



HIL/LHD/ENV/MoEF&CC/625

Date: 26th May 2026

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 Pakhar (115.13 Ha) Bauxite Mining project of M/s Hindalco Industries Limited, Lohardaga Jharkhand for the period from **October 2025 to March 2026**.

Ref: Environmental Clearance Letter No. J-11015/406/2007-IA II (M), dated 27th November 2012.

Dear Sir,

With reference to the above, we are submitting herewith the Compliance status report of EC conditions for **Pakhar (115.13 Ha) Bauxite Mining project of M/s Hindalco Industries Limited**, Lohardaga Jharkhand for the period from **October 2025 to March 2026** for your kind perusal please.

The lease details are below:

Lease area (ha)	Production Capacity (MT)	Lease Period
115.13	300000	19.07.1996 to 31.03.2030

Hope you will find the same in order.

Thanking You

Yours faithfully,
For **Hindalco Industries Limited**

R R P Ambastha
Head - Compliance

Enclosure: - As Above

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Name of the Project : **Pakhar Bauxite Mine (115.13 ha)**
M/s Hindalco Industries Limited

Environment Clearance No. & date : **J-11015/406/2007-IA. II(M), dated 27.11.2012**

Period of Compliance Report : **From 1st October 2025 to 31st March 2026**

Specific Conditions: -

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

Reply:- Consent to Operate (CTO) has been obtained. The Stipulated conditions of CTO are being implemented and complied with. The existing Consent to Operate (CTO) is valid till 31st December 2030.

Condition ii:- All the conditions stipulated by the Jharkhand State Pollution Control Board in their NOC shall be effectively implemented.

Reply: - Implementations of stipulated conditions in NOC are fulfilled post which consent to operate has been obtained from time to time. The existing consent to operate is valid up to 31st December 2030. Productions of bauxite are within limits specified in consent to operate.

Condition iii: - Corporate Environment Policy and hierarchical system for ensuring adherence to the policy and compliance with environmental regulation in accordance with the office memorandum dated 26.4.2011 issued by MoEF should be put in place.

Reply: - Corporate Environment Policy and hierarchical system is in place. A copy of our Environmental Policy is attached herewith as **Annexure 6**.

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

Reply: - Policy towards Corporate Environment Responsibility is part of Corporate Environment policy and in place. A copy of our Environmental Policy has already been submitted to the relevant statutory authorities and attached herewith as **Annexure 6**. The

company has implemented a system in line with the above policies which addresses the following points. (i) Standard operating process / process to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions, (ii) Hierarchical system or administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions and (iii) System of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company.

Condition v: - The environmental clearance is subject to approval of the State Land use Department, Government of Jharkhand for diversion of agricultural land for non- agricultural use.

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

Condition vi: - The critical habitat in the area including dens of python, fox and bear should be protected by adopting appropriate wildlife conservation measures.

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

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

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

Reply: - Topsoil is being stacked temporally properly with proper slope as and when required. Sequential backfilling and reclamation of mined out area are being exercised for which topsoil is being spread on backfilled area for reclamation of area. The mining is being carried out as per the approved mining plan. Monitoring and management of rehabilitated areas is being done through effective supervision. Data pertaining to backfilling is enclosed as **Annexure 4**.



Reclaimed Land

Condition x: - The over burden (OB) generated during the mining operation shall be temporarily stacked at earmarked dump site(s) only for the purpose of backfilling. Backfilling shall commence from the third year onwards and thereafter the waste generated shall be concurrently backfilled in the mined-out area. There shall be no external OB dump. An area of 16.39ha of the worked out pit shall be backfilled and reclaimed by plantation during the plan period. Monitoring and management of rehabilitated areas shall continue until the 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: - Overburden and waste rock are being used for concurrent backfilling, and topsoil is being spread on the backfilled area for reclamation. Currently, there is no OB dump present in the mine lease area. Monitoring and management of rehabilitated areas is continuing until vegetation becomes self-sustaining through supervision. Data pertaining to backfilling is enclosed as **Annexure 4**. Compliance status is being submitted to MoEF&CC on six monthly basis.

Condition xi: - Catch drains and siltation ponds of appropriate size shall be constructed for the working pit, temporary soil, OB and mineral dumps to arrest flow of silt and sediment directly into the agricultural fields, the Chaupat Nadi, the Kisko Nadi, the Shankh Nadi, Kisko Nallah, the Narachiya Nallah and other water bodies, The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted particularly after the monsoon and maintained properly.

Garland drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and temporary over burden

dumps to prevent run off of water and flow of sediments directly into the agricultural fields, the Chaupat Nadi, the Kisko Nadi, the Shankh Nadi, Kisko Nallah, the Narachiya Nallah and other 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 desilted at regular intervals.

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



De-siltation arrangement

Condition xii: - Dimension of the retaining wall at the toe of the temporary OB dumps and the OB benches within the mine to check run-off and siltation should be based on the rainfall data.

Reply: - There is no external dump.

Condition xiii: - The void left unfilled in an area of 4.5ha shall be converted into water body. The higher benches of excavated void/mining pit shall be terraced and plantation done to stabilize the slopes. The slope of higher benches shall be made gentler for easy accessibility by local people to use the water body. Peripheral fencing shall be carried out all along the excavated area.

Reply: - Water body has been created within the mine lease area. More than 4.39 ha of area has already been converted into water bodies (rainwater harvesting ponds) within the lease area. Implementation of conditions is in progress. Further water bodies will be created as required.

Mining is being carried out in a scientific manner as per Mining Plan approved by IBM. Necessary measures have been implemented for easy accessibility by local people to use this harvested water. Proper fencing is provided along excavated area.



Rainwater Harvesting Pond

Condition xiv: - Plantation shall be raised in an area of 24.09 ha including a 7.5m wide green belt in the safety zone around the mining lease by planting the native species around reclaimed area, mine benches, around water body, along the roads etc. in consultation with the local DFO/Agriculture Department. The density of the trees should be around 1500 plants per hectare. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within first five years.

Reply: - Progressive plantation of native species is being carried out in consultation with the local forest department within the safety zone and mining lease. During FY 2025–26 till September, a total of 8800 saplings have been planted within the mining lease area. Cumulatively, plantation has been carried out over 24.91 acres till date. In addition to this, agricultural activities is going on reclaimed land as per consent from landowners. Green belt development program is in progress with the progress of mining activities in a phased manner.





Plantation at Mines

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 crushing and screening plant, loading and unloading point and 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 are attached herewith below.



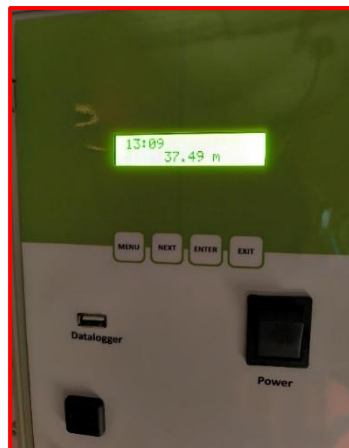
Water Tanker

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. The photograph of Rainwater Harvesting Pond is already attached above.

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 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 Bhubneswar, 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, 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 Ground water level from October 2025 to March 2026 and quality Monitoring report of Post-Monsoon and Winter season are attached as **Annexure 1 & 2**. Now, Regional office of MoEF&CC is in Ranchi.



Piezometer

Condition xviii: - Appropriate mitigative measures should be taken to prevent pollution of the Chaupat Nadi, the Kisko Nadi and the Shankh Nadi 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 xix: - The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of ground water, required for the project.

Reply: - We are not using ground water for mining operation. Rainwater harvesting ponds with proper fencing have been already constructed in the mine premises. Rainwater harvested during rainy season is being used for sprinkling on haul roads and raising plantation. However, we have obtained NOC for extraction of ground water from CGWA/ CGWB for drinking purpose only. The copy of same NOC is attached below.



The image shows a No Objection Certificate (NOC) for ground water abstraction. The certificate is issued by the Central Ground Water Authority (CGWA) under the Ministry of Jal Shakti, Government of India. It is for the Pakhar Bauxite Mining Project (15.13 HA) in the Pakhar village, Kiskoo tehsil, Lohardaga district, Jharkhand state. The certificate is valid from 16/02/2025 to 15/02/2027. The water quality type is Fresh Water and the area type category is Safe (GWRE-2023).

NOC NO. NOC/MIN/JH/2024/231/R-2/2		DATE OF ISSUANCE 30/12/2024	
APPLICATION NO. MIN/JH/2024/231/R-2		APPLICATION TYPE Mining	
PROJECT STATUS Existing Project		NOC TYPE Renew	
VALID FROM 16/02/2025		VALID UP TO 15/02/2027	
WATER QUALITY TYPE Fresh Water		AREA TYPE CATEGORY Safe (GWRE-2023)	

NOC for Ground Water

Condition xx: - The project proponent shall practice suitable rainwater harvesting measures on long term basis and work out a detailed scheme for rainwater harvesting in consultation with the Central Groundwater Authority and submit a copy of the same to the Ministry of Environment and Forests and its Regional Office, Bhubneswar.

Reply: - Rainwater is being harvested in mined out pit. Apart from rainwater harvesting pond, catch drain, sump etc. is being provided with progress of mining activity. The backfilling and drainage system in mine is so designed that water do not flow outside mine lease area and gets recharge in mine lease area itself.

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 above.

Condition xxi: - 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. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.

Reply: - To keep vehicular emissions under control, vehicles are periodically checked & repaired. All measures are being taken to control vehicular emission. All vehicles are covered

with tarpaulins, and non-overloading guidelines are being followed during transportation of mineral.



Tarpaulin covered vehicle

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

Reply: - Wet drilling is in practice.



Wet drilling

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

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

Condition xxiv: - Mineral handling area shall be provided with adequate number of high efficiency dust extraction systems. 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.



Water sprinkling through tanker.

Condition xxv: - 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 Pakhar group of mines to treat this effluent. The treated water is in close circuit and being reused for washing of vehicle in the workshop. We are not discharging any wastewater outside the mine lease area.

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

Condition xxvi: - 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 a regular basis.

Condition xxvii: - It shall be ensured that the fluoride level in the drinking water to be used by the workers in the project as well as to be provided to the public, if any, should meet the prescribed norms in this regard.

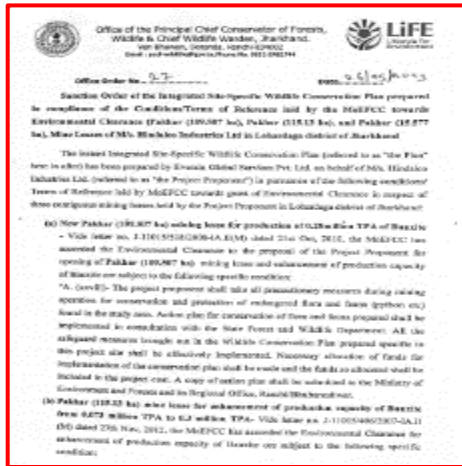
Reply: - Fluoride levels in drinking water is being monitored and no issues have been found in respect of fluoride in and around the mines. The water quality monitoring report is attached as **Annexure-2**.

Condition xxviii: - The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna namely python, leaf monkey (*Presbytis phayrei*) etc. spotted in the study area. The critical habitats in the area including dens of python, fox and bear should be protected by adopting appropriate wildlife conservation measures and the conservation plan prepared specific to this project in consultation with the State Forest and Wildlife Department should effectively address the same. All the safeguard measures brought out in the Wildlife Conservation Plan prepared specific to this project site shall be effectively implemented in consultation with the State Forest and Wildlife Department. A copy of the approved wildlife conservation plan shall be submitted to the Ministry and its Regional Office, Bhubaneswar within 3 months.

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

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

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



Integrated Site-specific Wildlife Conservation for Pakhar Group of Mines

Condition 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 labors 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 mentioned above are being taken care of.

Condition xxx: - The critical parameters such as RSPM (Particulate matter with size less than 10 micron i.e PM10) and NOx in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [TDS, DO, PH and Total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The Circular No. J-20012/1/2005-IA.II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry www.envfor.nic.in 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**. Six monthly 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.

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

Reply: - Mining Plan along with progressive mine closure plan has been approved by Indian Bureau of Mines. Final Mine Closure Plan will be submitted in due time as per applicable guidelines and timelines mentioned in MCDR/IBM guidelines who are competent authority to approve the same. Based on 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 and in scientific manner. Data pertaining to excavation, quantum of mineral bauxite etc. are mentioned in report attached as **Annexure 4**.

Condition iii: - 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 10micron i.e., PM10) and NO_x 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 is being carried out and reported to the concerned authorities. Monitoring Report is attached as **Annexure 2**.

Condition iv: - Data on ambient air quality RSPM (Particulate matter with size less than 10micron i.e., PM10) and NO_x) 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: - Being adhered to. Monitoring Reports for the reporting period are attached as **Annexure-2**. Now, the Regional office of MoEF&CC is in Ranchi.

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

Condition vi: - 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. Monitoring Report has been attached as **Annexure 2**.

Condition vii: - Industrial wastewater (workshop and wastewater 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 31st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.

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

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

Condition viii: - Personnel working in dusty areas should wear protective respiratory devices and they should also 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 ix: - A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.

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

Condition x: - The 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 xi: - 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: - This is an operating mine and hence the provision related to financial closure is not applicable. Now, the Regional office of MoEF&CC is in Ranchi.

Condition xii: - 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: - Noted and Agreed. Now, the Regional Office of MoEF&CC is in at Ranchi.

Condition xiii: - 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 company. Now, the Regional Office of MoEF&CC is in Ranchi.

Condition xiv: - A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.

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

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 31st 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, Bhubneswar by e-mail.

Reply: - Environment statement is being submitted regularly to the regional office of the Ministry and Member Secretary, JSPCB. Also, the status of compliance with EC conditions is uploaded on the website of the company on a regular basis.

Condition xvii: - The project authorities should advertise at least in two local newspapers of the District or State in which the project is located and widely circulated, one of 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://envfonnic.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.

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Piezometer Monitoring Report

Mine: Pakhar Bauxite Mine (115.13 Ha)

S No	Month	Ground Water Level (BGL) in meter
1	Oct-25	36.05
2	Nov-25	36.12
3	Dec-25	36.33
4	Jan-26	36.64
5	Feb-26	36.92
6	Mar-26	37.15



EPIC LabTech Private Limited



Address-
C/O - R.K. Tripathi, Indrapuri,
Road No. - 5, Ranchi,
Jharkhand - 834005, India

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

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

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000001348	Discipline	Chemical
Report Unique ID	RL03212542007	Group	Atmospheric Pollution
Issue date/time	18.10.2025/ 17:06	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE : PAKHAR 115.13 BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Girija Tamrakar +91 9111006074 girija.tamrakar@adityabirla.com 31.03.2025/ 10:10 13612313868
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References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0321	Sample Booking Number	EPIC-2542007
Sample(s) Code	2542007 (A) (B) (C) (D)	Sample Receipt (D/T)	14.10.2025/ 11:14

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	11.10.2025/ 11:08	Sampling End (D/T)	12.10.2025/ 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 %	65	Wind direction	60°-240°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42" / 84° 36' 00.33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88" / 84° 36' 06.71"
S. Location C	Near Mine Block B, Quarry No - 6	GPS coordinate	23° 32' 51.14" / 84° 36' 58.76"
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 05.36" / 84° 37' 04.76"

Date(s) of performance of the laboratory activities

Test start date	14.10.2025/ 11:34	Test completion date	18.10.2025/ 15:00
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--Test Results--

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	57.21	56.11	58.29	59.20	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	27.15	24.87	28.02	23.08	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	08.68	09.70	09.02	10.73	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	17.36	18.28	16.38	18.27	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	23.47	23.15	22.83	24.10	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	12.24	12.60	12.96	14.04	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 Mangraj



Reviewed by
(R.N. Kumar)
Technical Head

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



EPIC LabTech Private Limited

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

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03212542007	Group	Atmospheric Pollution
Issue date/time	18.10.2025/ 17:06	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE: PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0321	Sample Booking Number	EPIC-2542007
Sample(s) Code	2542007 (A) (B) (C)	Sample Receipt (D/T)	14.10.2025/ 11:14

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	11.10.2025/ 11:08	Sampling End (D/T)	12.10.2025/ 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 %	65	Wind direction	60°-240°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42" / 84° 36' 00.33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88" / 84° 36' 06.71"
S. Location C	Near Mine Block B, Quarry No - 6	GPS coordinate	23° 32' 51.14" / 84° 36' 58.76"
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 05.36" / 84° 37' 04.76"

Date(s) of performance of the laboratory activities

Test start date	14.10.2025/ 11:34	Test completion date	18.10.2025/ 15:00
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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 Mangraj



Reviewed by
(B.N. Kumar)
Technical Head



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



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

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

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000001349	Discipline	Chemical
Report Unique ID	RL03212542009	Group	Atmospheric Pollution
Issue date/time	18.10.2025/ 17:12	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE : PAKHAR 115.13 BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Girija Tamrakar +91 9111006074 girija.tamrakar@adityabirla.com 31.03.2025/ 10:10 13612313868
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References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0321	Sample Booking Number	EPIC-2542009
Sample(s) Code	2542009 (A) (B) (C) (D)	Sample Receipt (D/T)	14.10.2025/11:17

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	12.10.2025/ 11:22	Sampling End (D/T)	13.10.2025/ 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 %	65	Wind direction	60°-240°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29" / 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75" / 84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathamik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathamik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.33"

Date(s) of performance of the laboratory activities

Test start date	14.10.2025/ 11:37	Test completion date	18.10.2025/ 15:00
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--Test Results--

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	63.04	64.82	68.13	65.52	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	27.43	26.50	28.25	30.89	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	07.01	07.70	08.04	08.73	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	18.51	16.54	20.40	21.34	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	23.47	23.15	23.79	24.10	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	15.12	15.84	16.20	17.28	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



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

[Signature]
18/10/25
Issue by
(Umesh Das)
Laboratory Head
Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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



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

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	RL03212542009	Group	Atmospheric Pollution
Issue date/time	18.10.2025/ 17:12	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE : PAKHAR 115.13 BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Girija Tamrakar +91 9111006074 girija.tamrakar@adityabirla.com 31.03.2025/ 10:10 13612313868
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References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0321	Sample Booking Number	EPIC-2542009
Sample(s) Code	2542009 (A) (B) (C) (D)	Sample Receipt (D/T)	14.10.2025/11:17

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	12.10.2025/ 11:22	Sampling End (D/T)	13.10.2025/ 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 %	65	Wind direction	60°-240°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29" / 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75" / 84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathmik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathmik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.33"

Date(s) of performance of the laboratory activities

Test start date	14.10.2025/ 11:37	Test completion date	18.10.2025/ 15:00
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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 --

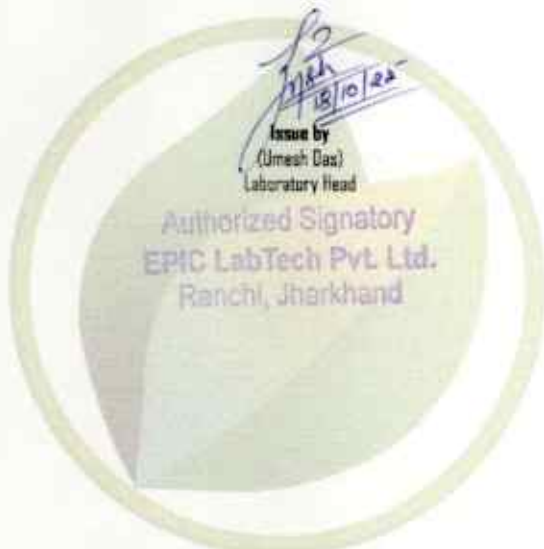
Prescribed Limit Environmental (Protection) Rules-1986, Schedule VII.

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



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



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



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

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03212542008	Group	Atmospheric Pollution
Issue date/time	18.10.2025/ 17:09	Sub Group	DG Stack

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0321	Sample Booking Number	EPIC-2542008
Sample(s) Code	2542008	Sample Receipt (D/T)	14.10.2025/ 17:05

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	11.10.2025/ 15:25	Sampling End (D/T)	11.10.2025/ 17:05
Mode of Sampling	Conducted by laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS: 11255 & CPCB Guideline (Lats/80/2013-14)		
Description/condition of sample	Receipt sample(s) were fit for analysis		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	65	Wind direction	60°-240°
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Sampling Location(s) with GPS coordinate(s)

S. Location	Stack	GPS coordinate	23° 18' 50.04" / 84° 17' 30.24"
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Field observation by laboratory's personnel

Stack Description (Shape & Material) Circular/ Metal
Emission Source DG
Stack Gas Temperature (K) 415

Data provided by customer

Type of fuel Used HSD
Total production Capacity 30 KVA
Barometric Pressure (P Bar) mmHg 746.0

Date(s) of performance of the laboratory activities

Test start date/time	14.10.2025/ 11:30	Test completion date/time	18.10.2025/ 13:00
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--Test Result--

Sl	Parameters	Test Method	Units	Results	Limits
1.	Stack gas Velocity	IS 11255 (Part 3)2018	m/s	11.43	-
2.	Volumetric Flow Rate	IS 11255 (Part 3)2018	Nm ³ /hr	111.38	-
3.	Particulate Matter (PM)	IS 11255 (Part 1)2019	mg/Nm ³	33.28	-
4.	Sulphur Dioxide (SO ₂)	IS 11255 (Part 2)2019	mg/Nm ³	32.89	-
5.	Oxides of Nitrogen (NO _x)	IS 11255 (Part 7)2022	mg/Nm ³	133.88	-
6.	Carbon Monoxide (CO)	IS 13270 2009	%	BDL (MDL-0.5)	-
7.	Carbon Dioxide (CO ₂)	IS 13270 2009	%	5.8	-

--Test Result End--

Operational Status Unit was Operational during sampling.

Analysed by - Vishal Mangaraj



Reviewed by
(B.N. Kumar)
Technical Head



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



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PAN:-AAHCE3611M
GST:-20AAHCE3611M12X

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

TC-12887

Analytical Test Report

Unique Lab Report No.	TC1288725000001449	Discipline	Chemical
Report Unique ID	RL03612547026	Group	Atmospheric Pollution
Issue date/time	24.11.2025/ 10:30	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE: PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0361	Sample Booking Number	EPIC-2547026
Sample(s) Code	2547026 (A) (B) (C) (D)	Sample Receipt (D/T)	18.11.2025/ 10:43

Sampling References

Type of industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.11.2025/ 10:15	Sampling End (D/T)	16.10.2025/ 08:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	67	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42"/ 84° 36' 00.33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88"/ 84° 36' 06.71"
S. Location C	Near Mine Block B, Quarry No - 6	GPS coordinate	23° 32' 51.14"/ 84° 36' 58.76"
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 05.36"/ 84° 37' 04.76"

Date(s) of performance of the laboratory activities

Test start date	18.11.2025/ 10:55	Test completion date	22.11.2025/ 18:05
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits <small>(Reference)</small>
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	58.79	57.87	59.92	59.88	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	28.85	25.76	27.38	23.40	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	09.84	09.70	09.83	11.61	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	18.75	19.63	17.51	18.80	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	13.64	12.94	13.99	14.69	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	24.85	23.95	23.35	24.55	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-

--Test Results End--

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

Analysed by - Rajesh Varma



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

Test Report End

(Signature)
24/11/25
Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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

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



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

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03612547026	Group	Atmospheric Pollution
Issue date/time	24.11.2025/ 10:30	Sub Group	Ambient Air Quality

Report Issue to		Contact Person	Mr. Girija Tamrakar
M/s - HINDALCO INDUSTRIES LIMITED		Contact Number	+91 9111006074
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302		Email Id	girija.tamrakar@adityabirla.com
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE		Order Date	31.03.2025/ 10:10
		Order Number	13612313868

References of Quality Management System (Steps of Traceability Chain)			
Customer Registration No.	EPIC/OTH/0361	Sample Booking Number	EPIC-2547026
Sample(s) Code	2547026 (A) (B) (C) (D)	Sample Receipt (D/T)	18.11.2025/ 10:43

Sampling References			
Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.11.2025/ 10:15	Sampling End (D/T)	16.10.2025/ 08:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling			
Weather condition	Cloudy	Temperature (°C)	24
		Humidity %	67
		Wind direction	0°-180°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42"/84° 36' 00.33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88"/84° 36' 06.71"
S. Location C	Near Mine Block B, Quarry No - 6	GPS coordinate	23° 32' 51.14"/84° 36' 58.76"
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 05.36"/84° 37' 04.76"

Date(s) of performance of the laboratory activities			
Test start date	18.11.2025/ 10:55	Test completion date	22.11.2025/ 18:05

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

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



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

Test Report End

[Signature]
24/11/25
Issue by
(Gimsh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



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CIN:-U74999JH2022PTC019605
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

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Jharkhand State Pollution Control Board
Certified by -
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TC-12887

Analytical Test Report

Unique Lab Report No.	TC1288725000001450	Discipline	Chemical
Report Unique ID	RL03612547027	Group	Water
Issue date/time	24.11.2025/ 10:33	Sub Group	Drinking Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE: PAKHAR 115.13 BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Girija Tamrakar +91 9111006074 girija.tamrakar@adityabirla.com 31.03.2025/ 10:10 13612313868
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References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0361	Sample Booking Number	EPIC-2547027
Sample(s) Code	2547027	Sample Receipt (D/T)	18.11.2025/ 10:44

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.11.2025/ 16:08	Sampling End (D/T)	15.11.2025/ 16:16
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	67	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	R.O Plant	GPS coordinate	23° 32' 24.47"/84° 36' 30.05"
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Date(s) of performance of the laboratory activities

Test start date	18.11.2025/ 11:20	Test completion date	22.11.2025/ 10:50
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits	
						Acceptable Limit	Permissible limit
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	0.7	6.89	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.3	0.89	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	5.0	5	5	15
4.	Odour	IS 3025 (P-05) 2018	-	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	10	225.0	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	5	39.42	250	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	10	90.00	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	10	122.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	10	40.88	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	0.6	BDL	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1)2022	mg/l	0.3	7.90	200	400
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	0.4	2.11	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	0.001	BDL	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	0.3	4.86	30	100



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GST:-20AAHCE3611MTZX

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

TC-12887

Analytical Test Report

Unique Lab Report No.	TC1288725000001450	Discipline	Chemical
Report Unique ID	RL03612547027	Group	Water
Issue date/time	24.11.2025/ 10:33	Sub Group	Drinking Water

Report issue to

M/s - HINDALCO INDUSTRIES LIMITED

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

MONITORING SITE: PAKHAR 115.13 BAUXITE MINE

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

Group - Residues and Contaminants in Water,

Sub Group - Trace Metals Elements

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

--Test Result End--

Prescribed Limit IS 10500:2012

Analysed by - Pappu Kumar



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

Test Report End

[Signature]
Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





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CIN:-U74999JH2022PTC019685
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Accredited by :-
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Certified by :-
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Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03612547027	Group	Water
Issue date/time	24.11.2025/ 10:33	Sub Group	Drinking Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE: PAKHAR 115.13 BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Girija Tamrakar +91 9111006074 girija.tamrakar@adityabirla.com 31.03.2025/ 10:10 13612313868
--	---	--

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0361	Sample Booking Number	EPIC-2547027
Sample(s) Code	2547027	Sample Receipt (D/T)	18.11.2025/ 10:44

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.11.2025/ 16:08	Sampling End (D/T)	15.11.2025/ 16:16
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	67	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	R.O Plant	GPS coordinate	23° 32' 24.47"/ 84° 36' 30.05"
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Date(s) of performance of the laboratory activities

Test start date	18.11.2025/ 11:20	Test completion date	22.11.2025/ 10:50
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits	
						Acceptable Limit	Permissible limit
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	0.1	BDL	1.0	1.5

Group-Residues and Contaminants in Water

Sub Group-Trace Metals Elements

2.	Aluminum	IS 3025 (P-55):2019	mg/l	0.1	BDL	0.03	0.2
3.	Boron	IS 3025 (P-57):2021	mg/l	0.1	BDL	0.5	1.0
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	0.2	BDL	0.5	No relaxation
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	0.05	BDL	0.1	No relaxation

Group-Residues and Contaminants in Water

Sub Group-Pesticides

6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	20	No relaxation
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	2.0	No relaxation
8.	Dieldrin	EPIC/LAB/SOP/WA/01/00	µg/l	0.02	BDL	0.03	No relaxation
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	0.005	BDL	0.01	No relaxation
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	0.02	BDL	0.04	No relaxation
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	125.0	No relaxation
12.	Chlopyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	30.0	No relaxation
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	0.02	BDL	0.04	No relaxation



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GST:-20AAHCE3611M1ZX

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Certified by -
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Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03612547027	Group	Water
Issue date/time	24.11.2025/ 10:33	Sub Group	Drinking Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED

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

MONITORING SITE: PAKHAR 115.13 BAUXITE MINE

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

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

--Test Result End --

Prescribed Limit IS 10500:2012

Analysed by - Pappu Kumar



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

Test Report End

Umesh Das
Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL03612547028	Group	Water
Issue date/time	24.11.2025/ 10:36	Sub Group	Drinking Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0361	Sample Booking Number	EPIC-2547028
Sample(s) Code	2547028	Sample Receipt (D/T)	18.11.2025/ 13:49

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.11.2025/ 16:08	Sampling End (D/T)	15.11.2025/ 16:16
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	67	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	R.O Plant	GPS coordinate	23° 32' 24.47"/ 84° 36' 30.05"
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Date(s) of performance of the laboratory activities

Test start date	18.11.2025/ 15:30	Test completion date	23.11.2025/ 11:00
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--Test Result Start--

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

--Test Result End --

Prescribed Limit IS 10500:2012

Analysed by - Ishika Singh

Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited



Address:-
C/o - B.K. Tripathi, Indrapuri,
Road No. - 5, Ranchi,
Jharkhand - 834005, India

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

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

TC-12887

Analytical Test Report

Unique Lab Report No.	TC1288725000001451	Discipline	Chemical
Report Unique ID	RL03612547029	Group	Water
Issue date/time	24.11.2025/ 10:39	Sub Group	Ground Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE : PAKHAR 115.13 BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Girija Tamrakar +91 9111006074 girija.tamrakar@adityabirla.com 31.03.2025/ 10:10 13612313868
---	---	---

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0361	Sample Booking Number	EPIC-2547029
Sample(s) Code	2547029	Sample Receipt (D/T)	18.11.2025/ 13:50

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.11.2025/ 15:05	Sampling End (D/T)	15.11.2025/ 15:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	67	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Utkarnit Rajkiya Prathmik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 36.90" / 84° 37' 27.19"
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Date(s) of performance of the laboratory activities

Test start date	18.11.2025/ 14:10	Test completion date	22.11.2025/ 11:20
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits	
						Acceptable Limit	Permissible limit
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	0.7	6.76	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.3	0.68	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	5.0	5	5	15
4.	Odour	IS 3025 (P-05) 2018	-	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	10	256.0	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	5.0	38.43	250	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	10	126.0	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	10	172.0	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	10	49.7	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	0.6	BDL	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1)2022	mg/l	0.3	13.1	200	400
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	0.4	4.99	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	0.001	BDL	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	0.3	11.66	30	100



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

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

Analytical Test Report

Unique Lab Report No.	TC1288725000001451	Discipline	Chemical
Report Unique ID	RL03612547029	Group	Water
Issue date/time	24.11.2025/ 10:39	Sub Group	Ground Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE: PAKHAR 115.13 BAUXITE MINE

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

Group - Residues and Contaminants in Water,

Sub Group - Trace Metals Elements

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

--Test Result End --

Prescribed Limit IS 10500:2012
Analysed by - Peppu Kumar



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03612547029	Group	Water
Issue date/time	24.11.2025/ 10:39	Sub Group	Ground Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

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

Z

Customer Registration No.	EPIC/OTH/0361	Sample Booking Number	EPIC-2547029
Sample(s) Code	2547029	Sample Receipt (D/T)	18.11.2025/ 13:50

Sampling References

Type of industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.11.2025/ 15:05	Sampling End (D/T)	15.11.2025/ 15:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	67	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Utkarmit Rajkiya Prathmik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 36.90" / 84° 37' 27.19"
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Date(s) of performance of the laboratory activities

Test start date	18.11.2025/ 14:10	Test completion date	22.11.2025/ 11:20
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--Test Result Start--

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



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

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03612547029	Group	Water
Issue date/time	24.11.2025/ 10:39	Sub Group	Ground Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

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

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

--Test Result End --

Prescribed Limit IS 10500:2012
Analysed by - Pappu Kumar




Reviewed by
(B.N. Kumar)
Technical Head
Test Report End


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





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Accredited by -
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Certified by -
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Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL03612547030	Group	Water
Issue date/time	24.11.2025/ 10:42	Sub Group	Ground Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED

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

MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0361	Sample Booking Number	EPIC-2547030
Sample(s) Code	2547030	Sample Receipt (D/T)	18.11.2025/ 13:51

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.11.2025/ 15:05	Sampling End (D/T)	15.11.2025/ 15:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	67	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Utकर्mit Rajkiya Prathmik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 36.90" / 84° 37' 27.19"
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Date(s) of performance of the laboratory activities

Test start date	18.11.2025/ 15:07	Test completion date	23.11.2025/ 11:00
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--Test Result Start--

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

--Test Result End --

Prescribed Limit IS 10500:2012

Analysed by - Ishika Singh



B.K. Kumar

Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Umesh Das
24/11/25

Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited



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GST:-20AAHCE3611M1ZX

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

Analytical Test Report

Unique Lab Report No.	TC1288725000001458	Discipline	Chemical
Report Unique ID	RL03612547041	Group	Atmospheric Pollution
Issue date/time	24.11.2025/ 16:15	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE: PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0361	Sample Booking Number	EPIC-2547041
Sample(s) Code	2547041 (A) (B) (C) (D)	Sample Receipt (D/T)	19.11.2025/ 15:31

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	16.11.2025/ 10:20	Sampling End (D/T)	17.11.2025/ 08:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	67	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29"/84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75"/84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathamik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59"/84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathamik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14"/84° 37' 30.33"

Date(s) of performance of the laboratory activities

Test start date	19.11.2025/ 15:55	Test completion date	24.11.2025/ 13:10
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits <small>24 hr</small>
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	63.90	65.70	68.57	66.74	300 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	28.82	27.39	29.44	31.50	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	07.49	07.70	08.22	09.09	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	8	19.03	16.93	20.56	22.44	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	23.95	23.65	24.85	23.35	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	15.74	16.79	16.44	17.84	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-

--Test Results End--

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

Analysed by - Rajesh Varma



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

Test Report End

[Signature]
Issued by
(Limesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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



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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03612547041	Group	Atmospheric Pollution
Issue date/time	24.11.2025/ 16:15	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0361	Sample Booking Number	EPIC-2547041
Sample(s) Code	2547041 (A) (B) (C) (D)	Sample Receipt (D/T)	19.11.2025/ 15:31

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	16.11.2025/ 10:20	Sampling End (D/T)	17.11.2025/ 08:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	67	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29" / 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75" / 84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathamik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathamik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.33"

Date(s) of performance of the laboratory activities

Test start date	19.11.2025/ 15:55	Test completion date	24.11.2025/ 13:10
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--Test Results Start--

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

--Test Results End--

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

Analysed by - Rajesh Varma



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

Test Report End

[Signature]
24/11/25
Issue by
(Limesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



EPIC LabTech Private Limited



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CIN:-U74999/JH2022PTC015685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

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

Analytical Test Report

Unique Lab Report No.	TC1288725000001625	Discipline	Chemical
Report Unique ID	RL03992551017	Group	Atmospheric Pollution
Issue date/time	19.12.2025/ 14:09	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE : PAKHAR 115.13 BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Girija Tamrakar +91 9111006074 girija.tamrakar@adityabirla.com 31.03.2025/ 10:10 13612313868
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References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0399	Sample Booking Number	EPIC-2551017
Sample(s) Code	2551017 (A) (B) (C) (D)	Sample Receipt (D/T)	17.12.2025/ 10:58

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	14.12.2025/ 11:20	Sampling End (D/T)	15.12.2025/ 08:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	22	Humidity %	68	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42"/ 84° 36' 00.33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88"/ 84° 36' 06.71"
S. Location C	Near Mine Block B, Quarry No - 6	GPS coordinate	23° 32' 51.14"/ 84° 36' 58.76"
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 05.36"/ 84° 37' 04.76"

Date(s) of performance of the laboratory activities

Test start date	17.12.2025/ 11:45	Test completion date	19.12.2025/ 12:55
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	59.81	58.86	60.98	61.88	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	29.38	26.62	28.98	24.54	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	09.82	11.12	10.92	11.86	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	20.00	21.01	18.83	19.77	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	15.14	14.14	16.13	16.82	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	25.58	24.97	24.61	26.38	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analyzed by - Rajesh Varma



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

Test Report End

[Signature]
Issue by
(Ajayesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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



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GST:-20AAHCE3611M1ZK

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03992551017	Group	Atmospheric Pollution
Issue date/time	19.12.2025/ 14:09	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE: PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0399	Sample Booking Number	EPIC-2551017
Sample(s) Code	2551017 (A) (B) (C) (D)	Sample Receipt (D/T)	17.12.2025/ 10:58

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	14.12.2025/ 11:20	Sampling End (D/T)	15.12.2025/ 08:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	22	Humidity %	68	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42"/ 84° 36' 00.33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88"/ 84° 36' 06.71"
S. Location C	Near Mine Block B, Quarry No - 6	GPS coordinate	23° 32' 51.14"/ 84° 36' 58.76"
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 05.36"/ 84° 37' 04.76"

Date(s) of performance of the laboratory activities

Test start date	17.12.2025/ 11:45	Test completion date	19.12.2025/ 12:55
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--Test Results Start--

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

--Test Results End--

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

Analysed by - Rajesh Varma



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issue by
(Vinesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



EPIC LabTech Private Limited



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PAN:-AAHCE3611M
GST:-20AAHCE3611M12X

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

Analytical Test Report

Unique Lab Report No.	TC1288725000001626	Discipline	Chemical
Report Unique ID	RL03992551018	Group	Atmospheric Pollution
Issue date/time	19.12.2025/ 14:12	Sub Group	Ambient Air Quality

Report Issue to	M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE : PAKHAR 115.13 BAUXITE MINE	Contact Person	Mr. Girija Tamrakar
		Contact Number	+91 9111006074
		Email Id	girija.tamrakar@adityabirla.com
		Order Date	31.03.2025/ 10:10
		Order Number	13612313868

References of Quality Management System (Steps of Traceability Chain)			
Customer Registration No.	EPIC/OTH/0399	Sample Booking Number	EPIC-2551018
Sample(s) Code	2551018 (A) (B) (C) (D)	Sample Receipt (D/T)	17.12.2025/ 10:59

Sampling References			
Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	15.12.2025/ 11:15	Sampling End (D/T)	16.12.2025/ 08:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling			
Weather condition	Clear	Temperature (°C)	21
		Humidity %	69
		Wind direction	0°-180°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29"/ 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75"/ 84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathmik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59"/ 84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathmik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14"/ 84° 37' 30.33"

Date(s) of performance of the laboratory activities			
Test start date	17.12.2025/ 11:45	Test completion date	19.12.2025/ 12:55

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	64.92	66.86	68.88	67.87	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	29.59	28.49	30.42	32.92	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	08.93	09.04	09.95	10.89	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	21.09	18.20	22.96	23.99	60 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	16.15	17.92	17.54	19.08	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	24.78	25.00	25.73	26.06	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2-1999	ng/m ³	2	BDL	BDL	BDL	BDL	-

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



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

Test Report End

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

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



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CIN:-U74999JH2022PTC019683
PAN:-AANCE3611M
GST:-20AANCE3611M12X

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03992551018	Group	Atmospheric Pollution
Issue date/time	19.12.2025/ 14:12	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0399	Sample Booking Number	EPIC-2551018
Sample(s) Code	2551018 (A) (B) (C) (D)	Sample Receipt (D/T)	17.12.2025/ 10:59

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.12.2025/ 11:15	Sampling End (D/T)	16.12.2025/ 08:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	21	Humidity %	69	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29" / 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75" / 84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathamik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathamik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.33"

Date(s) of performance of the laboratory activities

Test start date	17.12.2025/ 11:45	Test completion date	19.12.2025/ 12:55
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--Test Results Start--

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

--Test Results End --

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

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

Analysed by - Rajesh Varma



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issue by
(Ajmesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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



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CIN:-U74999/JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

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

TC-12887

Analytical Test Report

Unique Lab Report No.	TC1288725000001627	Discipline	Chemical
Report Unique ID	RL03992551019	Group	Atmospheric Pollution
Issue date/time	19.12.2025/ 14:15	Sub Group	Ambient Noise

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0399	Sample Booking Number	EPIC-2551019
Sample(s) Code	2551019 (A) (B) (C) (D)	Sample Receipt (D/T)	17.12.2025/ 11:00

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	14.12.2025/ 10:30	Sampling End (D/T)	15.12.2025/ 08:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	22	Humidity %	68	Wind direction	0°-180°
-------------------	-------	------------------	----	------------	----	----------------	---------

Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42"/84° 36' 00.33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88"/84° 36' 06.71"
S. Location C	Near Mine Block B, Quarry No - 6	GPS coordinate	23° 32' 51.14"/84° 36' 58.76"
S. Location D	Near Mine Block-B, Quarry No. 7	GPS coordinate	23° 33' 05.36"/84° 37' 04.76"

Date(s) of performance of the laboratory activities

Test start date	17.12.2025/ 11:45	Test completion date	19.12.2025/ 12:55
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	L _{eq} (Day time)	IS: 9989:1981	dB (A)	30	53.1	56.0	49.6	57.0	75
2.	L _{eq} (Night time)	IS: 9989:1981	dB (A)	30	42.5	37.7	39.4	46.3	70

--Test Results End--

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

Analysed by - Rajesh Varma

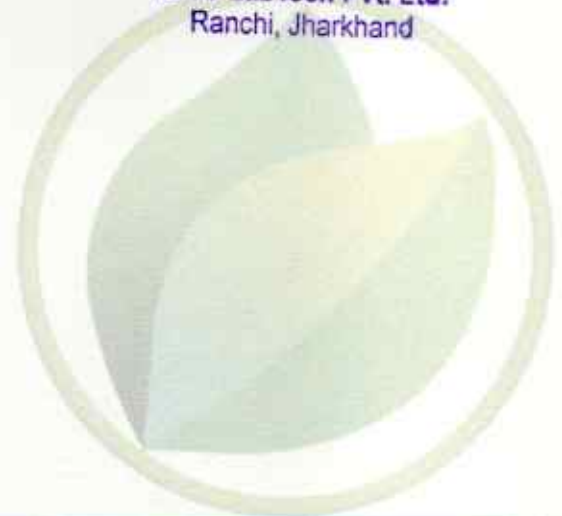


Reviewed by
(S.N. Kumar)
Technical Head

Test Report End

Issue by
(Umish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



EPIC LabTech Private Limited

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

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03992551020	Group	Atmospheric Pollution
Issue date/time	19.12.2025/14:18	Sub Group	Work Zone Noise

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0399	Sample Booking Number	EPIC-2551020
Sample(s) Code	2551020 (A) (B)	Sample Receipt (D/T)	17.12.2025/11:01

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D)	15.12.2025	Sampling End (D)	15.12.2025
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	22	Humidity %	68	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Quarry No. 7	GPS coordinate	23° 33' 06.11" / 84° 37' 06.07"
S. Location B	Near Mine Quarry No-3	GPS coordinate	23° 33' 25.09" / 84° 35' 58.00"

Date(s) of performance of the laboratory activities

Test start date	17.12.2025/11:45	Test completion date	19.12.2025/12:55
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results		Limits
					A	B	
1.	L _{eq} (Day time)	IS: 9989:1991	dB (A)	30	67.2	72.9	85

--Test Results End --

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

Analysed by - Rajesh Varma



[Signature]

Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

[Signature]
19/12/25

Issue by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



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CIN - U74999JH2022PTC019685
PAN - AAHCE3611M
GST - 20AAHCE3611M12X

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

Test Report



Unique Lab Report No.	TC1288726000000059	Discipline	Chemical
Report Unique ID	RL04282603015	Group	Atmospheric Pollution
Issue date/time	16.01.2026/ 18:00	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0428	Sample Booking Number	EPIC-2603015
Sample(s) Code	2603015 (A) (B) (C) (D)	Sample Receipt (D/T)	13.01.2026/ 10:45

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	10.01.2026/ 10:48	Sampling End (D/T)	11.01.2026/ 08:23
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	21	Humidity %	60	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42"/ 84° 36' 00.33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88"/ 84° 36' 06.71"
S. Location C	Near Mine Block B, Quarry No - 6	GPS coordinate	23° 32' 51.14"/ 84° 36' 58.76"
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 05.36"/ 84° 37' 04.76"

Date(s) of performance of the laboratory activities

Test start date	13.01.2026/ 12:18	Test completion date	16.01.2026/ 10:05
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	60.53	59.39	61.84	62.45	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	30.07	27.10	29.34	25.31	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	10.63	12.23	12.00	12.53	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	8	20.76	22.24	19.38	20.25	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	16.89	16.17	18.33	17.97	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	26.17	25.58	25.29	27.33	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-
10.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



Reviewed by
(S.N. Kumar)
Technical Head

Issue by
(Vimlesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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

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CIN:-UJ74999JHZ022PTC019685 Accredited by :-
Jharkhand State Pollution Control Board
PAN:-AAHCE3611M
GST:-20AAHCE3611M12X
Certified by :-
ISO 9001:2015 and ISO 45001:2018

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04282603015	Group	Atmospheric Pollution
Issue date/time	16.01.2026/ 18:00	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE: PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0428	Sample Booking Number	EPIC-2603015
Sample(s) Code	2603015 (A) (B) (C) (D)	Sample Receipt (D/T)	13.01.2026/ 10:45

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	10.01.2026/ 10:48	Sampling End (D/T)	11.01.2026/ 08:23
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	21	Humidity %	60	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42"/ 84° 36' 00.33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88"/ 84° 36' 06.71"
S. Location C	Near Mine Block B, Quarry No - 6	GPS coordinate	23° 32' 51.14"/ 84° 36' 58.76"
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 05.36"/ 84° 37' 04.76"

Date(s) of performance of the laboratory activities

Test start date	13.01.2026/ 12:18	Test completion date	16.01.2026/ 10:05
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01	mg/m ³	1.0	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



Reviewed by
(B.N. Kumar)
Technical Head

Issue by
(Ajmesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



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CIN:-U74999/JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

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

Test Report



Unique Lab Report No.	TC1288726000000060	Discipline	Chemical
Report Unique ID	RL04282603016	Group	Atmospheric Pollution
Issue date/time	16.01.2026/ 18:03	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0428	Sample Booking Number	EPIC-2603016
Sample(s) Code	2603016 (A) (B) (C) (D)	Sample Receipt (D/T)	13.01.2026/ 10:47

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	11.01.2026/ 11:10	Sampling End (D/T)	12.01.2026/ 09:35
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	21	Humidity %	56	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29" / 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75" / 84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathamik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathamik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.33"

Date(s) of performance of the laboratory activities

Test start date	13.01.2026/ 14:10	Test completion date	16.01.2026/ 10:10
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	65.64	67.55	69.44	68.36	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	30.31	29.28	31.47	33.70	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	09.53	10.53	10.83	11.68	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	22.34	19.03	23.46	24.33	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	17.97	19.77	19.05	20.85	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	25.29	26.17	26.46	27.33	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-
10.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



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

****Test Report End****

[Signature]
Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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

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

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04282603016	Group	Atmospheric Pollution
Issue date/time	16.01.2026/ 18:03	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0428	Sample Booking Number	EPIC-2603016
Sample(s) Code	2603016 (A) (B) (C) (D)	Sample Receipt (D/T)	13.01.2026/ 10:47

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	11.01.2026/ 11:10	Sampling End (D/T)	12.01.2026/ 09:35
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	21	Humidity %	56	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29" / 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75" / 84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathamik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathamik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.33"

Date(s) of performance of the laboratory activities

Test start date	13.01.2026/ 14:10	Test completion date	16.01.2026/ 10:10
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--Test Results Start--


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

--Test Results End--

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

Analyzed by - Rajesh Varma




Reviewed by
G.N. Kumar
Technical Head


Issue by
Omesh Das
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



EPIC LabTech Private Limited



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Indrapuri, Road No. - 5,
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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3613M
GST:-20AAHCE3611M1ZK

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

Test Report



Unique Lab Report No.	TC1288726000000190	Discipline	Chemical
Report Unique ID	RL04592608017	Group	Atmospheric Pollution
Issue date/time	21.02.2026/ 17:00	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0459	Sample Booking Number	EPIC-2608017
Sample(s) Code	2608017 (A) (B) (C) (D)	Sample Receipt (D/T)	18.02.2026/ 11:29

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	15.02.2026/ 12:35	Sampling End (D/T)	16.02.2026/ 10:25
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	51	Wind direction	90°-270°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42"/84° 36' 00.33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88"/84° 36' 06.71"
S. Location C	Near Mine Block B, Quarry No - 6	GPS coordinate	23° 32' 51.14"/84° 36' 58.76"
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 05.36"/84° 37' 04.76"

Date(s) of performance of the laboratory activities

Test start date	18.02.2026/ 14:30	Test completion date	21.02.2026/ 13:55
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	59.71	58.67	60.97	61.82	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	29.73	26.42	28.64	24.15	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	10.87	12.51	06.70	07.53	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	22.34	23.30	20.47	21.34	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	19.41	18.69	21.21	20.13	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	28.20	27.33	26.75	29.07	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-
10.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



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

[Signature]
Issue by
(Umesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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

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

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CIN:-U74999JH2022PTC019885 Accredited by -
Jharkhand State Pollution Control Board
PAN:-AAHCE36TJM Certified by -
ISO 9001:2015 and ISO 45001:2018
GST:-20AAHCE36T1M12X

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04592608017	Group	Atmospheric Pollution
Issue date/time	21.02.2026/ 17:00	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0459	Sample Booking Number	EPIC-2608017
Sample(s) Code	2608017 (A) (B) (C) (D)	Sample Receipt (D/T)	18.02.2026/ 11:29

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.02.2026/ 12:35	Sampling End (D/T)	16.02.2026/ 10:25
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	51	Wind direction	90°-270°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42"/84° 36' 00.33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88"/84° 36' 06.71"
S. Location C	Near Mine Block B, Quarry No - 6	GPS coordinate	23° 32' 51.14"/84° 36' 58.76"
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 05.36"/84° 37' 04.76"

Date(s) of performance of the laboratory activities

Test start date	18.02.2026/ 14:30	Test completion date	21.02.2026/ 13:55
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--Test Results Start--

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

--Test Results End --

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

Analysed by - Rajesh Varma

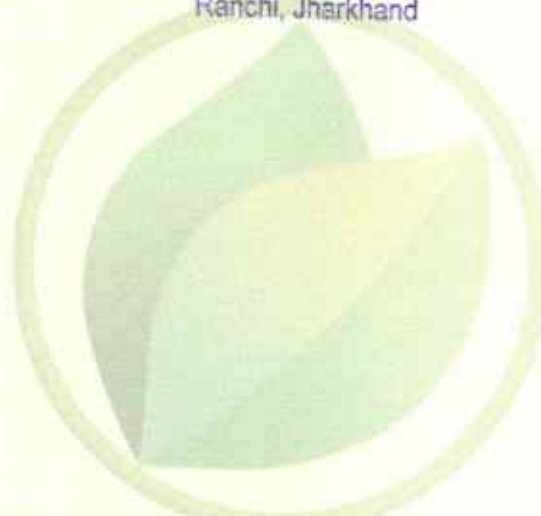


Reviewed by
(R.N. Kumar)
Technical Head

Issue by
(Ajmesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited



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CIN: U74999JH2022PTC019685
PAN: AAHCE3611M
GST: 20AAHCE3611MTZX

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

Test Report



Unique Lab Report No.	TC128872600000191	Discipline	Chemical
Report Unique ID	RL04592608018	Group	Atmospheric Pollution
Issue date/time	21.02.2026/ 17:03	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0459	Sample Booking Number	EPIC-2608018
Sample(s) Code	2608018 (A) (B) (C) (D)	Sample Receipt (D/T)	18.02.2026/ 11:30

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational! <input checked="" type="checkbox"/> Non-Operational! <input type="checkbox"/>
Sampling Start (D/T)	16.02.2026/ 13:10	Sampling End (D/T)	17.02.2026/ 11:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	24	Humidity %	56	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29"/84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75"/84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathamik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59"/84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathamik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14"/84° 37' 30.33"

Date(s) of performance of the laboratory activities

Test start date	18.02.2026/ 15:10	Test completion date	21.02.2026/ 14:20
-----------------	-------------------	----------------------	-------------------

--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	64.72	66.85	68.66	67.53	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	29.50	28.66	30.42	28.38	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	09.71	10.63	11.12	12.00	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	23.37	20.15	24.10	25.63	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	20.49	22.28	21.93	22.64	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	27.04	28.20	28.78	29.36	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-
10.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



Reviewed by
(B.N. Kumar)
Technical Head

Issue by
(Umash Goswami)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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

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

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

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04592608018	Group	Atmospheric Pollution
Issue date/time	21.02.2026/ 17:03	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED

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

MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0459	Sample Booking Number	EPIC-2608018
Sample(s) Code	2608018 (A) (B) (C) (D)	Sample Receipt (D/T)	18.02.2026/ 11:30

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	16.02.2026/ 13:10	Sampling End (D/T)	17.02.2026/ 11:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	24	Humidity %	56	Wind direction	0°-180°
-------------------	-------	------------------	----	------------	----	----------------	---------

Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29"/84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75"/84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathamik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59"/84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathamik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14"/84° 37' 30.33"

Date(s) of performance of the laboratory activities

Test start date	18.02.2026/ 15:10	Test completion date	21.02.2026/ 14:20
-----------------	-------------------	----------------------	-------------------

--Test Results Start--

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

--Test Results End --

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

Analysed by - Rajesh Varma



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

[Signature]
Issued by
(Girish Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited



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epiclabtech@gmail.com

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

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

Test Report



Unique Lab Report No.	TC1288726000000192	Discipline	Chemical
Report Unique ID	RL04592608019	Group	Pollution & Environment
Issue date/time	21.02.2026/ 17:06	Sub Group	Waste Water (Effluent)

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0459	Sample Booking Number	EPIC-2608019
Sample(s) Code	2608019	Sample Receipt (D/T)	18.02.2026/ 11:31

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	16.02.2026/ 15:30	Sampling End (D/T)	16.02.2026/ 15:48
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	51	Wind direction	90°-270°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Work Shop Outlet	GPS coordinate	23° 32' 25.91" / 84° 36' 34.82"
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Date(s) of performance of the laboratory activities

Test start date	18.02.2026/ 11:51	Test completion date	21.02.2026/ 15:30
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	pH value at 25.4°C	IS 3025 (P-11) 2022	-	1.5	6.81	6.5-8.5
2.	BOD (3 days at 27°C)	IS 3025 (P-44) 2000	mg/l	0.3	11.5	-
3.	COD	IS 3025 (P-58) 2006	mg/l	8.0	88.00	150.0
4.	Oil & Grease	IS 3025 (P-39) 2021	mg/l	4.0	BDL	10
5.	Total Suspended Solid	IS 3025 (P-17) 2022	mg/l	10.0	38.0	50
6.	Total Dissolve Solids (TDS)	IS 3025 (P-16) 2023	mg/l	10.0	228.0	-
7.	Phosphate (as PO ₄)	IS 3025 (P-31/Sec -1) 2022	mg/l	0.2	0.52	-
8.	Zinc (as Zn)	APHA 3111 B 2023	mg/l	0.04	BDL	5.0

--Test Result End --

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

Analysed by - Pappu Kumar



Reviewed by
(E.N. Kumar)
Technical Head

****Test Report End****

Issued by
(Limesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

EPIC LabTech Private Limited



Address:-
Indrapuri, Road No. - 5,
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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04592608019	Group	Pollution & Environment
Issue date/time	21.02.2026/ 17:06	Sub Group	Waste Water (Effluent)

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0459	Sample Booking Number	EPIC-2608019
Sample(s) Code	2608019	Sample Receipt (D/T)	18.02.2026/ 11:31

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	16.02.2026/ 15:30	Sampling End (D/T)	16.02.2026/ 15:48
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition: Clear Temperature (°C): 26 Humidity %: 51 Wind direction: 90°-270°

Sampling Location(s) with GPS coordinate(s)

S. Location A: Work Shop Outlet GPS coordinate: 23° 32' 25.91" / 84° 36' 34.82"

Date(s) of performance of the laboratory activities

Test start date: 18.02.2026/ 11:51 Test completion date: 21.02.2026/ 15:30

--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	Dissolve Oxygen (DO)	IS 3025 (P-38) 1986	mg/l	0.2	0.8	-

--Test Result End --

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

Analysed by - Pappu Kumar



Reviewed by
(B.N. Kumar)
Technical Head

****Test Report End****

Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited



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

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

Test Report



Unique Lab Report No.	TC1288726000000340	Discipline	Chemical
Report Unique ID	RL04982612018	Group	Atmospheric Pollution
Issue date/time	20.03.2026/ 16:43	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0498	Sample Booking Number	EPIC-2612018
Sample(s) Code	2612018 (A) (B) (C)	Sample Receipt (D/T)	17.03.2026/ 10:47

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	14.03.2026/ 16:35	Sampling End (D/T)	15.03.2026/ 14:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	22	Humidity %	46	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42"/84° 36' 00.33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88"/84° 36' 06.71"
S. Location C	Near Mine Block B, Quarry No - 6	GPS coordinate	23° 32' 51.14"/84° 36' 58.76"
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 05.36"/84° 37' 04.76"

Date(s) of performance of the laboratory activities

Test start date	17.03.2026/ 12:10	Test completion date	20.03.2026/ 13:45
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	60.93	59.54	61.85	62.79	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	30.89	27.47	29.71	25.21	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	09.49	11.08	11.21	12.10	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	21.90	22.77	19.30	20.80	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	21.93	20.85	23.72	22.64	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	29.65	28.78	27.62	30.82	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-
10.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analyzed by - Rajesh Varma



Reviewed by
(B.H. Kumar)
Technical Head

Issued by
(Umesh Chandra)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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

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GST:-20AAHCE3611MTZX

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04982612018	Group	Atmospheric Pollution
Issue date/time	20.03.2026/ 16:43	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0498	Sample Booking Number	EPIC-2612018
Sample(s) Code	2612018 (A) (B) (C)	Sample Receipt (D/T)	17.03.2026/ 10:47

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	14.03.2026/ 16:35	Sampling End (D/T)	15.03.2026/ 14:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	22	Humidity %	46	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42"/ 84° 36' 00.33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88"/ 84° 36' 06.71"
S. Location C	Near Mine Block B, Quarry No - 6	GPS coordinate	23° 32' 51.14"/ 84° 36' 58.76"
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 05.36"/ 84° 37' 04.76"

Date(s) of performance of the laboratory activities

Test start date	17.03.2026/ 12:10	Test completion date	20.03.2026/ 13:45
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--Test Results Start--

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

--Test Results End --

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

Analysed by - Rajesh Varma


Reviewed by
(B.N. Kumar)
Technical Head


Issue by
(Umesh Das)
Laboratory Head

****Test Report End****



Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



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

Test Report



Unique Lab Report No.	TC1288726000000341	Discipline	Chemical
Report Unique ID	RL04982612019	Group	Atmospheric Pollution
Issue date/time	20.03.2026/ 16:46	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0498	Sample Booking Number	EPIC-2612019
Sample(s) Code	2612019 (A) (B) (C) (D)	Sample Receipt (D/T)	17.03.2026/ 10:48

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.03.2026/ 17:10	Sampling End (D/T)	16.03.2026/ 15:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	24	Humidity %	52	Wind direction	220°-40°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29"/ 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75"/ 84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathamik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59"/ 84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathamik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14"/ 84° 37' 30.33"

Date(s) of performance of the laboratory activities

Test start date	17.03.2026/ 13:25	Test completion date	20.03.2026/ 14:10
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	65.95	67.76	69.57	68.86	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	30.65	29.15	31.48	29.59	50 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	08.92	09.74	10.63	11.54	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	22.60	19.25	23.21	24.19	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	22.64	24.80	23.72	24.44	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	28.78	29.65	29.94	30.82	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-
10.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



Reviewed by
(D.N. Kumar)
Technical Head

****Test Report End****

Issue by
(Rupesh Prajapati)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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

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PAN:-AAHCE3611M
GST:-20AAHCE3611MTXZ

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04982612019	Group	Atmospheric Pollution
Issue date/time	20.03.2026/ 16:46	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0498	Sample Booking Number	EPIC-2612019
Sample(s) Code	2612019 (A) (B) (C) (D)	Sample Receipt (D/T)	17.03.2026/ 10:48

Sampling References

Type of industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.03.2026/ 17:10	Sampling End (D/T)	16.03.2026/ 15:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	24	Humidity %	52	Wind direction	220°-40°
-------------------	-------	------------------	----	------------	----	----------------	----------

Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29"/84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75"/84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathamik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59"/84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathamik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14"/84° 37' 30.33"

Date(s) of performance of the laboratory activities

Test start date	17.03.2026/ 13:25	Test completion date	20.03.2026/ 14:10
-----------------	-------------------	----------------------	-------------------

--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01	mg/m ³	1.6	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



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

****Test Report End****

[Signature]
Issue by
(Rupesh Prajapati)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



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PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

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

Test Report



Unique Lab Report No.	TC1288726000000342	Discipline	Chemical
Report Unique ID	RL04982612020	Group	Water
Issue date/time	20.03.2026/ 16:49	Sub Group	Drinking Water

Report Issue to

M/s - **HINDALCO INDUSTRIES LIMITED**
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0498	Sample Booking Number	EPIC-2612020
Sample(s) Code	2612020	Sample Receipt (D/T)	17.03.2026/10:53

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.03.2026/ 12:40	Sampling End (D/T)	15.03.2026/ 12:56
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	22	Humidity %	46	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	R.O Plant	GPS coordinate	23° 32' 24.47"/ 84° 36' 30.05"
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Date(s) of performance of the laboratory activities

Test start date	17.03.2026/ 11:10	Test completion date	20.03.2026/ 15:00
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits	
						Acceptable Limit	Permissible limit
1.	pH value at 25.5°C	IS 3025 (P-11) 2022	-	1.5	6.72	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.3	0.82	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	5.0	5	5	15
4.	Odour	IS 3025 (P-05) 2018	-	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	10	195.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	5	37.94	250	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	10	100.00	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	10	158.63	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	10	33.67	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	0.6	BDL	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1)2022	mg/l	0.3	8.30	200	400
13.	Nitrate (as NO ₃ -N)	IS 3025 (P-34/Sec-1) 2023	mg/l	0.4	2.01	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	0.001	BDL	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	0.3	18.13	30	100



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PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

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

Test Report



Unique Lab Report No.	TC1288726000000342	Discipline	Chemical
Report Unique ID	RL04982612020	Group	Water
Issue date/time	20.03.2026/ 16:49	Sub Group	Drinking Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE: PAKHAR 115.13 BAUXITE MINE

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

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

--Test Result End--

Prescribed Limit IS 10500:2012
Analysed by - Pappu Kumar



Reviewed by
(B.N. Kumar)
Technical Head

****Test Report End****

Issued By
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

EPIC LabTech Private Limited



Address:-
Indrapuri, Road No. - 5,
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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04982612020	Group	Water
Issue date/time	20.03.2026/ 16:49	Sub Group	Drinking Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE: PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/DTH/0498	Sample Booking Number	EPIC-2612020
Sample(s) Code	2612020	Sample Receipt (D/T)	17.03.2026/10:53

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.03.2026/ 12:40	Sampling End (D/T)	15.03.2026/ 12:56
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	22	Humidity %	46	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	R.O Plant	GPS coordinate	23° 32' 24.47"/ 84° 36' 30.05"
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Date(s) of performance of the laboratory activities

Test start date	17.03.2026/ 11:10	Test completion date	20.03.2026/ 15:00
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--Test Result Start--

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

EPIC LabTech Private Limited



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

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04982612020	Group	Water
Issue date/time	20.03.2026/ 16:49	Sub Group	Drinking Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Girija Tamrakar
+91 9111006074
girija.tamrakar@adityabirla.com
31.03.2025/ 10:10
13612313868

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

--Test Result End --

Prescribed Limit IS 10500:2012

Analysed by - Pappu Kumar




Reviewed by
(B.N. Kumar)
Technical Head


Issued By
(Umesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Page 2 of 2

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

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

EPIC LabTech Private Limited



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

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

Test Report

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL04982612021	Group	Water
Issue date/time	20.03.2026/ 16:52	Sub Group	Drinking Water

Report Issue to

M/s - **HINDALCO INDUSTRIES LIMITED**
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0498	Sample Booking Number	EPIC-2612021
Sample(s) Code	2612021	Sample Receipt (D/T)	17.03.2026/ 10:57

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.03.2026/ 12:40	Sampling End (D/T)	15.03.2026/ 12:56
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition **Clear** Temperature (°C) **22** Humidity % **46** Wind direction **0°-180°**

Sampling Location(s) with GPS coordinate(s)

S. Location A **R.O Plant** GPS coordinate **23° 32' 24.47"/ 84° 36' 30.05"**

Date(s) of performance of the laboratory activities

Test start date **17.03.2026/ 11:20** Test completion date **20.03.2026/ 15:00**

--Test Result Start--

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

--Test Result End --

Prescribed Limit **IS 10500:2012**
Analysed by - **Ishika Singh**

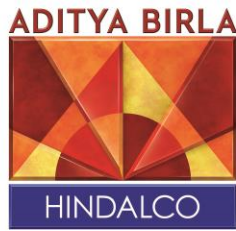



Reviewed by
(B.N. Kumar)
Technical Head

****Test Report End****


Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Annexure 3

Date – 01.05.2025

Office Order

Environmental Cell has been re-constituted for Pakhar Group of Mines (Pakhar – 115.13 ha, Pakhar – 35.12 ha and Pakhar – 8.09 ha Bauxite Mines). This cell consists of the following team members who will ensure compliance with the Environment Acts, Rules & Regulations in respect of the said mines of Hindalco Industries Limited.

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

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

A handwritten signature in blue ink, appearing to read "Basudev Gangopadhyay", is written over a horizontal line.

Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)

Annexure 4

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

Annexure 4

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

*Static information about the mines included in the above table



R R P Ambastha
Head - Compliance

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

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

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

**Part of OB removed cost



R R P Ambastha
Head - Compliance



ENVIRONMENT POLICY

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

To achieve this, we shall:

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

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

Satish Pai

MD, Hindalco Industries Limited

Date : 9th August, 2022