



HIL/LHD/ENV/MoEF&CC/404

Date: 24<sup>th</sup> November 2025

To,  
**The Dy. Director General of Forest (C)**  
**Ministry of Environment, Forests and Climate Changes**  
**2<sup>nd</sup> Floor, Headquarter-Jharkhand State Housing Board**  
**Harmu Chowk, Ranchi, Jharkhand-834002**

**Sub:** Six Monthly EC Compliance Report for Pakhar (115.13 Ha) Bauxite Mining project of M/s Hindalco Industries Limited, Lohardaga Jharkhand for the period from April 2025 to September 2025.

**Ref:** Environmental Clearance Letter No. J-11015/406/2007-IA II (M), dated 27<sup>th</sup> 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 **April 2025 to September 2025** 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**

**Basudev Gangopadhyay**  
**AVP (Planning, Environment & 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 1<sup>st</sup> April 2025 to 30<sup>th</sup> September 2025**

**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 31<sup>st</sup> December 2025.

**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 31<sup>st</sup> December 2025. 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.**

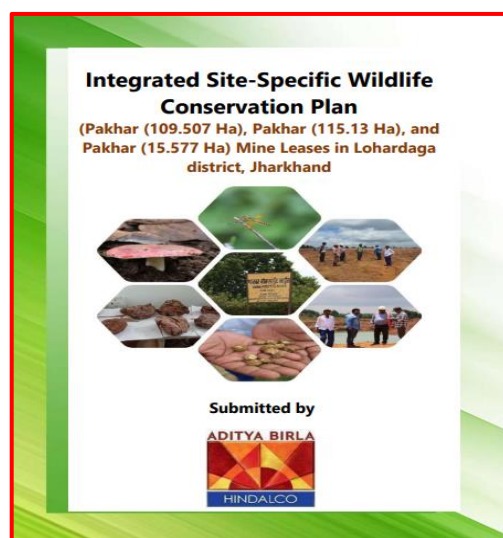
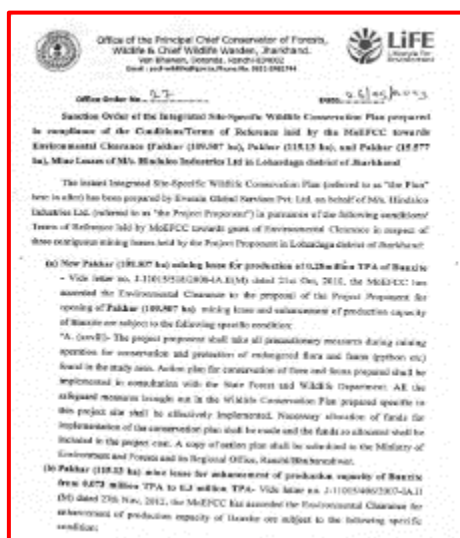
**Reply:** - Land acquisition is being done with permission of competent authority of State Government i.e. concerned Deputy Commissioner (D.C.) under CNT Act. The land lease agreement is being done with raiyat (Landowner) after permission of State Govt with provision of returning the land as per the 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.



## Integrated Site-specific Wildlife Conservation for Pakhar Group of Mines

**Condition vii: - The mining operations shall be restricted to above ground water table**

**and it should not intersect the groundwater table. In case of working below the ground water table, prior approval of the Ministry of Environment and Forests and the Central Ground Water Authority shall be obtained, for which a detailed hydro-geological study shall be carried out.**

**Reply:** - Since shallow depth mining is being carried out, hence there is no intersection with the groundwater table. In future also, working zones will be restricted to above ground water table. We undertake that no mining is/was carried out below ground water table and the same status will be maintain in future also.

Moreover, we are regularly monitoring the groundwater table through the installation of a piezometer. A copy of the water level report is attached herewith as **Annexure 1**.

As the water table is not intersected during mining operations, a detailed hydro-geological study is not applicable for this mine.

**Condition viii: - The project proponent shall ensure that no natural watercourse and/or water resources shall be obstructed due to any mining operations. Adequate measures shall be taken for conservation and protection of the 1st and 2<sup>nd</sup> order streams, if any emanating or passing through the mine lease during the course of mining operation.**

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

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

**Reply:** - Topsoil is being stacked temporally properly with proper slope as and when required. 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 24.09ha 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 6,870 saplings have been planted within the mining lease area. Cumulatively, plantation has been carried out over 23.01 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.





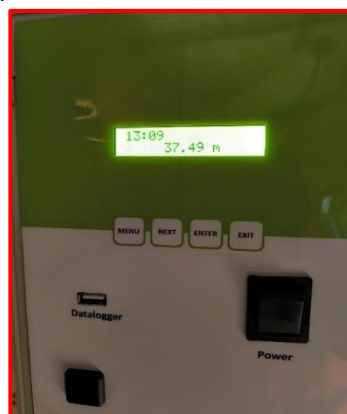
Water Tanker

**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 same is attached herewith as **Annexure 1 & 2**. Now, Regional office of MoEF&CC is in Ranchi.





**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.

**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.

## NOC for Ground Water

**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.

**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**.

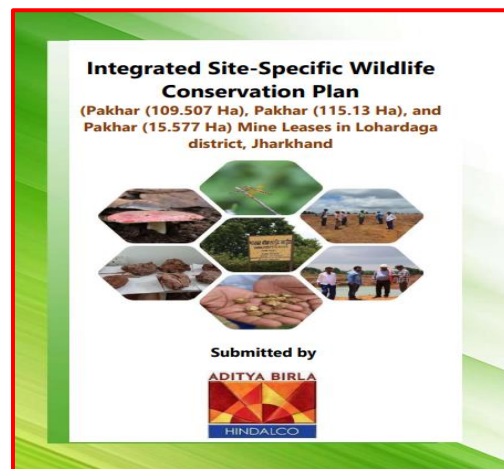
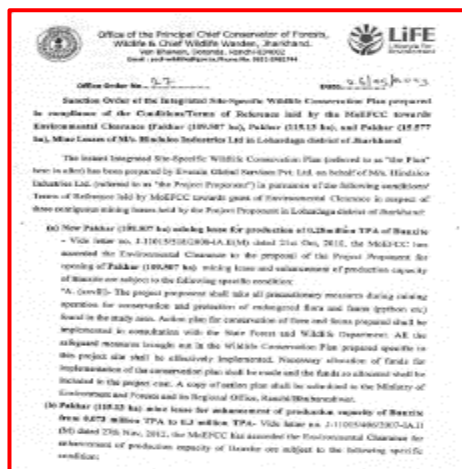
**Condition xxviii: - The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna namely python, leaf monkey (Presbyits phayrei) etc. spotted in the study area. The critical**

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](http://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 NOx monitoring. Location of the stations should be decided based on the meteorological data, topographical features and**

**environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.**

**Reply:** - We have already established four ambient air quality monitoring stations in the core zone as well as buffer zone. Monitoring 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 NOx) should be regularly submitted to the Ministry including its Regional office located at Bhubaneswar and the State Pollution Control Board / Central Pollution Control Board once in six months.

**Reply:** - 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 Parishad/ 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, Bhubaneswar 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.



**Piezometer Monitoring Report****Mine: Pakhar Bauxite Mine (115.13 Ha)**

<b>S No</b>	<b>Month</b>	<b>Ground Water Level (BGL) in meter</b>
1	<b>Apr-25</b>	<b>37.08</b>
2	<b>May-25</b>	<b>37.91</b>
3	<b>Jun-25</b>	<b>37.49</b>
4	<b>Jul-25</b>	<b>36.82</b>
5	<b>Aug-25</b>	<b>36.19</b>
6	<b>Sep-25</b>	<b>36.28</b>



## Analytical Test Certificate

Annexure - 2

Unique Lab Report No.	TC1288725000000364	Discipline	Chemical
Report Unique ID	RL0136251638	Group	Atmospheric Pollution
Issue date/time	24.04.2025/ 11:10	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 MINES	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +91 9971034775 ankit.das@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/0138	Sample Booking Number	EPIC-251638
Sample(s) Code	251638 (A) (B) (C) (D)	Sample Receipt (D/T)	17.04.2025/ 10:40

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/038
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Sampling Start (D/T)	14.04.2025/ 09:12	Sampling End (D/T)	15.04.2025/ 07:42
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling			
Weather condition	Clear	Temperature (°C)	26
		Humidity %	48
		Wind direction	260°-80°

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	17.04.2025/ 11:15	Test completion date	23.04.2025/ 17:30

--Test Result--								
Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-22) 2022	µg/m <sup>3</sup>	82.00	80.94	79.92	77.96	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS:5182 (P-24) 2019	µg/m <sup>3</sup>	38.87	36.67	34.81	33.38	60 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-03) 2023	µg/m <sup>3</sup>	07.91	07.37	07.08	07.86	80 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	24.51	23.51	23.53	26.35	80 (24 hr)
5.	Ozone (O <sub>3</sub> )	IS:5182 (P-08) 2019	µg/m <sup>3</sup>	32.65	31.68	30.71	29.74	180 (1 hr)
6.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	48.02	46.75	46.12	44.86	400 (24 hr)
7.	Lead (Pb)	IS:5182 (P-22) 2019	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182 (P-28) 2020	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	
9.	Arsenic (As)	USEPA IO 3.2-1999	ng/m <sup>3</sup>	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	

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

Analysed by - A.K. Das



Checked by  
(B.R. Kumar)  
Technical Head

Verified & Issued by  
(Anish Das)  
Laboratory Head

Authorized Signatory



# EPIC LabTech Private Limited

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✉ info@epiclabtech.com

CIN: U74900JH2022PTC000645  
PAN: AAHCE3310E  
GST: 20AAHCE3310E1GK

Accredited by -  
National Testing Agency (NTA)  
Certified by -  
ISO 9001:2015 and ISO 15189:2013

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0138251638	Group	Atmospheric Pollution
Issue date/time	24.04.2025/ 11:10	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 MINES	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +91 9971034775 ankit.das@adityabirla.com 31.03.2025/ 10:10 13612313868
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References of Quality Management System (Scope of Traceability Check)			
Customer Registration No.	EPIC/OTH/0138	Sample Booking Number	EPIC-251638
Sample(s) Code	251638 (A) (B) (C) (D)	Sample Receipt (D/T)	17.04.2025/ 10:40

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Sampling Start (D/T)	14.04.2025/ 09:12	Sampling End (D/T)	15.04.2025/ 07:42
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Clear	Temperature (°C)	26	Humidity %	48	Wind direction	260°-80°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.47" / 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' 56.76"
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	17.04.2025/ 11:15	Test completion date	23.04.2025/ 17:30

### --Test Result--

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS:5182(P-11) 2006	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5382(P-12) 2004	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SDP/AM/01/00	mg/m <sup>3</sup>	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

### --Test Result End--

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



Checked by  
(B.K. Kumar)  
Technical Head

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





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CIN: U74909JH2022PTC095685  
PAN: AAKCE3850M  
GST: 20AAHCL1611M1ZK

Accredited by:  
NABL, ISO 15189:2013 Number: NC-1587  
Jharkhand State Pollution Control Board  
Certified by:  
ISO 9001:2015 and ISO 14001:2015



TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000365	Discipline	Chemical
Report Unique ID	RL0138251639	Group	Atmospheric Pollution
Issue date/time	24.04.2025/ 11:12	Sub Group	Ambient Air Quality

Report Issue to			
M/s - HINDALCO INDUSTRIES LIMITED	Contact Person	Mr. Ankit Das	
VILLAGE-COURT ROAD,	Contact Number	+91 9971034775	
POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA,	Email Id	ankit.das@adityabirla.com	
STATE-JHARKHAND, INDIA 835302	Order Date	31.03.2025/ 10:10	
MONITORING SITE: PAKHAR 115.13 BAUXITE MINES	Order Number	13612313868	

Reference of Quality Management System (Steps of Irrevocability Chain)			
Customer Registration No.	EPIC/OTH/0138	Sample Booking Number	EPIC-251639
Sample(s) Code	251639 (A) (B) (C) (D)	Sample Receipt (D/T)	17.04.2025/ 10:43

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Sampling Start (D/T)	15.04.2025/ 10:29	Sampling End (D/T)	16.04.2025/ 07:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Clear	Temperature (°C)	26	Humidity %	48	Wind direction	260°-80°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Near Bunglapart Village	GPS coordinate	22° 32' 42.29" / 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	22° 33' 11.75" / 84° 37' 28.48"
S. Location C	Near Uttkarmi Rajkiya Prathamik Vidyalaya Bunglapart Village	GPS coordinate	22° 32' 49.59" / 84° 36' 00.39"
S. Location D	Near Uttkarmi Rajkiya Prathamik Vidyalaya Dumrapart Village	GPS coordinate	22° 33' 38.14" / 84° 37' 30.33"

Date(s) of performance of the laboratory activities			
Test start date	17.04.2025/ 11:05	Test completion date	23.04.2025/ 17:50

### --Test Result --

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-23) 2022	µg/m <sup>3</sup>	70.89	72.12	69.96	68.12	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (P-24) 2019	µg/m <sup>3</sup>	33.49	34.10	32.25	30.98	80(24hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2022	µg/m <sup>3</sup>	07.01	07.91	07.05	07.09	80(24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	23.13	24.33	23.26	22.29	80(24 hr)
5.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m <sup>3</sup>	27.48	28.45	29.74	27.16	180(1 hr)
6.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	44.23	45.49	43.60	41.70	400(24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m <sup>3</sup>	BDL	BDL	BDL	BDL	1.0(24 hr)
				(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m <sup>3</sup>	BDL	BDL	BDL	BDL	
				(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	
9.	Arsenic (As)	USEPA IO 3.2-1999	ng/m <sup>3</sup>	BDL	BDL	BDL	BDL	
				(MDL-0.003)	(MDL-0.003)	(MDL-0.004)	(MDL-0.004)	

### --Test Result End --

Prescribed Limit	Environmental (Protection) Rules, 1986, Schedule VII.
Operational Status	Unit was Operational During sampling.
Applied by - A.C. SINHA	



Checked by  
(S.D. Karmar)  
Technical Head

Verified Issue by  
(Ankit Das)  
Laboratory Head

Authorized Signatory





# EPIC LabTech Private Limited

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0651 710088

epiclabtech@gmail.com

CIN: U74900JH2022PTC000663 Accredited by:-

PAH-4AHC230116

GET-2PAHC2301M128

Test Report Data Management System

Certified by:-

ISO 9001:2015 and ISO 14001:2015

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0136251639	Group	Atmospheric Pollution
Issue date/time	24.04.2025/ 11:12	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 MINES

Contact Person  
Contact Number  
Email Id  
Order Date  
Order Number

Mr. Ankit Das  
+91 9971034775  
ankit.das@adityabirla.com  
31.03.2025/ 10:10  
13612313868

### References of Quality Management System (Scope of Traceability Claim)

Customer Registration No.	EPIC/OTH/0138	Sample Booking Number	EPIC-251639
Sample(s) Code	251639 (A) (B) (C) (D)	Sample Receipt (D/T)	17.04.2025/ 10:43

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS 5182 and CPCB Air Manual Volume- 1 (NAAQM/36/2012-13)		
Sampling Start (D/T)	15.04.2025/ 10:29	Sampling End (D/T)	16.04.2025/ 07:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	48	Wind direction	260°-80°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglupart 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 Bunglupart 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	17.04.2025/ 11:05	Test completion date	23.04.2025/ 17:50
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### --Test Result --

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS-5182(P-11) 2006	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS-5182(P-12) 2004	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/APP/01/06	mg/m <sup>3</sup>	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

### --Test Result End --

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



Checked by  
G.R. Kumar  
Technical Head

Verified & Issued by  
(Anush Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



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epiclabtech@gmail.com

CIN: U41109JH2022PTC010665

PAN: AARCE3611P

GST-29ARNCE3611M1XK

Accredited by:-

NABL, Accredited Number: N-12847

Address: Bhubaneswar, Odisha, India

Certified Up to:-

ISO 9001:2015 and ISO 14001:2015



TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000366	Discipline	Chemical
Report Unique ID	RL0138251640	Group	Water
Issue date/time	24.04.2025/ 11:15	Sub Group	Drinking Water

Report Issue to			
M/s - HINDALCO INDUSTRIES LIMITED	Contact Person	Mr. Ankit Das	
VILLAGE-COURT ROAD,	Contact Number	+91 9871034775	
POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA,	Email Id	ankit.das@adityabirla.com	
STATE-JHARKHAND, INDIA 835302	Order Date	31.03.2025/ 10:10	
MONITORING SITE- PAKHAR 115.13 BAUXITE MINES	Order Number	13612313868	

References of Quality Management System (Steps of Traceability Chain)			
Customer Registration No.	EPIC/OTH/0138	Sample Booking Number	EPIC-251640
Sample(s) Code	251640	Sample Receipt (D/T)	17.04.2025/ 10:48

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS: 3025 (Part-1) 1987, R-2003		
Sampling Start (D/T)	15.04.2025/ 12:30	Sampling End (D/T)	15.04.2025/ 12:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Clear	Temperature (°C)	26	Humidity %	48	Wind direction	260°-30°

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	17.04.2025/ 11:10	Test completion date	23.04.2025/ 12:00

### --Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible Limit
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.64	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.51	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	<5	5	15
4.	Odour	IS 3025 (P-05) 2018	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-15) 2023	mg/l	181.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	38.43	250	1000
8.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23) 2019	mg/l	96.00	200	600
9.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21) 2009	mg/l	146.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	33.67	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	BDL(MDL-0.4)	0.2	1
12.	Sulphate (as SO <sub>4</sub> )	IS 3025 (P-24/Sec-1)2022	mg/l	08.40	200	400
13.	Nitrate (as NO <sub>3</sub> )	APHA 4500 B 2023	mg/l	02.01	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL(MDL-0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	15.06	30	100

Group - Residues and Contaminants in Water	Sub Group- Trace Metals Elements
--	----------------------------------





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CIN:-U74999(JH2022)PTC019685  
PIN:-834005  
GST:-20AAHCB64196852

Accredited by:-  
NABL, with certificate number TC - 15437  
and scope for testing of Chemicals  
Certified by:-  
(U) 98092015 and (M) 430012018



TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000366	Discipline	Chemical
Report Unique ID	RL0138251640	Group	Water
Issue date/time	24.04.2025/ 11:15	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 MINES

Contact Person	Mr. Ankit Das
Contact Number	+91 9971034775
Email Id	ankit.das@adityabiria.com
Order Date	31.03.2025/ 10:10
Order Number	13612313668

16. Copper (as Cu)	APHA 3111 B 2023	mg/l	BDL(MDL-0.2)	0.05	1.5
17. Iron (as Fe)	APHA 3111 B 2023	mg/l	BDL(MDL-0.1)	1.0	No relaxation
18. Lead (as Pb)	APHA 3111 B 2023	mg/l	BDL(MDL-0.01)	0.01	No relaxation
19. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BDL(MDL-0.003)	0.003	No relaxation
20. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	0.05	No relaxation
21. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BDL(MDL-0.02)	0.02	No relaxation
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	0.05
23. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	No relaxation
24. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.09)	0.1	0.3
25. Zinc (as Zn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	0	15

--Test Result End--

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



Checked by  
(E.A. Kumar)  
Technical Head

Verified & Issue by  
(Anshu Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



# EPIC LabTech Private Limited

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Tel: 0651-4668202

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epiclabtech@gmail.com

CIN: U74900JH2022PTC06863

PAN: AAHCE33MM

GST: 28AAHCE33MM2K

Accredited by:

Indian Council for Mutual Certification

Certified by:

ISO 9001:2015 and ISO 14001:2015

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0138251640	Group	Water
Issue date/time	24.04.2025/ 11:15	Sub Group	Drinking Water

Report Issue to		Contact Person	Mr. Ankit Das
M/s - HINDALCO INDUSTRIES LIMITED		Contact Number	+91 9971034775
VILLAGE-COURT ROAD,		Email Id	ankit.das@adityabirla.com
POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA,		Order Date	31.03.2025/ 10:10
STATE-JHARKHAND, INDIA 835302		Order Number	13612313868
MONITORING SITE: PAKHAR 115.13 BAUXITE MINE			

Reference of Quality Management System (Steps of Traceability Chain)			
Customer Registration No.	EPIC/OTW/0138	Sample Booking Number	EPIC-251640
Sample(s) Code	251640	Sample Receipt (D/T)	17.04.2025/ 10:58

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Sampling Start (D/T)	15.04.2025/ 12:30	Sampling End (D/T)	15.04.2025/ 12:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Clear	Temperature (°C)	26	Humidity %	48	Wind direction	260°-80°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	R.O Plant	GPS coordinate	23° 32' 24.47" N 84° 36' 30.05" E

Date(s) of performance of the laboratory activities			
Test start date	17.04.2025/ 11:10	Test completion date	23.04.2025/ 13:00

### -Test Result -

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

Page 4 of 5

Consent/Notes: 1. The laboratory accepts responsibility for content of this report. 2. Test performed at laboratory's permanent facility, at specific environmental conditions as specified required and results relate only to the sample tested as prescribed here & time. 3. The Test report shall not be reproduced full or in part & not be used as proof in the court of law. 4. Any complaint about this report, should be communicated in writing within 7 days of its issue. 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to involved amount only. 6. All disputes are subjected to Ranchi Jurisdiction and exclusive liability of the laboratory does not exceed the testing and sampling charges. 7. Opinion does not imply endorsement of the tested product by laboratory. 8. Under no circumstances, laboratory accepts any liability for use or misuse of this report. 9. When the results are from external providers are marked as "outs".





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CIN:-U74999JH2022PTC016085, Accredited by:-  
PAN:-AAHCE36174  
GST:-37AAHCE36174Z

ISO 9001:2015 and ISO 14001:2015  
Certified by:-  
ISO 9001:2015 and ISO 14001:2015

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0138251840	Group	Water
Issue date/time	24.04.2025/ 11:15	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. Ankit Das  
+91 9971034775  
ankit.das@adityabirla.com  
31.03.2025/ 10:10  
13612313868

15.	Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
16.	Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	100.0	No relaxation
17.	Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.3	No relaxation
18.	Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	1.0	No relaxation
19.	Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
20.	DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	1.0	No relaxation
21.	Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.4	No relaxation

—Test Result End—

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



Checked by  
D.K. Kanori  
Technical Head

Verified & Issued by  
(Anshu Kanori)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



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CIN-U74999JH2022PTC039685

PAN-AAHCE3873M

GST-20AAHCE3K11M12X

Accredited by :-

Authorized Signatory (Common Seal)

Certified by :-

ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL0138251641	Group	Water
Issue date/time	24.04.2025/ 11:17	Sub Group	Drinking Water

### Report Issue to

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

Contact Person  
Contact Number  
Email Id  
Order Date  
Order Number

Mr. Ankit Das  
+91 9971034775  
ankit.das@adityabirla.com  
31.03.2025/ 10:10  
13612313868

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

Customer Registration No.	EPIC/OTH/0138	Sample Booking Number	EPIC-251641
Sample(s) Code	251641	Sample Receipt (D/T)	17.04.2025/ 10:50

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/038
Sampling method used	IS : 3025 (Part-3) 1987, R-2003& IS 1622 1981		
Sampling Start (D/T)	15.04.2025/ 12:30	Sampling End (D/T)	15.04.2025/ 12:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	48	Wind direction	260°-80°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	R.O Plant	GPS coordinate	23° 32' 24.47" N 84° 38' 30.05" E
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### Date(s) of performance of the laboratory activities

Test start date	17.04.2025/ 11:10	Test completion date	23.04.2025/ 13:00
-----------------	-------------------	----------------------	-------------------

### --Test Result --

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

### --Test Result End --

Prescribed Limit  
Operational Status

IS 10500:2021  
Unit was Operational During sampling.

Analysed by -Pratima Kanari/ Anjali Kanari



Checked by  
(R.K. Kanari)  
Technical Head

Verified & Issued by  
(Anish Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





# EPIC LabTech Private Limited

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CIN - U74999HR2022PTC016001  
PAN - RAHCE3311M  
GSTIN - 20RAHCE3311M024

Accredited by:-  
NABL with certificate number 201/13887  
for Central Water Pollution Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018



## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000367	Discipline	Chemical
Report Unique ID	RLD138251642	Group	Water
Issue date/time	24.04.2025/ 11:19	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 MINES

Contact Person Mr. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adnyabiria.com  
Order Date 31.03.2025/ 10:10  
Order Number 13612313888

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

Customer Registration No.	EPIC/QTH/D138	Sample Booking Number	EPIC-251642
Sample(s) Code	251642	Sample Receipt (D/T)	17.04.2025/ 10:51

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Sampling Start (D/T)	15.04.2025/ 13:40	Sampling End (D/T)	15.04.2025/ 13:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	25	Humidity %	48	Wind direction	260°-80°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Uttamit Rajkiya Prathamik Vidyalaya Dumrapant 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	17.04.2025/ 11:10	Test completion date	23.04.2025/ 13:00
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### --Test Result--

Sl.	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible Limit
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.78	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.60	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	<5	5	15
4.	Odour	IS 3025 (P-05) 2018	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	276.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	45.33	250	1000
8.	Total Alkalinity(as CaCO <sub>3</sub> )	IS 3025 (P-23) 2019	mg/l	130.00	200	600
9.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21) 2009	mg/l	170.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	40.08	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	BDL(MDL-0.4)	0.2	1
12.	Sulphate (as SO <sub>4</sub> )	IS 3025 (P-24/Sec-1)2022	mg/l	13.10	200	400
13.	Nitrate (as NO <sub>3</sub> )	APHA 4500 B 2023	mg/l	03.49	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL(MDL-0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3600 Mg E 2023	mg/l	17.01	30	100



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PAN: AAKCE3611M  
GST: 20AAHCK3611M1ZK

Accredited by -  
NABL, Accreditation Number TC-1350  
For Environmental Testing & Control Equip.  
Certified by -  
ISO 9001:2015 and ISO 45001:2018



## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000367	Discipline	Chemical
Report Unique ID	RL0138251642	Group	Water
Issue date/time	24.04.2025/ 11:19	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 MINES

Contact Person

Mr. Ankit Das

Contact Number

+91 9971034775

Email Id

ankit.das@adityabiria.com

Order Date

31.03.2025/ 10:10

Order Number

13612313868

### Group-Residues and Contaminants in Water

### Sub Group- Trace Metals Elements

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

-Test Result End -

Prescribed Limit

IS 10500:2023

Operational Status

Unit was Operational During sampling.

Analyzed by -Pratima Kumar/ Anjali Kumar



Checked by  
(G.H. Kumar)  
Technical Head

Verified & Issue by  
(Ankit Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





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CIN:-U74999JH2022PTC015685

PAN:-AAHCE340M

GST:-21AAHCE340M1Z

Accredited by:-

National State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 14001:2015

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0138251642	Group	Water
Issue date/time	24.04.2025/ 11:19	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 MINES	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +91 9971034775 ankit.das@adityabirla.com 31.03.2025/ 10:10 13612313868
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References of Quality Management System (State of Traceability Chain)			
Customer Registration No.	EPIC/OTW/0138	Sample Booking Number	EPIC-251642
Sample(s) Code	251642	Sample Receipt (D/T)	17.04.2025/ 10:51

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS: 3026 (Part-1) 1987, R-2003		
Sampling Start (D/T)	15.04.2025/ 13:40	Sampling End (D/T)	15.04.2025/ 13:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Clear	Temperature (°C)	26	Humidity %	48	Wind direction	260°-80°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Near Upkarmit Rajkiya Prathamik Vidyalaya Dumrapari Village	GPS coordinate	23° 33' 36.90" N 84° 37' 27.19" E

Date(s) of performance of the laboratory activities			
Test start date	17.04.2025/ 11:10	Test completion date	23.04.2025/ 13:00

### --Test Result --

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





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PAN - AARCE3613M  
GST - 20AARCE3613M1ZK

Accredited by -  
Jharkhand State Bureau of Metrology  
Certified by -  
ISO 9001:2015 and ISO 14001:2015

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0138251642	Group	Water
Issue date/time	24.04.2025/ 11:19	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 MINES

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

15.	Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
16.	Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	150.0	No relaxation
17.	Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.3	No relaxation
18.	Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	1.0	No relaxation
19.	Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
20.	DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	1.0	No relaxation
21.	Endosulfen (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.4	No relaxation

—Test Result End—

Prescribed Limit

IS 10500:2012

Operational Status

Unit was Operational During sampling.

Analysed by -Pratim Kumar/ Apshy Kumar



Checked by  
(B.N. Kumar)  
Technical Head

Verified & Issued by  
(Ansh Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



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✉ epiclabtech@gmail.com

CIN: U14096(JH2022PTC0119485) Accredited by:-

PAN: AANR2341D3

GST: 20AANCE3871M125

Participated in Performance Comparison Study

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

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL0138251643	Group	Water
Issue date/time	24.04.2025/ 11:22	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. Ankit Das +91 9871034775 ankit.das@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/0138	Sample Booking Number	EPIC-251643
Sample(s) Code	251643	Sample Receipt (D/T)	17.04.2025/ 10:51

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS : 3025 (Part-1) 1987, R-2003& IS 1822 1981		
Sampling Start (D/T)	15.04.2025/ 13:40	Sampling End (D/T)	15.04.2025/ 13:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Clear	Temperature (°C)	26	Humidity %	48	Wind direction	260°-80°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Near Utkarmit Rajkoya Prathamik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 36.90" / 84° 37' 27.19"

Date(s) of performance of the laboratory activities			
Test start date	17.04.2025/ 11:10	Test completion date	23.04.2025/ 13:00

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

--Test Result End --					
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Prescribed Limit	IS 10500:2021
Operational Status	Unit was Operational During sampling.

Analyzed by -Pratim Kumar/ Anshu Kumar



Checked by  
(E.K. Kumar)  
Technical Head

12  
12/04/25

Verified & Issue by  
(Anshu Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





# EPIC LabTech Private Limited



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CIN - U74900JH2022PTC019825  
RAC - AAMCE3813M  
GST - 20AAHCE3813M129

Accredited by -  
NABL with compliance number JC - 53807  
Jharkhand State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 14001:2015

TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000503	Discipline	Chemical
Report Unique ID	RL0171252011	Group	Atmospheric Pollution
Issue date/time	19.05.2025/ 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. Ankit Das  
Contact Number +91 9971034775  
Email id ankit.das@edityabirla.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/0171	Sample Booking Number	EPIC-252011
Sample(s) Code	252011 (A) (B) (C) (D)	Sample Receipt (D/T)	13.05.2025/ 10:22

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	10.05.2025/ 11:28	Sampling End (D/T)	11.05.2025/ 06:36
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	46	Wind direction	260°-80°
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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' 08.36" / 84° 37' 04.76"

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

Test start date	13.05.2025/ 10:45	Test completion date	18.05.2025/ 10:45
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### --Test Results--

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS-5182 (P-23) 2022	µg/m <sup>3</sup>	77.28	84.57	89.38	82.02	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS-5182 (P-24) 2018	µg/m <sup>3</sup>	37.06	42.19	39.18	33.30	80 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS-5182 (P-02) 2023	µg/m <sup>3</sup>	10.50	11.14	12.50	08.58	80 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS-5182 (P-06) 2022	µg/m <sup>3</sup>	23.52	25.95	18.62	21.15	80 (24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS-5182 (P-25) 2018	µg/m <sup>3</sup>	30.74	32.03	37.21	35.92	400 (24 hr)
6.	Ozone (O <sub>3</sub> )	IS-5182 (P-09) 2019	µg/m <sup>3</sup>	26.38	21.39	24.95	27.09	180 (1 hr)
7.	Lead (Pb)	IS-5182(P-22) 2019	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0 (24 hr)
8.	Nickel (Ni)	IS-5182(P-26) 2020	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	
9.	Arsenic (As)	USEPA IO 3.2-1999	ng/m <sup>3</sup>	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	

### --Test Results End--

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



Reviewed by  
(E.K. Kumar)  
Technical Head

Issue by  
(Ankit Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





# EPIC LabTech Private Limited

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CIN - U74999JK2022PTC000005 Accredited by -  
RAN - AAHCE3813M  
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	RL0171252011	Group	Atmospheric Pollution
Issue date/time	19.05.2025/ 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. 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/0171	Sample Booking Number	EPIC-252011
Sample(s) Code	252011 (A) (B) (C) (D)	Sample Receipt (D/T)	13.05.2025/ 10:22

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/006
Sampling Start (D/T)	10.05.2025/ 11:28	Sampling End (D/T)	11.05.2025/ 06:36
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	46	Wind direction	260°-80°
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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	13.05.2025/ 10:46	Test completion date	18.05.2025/ 10:46
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### -Test Results-

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

### -Test Results End -

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



Reviewed by  
(A.K. Kumar)  
Technical Head





# EPIC LabTech Private Limited

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CIN - U14800JH2022PTC018683  
PAN - AANHC2861M  
GST - 25AANHC2811M1ZK

Accredited by -  
NABL with certificate number TL-1386/  
Hazardous Waste Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018



TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC128872500000504	Discipline	Chemical
Report Unique ID	RL0171252012	Group	Atmospheric Pollution
Issue date/time	19.05.2025/ 10:32	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. 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 (Stage of Invalidity Date)

Customer Registration No.	EPIC/OTH/0171	Sample Booking Number	EPIC-252012
Sample(s) Code	252012 (A) (B) (C) (D)	Sample Receipt (D/T)	13.05.2025/ 10:30

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	11.05.2025/ 12:15	Sampling End (D/T)	12.05.2025/ 06:43
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	45	Wind direction	260°-80°
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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 Uttkarnit Rajkiya Prasthnik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.39"
S. Location D	Near Uttkarnit Rajkiya Prasthnik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.33"

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

Test start date	13.05.2025/ 10:55	Test completion date	18.05.2025/ 10:50
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### -Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS 5182 (P-23) 2022	µg/m <sup>3</sup>	72.49	79.37	74.64	70.33	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (P-24) 2019	µg/m <sup>3</sup>	38.08	36.08	33.99	37.22	60 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS 5182 (P-02) 2023	µg/m <sup>3</sup>	07.45	10.21	12.31	11.07	80 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 (P-06) 2022	µg/m <sup>3</sup>	24.29	21.83	23.22	26.58	80 (24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS 5182 (P-25) 2018	µg/m <sup>3</sup>	37.86	40.45	36.24	35.27	400 (24 hr)
6.	Ozone (O <sub>3</sub> )	IS 5182 (P-09) 2019	µg/m <sup>3</sup>	25.31	30.66	23.88	22.46	180 (1 hr)
7.	Lead (Pb)	IS 5182 (P-22) 2019	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0 (24 hr)
8.	Nickel (Ni)	IS 5182 (P-26) 2020	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
9.	Arsenic (As)	USEPA IO 3.2-1995	ng/m <sup>3</sup>	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	-

### -Test Results End -

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

Reviewed by  
(S.K. Kumar)  
Technical Head

Issue by  
(Ankit Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Jharkhand







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CIN:- U74999JH2022PTC016685  
PAN:- AAKCE2813K  
GST:- 20AAHCE2813M1ZK  
Accredited by:-  
Bharat Standards Institution Certified Body  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0171252012	Group	Atmospheric Pollution
Issue date/time	19.05.2025/ 10:32	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. 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/0171	Sample Booking Number	EPIC-253012
Sample(s) Code	252012 (A) (B) (C) (D)	Sample Receipt (D/T)	13.05.2025/ 10:30

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	11.05.2025/ 12:15	Sampling End (D/T)	12.05.2025/ 06:43
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	46	Wind direction	260°-80°
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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	13.05.2025/ 10:55	Test completion date	18.05.2025/ 10:50
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### -Test Results-

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

### -Test Results End -

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

Operational Status Unit was Operational During sampling.

Analysed by - AK Senha



Reviewed by  
(B.K. Kumar)  
Technical Head





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CIN - 3274995 (WZ) 2022 PTC 016685  
PAN - AARCE3413M  
GST - 20AAHCE381M1U2X

Accredited by:-  
NABL, with certificate number TC - 12887  
for Ambient Noise Pollution Control Board  
Certified to:-  
ISO 9001:2015 and ISO 45001:2018

TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000505	Discipline	Chemical
Report Unique ID	RL0171252013	Group	Atmospheric Pollution
Issue date/time	19.05.2025/ 10:34	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. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 31.03.2025/ 10:10  
Order Number 13612213868

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

Customer Registration No.	EPIC/OTH/0171	Sample Booking Number	EPIC-252013
Sample(s) Code	252013 (A) (B) (C) (D)	Sample Receipt (D/T)	13.05.2025/ 10:34

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	10.05.2025/ 11:28	Sampling End (D/T)	11.05.2025/ 09:38
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 9889:1981 (RA 2020) & CPCB Method S.D.50 (E) dated 11/01/2010		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	46	Wind direction	280°-80°
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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' 58.70"
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	13.05.2025/ 10:40	Test completion date	18.05.2025/ 10:35
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### -Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	L <sub>eq</sub> (Day time)	IS: 9889:1981	dB (A)	52.9	55.2	48.2	56.2	75
2.	L <sub>eq</sub> (Night time)	IS: 9889:1981	dB (A)	40.7	38.7	36.4	44.6	70

### -Test Results End -

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



Reviewed by  
(S.K. Kumar)  
Technical Head







# EPIC LabTech Private Limited



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CIN: U74999JH222277COC09685  
 PAN: AASHC3651M  
 GST: 20AAACE3611M2X  
 Accredited by: NABL, Certificate Number: TC-12887  
 Issuance Date: Pollution Control Board  
 Certified by: ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000687	Discipline	Chemical
Report Unique ID	RL0204252415	Group	Atmospheric Pollution
Issue date/time	13.06.2025/ 16:16	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. Ankit Das +91 9971034775 ankit.das@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/0204	Sample Booking Number	EPIC-252415
Sample(s) Code	252415 (A) (B) (C) (D)	Sample Receipt (D/T)	10.06.2025/ 11:07

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/RV036
Sampling Start (D/T)	07.06.2025/ 12:38	Sampling End (D/T)	08.06.2025/ 10:23
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	50	Wind direction	300°-110°
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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' 58.70"
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	10.06.2025/ 11:30	Test completion date	13.06.2025/ 11:10
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### -Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-23) 2022	µg/m <sup>3</sup>	85.71	80.17	83.40	76.01	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS:5182 (P-24) 2019	µg/m <sup>3</sup>	37.91	35.06	36.94	33.15	60(24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-62) 2023	µg/m <sup>3</sup>	09.79	10.57	10.18	11.35	80(24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-66) 2022	µg/m <sup>3</sup>	22.20	23.25	26.43	24.31	80(24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	50.32	51.30	47.40	45.45	400(24 hr)
6.	Ozone (O <sub>3</sub> )	IS:5182 (P-69) 2019	µg/m <sup>3</sup>	38.72	37.56	35.24	32.91	180(1 hr)
7.	Lead (Pb)	IS:5182(P-32) 2019	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS:5182(P-36) 2020	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
9.	Arsenic (As)	USEPA IO 3.2-1009	ng/m <sup>3</sup>	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	-

### -Test Results End-

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

Analysed by - Archana Kumari



Reviewed by  
B.K. Kumar  
Technical Head

Issued by  
Shresh Thakur  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





# EPIC LabTech Private Limited

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 ✉ epiclabtech@gmail.com

☎ 0657-4688252 Accredited by:-  
 PAN - AACHCE3611M  
 GST - 20AACHCE3611MTX  
 Certified by:-  
 ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0204252415	Group	Atmospheric Pollution
Issue date/time	13.06.2025/ 16:16	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. 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/IOTH/0204	Sample Booking Number	EPIC-252415
Sample(s) Code	252415 (A) (B) (C) (D)	Sample Receipt (D/T)	10.06.2025/ 11:07

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	07.06.2025/ 12:38	Sampling End (D/T)	08.06.2025/ 10:23
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	50	Wind direction	300°-110°
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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' 56.76"
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	10.06.2025/ 11:30	Test completion date	13.06.2025/ 11:10
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### --Test Results--

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

### --Test Results End --

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

Operational Status Unit was Operational During sampling.

Analysed by - Archana Gopin



Reviewed by  
 (S.K. Kumar)  
 Technical Head







# EPIC LabTech Private Limited



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CIN - U74999JH2022PTC019483  
PAN - AARCE2411M  
GST - 20AARCE3601M1Z5

Accredited by -  
NABL, with certificate number TC-1381  
Facilitating State Pollution Control Board  
Certified by -  
GO 9037 2015 and ISO 43001:2018

TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000688	Discipline	Chemical
Report Unique ID	RL0204252416	Group	Atmospheric Pollution
Issue date/time	13.06.2025/ 16:19	Sub Group	Ambient Air Quality

### Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 836302  
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/0204	Sample Booking Number	EPIC-252416
Sample(s) Code	252416 (A) (B) (C) (D)	Sample Receipt (D/T)	10.06.2025/ 11:10

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	08.06.2025/ 12:25	Sampling End (D/T)	09.06.2025/ 09:32
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	50	Wind direction	300°-100°
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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' 28.48"
S. Location C	Near Uttamit Rajkiya Prasthnik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.39"
S. Location D	Near Uttamit Rajkiya Prasthnik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.33"

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

Test start date	10.06.2025/ 11:15	Test completion date	13.06.2025/ 11:20
-----------------	-------------------	----------------------	-------------------

### --Test Results--

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS 5182 (P-23) 2022	µg/m <sup>3</sup>	63.19	65.70	68.01	66.83	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (P-24) 2018	µg/m <sup>3</sup>	28.51	26.96	28.87	31.05	60(24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS 5182 (P-02) 2023	µg/m <sup>3</sup>	07.05	08.22	07.44	08.61	80(24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 (P-06) 2022	µg/m <sup>3</sup>	19.03	17.97	20.06	21.14	80(24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS 5182 (P-25) 2018	µg/m <sup>3</sup>	43.83	45.13	40.58	39.93	400(24 hr)
6.	Ozone (O <sub>3</sub> )	IS 5182 (P-08) 2019	µg/m <sup>3</sup>	27.10	25.94	28.27	30.20	180(1 hr)
7.	Lead (Pb)	IS 5182(P-22) 2019	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS 5182(P-26) 2020	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m <sup>3</sup>	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	-

### --Test Results End--

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



Reviewed by  
(E.A. Kumar)  
Technical Head

12  
27/06/25  
13/6/25  
Issued by  
(Anish Das)  
Secretary Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

Page 5 of 5

Consentual Note | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility at specific environmental conditions as method required and results relate only to the sample tested in prescribed Date & time | 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law | 4. Any complaint about this report should be communicated in writing within 30 days of its issue | 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to rendered 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. Unless no contraindications, laboratory accepts any caused by use or misuse of this report. | 8. When the results are from external provider are marked as "mark". |  
Abbreviations - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation). |





# EPIC LabTech Private Limited

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98357 96677

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CIN - U24999JH2022PTC00665 Accredited by:-

RAN - AACCE3611M

IST - 20AACCE3611M12X

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	RL0204252416	Group	Atmospheric Pollution
Issue date/time	13.06.2025/ 16:19	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. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 31.03.2025/ 10:10  
Order Number 13612313668

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

Customer Registration No.	EPIC/OTH/0204	Sample Booking Number	EPIC-252416
Sample(s) Code	252416 (A) (B) (C) (D)	Sample Receipt (D/T)	10.06.2025/ 11:10

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	06.06.2025/ 12:25	Sampling End (D/T)	09.06.2025/ 09:32
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	50	Wind direction	300°-100°
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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	10.06.2025/ 11:15	Test completion date	13.06.2025/ 11:20
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### -Test Results-

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

### -Test Results End -

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

Operational Status Unit was Operational During sampling.

Analyzed by - AK Sinha



Reviewed by  
(B.K. Kumar)  
Technical Head





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 93345 73894  
 epiclabtech@gmail.com

CIN:-U74999JH2022PTC016685 Accredited by:-  
 Jharkhand State Pollution Control Board  
 PAN:-AAKCE2611M  
 GST:-20AAKCE2611M1Z3  
 Certified by:-  
 ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0204252417	Group	Atmospheric Pollution
Issue date/time	13.06.2025/ 16:21	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 Contact Number Email Id Order Date Order Number	Mr. Ankit Das +91 9971034775 ankit.das@adityabirla.com 31.03.2025/ 10:10 13612313668
--	--	--

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

Customer Registration No.	EPIC/OTH/0204	Sample Booking Number	EPIC-252417
Sample(s) Code	252417 (A) (B)	Sample Receipt (D/T)	10.06.2025/ 11:11

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D)	07.06.2025	Sampling End (D)	07.06.2025
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 9989-1981 (RA 2020) & CPCB Method S.D.50 (E) dated 11/01/2010		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	50	Wind direction	300°-110°
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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° 32' 25.09" / 84° 35' 58.00"

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

Test start date	10.06.2025/ 11:20	Test completion date	13.06.2025/ 15:25
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### --Test Results--

Sl	Test Parameters	Method used	Unit	Results		Limits
				A	B	
1.	$L_{eq}$	IS: 9989-1981	dB (A)	74.4	72.3	85

### --Test Results End--

Prescribed Limit  
 Operational Status  
 Analysed by - AK Sinha

NIOSH - Publication No. 98-128 in 1972, Table 1-1  
 Unit was Operational During sampling.



Reviewed by  
 (R.K. Kumar)  
 Technical Head

13  
 13/6/25  
 Issued by  
 (Ankit Das)  
 Laboratory Head

Authorized Signatory  
 EPIC LabTech Pvt. Ltd.  
 Ranchi, Jharkhand







# EPIC LabTech Private Limited



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CIN:-U74999/JH2022PTC038845 Accredited by:-  
NABL - ISO 15189 Number: SC-1380  
PRN:-AAMCE3671M  
Jharkhand State Pollution Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018

TC-12887

## Accredited Test Certificate

Unique Lab Report No.	TC1286725000000840	Discipline	Chemical
Report Unique ID	RL02312528041	Group	Atmospheric Pollution
Issue date/time	14.07.2025/ 12:20	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. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@editysbirla.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/0231	Sample Booking Number	EPIC-2528041
Sample(s) Code	2528041 (A) (B) (C) (D)	Sample Receipt (D/T)	09.07.2025/ 11:36

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	06.07.2025/ 12:10	Sampling End (D/T)	07.07.2025/ 09:16
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	60	Wind direction	220°-40°
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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' 18.68"/ 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	09.07.2025/ 12:11	Test completion date	14.07.2025/ 11:10
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### -Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-23) 2022	µg/m <sup>3</sup>	84.19	79.46	82.36	75.47	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS:5182 (P-24) 2019	µg/m <sup>3</sup>	36.36	34.25	35.79	31.97	60 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2022	µg/m <sup>3</sup>	08.73	09.07	09.47	10.24	80 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	22.14	22.04	25.25	23.16	80 (24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	49.30	50.42	46.22	44.26	400 (24 hr)
6.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m <sup>3</sup>	37.85	36.26	34.35	31.80	180 (1 hr)
7.	Lead (Pb)	IS:5182(P-22):2019	µg/m <sup>3</sup>	BDL	BDL	BDL	BDL	1.0 (24 hr)
				(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	
8.	Nickel (Ni)	IS:5182(P-26):2020	ng/m <sup>3</sup>	BDL	BDL	BDL	BDL	
				(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m <sup>3</sup>	BDL	BDL	BDL	BDL	
				(MDL-1.8)	(MDL-1.8)	(MDL-1.8)	(MDL-1.8)	

### -Test Results End -

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

Analysed by - Vishal Mangaraj



Reviewed by  
(S.K. Kumar)  
Technical Head

Issue by  
(Ankit Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

Page 1 of 2

Disclaimer: 1. The laboratory accepts responsibility for content of this report. 2. Test performed at laboratory's permanent facility. 3. Results are valid only as method required and results valid only to the sample tested in prescribed Date & time. 4. The Test report shall not be reproduced false in part & can't be used as proof in the court of law. 5. Any complaint about this report should be communicated in writing within 30 days of its issue. 6. Total liability of EPIC LabTech Pvt. Ltd. will be limited to limited amount only. 7. All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges. 8. Customer does not imply endorsement of the tested product by laboratory. Unless no circumstances, laboratory accepts any claims by use or misuse of this report. 9. Where the results are from external provider are marked as "mark".  
Abbreviation: - BDL (Below Detectable Limit), MDL (Maximum Detectable Limit), LoQ (Limit of Quantification)





# EPIC LabTech Private Limited

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CIN: U74999(JH2022PTC019485)  
PAN: AAHCE3811M  
GST: 23AAHCE3811M1ZK

Accredited by:-  
(rajasthan) State Pollution Control Board  
Certified by:-  
(ISO 9001:2015 and ISO 45001:2018)

## Environmental Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02312528041	Group	Atmospheric Pollution
Issue date/time	14.07.2025/ 12:20	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. 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/0231	Sample Booking Number	EPIC-2528041
Sample(s) Code	2528041 (A) (B) (C) (D)	Sample Receipt (D/T)	09.07.2025/ 11:38

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	06.07.2025/ 17:10	Sampling End (D/T)	07.07.2025/ 09:16
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	60	Wind direction	220°-40°
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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' 06.38" / 84° 37' 04.76"

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

Test start date	00.07.2025/ 12:11	Test completion date	14.07.2025/ 14:10
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### -Test Results-

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

### -Test Results End -

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



Reviewed by  
(S.K. Kumar)  
Technical Head







# EPIC LabTech Private Limited

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PAN - AAKCE3611M  
GST - 20AAHCE3611M1Z3X

Accredited by -  
NABL, with certificate number TC-13887  
Jharkhand State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018



TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000841	Discipline	Chemical
Report Unique ID	RL02312528042	Group	Atmospheric Pollution
Issue date/time	14.07.2025/ 12:22	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. 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 (Days of Traceability Chain)

Customer Registration No.	EPIC/OTH/0231	Sample Booking Number	EPIC-3528042
Sample(s) Code	2528042 (A) (B) (C) (D)	Sample Receipt (D/T)	09.07.2025/ 11:37

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/038
Sampling Start (D/T)	07.07.2025/ 12:34	Sampling End (D/T)	08.07.2025/ 09:41
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	60	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' 42.28" / 84° 38' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.76" / 84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prasthnik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prasthnik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.33"

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

Test start date	09.07.2025/ 12:15	Test completion date	14.07.2025/ 11:11
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### -Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS 5182 (P-23) 2022	µg/m <sup>3</sup>	62.45	64.38	67.57	65.63	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (P-24) 2019	µg/m <sup>3</sup>	27.59	26.16	28.07	30.44	60 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS 5182 (P-02) 2023	µg/m <sup>3</sup>	06.82	07.97	07.20	07.95	80 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 (P-06) 2023	µg/m <sup>3</sup>	18.95	16.86	20.00	21.02	80 (24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS 5182 (P-25) 2018	µg/m <sup>3</sup>	42.58	44.26	39.78	38.65	400 (24 hr)
6.	Ozone (O <sub>3</sub> )	IS 5182 (P-08) 2019	µg/m <sup>3</sup>	26.08	24.81	27.35	29.58	180 (1 hr)
7.	Lead (Pb)	IS 5182 (P-22) 2019	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0 (24 hr)
8.	Nickel (Ni)	IS 5182 (P-26) 2020	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	
9.	Arsenic (As)	USEPA IO 2.2:1999	ng/m <sup>3</sup>	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	

### -Test Results End -

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

Analysed by - Vishal Mongra



Reviewed by  
(S.K. Kumar)  
Technical Head

Issued by  
(Ankit Das)  
Laboratory Head

Authorized Signatory

EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

Page 1 of 1

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CIN: U74999JH2822PTC015585

PAN: AANCE3811K

GST: 25AANCE3811M2K

Accredited by:-

Pradhan Mantri Aardram Mission

Certified by:-

ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02312528042	Group	Atmospheric Pollution
Issue date/time	14.07.2025/ 12:22	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. 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 (Days of Incumbency Date)

Customer Registration No.	EPIC/OTH/0231	Sample Booking Number	EPIC-2528042
Sample(s) Code	2528042 (A) (B) (C) (D)	Sample Receipt (D/T)	09.07.2025/ 11:37

### Sampling References

Type of Industry	EPIC-2528042	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	07.07.2025/ 11:37	Sampling End (D/T)	08.07.2025/ 09:41
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	60	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	09.07.2025/ 12:15	Test completion date	14.07.2025/ 11:11
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### -Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS 5182(P-11) 2008	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS 5182(P-12) 2004	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AR/01/00	mg/m <sup>3</sup>	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

### -Test Results End -

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangark



Reviewed by  
(B.K. Kumar)  
Technical Lead







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CRM - U P 4995042222PFC01685 Accredited by:-  
NABL, lab certificate Number IC - 1380  
Haryana State Pollution Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018



TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000642	Discipline	Chemical
Report Unique ID	RL02312528043	Group	Water
Issue date/time	14.07.2025/ 12:24	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. 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/0231	Sample Booking Number	EPIC-2528043
Sample(s) Code	2528043	Sample Receipt (D/T)	09.07.2025/ 11:38

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	07.07.2025/ 14:10	Sampling End (D/T)	07.07.2025/ 14:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS: 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	60	Wind direction	220°-40°
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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	09.07.2025/ 12:20	Test completion date	14.07.2025/ 10:00
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### --Test Result--

Sl.	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible Limit
1.	pH value at 25.1°C	IS 3025 (P-11) 2022	-	6.61	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.62	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	<5	5	15
4.	Odour	IS 3025 (P-05) 2018	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	180.0	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	37.45	250	1000
8.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23) 2019	mg/l	94.00	200	500
9.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21) 2009	mg/l	146.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	33.27	75	200
11.	Free Residual Chlorine	IS 3025 (P-36) 1988	mg/l	BOL (HCL-0.4)	0.2	1
12.	Sulphate (as SO <sub>4</sub> )	IS 3025 (P-34/Sec-1) 2022	mg/l	8.00	200	400
13.	Nitrate (as NO <sub>3</sub> )	APHA 4500 N 2023	mg/l	2.03	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BOL (HCL-0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 5000 Mg E 2023	mg/l	14.09	30	100



# EPIC LabTech Private Limited



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CIN: U74999JH2022PTC008685 Accredited by -  
NABL with certificate number TC-13807  
RAN-AAHCE38175A  
Jharkhand State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018  
GST: 22AAHCE38175R2Z

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000842	Discipline	Chemical
Report Unique ID	RL02312528043	Group	Water
Issue date/time	14.07.2025/ 12:34	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. Ankit Das  
Contact Number: +91 9971034775  
Email Id: ankit.das@adityabirla.com  
Order Date: 31.03.2025/ 10:10  
Order Number: 13612313868

### Group-Residues and Contaminants in Water

### Sub Group- Trace Metals Elements

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

--Test result End--

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



Reviewed by  
(R.K. Kumar)  
Technical Head

Issued by  
(Ankit Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand







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PAN-AAHCE3611M  
GST - 20AAHCE3611M1Z5

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

## Ambulatory Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02312528043	Group	Water
Issue date/time	14.07.2025/ 12:34	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. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@adityabirla.com  
Order Date 31.03.2025/ 10:10  
Order Number 13612313668

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

Customer Registration No.	EPIC/OTH/0231	Sample Booking Number	EPIC-2528043
Sample(s) Code	2528043	Sample Receipt (D/T)	09.07.2025/ 11:38

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	07.07.2025/ 14:10	Sampling End (D/T)	07.07.2025/ 14:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	60	Wind direction	220°-40°
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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	09.07.2025/ 12:20	Test completion date	14.07.2025/ 10:00
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### --Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible Limit
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	BDL(MDL-0.1)	1.0	1.5
Group-Residues and Contaminants in Water					Sub Group-Trace Metals Elements	
2.	Aluminum	IS 3025 (P-55):2019	mg/l	BDL(MDL-0.1)	0.03	0.2
3.	Boron	IS 3025 (P-57):2001	mg/l	BDL(MDL-0.1)	0.5	1.0
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.5	No relaxation
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.1	No relaxation
Group-Residues and Contaminants in Water					Sub Group-Pesticides	
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
8.	Dieldrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.03	No relaxation
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.005)	0.01	No relaxation
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	125.0	No relaxation
12.	Chlorpyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	30.0	No relaxation
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	3.0	No relaxation
15.	Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation





# EPIC LabTech Private Limited

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CIN: U74999JH2022PTC016685 Accredited by:-

RAN - AAMCE 2411M

IST - DOAHCE 2411MEX

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	RL02312528043	Group	Water
Issue date/time	14.07.2025/ 12:24	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. Ankit Das

+91 9971034775

ankit.das@adityabirla.com

31.03.2025/ 10:10

13612313868

16. Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	BOL(MOL-0.5)	100.0	No relaxation
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	BOL(MOL-0.2)	0.3	No relaxation
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	BOL(MOL-0.5)	1.0	No relaxation
19. Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	BOL(MOL-0.5)	2.0	No relaxation
20. DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	µg/l	BOL(MOL-0.5)	1.0	No relaxation
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	BOL(MOL-0.05)	0.4	No relaxation

--Test result End--

Prescribed Limit

IS 10500:2021

Operational Status

Unit was Operational During sampling

Analysed by - Vishal Mangaraj

Reviewed by  
(S.K. Kumar)  
Technical Head

Issued by  
(Ankit Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



Page 2 of 2

**Disclaimer:** 1. The laboratory accepts responsibility for content of this report. 2. Test performed at laboratory's permanent facility, at specific environmental conditions, as method required and results relate only to the sample tested in prescribed Date & time. 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law. 4. Any complaint about this report should be communicated in writing within 10 days of its issue. 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to laboratory's 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. Options 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), LQ (Limit of Quantitation).



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Jharkhand State Pollution Control Board  
RAM - AAMCE3611M  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL02312528044	Group	Water
Issue date/time	14.07.2025/ 12:26	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. 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/0231	Sample Booking Number	EPIC-2528044
Sample(s) Code	2528044	Sample Receipt (D/T)	09.07.2025/ 11:38

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/RV036
Sampling Start (D/T)	07.07.2025/ 14:10	Sampling End (D/T)	07.07.2025/ 14:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	60	Wind direction	220°-40°
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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	09.07.2025/	Test completion date	14.07.2025/ 16:05
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### --Test Result--

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

### --Test result End --

Prescribed Limit IS 10500:2021  
Operational Status Unit was Operational During sampling.

Analysed by -Sujata Kumar



Reviewed by  
(S.R. Kumar)  
Technical Head

Issued by  
(Ankit Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





# EPIC LabTech Private Limited



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GST: 20AAHCE2671M1Z8

Accredited by -  
NABL with certificate number TC - 1337  
Jharkhand State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

TC-12887

## Analysis Report Certificate

Unique Lab Report No.	TC128872500000995	Discipline	Chemical
Report Unique ID	RL02632534001	Group	Atmospheric Pollution
Issue date/time	23.08.2025/ 13:00	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. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@aditysbirla.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/00263	Sample Booking Number	EPIC-2534001
Sample(s) Code	2534001 (A) (B) (C) (D)	Sample Receipt (D/T)	18.08.2025/ 10:13

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	15.08.2025/ 12:11	Sampling End (D/T)	16.08.2025/ 09:19
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	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	22° 33' 05.36"/ 84° 37' 04.76"

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

Test start date	18.08.2025/ 10:33	Test completion date	23.08.2025/ 12:00
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### -Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-23) 2022	µg/m³	83.74	78.46	81.36	74.46	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (P-24) 2019	µg/m³	35.29	33.47	34.53	31.05	60(24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m³	08.35	08.74	09.14	09.88	80(24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m³	21.09	21.11	24.33	22.16	80(24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m³	48.18	49.30	45.38	43.42	400(24 hr)
6.	Ozone (O <sub>3</sub> )	IS:5182 (P-08) 2019	µg/m³	36.89	35.30	33.39	30.85	160(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS:5182(P-38) 2020	ng/m³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
9.	Arsenic (As)	USEPA IO 3.2:1989	ng/m³	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	-

### -Test Results End -

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

Analysed by - Vishal Mangra



Reviewed by  
(B.K. Kumar)  
Technical Head

Issued by  
(Ajay Singh)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.

Page 1 of 1

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Abbreviation - BDL (Below Detection Limit), ND (Not Measurable Detectable Limit), LoQ (Limit of Quantification).





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RAN- AAACE5611M  
GST: 20AAACE5611M1Z8

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

## Analysis Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02632534001	Group	Atmospheric Pollution
Issue date/time	23.08.2025/ 13:00	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. 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 (Days of Incubability Data)

Customer Registration No.	EPIC/OTH/0263	Sample Booking Number	EPIC-2534001
Sample(s) Code	2534001 (A) (B) (C) (D)	Sample Receipt (D/T)	18.08.2025/ 10:13

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	15.08.2025/ 12:11	Sampling End (D/T)	18.08.2025/ 09:19
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	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"

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

Test start date	18.08.2025/ 10:33	Test completion date	23.08.2025/ 12:00
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### -Test Results-

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

### -Test Results End -

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangra



Reviewed by  
(S.K. Kumar)  
Technical Feed



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**Abbreviations:** BCL (Bihar Conservation Limit), MDL (Minimum Detectable Limit), LQ (Limit of Quantification)





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CIN: U74905JH2022PTC019625 Accredited by:-  
JALC, with certificate number TC- 0367  
RAN- LAHCE3611M  
Jharkhand State Pollution Control Board  
Certified by:-  
ISO 9001:2015 and ISO 43001:2018



## Analyst's Test Certificate

Unique Lab Report No.	TC1286725000000996	Discipline	Chemical
Report Unique ID	RL02632534002	Group	Atmospheric Pollution
Issue date/time	23.08.2025/ 13:03	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. 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/0263	Sample Booking Number	EPIC-2534002
Sample(s) Code	2534002 (A) (B) (C) (D)	Sample Receipt (D/T)	18.08.2025/ 10:14

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	16.08.2025/ 12:16	Sampling End (D/T)	17.08.2025/ 09:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	0°-160°
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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' 28.40"
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	18.08.2025/ 10:34	Test completion date	23.08.2025/ 12:00
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### -Test Results-

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-23) 2022	µg/m <sup>3</sup>	61.44	63.40	66.59	64.63	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS:5182 (P-24) 2019	µg/m <sup>3</sup>	26.61	25.17	27.05	29.51	50 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	06.33	07.44	07.06	07.83	80 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	17.58	15.50	19.61	20.71	80 (24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	42.02	43.70	39.21	38.09	400 (24 hr)
6.	Ozone (O <sub>3</sub> )	IS:5182 (P-08) 2019	µg/m <sup>3</sup>	25.76	24.49	27.03	29.26	180 (1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2018	µg/m <sup>3</sup>	BOL (MDL-0.1)	BOL (MDL-0.1)	BOL (MDL-0.1)	BOL (MDL-0.1)	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m <sup>3</sup>	BOL (MDL-0.1)	BOL (MDL-0.1)	BOL (MDL-0.1)	BOL (MDL-0.1)	
9.	Arsenic (As)	USEPA IO 3.2-1989	ng/m <sup>3</sup>	BOL (MDL-0.001)	BOL (MDL-0.001)	BOL (MDL-0.001)	BOL (MDL-0.001)	

### -Test Results End -

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

Analysed by - Vishal Mangaraj



Reviewed by  
(R.K. Kumar)  
Technical Head

Issued by  
(Ankit Das)  
Laboratory Head

Authorized Signatory

EPIC LabTech Private Limited

Ranchi, Jharkhand





# EPIC LabTech Private Limited

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 PAN: AAAPCE2071M  
 GST: 20AAACE2071M1Z3  
 Accredited by: -  
 Pathanki State Resource Centre Board  
 Certified by: -  
 ISO 9001:2015 and ISO 45001:2018

## Amplified Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02632534002	Group	Atmospheric Pollution
Issue date/time	23.08.2025/ 13:03	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 Contact Number Email Id Order Date Order Number	Mr. Ankit Das +91 9971034775 ankit.das@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/0263	Sample Booking Number	EPIC-2534002
Sample(s) Code	2534002 (A) (B) (C) (D)	Sample Receipt (D/T)	18.08.2025/ 10:14

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.08.2025/ 12:16	Sampling End (D/T)	17.08.2025/ 09:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	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' 26.40"
S. Location C	Near Uttamit Rajkiya Prathamik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.58" / 84° 36' 00.39"
S. Location D	Near Uttamit Rajkiya Prathamik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 36.14" / 84° 37' 30.33"

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

Test start date	18.08.2025/ 10:34	Test completion date	23.08.2025/ 12:00
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### -Test Results-

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

### -Test Results End -

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

Operational Status: Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by  
(E.K. Kumar)  
Technical Head





# EPIC LabTech Private Limited



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CIN: U74999JH2022PTC009885  
PAN: AAMCE3611M  
GST: 29AAMCE3611M1ZK

Accredited by:-  
NABL with certificate number TC-1587  
Jharkhand State Pollution Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018

TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000997	Discipline	Chemical
Report Unique ID	RL02632534003	Group	Water
Issue date/time	23.08.2025/ 13:06	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. Ankit Das +91 9971034775 ankit.das@adityabirla.com 31.03.2025/ 10:10 13612313868
---	--	--

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

Customer Registration No.	EPIC/OTH/0263	Sample Booking Number	EPIC-2534003
Sample(s) Code	2534003	Sample Receipt (D/T)	18.08.2025/ 10:15

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	15.08.2025/ 16:03	Sampling End (D/T)	15.08.2025/ 16:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Utkarmit Rajkya 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	18.08.2025/ 10:35	Test completion date	23.08.2025/ 11:15
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### --Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible Limit
1.	pH value at 25.6°C	IS 3025 (P-11) 2022	-	6.71	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.82	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	<5	5	10
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	275.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	45.33	200	1000
8.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23) 2019	mg/l	128.00	200	600
9.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21) 2009	mg/l	168.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	39.28	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	BDL(MDL-0.4)	0.2	1
12.	Sulphate (as SO <sub>4</sub> )	IS 3025 (P-24/Sec-1) 2022	mg/l	13.10	200	400
13.	Nitrate (as NO <sub>3</sub> )	APHA 4500 B 2023	mg/l	03.39	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL(MDL-0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 2500 Mg E 2023	mg/l	17.01	30	100





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CIN-2749953W2022PTC019625  
RAN-20AACE2611M  
GST-29AAHCE2611M12X

Accredited by -  
NABL, Lab Certificate Number: TC-12887  
Issued Date: 10/06/2022  
Valid till -  
30/06/2025 and ISO 45001:2018

TC-12887

*Analysed / Test Certificate*

Unique Lab Report No.	TC1288725000000997	Discipline	Chemical
Report Unique ID	RL02632534003	Group	Water
Issue date/time	23.08.2025/ 13:06	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. Ankit Das  
+91 9971034775  
ankit.das@adityabirla.com  
31.03.2025/ 10:10  
13612313668

## Group - Residues and Contaminants in Water,

## Sub Group - Trace Metals Elements

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

—Test result End—

Prescribed Limit  
Operational Status

IS 10500:2023  
Unit was Operational During sampling.

Analysed by - Pappu Kumar



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

*[Signature]*  
Issued by  
(Anshu Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



Page 2 of 2

**Contractual Notes :** 1. The laboratory accepts responsibility for content of this report. 2. Test performed at laboratory's permanent facility of specific environmental condition as method required and results relate only to the sample tested in prescribed Date & time. 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law. 4. Any complaint about this report should be communicated in writing within 30 days of its issue. 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to services 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 reward by use or misuse of this report. 8. Where the results are from external provider are marked as " mark. 9. Advertisements - BDL, Online Data table (units), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation).



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CIN:-U74999JH2022PTC016685 Accredited by -  
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Bachchan Total Education Control Board  
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ISO 9001:2015 and ISO 45001:2018  
GST:-20BAHCE001M126

## Analysed Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02632534003	Group	Water
Issue date/time	23.08.2025/ 13:06	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. 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/0263	Sample Booking Number	EPIC-2534003
Sample(s) Code	2534003	Sample Receipt (D/T)	18.06.2025/ 10:15

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/038
Sampling Start (D/T)	15.08.2025/ 16:03	Sampling End (D/T)	15.08.2025/ 16:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Urkarmit Rajkiya Prathamik 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	18.08.2025/ 10:35	Test completion date	23.08.2025/ 11:15
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### --Test Result--

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





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CIN:-U74999JH2022PTC006675  
PAN:-AAACE2811M  
GST:-20AAACE2811M128  
Accredited by:-  
Bharatiya Tata Research Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018

## Analysis Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02632534003	Group	Water
Issue date/time	23.08.2025/ 13:06	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. Ankit Das  
+91 9971034775  
ankit.das@adityabirla.com  
31.03.2025/ 10:10  
13612313668

15. Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
16. Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	100.0	No relaxation
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.3	No relaxation
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	1.0	No relaxation
19. Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
20. DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	1.0	No relaxation
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.4	No relaxation

—Test result End—

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



Reviewed by  
(R.K. Kumar)  
Technical Head

Issued by  
(Ankit Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



Page 2 of 2

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**Abbreviation** : BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LxQ (Limit of Quantification)



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CIN - U74900JH2022PTC019629 Accredited by -  
RAC - LAHCE3011M  
Jharkhand State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Analysis and Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL02632534004	Group	Water
Issue date/time	23.08.2025/ 13:09	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. Ankit Das  
Contact Number +91 9971034775  
Email id ankit.das@adityabirla.com  
Order Date 31.03.2025/ 10:10  
Order Number 13612313668

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

Customer Registration No.	EPIC/OTH/0263	Sample Booking Number	EPIC-2534004
Sample(s) Code	2534004	Sample Receipt (D/T)	18.08.2025/ 10:15

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	15.08.2025/ 16:03	Sampling End (D/T)	15.08.2025/ 16:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Utkarmit Rajkiya Prathmik Vidyalaya Dumragart 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	18.08.2025/ 10:36	Test completion date	23.08.2025/ 11:15
-----------------	-------------------	----------------------	-------------------

### --Test Result--

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

### --Test result End--

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



  
Reviewed by  
B.R. Kumar  
Technical Head

  
Issued by  
(Ankit Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





# EPIC LabTech Private Limited

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CRC-UT4888W2222PTC000001  
PAN-AAACE2611M  
GST-20AAACE2611M1Z3

Accredited by:-  
NABL, vide certificate number TC-1587  
Jharkhand State Pollution Control Board  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018



## Analytical Test Certificate

Unique Lab Report No.	TC1268725000000998	Discipline	Chemical
Report Unique ID	RL02632534005	Group	Pollution & Environment
Issue date/time	23.08.2025/ 13:12	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. 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/0263	Sample Booking Number	EPIC-2534005
Sample(s) Code	2534005	Sample Receipt (D/T)	18.08.2025/ 10:16

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	15.08.2025/ 15:30	Sampling End (D/T)	15.08.2025/ 15:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	0°-180°
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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	18.08.2025/ 10:36	Test completion date	23.08.2025/ 11:15
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### --Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25.0°C	IS 3025 (P-11) 2002	-	6.61	6.5-8.5
2.	BOD (3 days at 27°C)	IS 3025 (P-44) 2000	mg/l	12.00	-
3.	COD	IS 3025 (P-58) 2006	mg/l	80.00	150.0
4.	OR & Grease	IS 3025 (P-38) 2001	mg/l	BDL(MDL-04)	10.0
5.	Total Suspended Solid	IS 3025 (P-17) 2002	mg/l	42.00	50.0
6.	Phosphate	IS 3025 (P-31/Sec-1) 2002	mg/l	0.58	-
7.	Zinc	APHA 3111 B 2003	mg/l	BDL(MDL-0.04)	-

### --Test result End --

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

Analyzed by -Pappu Kumar



Reviewed by  
(G.R. Kumar)  
Technical Head

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



# EPIC LabTech Private Limited

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CRC - U74999043522P1C019885, Accredited by:-  
RAN - AANCC3331M  
GST - 20AAHCE3311M123  
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	RL02632534005	Group	Pollution & Environment
Issue date/time	23.08.2025/ 13:12	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. Ankit Das  
Contact Number +91 9971034775  
Email Id ankit.das@edityabirla.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/0363	Sample Booking Number	EPIC-2534005
Sample(s) Code	2534005	Sample Receipt (D/T)	18.08.2025/ 10:16

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	15.08.2025/ 15:30	Sampling End (D/T)	15.08.2025/ 15:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	0°-180°
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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"
---------------	--------------------	----------------	---------------------------------

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

Test start date	18.08.2025/ 10:36	Test completion date	23.08.2025/ 11:15
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### -Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Total Dissolve Solids (TDS)	IS 3025 (P-16) 2023	mg/l	220.00	-
2.	Dissolve Oxygen (DO)	IS 3025 (P-36) 1966	mg/l	0.9	-

### -Test result End -

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

Analyzed by - Pappu Kumar



Reviewed by  
(R.N. Kumar)  
Technical Head

Issued by  
(Ankit Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





# EPIC LabTech Private Limited



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 93040 72994  
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CIN: U74999JH2022PTC019625 Accredited by: NABL and certificate Number TC - 1507  
 PAN: AAHCE3611M  
 GST: ZSAAHCE3611M1C2X  
 Certified by: ISO 9001:2015 and ISO 45001:2018

## Analysis Test Certificate

Unique Lab Report No.	TC128872500001178	Discipline	Chemical
Report Unique ID	RL02912537017	Group	Atmospheric Pollution
Issue date/time	13.09.2025/ 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. Ankit Das +91 9871034775 ankit.das@adityabirla.com 31.03.2025/ 10:10 13612313666
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### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0291	Sample Booking Number	EPIC-2537017
Sample(s) Code	2537017 (A) (B) (C) (D)	Sample Receipt (D/T)	11.09.2025/ 11:14

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	08.09.2025/ 12:12	Sampling End (D/T)	08.09.2025/ 09:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/06/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	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	11.08.2025/ 11:34	Test completion date	13.09.2025/ 16:00
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### -Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS 5182 (P-23) 2022	µg/m <sup>3</sup>	57.96	56.91	58.92	59.92	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS 5182 (P-24) 2018	µg/m <sup>3</sup>	27.75	25.29	26.62	23.79	60(24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS 5182 (P-02) 2023	µg/m <sup>3</sup>	09.11	10.24	09.44	11.32	80(24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 (P-06) 2022	µg/m <sup>3</sup>	17.93	18.97	17.83	18.86	80(24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS 5182 (P-25) 2018	µg/m <sup>3</sup>	24.09	24.37	24.65	24.93	400(24 hr)
6.	Ozone (O <sub>3</sub> )	IS 5182 (P-08) 2019	µg/m <sup>3</sup>	13.36	13.68	13.99	14.63	100(1 hr)
7.	Lead (Pb)	IS 5182(P-22) 2019	µg/m <sup>3</sup>	BDL (MDL 0.1)	BDL (MDL 0.1)	BDL (MDL 0.1)	BDL (MDL 0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS 5182(P-26) 2020	ng/m <sup>3</sup>	BDL (MDL 0.1)	BDL (MDL 0.1)	BDL (MDL 0.1)	BDL (MDL 0.1)	
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m <sup>3</sup>	BDL (MDL 0.001)	BDL (MDL 0.001)	BDL (MDL 0.001)	BDL (MDL 0.001)	

### -Test Results End -

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

Analysed by - Vishal Mangraj



Reviewed by  
(S.K. Kumar)  
Technical Head

Issue by  
(Ankit Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.



# EPIC LabTech Private Limited

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GST: 4882201  
GSTIN: 20AAHCE381M123  
CIN: U74999JH2022PTC006483  
Accredited by: Jharkhand State Pollution Control Board  
Certified by: ISO 9001:2015 and ISO 45001:2018

## Amplified Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02912537017	Group	Atmospheric Pollution
Issue date/time	13.09.2025/ 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. Ankit Das +91 9971034775 ankit.das@adityabirla.com 31.03.2025/ 10:10 13012213068
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### References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0291	Sample Booking Number	EPIC-2537017
Sample(s) Code	2537017 (A) (B) (C) (D)	Sample Receipt (D/T)	11.09.2025/ 11:14

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	08.09.2025/ 12:12	Sampling End (D/T)	09.09.2025/ 09:30
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)	28	Humidity %	66	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 - 5	GPS coordinate	23° 32' 51.14" / 84° 36' 56.78"
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	11.08.2025/ 11:34	Test completion date	13.09.2025/ 16:00
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### -Test Results-

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

### -Test Results End -

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangra



Reviewed by  
(R.K. Kumar)  
Technical Head







# EPIC LabTech Private Limited



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 PAN: JAAACE2810M  
 GST: 25AAHCE3881M124

Accredited by: NABL, ISO 15189:2015 Number: TC-12887  
 Validity: 31.03.2025 to 31.03.2028  
 Certified to: ISO 15189:2015 and ISO 45001:2018

TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1286725000001179	Discipline	Chemical
Report Unique ID	RL02912537018	Group	Atmospheric Pollution
Issue date/time	13.09.2025/ 17:15	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. 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/0291	Sample Booking Number	EPIC-2537018
Sample(s) Code	2537018 (A) (B) (C) (D)	Sample Receipt (D/T)	11.09.2025/ 11:15

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	09.09.2025/ 12:17	Sampling End (D/T)	10.09.2025/ 10:14
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	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 Uttamit Rajkya Prathmik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.58" / 84° 36' 00.39"
S. Location D	Near Uttamit Rajkya Prathmik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.39"

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

Test start date	11.09.2025/ 11:35	Test completion date	13.09.2025/ 16:00
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### -Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-23) 2022	µg/m³	63.85	65.45	68.88	66.38	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS:5182 (P-24) 2019	µg/m³	28.16	27.14	29.43	31.68	60(24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m³	07.44	08.17	08.51	09.59	80(24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-08) 2022	µg/m³	19.64	17.53	21.59	22.53	80(24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m³	24.37	24.09	24.65	24.93	400(24 hr)
6.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m³	15.90	16.54	16.86	17.81	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m³	BDL	BDL	BDL	BDL	1.0(24 hr)
				(MDL: 0.1)	(MDL: 0.1)	(MDL: 0.1)	(MDL: 0.1)	
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m³	BDL	BDL	BDL	BDL	-
				(MDL: 0.1)	(MDL: 0.1)	(MDL: 0.1)	(MDL: 0.1)	
9.	Arsenic (As)	USEPA HD 3.2:1999	ng/m³	BDL	BDL	BDL	BDL	-
				(MDL: 0.001)	(MDL: 0.001)	(MDL: 0.001)	(MDL: 0.001)	

### -Test Results End -

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



Reviewed by  
 (R.K. Kumar)  
 Technical Head

Issued by  
 (Vishal Mangaraj)  
 Laboratory Head

Authorized Signatory  
 EPIC LabTech Pvt. Ltd.





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CIN: U74999JH2022PTC05685, Accredited by -

NAAC - AA+ (C-3611M)

ISO - 22448 (CET11M12X)

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	RL02912537018	Group	Atmospheric Pollution
Issue date/time	13.09.2025/ 17:15	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. 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/0291	Sample Booking Number	EPIC-2537018
Sample(s) Code	2537018 (A) (B) (C) (D)	Sample Receipt (D/T)	11.09.2025/ 11:15

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	09.09.2025/ 12:17	Sampling End (D/T)	10.09.2025/ 10:14
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/06/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	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 Uttamit Rajkiya Prathmik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.58" / 84° 36' 00.39"
S. Location D	Near Uttamit Rajkiya Prathmik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.30"

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

Test start date	11.09.2025/ 11:35	Test completion date	13.09.2025/ 16:00
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### --Test Results--

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

### --Test Results End--

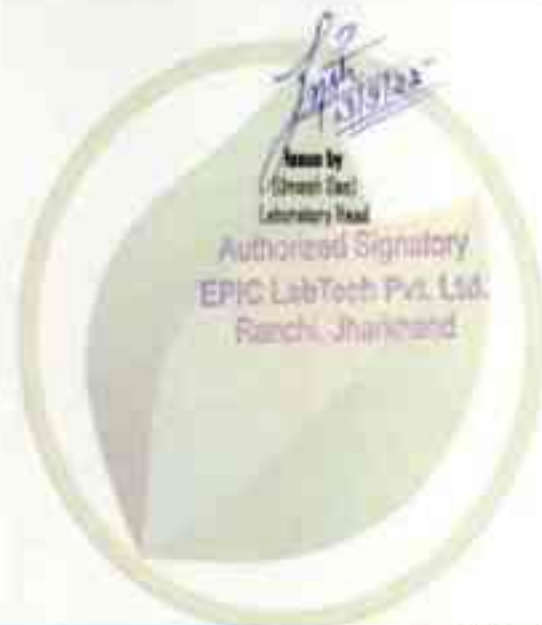
Prescribed Limit: Environmental (Protection) Rules-1986, Schedule VII.

Operational Status: Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by  
R.K. Kumar  
Technical Head



Page 3 of 3

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





# EPIC LabTech Private Limited



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CIN:-U74999JH2022PTC015683  
PAN:-AAAC1261M  
GST:-20AAHCA3601M1Z6

Recognized by -  
NABL, Lab. No. 1034775  
NABL State Industrial Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

TC-12887

## Analysis Test Certificate

Unique Lab Report No.	TC1288725000001180	Discipline	Chemical
Report Unique ID	RL02912537019	Group	Water
Issue date/time	13.09.2025/ 17:18	Sub Group	Surface 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. 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/0291	Sample Booking Number	EPIC-2537019
Sample(s) Code	2537019	Sample Receipt (D/T)	11.09.2025/11:10

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	08.09.2025/ 15:10	Sampling End (D/T)	08.09.2025/ 15:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS: 3025 (Part-1) 1967, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	68	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bungalapur Village	GPS coordinate	22° 32' 39.61" N 84° 36' 07.66" E
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### Date(s) of performance of the laboratory activities

Test start date	11.09.2025/ 11:36	Test completion date	13.09.2025/ 16:00
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### --Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2002	-	5.93	-
2.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2002	mg/l	25.0	-
3.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	6.41	-

### Group - Residues and Contaminants in Water,

4.	Iron (as Fe)	APHA 3111 B 2003	-	BDL (MDL-0.1)	-
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### Sub Group - Trace Metals Elements

### --Test result End--

Operational Status Unit was Operational During sampling.

Analysed By - Pappu Kumar



*[Signature]*  
Reviewed by  
G.R. Kumar  
Technical Head





# EPIC LabTech Private Limited

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CIN:-U74999JH2022PTC016585  
PAN:-AAACE2870M  
GST:-35AAHCE001M1CX

Accredited by:-  
National Body for Quality Control Society  
Certified by:-  
ISO 9001:2015 and ISO 45001:2018

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02912537019	Group	Water
Issue date/time	13.09.2025/ 17:18	Sub Group	Surface 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. 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/0291	Sample Booking Number	EPIC-2537019
Sample(s) Code	2537019	Sample Receipt (D/T)	11.09.2025/11:16

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	08.09.2025/ 15:10	Sampling End (D/T)	08.09.2025/ 15:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	68	Wind direction	0°-180°
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### Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bungalpart Village	GPS coordinate	23° 32' 39.61" / 84° 38' 07.68"
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### Date(s) of performance of the laboratory activities

Test start date	11.09.2025/ 11:36	Test completion date	14.09.2025/ 10:00
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### --Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Dissolve Oxygen (DO)	IS 3025 (P-38) 1989	mg/l	4.8	-
2.	Temperature	IS 3025 (P-09) 1986	°C	24.3	-
3.	BOD (3days at 27°C)	IS 3025 (P-44) 2000	mg/l	2.1	-
4.	COD	IS 3025 (P-50) 2008	mg/l	44.0	-
5.	Total Suspended Solids (TSS)	IS 3025 (P-17) 2022	mg/l	48	-
6.	Oil & Grease	IS 3025 (P38) 2021	mg/l	BDL(MDL-04)	-

### Group - Residues and Contaminants in Water,

7.	Aluminum (as Al)	IS 3025 (P-55) 2003	-	BDL (MDL 0.1)	-
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### Sub Group - Trace Metals Elements

### --Test result End--

### Operational Status

Unit was Operational During sampling

Analysed by - Pappu Kumar



Reviewed by  
(S.K. Kumar)  
Technical Head







# EPIC LabTech Private Limited



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CIN: U74999JH2022PTC019625 Accredited by:  
Public use certificate number 20-12827  
RMC-BANICE3031M  
Jharkhand State Pollution Control Board  
Certified by:  
ISO 9001:2015 and ISO 14001:2015

TC-12887

## Analysed Test Certificate

Unique Lab Report No.	TC1288725000001181	Discipline	Chemical
Report Unique ID	RL02912537020	Group	Pollution & Environment
Issue date/time	13.09.2025/ 17:21	Sub Group	Soli/Sediments

### 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: 13612313668

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

Customer Registration No.	EPIC/OTH/0291	Sample Booking Number	EPIC-2537020
Sample(s) Code	2537020	Sample Receipt (D/T)	11.09.2025/11:17

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/006
Sampling Start (D/T)	08.09.2025/ 15:30	Sampling End (D/T)	08.09.2025/ 15:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/LAB/SOP/PE/01/00		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	68	Wind direction	D°-180°
-------------------	--------	------------------	----	------------	----	----------------	---------

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

S. Location A	Near Mine Block - B, Quarry No.03	GPS coordinate	23° 32' 24.31" / 84° 36' 09.95"
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### Date(s) of performance of the laboratory activities

Test start date	11.09.2025/ 12:00	Test completion date	13.09.2025/ 16:30
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### -Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25.7°C	MAGI 2011	-	6.35	-
2.	Available Phosphorus	MAGI 2011	kg/ha	3.6	-
3.	Available Potassium	MAGI 2011	kg/ha	99.70	-
4.	Organic Carbon	MAGI 2011	%	0.92	-
5.	Electrical Conductivity	MAGI 2011	µS/cm	77.25	-
6.	Magnesium	MAGI 2011	mg/kg	40.32	-
7.	Nitrogen	MAGI 2011	%	0.082	-
8.	Arsenic (as As)	USEPA 3050 B 1996	mg/kg	BDL(MDL-0.006)	-
9.	Cadmium (as Cd)	USEPA 3050 B 1996	mg/kg	0.85	-
10.	Selenium (as Se)	USEPA 3050 B 1996	mg/kg	BDL(MDL-0.006)	-

### -Test result End -

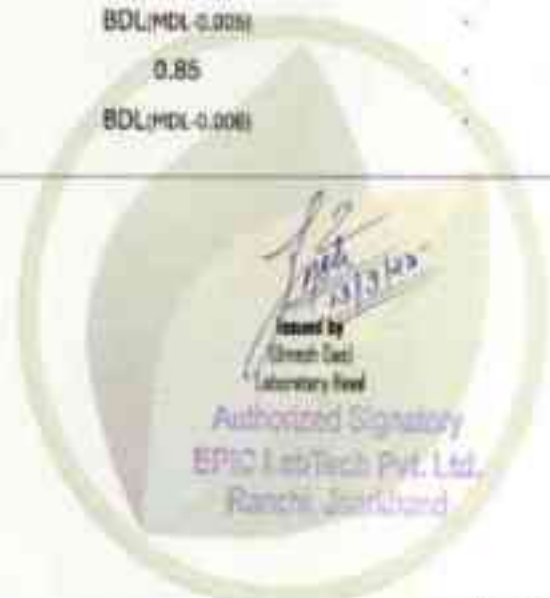
### Operational Status

Unit was Operational During sampling.

Analysed by - Ishika Singh



Reviewed by  
JEN Kumar  
Technical Head





# EPIC LabTech Private Limited

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CIN - U74999JH2022PTC016683  
PAN - AAKCE2611M  
GST - 20AAACE3A11M12X

Accredited by -  
Bharat State Private Control Board  
Certified by -  
ISO 9001:2015 and ISO 45001:2018

## Amplified Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02912537020	Group	Pollution & Environment
Issue date/time	13.09.2025/ 17:21	Sub Group	Soil/Sediments

### 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 13612213868

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

Customer Registration No.	EPIC/OTH/0291	Sample Booking Number	EPIC-2537020
Sample(s) Code	2537020	Sample Receipt (D/T)	11.09.2025/11:17

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	08.09.2025/ 15:30	Sampling End (D/T)	08.09.2025/ 15:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/LAB/SOP/PE/01/00		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	68	Wind direction	0°-180°
-------------------	--------	------------------	----	------------	----	----------------	---------

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

S. Location A	Near Mine Block - B, Quarry No.03	GPS coordinate	23° 32' 24.31" / 84° 36' 09.95"
---------------	-----------------------------------	----------------	---------------------------------

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

Test start date	11.09.2025/ 12:00	Test completion date	13.09.2025/ 16:30
-----------------	-------------------	----------------------	-------------------

### --Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Chloride (as Cl)	EPIC/LAB/SOP/PE/01/00	%	0.030	-
2.	Mercury (as Hg)	USEPA 3050 B 1996	mg/kg	BOL(MDL-0.005)	-

### --Test result End --

### Operational Status

Unit was Operational During sampling.

Analysed by - Ishika Singh

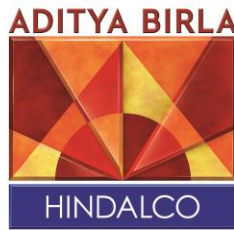


Reviewed by  
(B.N. Kumar)  
Technical Head

Issued by  
(Suresh 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 be 'Basudev Gangopadhyay', written over a horizontal line.

**Basudev Gangopadhyay**  
**AVP (Planning, Environment & Compliance)**

## Annexure 4

Production, Mined Out, Back Filled and Over Burden removal from April 2025 to September 2025								
S No	Name of the Mines	Mining lease area (ha)	Production Capacity (MT)*	Lease Period*	Production (MT)	Mined out area (ha)	Backfilled area (ha)	Over burden (Cu.M)
1	Bagru Bauxite Mine	75.41	85000	22.01.1974 to 31.03.2030	NIL	NIL	NIL	NIL
2	Bhusar Bauxite Mine	65.31	280000	11.07.1981 to 31.03.2030	79390	0.21	0.45	87427.68
3	Hisri (New) Bauxite Mine	14.55	100000	19.07.1981 to 31.03.2030	41829	0.11	0.23	13246.30
4	Pakhar (8.09) Bauxite Mine	8.09	80000	16.05.1973 to 31.03.2030	NIL	NIL	NIL	NIL
5	Pakhar (35.12) Bauxite Mine	35.12	200000	17.04.1975 to 31.03.2030	NIL	NIL	NIL	NIL
6	Pakhar (115.13) Bauxite Mine	115.13	300000	19.07.1996 to 31.03.2030	124975	1.58	0.50	153576.56
7	Sherangdag-A Bauxite Mine	155.81	260000	16.10.1974 to 31.03.2030	500	0.03	0.01	0.00
8	Serangdag-B Bauxite Mine	77.89	100000	04.10.1978 to 31.03.2030	57100	2.01	1.60	70755.24
9	Jalim & Sanai Bauxite Mine	12.14	50000	16.10.1974 to 31.03.2030	8547	0.13	0.10	8842.10
10	Gurdari Bauxite Mine	584.19	325000	23.03.1985 to 22.03.2035	94470	4.30	3.31	125642.99
11	Kujam - I Bauxite Mine	80.87	150000	13.03.2006 to 12.03.2056	NIL	NIL	NIL	NIL
12	Kujam - II Bauxite Mine	157.38	300000	24.03.2006 to 23.03.2056	63140	1.67	0.51	56988.56
13	Amtipani Bauxite Mine	190.95	150000	13.03.2006 to 12.03.2056	93765	3.168	1.21	209999.64



**Annexure 4**

<b>Minerals &amp; Minerals Limited</b>								
14	Pakhar (109.507) Bauxite Mine	109.507	280000	26.07.2008 to 25.07.2058	100280	1.630	0.72	175833.99
15	Pakhar (15.58) Bauxite Mine	15.58	60000	28.04.1965 to 31.03.2030	NIL	NIL	NIL	NIL
16	Bimarla Bauxite Mine	134.526	300000	18.07.2009 to 17.07.2059	77100	0.849	0.30	62788.97
17	Amtipani Chirodih Bauxite Mine	130.01	450000	11.01.2017 to 10.01.2067	157400	5.320	4.600	218030.43

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



**Basudev Gangopadhyay**  
**AVP (Planning, Environment and Compliance)**

## Annexure-5

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

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

S. No	Description	Budget (in Rupees) FY 2025-26 (From Apr'25 to Sep'25)	Actual (in Rupees) FY 2025-26 (From Apr'25 to Sep'25)
1	Pollution Control and Environmental Monitoring	1,71,00,000	59,45,184
2	Reclamation/ Back filing & Rehabilitation**	2,04,00,000	1,19,00,000
3	Green belt, Plantation & Water sprinkling arrangement	1,20,00,000	42,73,045
4	Rural Development	7,92,00,000	2,59,84,599

\*\*Part of OB removed cost



Basudev Gangopadhyay  
AVP (Planning, Environment & Compliance)





## ENVIRONMENT POLICY

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

To achieve this, we shall:

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

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

Satish Pai

MD, Hindalco Industries Limited

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