and Contaminants in Water,

Sub Group - Trace Metals Elements

4.	Iron (as Fe)	APHA 3111 B 2023	-	BDL (MDL 0.1)	-
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-Test result End-

Operational Status Unit was Operational During sampling.

Analysed by - Pooja Kumar



Reviewed by
(B.K. Kumar)
Technical Head





EPIC LabTech Private Limited

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CIN: U74900JH2022PTC016685
PAN: AANCE3811M
GST: 20AANCE3811M1ZK

Accredited by:-
NABL and 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	RL03032539004	Group	Water
Issue date/time	25.09.2025/ 17:39	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. Ankit Das
Contact Number +91 9871034775
Email id ankit.das@edityabiria.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/0303	Sample Booking Number	EPIC-2539004
Sample(s) Code	2539004	Sample Receipt (D/T)	22.09.2025/ 10:32

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.09.2025/ 16:10	Sampling End (D/T)	18.09.2025/ 16:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	200°-20°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Quarry No.1B	GPS coordinate	23° 17' 46.60" / 84° 25' 29.17"
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Date(s) of performance of the laboratory activities

Test start date	22.09.2025/ 10:52	Test completion date	25.09.2025/ 16:10
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-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	Dissolve Oxygen (DO)	IS 3025 (P-38) 1968	mg/l	4.2	-
2.	Temperature	IS 3025 (P-89) 1986	°C	24.2	-
3.	BOD (3days at 27°C)	IS 3025 (P-44) 2000	mg/l	2.0	-
4.	COD	IS 3025 (P-58) 2000	mg/l	32.0	-
5.	Total Suspended Solids (TSS)	IS 3025 (P-17) 2022	mg/l	12.00	-
6.	Oil & Grease	IS 3025 (P39) 2021	mg/l	BOL(MDL-04)	-

Group - Residues and Contaminants in Water,

7.	Aluminium (as Al)	IS 3025 (P-55) 2003	-		
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Sub Group - Trace Metals Elements

BOL(MDL-0.1)

-Test result End-

Operational Status

Unit was Operational During sampling.

Analysed by - Pappu Kumar



Reviewed by
(P.K. Kumar)
Technical Head



Page 1 of 1

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 valid only to the sample tested is presented Date & time. 3. The test report shall not be reproduced full or in part & (not) be used as proof in the court of law. 4. Any complaint about this report should be communicated in writing within thirty days of its issue. 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to amount only. 6. All disputes are subjected to Ranchi, Jharkhand and exclusive jurisdiction of the laboratory does not covered the testing and sampling charges. 7. Opinion does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any liability by use or misuse of this report. 8. When the results are from external provider are marked as * mark. 9.

Abbreviations - BOL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation).

MINERALS & MINERALS LIMITED

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

Tel.-06526-223163

CIN NO. U26990JH1970PLC000875

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)

Annexure 4

Production, Mined Out, Back Filled and Over Burden removal from April 2025 to September 2025								
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	79390	0.21	0.45	87427.68
3	Hisri (New) Bauxite Mine	14.55	100000	19.07.1981 to 31.03.2030	41829	0.11	0.23	13246.30
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	124975	1.58	0.50	153576.56
7	Sherangdag-A Bauxite Mine	155.81	260000	16.10.1974 to 31.03.2030	500	0.03	0.01	0.00
8	Serangdag-B Bauxite Mine	77.89	100000	04.10.1978 to 31.03.2030	57100	2.01	1.60	70755.24
9	Jalim & Sanai Bauxite Mine	12.14	50000	16.10.1974 to 31.03.2030	8547	0.13	0.10	8842.10
10	Gurdari Bauxite Mine	584.19	325000	23.03.1985 to 22.03.2035	94470	4.30	3.31	125642.99
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	63140	1.67	0.51	56988.56
13	Amtipani Bauxite Mine	190.95	150000	13.03.2006 to 12.03.2056	93765	3.168	1.21	209999.64

Annexure 4

Minerals & Minerals Limited								
14	Pakhar (109.507) Bauxite Mine	109.507	280000	26.07.2008 to 25.07.2058	100280	1.630	0.72	175833.99
15	Pakhar (15.58) Bauxite Mine	15.58	60000	28.04.1965 to 31.03.2030	NIL	NIL	NIL	NIL
16	Bimarla Bauxite Mine	134.526	300000	18.07.2009 to 17.07.2059	77100	0.849	0.30	62788.97
17	Amtipani Chirodih Bauxite Mine	130.01	450000	11.01.2017 to 10.01.2067	157400	5.320	4.600	218030.43

*Static information about the mines included in the above table



Basudev Gangopadhyay
AVP (Planning, Environment and Compliance)

Annexure-5

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 Apr'25 to Sep'25)	Actual (in Rupees) FY 2025-26 (From Apr'25 to Sep'25)
1	Pollution Control and Environmental Monitoring	1,71,00,000	59,45,184
2	Reclamation/ Back filing & Rehabilitation**	2,04,00,000	1,19,00,000
3	Green belt, Plantation & Water sprinkling arrangement	1,20,00,000	42,73,045
4	Rural Development	7,92,00,000	2,59,84,599

**Part of OB removed cost



Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)