

HIL/LHD/ENV/MoEF&CC/404

Date: 24th November 2025

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

Sub: Six Monthly EC Compliance Report for 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 27th November 2012.

Dear Sir,

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

A handwritten signature in blue ink, appearing to read "Basudev Gangopadhyay".

Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)

Enclosure: - As Above

CC: ro.ranchi-mef@gov.in, mef@ori.nic.in, mef@nic.in, mef.or@nic.in, mscb.cpcb@nic.in, zokolkatta.cpcb@nic.in, ranchijspcb@gmail.com, roranchi47@gmail.com

Name of the Project	: Pakhar Bauxite Mine (115.13 ha) M/s Hindalco Industries Limited
Environment Clearance No. & date	: J-11015/406/2007-IA. II(M), dated 27.11.2012
Period of Compliance Report	: From 1st April 2025 to 30th 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 31st 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 31st 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.

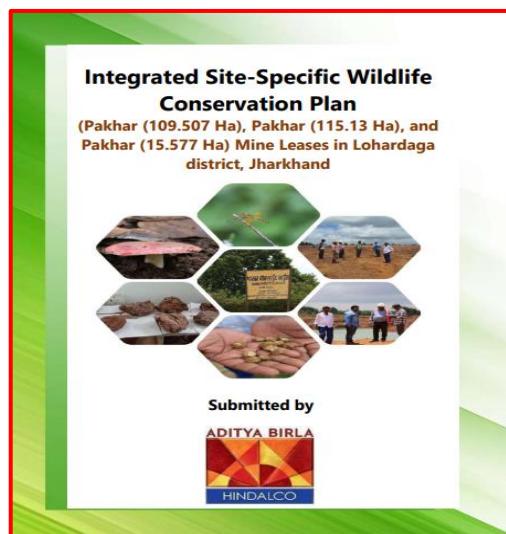
Reply: - Land acquisition is being done with permission of competent authority of State Government i.e. concerned Deputy Commissioner (D.C.) under CNT Act. The land lease agreement is being done with raiyat (Landowner) after permission of State Govt with provision of returning the land as per the norms 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 2nd 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, Bhubaneshwar 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 Nal lah 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.



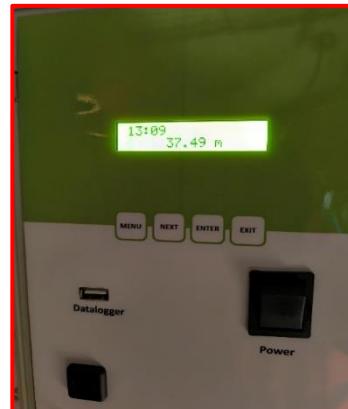
Water Tanker

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.



Condition xviii: - Appropriate mitigative measures should be taken to prevent pollution of the Chaupat Nadi, the Kisko Nadi and the Shankh Nadi in consultation with the State Pollution Control Board.

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

Condition xix: - The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of ground water, required for the project.

Reply: - We are not using ground water for mining operation. Rainwater harvesting ponds with proper fencing have been already constructed in the mine premises. Rainwater harvested during rainy season is being used for sprinkling on haul roads and raising plantation.

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



NOC for Ground Water

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

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

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

Condition xxi: - Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.

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



Tarpaulin covered vehicle

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

Reply: - Wet drilling is in practice.



Wet drilling

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

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

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

Reply: - Water sprinkling is being carried out regularly at mineral handling area, loading and unloading areas to control the dust.



Water sprinkling through tanker.

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

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

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

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

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

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

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

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

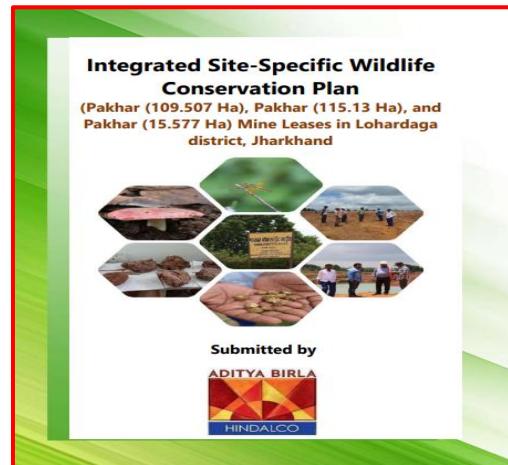
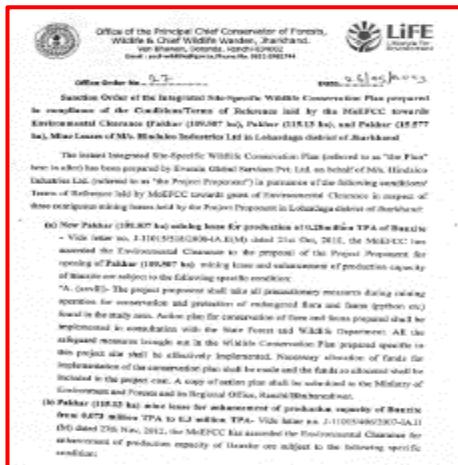
Condition xxviii: - The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna namely python, leaf monkey (*Presbytis phayrei*) etc. spotted in the study area. The critical

habitats in the area including dens of python, fox and bear should be protected by adopting appropriate wildlife conservation measures and the conservation plan prepared specific to this project in consultation with the State Forest and Wildlife Department should effectively address the same. All the safeguard measures brought out in the Wildlife Conservation Plan prepared specific to this project site shall be effectively implemented in consultation with the State Forest and Wildlife Department. A copy of the approved wildlife conservation plan shall be submitted to the Ministry and its Regional Office, Bhubaneswar within 3 months.

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

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

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



Integrated Site-specific Wildlife Conservation for Pakhar Group of Mines

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

Reply: - We believe that the wellbeing of all the labors working within the site should be taken care of on a priority basis, so that they can work in a stress-free environment. Therefore, all the necessary infrastructure and basic facilities mentioned above are being taken care of.

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

Reply: - Noted and being adhered. We have established four ambient air quality monitoring stations in the core zone as well as buffer zone. Monitoring of Ambient Air Quality and Treated Water is being carried out by NABL accredited Laboratory and reported to the concerned authorities. Monitoring Report is attached herewith as **Annexure 2**. Six monthly EC compliance along with Environmental monitoring reports is being uploaded on company website regularly.

A Display board is already installed near the mine gate office. We have also installed an online PM10 analyzer at mine site.

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

Reply: - Mining Plan along with progressive mine closure plan has been approved by Indian Bureau of Mines. Final Mine Closure Plan will be submitted in due time as per applicable guidelines and timelines mentioned in MCDR/IBM guidelines who are competent authority to approve the same. Based on present resource estimate and peak rated production capacity mentioned in EC, Mining operation is being carried out.

General Conditions: -

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

Reply: - Noted.

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

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

Condition iii: - At least four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10micron i.e., PM10) and 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 Parisad/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.

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

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

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

Condition xvi: - The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Office of the Ministry of Environment and Forests, 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)

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



Analytical Test Certificate

Annexure - 2

Unique Lab Report No.	TC1288725000000364	Discipline	Chemical
Report Unique ID	RL0136251838	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
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 (Scope of Inspection/ Test)

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

1. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42" E 84° 36' 50.33" N
2. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88" E 84° 36' 06.71" N
3. Location C	Near Mine Block-B, Quarry No - 6	GPS coordinate	23° 32' 51.14" E 84° 36' 58.76" N
4. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 05.36" E 84° 37' 04.76" N

Date(s) of performance of the laboratory activities

Test start date	17.04.2025/ 11:15	Test completion date	23.04.2025/ 17:30
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-Test Result -

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-22) 2022	µg/m ³	82.00	80.94	79.92	77.96	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	38.87	36.67	34.81	33.38	50(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	07.91	07.37	07.08	07.86	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	24.51	23.51	23.53	26.35	80(24 hr)
5.	Ozone (O ₃)	IS:5182 (P-08) 2019	µg/m ³	32.65	31.68	30.71	29.74	100(1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	48.02	46.75	46.12	44.95	400(24 hr)
7.	Lead (Pb)	IS:5182 (P-22) 2019	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS:5182 (P-26) 2020	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
9.	Arsenic (As)	USEPA/IO 3.2:1999	µg/m ³	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	-

-Test result End -

Prescribed Limit
Operational Status
Analysed by - A. T. Birla

Environmental (Protection) Rules-1986, Schedule VII.

Unit was Operational During sampling.

Checked by
(A. T. Birla)
Technical Head

Verified by
(A. T. Birla)
Laboratory Head

Authorized Signatory

Page 1 of 3

Comments Note: 1. The laboratory accepts responsibility for content of this report. 2. Test performed at laboratory's permanent facility. 3. Specific environmental conditions as method required and results refer to the sample tested as prescribed time & time. 4. The test report shall not be reproduced further in part or as the full as used in the court of law. 5. Any complaint about this report should be communicated in writing within 10 days of its issue. 6. Test facility of EPIC LabTech Pvt. Ltd. will be subject to inspection/audit only. 7. All samples are subjected to Random Interference and non-compliance of the laboratory does not exceed the testing and sampling charges. 8. Operator does not supply environmental of the tested product by laboratory. Under no circumstances, laboratory accepts any claim for loss or damage of this report. 9. When the results are from external provider are marked as * small.



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

References of Quality Management System (Copy of Transparency Card)

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°
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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' 24.47" / 84° 36' 00.33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88" / 84° 36' 05.71"
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
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→ Test Result →

SL	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12) 2004	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/APV/01/10	mg/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-

→ Test Result End →

Prescribed Limit
Operational Status
Analyzed by - I.K. Birla



Checked by
(I.K. Birla)
Technical Head

Method B issued by
(Ankit Das)
Laboratory Head

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



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 issued 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

References of Quality Management System (Steps of Inexibility Cross)			
Customer Registration No.	EPIC/OTH/0138	Sample Booking Number	EPIC-251809
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/ 17:50
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 Bunglapur 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 Prashiksha Vidyalaya Bunglapur Village	GPS coordinate	23° 32' 46.59" / 84° 38' 00.39"			
S. Location D	Near Utkarmit Rajkiya Prashiksha Vidyalaya Dumrapur 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	

-Test Result -								
Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12) 2004	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)
3.	Carbon Monoxide (CO)	EPIC/LAB/901NAPK/1/06	mg/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)

--Test Result End --

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

Analysed by -AK SHRI




Checked by
(S. K. Suri)
Technical Head


Verified by
(B. K. Suri)
Quality Control Head

Authorised Signatory
EPIC LabTech Pvt. Ltd.,
Ranchi, Jharkhand



Analytical Test Certificate

Unique Lab Report No.	TC128872500000366	Discipline	Chemical
Report Unique ID	RL0138251640	Group	Water
Issue date/time	24.04.2025/ 11:15	Sub Group	Drinking Water

Report issued to

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

Contact Person	Mr. Ankit Das
Contact Number	+91 9971034775
Email Id	ankit.das@odityabirlo.com
Order Date	31.03.2025/10:10
Order Number	12312313888

Submissions of Quality Management Section (State of Feasibility Phase)

Customer Registration No. EPIC/OTH/0136 Sample Booking Number EPIC-251640
Sample(s) Code 251640 Sample Receipt (DVT) 17/04/2026/10:48

Sampling References

Sampling Item Codes	BAU001	Ref. of Sampling Plan	EPIC/LAB/R/036
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 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

These first suspended terms fit the analysis.

Environmental Conditions during sampling

Weather conditions Clear Temperature (°C) 26 Illuminance (lx) 48 Wind direction 200°-300°

Scanning 1 μ m² with 1000 nano-ellipsoids[3]

Sampling location(s) with no coordinates

Rate(s) of performance of the laboratories

Test start date: 22.04.2025/11:10 Test completion date: 23.04.2025/12:00

Test Results

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 ₃)	IS 3025 (P-23) 2019	mg/l	96.00	200	600
9.	Total Hardness (as CaCO ₃)	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 ₄)	IS 3025 (P-24/Sec-1) 2022	mg/l	08.40	200	400
13.	Nitrate (as NO ₃)	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



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
Contact Number
Email Id
Order Date
Order Number

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

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.

Analyzed by: Pratima Kumar/ Ankit Das




Pratima
Kumar
Ankit Das
Technical Head



10/04/2025
Ankit Das
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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						
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. Ankut Das				
	Contact Number	+91 9971034775				
	Email Id	ankut.das@adityabirla.com				
	Order Date	31.03.2025/ 10:10				
	Order Number	13612313868				
Reference 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/ 10:46			
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	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.	Diektrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.03	No relaxation
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.005)	0.01	No relaxation
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	125.0	No relaxation
12.	Chlopyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	30.0	No relaxation
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	3.0	No relaxation



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

15. Gamma-HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	100	BDL(MDL-0.5)	2.0	No relaxation
16. Malathion	EPIC/LAB/SOP/WA/01/00	100	BDL(MDL-0.5)	199.0	Relaxation
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	100	BDL(MDL-0.2)	0.3	No relaxation
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	100	BDL(MDL-0.5)	1.0	No relaxation
19. Phorate	EPIC/LAB/SOP/WA/01/00	100	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	100	BDL(MDL-0.5)	1.0	No relaxation
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	100	BDL(MDL-0.05)	0.4	No relaxation

-Test Result End -

Prescribed Limit: 05.05.2021

Operational Status: Unit was Operational During sampling.

Analysed by -Pratik Kumar/ Anuj Kumar

Checked by
Pratik Kumar
Technical HeadVerified & issued by
Anuj Kumar
Laboratory HeadAuthentic Signature
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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-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 Given)

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-1) 1987, R-2009& 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
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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	Should 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

Unit was Operational During sampling

Analysed by - Pradeep Kumar/ Akash Kumar




 Checked by
 (P.K. Kumar)
 Technical Head


 Verified & Issued by
 (Bhushan Das)
 Laboratory Head

Authorised Signatory
 EPIC LabTech Pvt. Ltd.
 Ranchi, Jharkhand



Address:
C/o - R.R. Tripathi, Indrapuram,
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CIN - U74999HR2022PLC649444
Approved by
ISO 9001:2015
Certified by
ISO 9001:2015 and ISO 45001:2018

TC-128867

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 9871034775
	Email Id ankit.das@adityabirla.com
	Order Date 31.03.2025/ 10:10
	Order Number 13612313868

References of Quality Management System (Date of Issuability/ Date)

Customer Registration No.	EPIC/OTH/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, B-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°
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Sampling Location(s) with GPS coordinate(s)

5. Location A	Near Utkarsh Rajkanya Pratimik Vidyalaya Dumrapur 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	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	mm	<5	6	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 ₃)	IS 3025 (P-23) 2019	mg/l	130.00	200	900
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	170.00	200	800
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 ₄)	IS 3025 (P-24/Sec-1) 2022	mg/l	13.10	200	400
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	03.49	45	No maximum
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

General Notes: 1. The laboratory accepts responsibility for content of this report. 2. Test performed at laboratory's permanent facility at specific environmental conditions as per required and results will be only in the sample tested in particular Date & time. 3. The Test report shall not be reproduced full or in part & must be used as proof of the result of test. 4. Any complaint about this report should be communicated in writing within 10 days of its issue. 5. Test facility of EPIC LabTech Pvt. Ltd. will be limited to intended activities only. 6. All disputes are subject to Jharkhand jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges. 7. Owner does not carry endorsement of the tested product by laboratory. Unlike re-test chances, laboratory accepts only caused by use or misuse of this report. 8. When the results are from external provider no mark on "mark".

Abbreviations - BDL: Below Detectable Limit, MDL: Minimum Detectable Limit, U.LaQ: Limit of Quantification.



Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0138251842	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

References of Quality Management System (Site of Traceability Data)

Customer Registration No.	EPIC/DTH/0138	Sample Booking Number	EPIC-251842
Sample(s) Code	251842	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 %	45	Wind direction	260°-80°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Utkarsh Rajkoya Prathmik Vidyalaya Dumrapur Village	GPS coordinate	23°33'36.90" E 84°37'27.19"
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Data(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	Acceptable Limit	Limits Permissible limit
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	BDL(mol-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(mol-0.1)	0.03	0.2
3.	Boron	IS 3025 (P-57):2021	mg/l	BDL(mol-0.1)	0.5	1.0
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(mol-0.2)	0.5	No relaxation
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(mol-0.05)	0.1	No relaxation
Group-Residues and Contaminants in Water						Sub Group-Pesticides
6.	Aalachlor	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(mol-0.5)	20	No relaxation
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(mol-0.5)	2.0	No relaxation
8.	Dieidrin	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(mol-0.02)	0.03	No relaxation
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(mol-0.005)	0.01	No relaxation
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(mol-0.02)	0.04	No relaxation
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(mol-0.5)	125.0	No relaxation
12.	Chlopyrifos	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(mol-0.5)	30.0	No relaxation
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(mol-0.02)	0.04	No relaxation
14.	Ethion	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(mol-0.5)	3.0	No relaxation

Comments: 1. The laboratory accepts responsibility for content of this report. 2. Test performed at laboratory's permanent facility at specific environmental condition as method required and results relate only to the specific test(s) as prescribed this is true. 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 dispute about this report should be communicated to writing within 10 days of its issue. 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to one and a half times of the bill. 6. All samples are subjected to known limitations and maximum liability of the laboratory does not exceed testing and sampling charges. 7. Operator does not apply enhancement of the tested product by laboratory. Under no circumstances, laboratory accepts any kind of losses or claims of this report. 8. When the results are from external provider are marked as "final".



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(HDL-0.5)	2.0	No relaxation
16. Malathion	EPIC/LAB/SOP/WA/01/00	µg/L	BDL(HDL-0.5)	100.0	No relaxation
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/L	BDL(HDL-0.25)	0.3	No relaxation
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/L	BDL(HDL-0.5)	1.0	No relaxation
19. Phorate	EPIC/LAB/SOP/WA/01/00	µg/L	BDL(HDL-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(HDL-0.5)	1.0	No relaxation
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/L	BDL(HDL-0.05)	0.4	No relaxation

-Test Result End--

Prescribed Limit IS 10500:2021

Operational Status Unit was Operational During sampling.

Analysed by -Pratik Kumar/ Analytical

Checked by
(B.N. Kumar)
Technical Head
Verified by
(Ankit Das)
Laboratory HeadAuthorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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	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		

References of Quality Management System (Steps of Traceability Data)			
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 Utkarsh Rajya Pramukh Vidyayalaya Dumrapur 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--

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

Analysed by - Pratik Kumar / Akash Kumar



Checked by
(Pratik Kumar)
Technical Head



Verified by
(Akash Kumar)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





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RAN - AANCE3611W123
GST - 204AANCE3611W123

Accredited by -
NABL, MPA, NABL-NCV, NABL-NCV-Accredited
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 17025:2018

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@edityabiria.com
Order Date
31.03.2025/ 10:10
Order Number
13612313868

References of Quality Management System (Days of Traceability Data)

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° 00' 33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88" / 84° 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/ 10:45	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 _{2.5})	IS:5182 (P-23) 2022	µg/m ³	77.28	84.57	89.38	82.02	100 (4 hr)
2.	Fine Particulate Matter (PM ₁₀)	IS:5182 (P-34) 2018	µg/m ³	37.96	42.19	39.18	33.30	60 (34 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	10.50	11.14	12.50	08.58	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	23.52	25.95	18.62	21.15	80 (24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	30.74	32.03	37.21	35.92	400 (24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	26.38	21.39	24.95	27.09	180 (1 hr)
7.	Lead (Pb)	IS:5182 (P-22) 2019	µg/m ³	BDL	(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	1.0 (34 hr)
8.	Nickel (Ni)	IS:5182 (P-26) 2020	µg/m ³	BDL	(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	-
9.	Arsenic (As)	USEPA 40 3.2-1999	µg/m ³	BDL	(MDL-0.001)	(MDL-0.001)	(MDL-0.001)	(MDL-0.001)

-Test Results End -

Prescribed Limit Environmental (Protection) Rules-1996, Schedule V.

Operational Status Unit was Operational During sampling.

Analyzed by - AK Seha

Reviewed by
AK Seha
Technical Head

Issued by
Mr. Ankit Das
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

Page 3 of 6



EPIC LabTech Private Limited

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PAN - AAHCES93UM
GST - 20AAHCES9361M124

Admitted by -
Ranjan Singh Patnaik, Director
Certified by -
ISO 9001:2015 and ISO 17025:2018

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 9671034775	Email Id ankit.das@adityabirla.com					
	Order Date 31.03.2025/ 10:10	Order Number 13612313868						
References of Quality Management System (Days of Traceability Data)								
Customer Registration No.	EPIC/OTH/0171	Sample Booking Number	EPIC-252011					
Sample(s) Code	252011 (A) (B) (C) (D)	Sample Receipt (D/T)	19.05.2025/ 10:22					
Sampling References								
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036					
Sampling Start (D/T)	19.05.2025/ 11:28	Sampling End (D/T)	19.05.2025/ 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°					
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	19.05.2025/ 10:45	Test completion date	19.05.2025/ 10:46					
-Test Results-								
Sl	Test Parameters	Method used	Unit	A	B	C	D	Limits
1.	Benzene (C ₆ H ₆)	(S:5182/P-11) 2006	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	(S:5182/P-12) 2004	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/API/01/00	mg/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-
-Test Results End -								

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

Analyzed by - A.K. Singh


Analyzed by
(A.K. Singh)
Technical Head





TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000504	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 99771834775	Email Id ankit.das@adityabirla.com					
	Order Date 31.03.2025/ 10:10	Order Number 13612313868						
References of Quality Management System (Date of Issuability 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)	13.05.2025/ 12:15	Sampling End (D/T)	13.05.2025/ 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°					
Sampling Location(s) with GPS coordinate(s)								
S. Location A	Near Bunglapur 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°37'26.46"					
S. Location C	Near Uttam Rajkiya Prathmik Vidyalaya Bunglapur Village	GPS coordinate	23°32'46.59" / 84°36'00.39"					
S. Location D	Near Uttam Rajkiya Prathmik Vidyalaya Dumrapur Village	GPS coordinate	23°33'38.14" / 84°37'30.33"					
Data(s) of performance of the laboratory activities								
Test start date	13.05.2025/ 10:56	Test completion date	18.05.2025/ 10:50					
-Test Results-								
Sl	Test Parameters	Method used	Unit	A	B	C	D	Limits
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	72.49	79.37	74.64	70.33	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	38.08	36.08	33.99	37.22	80 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	07.45	10.21	12.31	11.07	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-08) 2022	µg/m ³	24.29	21.83	23.22	26.56	80 (24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	37.86	40.45	36.24	35.27	400 (24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	25.31	30.56	23.88	22.46	180 (1 hr)
7.	Lead (Pb)	IS:5182 (P-22) 2019	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182 (P-26) 2020	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)
9.	Arsenic (As)	USEPA 10.3.2:1999	ng/m ³	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	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 Sofia

Reviewed by
(A.K. Sofia)
Technical Head



Issue by
Akash Kumar
Technical Head
Authorized Signatory
EPIC LabTech Pvt. Ltd., Ranchi

Jharkhand



Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0171252012	Group	Atmospheric Pollution
Issue date/time	13.05.2025/ 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 (Date of Issuability 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 %	46	Wind direction	260°-80°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapur 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' 26.46"
S. Location C	Near Utkarmit Rajkya Prachinik Vidyalaya Bunglapur Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.39"
S. Location D	Near Utkarmit Rajkya Prachinik Vidyalaya Dumrapur Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.39"

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 ₆ H ₆)	IS 5182(P-11) 2006	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS 5182(P-12) 2004	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AR/01/00	mg/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-

-Test Results End -

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

Operational Status Unit was Operational During sampling.

Analysed by - AK Seha


 Reviewed by
(AK Seha)
Technical Head


 Issued by
Ankit Das
Laboratory Head
Authorized Signature
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

**Analytical Test Certificate**

Unique Lab Report No.	TC1288725000000505	Discipline	Chemical
Report Unique ID	R10171252013	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@kudityabiria.com
Order Date
31.03.2025/ 10:10
Order Number
13612313868

References of Quality Management System (Steps of Traceability Doc)

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/ 06:38
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 9089:1981 (RA 2020) & CPCB Method S.O. 50 (E) dated 11/01/2010		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	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' 09.36" / 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/ 10:36
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-Test Results-

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	L ₁₀ (Day time)	IS: 9089:1981	dB (A)	52.9	55.2	48.2	58.2	75
2.	L ₁₀ (Night time)	IS: 9089:1981	dB (A)	40.7	38.7	36.4	44.6	70

-Test Results End -

Prescribed Limit
Operational Status
Analysed by -AKS

Reviewed by
(A.K. Singh)
Technical Head

Issued by
Gopal Das
Quality Head
Authorized Signatory
EPIC LabTech Pvt. Ltd.
Panchkula, Haryana



EPIC LabTech Private Limited

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C/o - R.K. Tripathi, Jharkhand,
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epiclabtech@gmail.com

CIN - U74999JH2022PTC079625
PAN - AAHC33871M
GST - 20AANCE001M0225

Accredited by -
NABL, certificate number: 11-12887
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018



TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000687	Discipline	Chemical
Report Unique ID	RL0204252415	Group	Atmospheric Pollution
Issue date/time	13.06.2025/ 10:10	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 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 Doc)

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/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' 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 ₁₀)	IS:5182 (P-23) 2022	µg/m ³	85.71	80.17	83.40	76.01	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	37.91	35.06	36.94	33.15	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	09.79	10.57	10.18	11.35	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	22.20	23.25	26.43	24.31	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	50.32	51.30	47.40	45.45	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	38.72	37.56	35.24	32.91	180(1 hr)
7.	Lead (Pb)	IS:5182 (P-22) 2019	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS:5182 (P-26) 2020	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
9.	Arsenic (As)	USEPA ID 3.2:2009	µg/m ³	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	-

-Test Results End-

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

Operational Status Unit was Operational During sampling.

Analyzed by - Archana Kumar


Reviewed by
Archana Kumar
Technical Head


Issued by
Archana Kumar
Authorized Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

Page 1 of 1

Contractual Notes | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility, at specific environmental condition, as method required and results relate only to the sample tested as 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. Test facility of EPIC LabTech Pvt. Ltd. will be limited to ambient air only | 6. All samples are subjected to Benthic Bioassay and maximum validity 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 claim by use or misuse of this report | 8. When the results are from external provider are marked as * mark | 9. Abbreviation - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), Log (Log of Quantification)



EPIC LabTech Private Limited

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98357 88677
91049 72364
epiclabtech@gmail.com

CIN: U74999JH2022PTC036625 Accredited by:
Bhartiya State Pollution Control Board
Certified by:
ISO 17025:2017 and ISO 9001:2015

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 9871034775 Email Id ankit.das@adityabirla.com Order Date 31.03.2025/ 10:10 Order Number 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/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' 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	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 ₆ H ₆)	IS:5182(P-11)2006	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12)2004	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/APH/01/00	mg/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-

-Test Results End -

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

Operational Status Unit was Operational During sampling.

Analyzed by - Archana Suman


Reviewed by
(A.K. Suman)
Technical Head




Issued by
(Archana Suman)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC | 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 issued 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 (QMS) of Toyota Diesel

Customer Registration No. EPIC/OTH/0004 Sample Booking Number EPIC-252416
Sampled At Code 252416 (A)(8)(C)(D) Sample Receipt (D/T) 10.08.2025/11:10

Sample References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/006
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/conditions of sample	Recent samples/2 were fit for analysis		

Environmental Condition during sampling

Mean temperature (°C) 26.0 Mean humidity (%) 50.0 Wind direction 300.0–100.0

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Near Bunglepurt 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 Uttamrit Rajkoya Prathmik Vidyalaya Bunglepurt Village	GPS coordinate	22° 32' 46.59" / 84° 36' 00.39"
S. Location D	Near Vidyavardhini Rajkoya Prathmik Vidyalaya Dangmarg Village	GPS coordinate	22° 32' 38.14" / 84° 37' 30.33"

Outcomes of performance of the laboratory activities

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

Sl.	Test Parameters	Method used	Unit	Test Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	63.19	65.70	68.01	66.83	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	28.51	26.96	28.87	31.05	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	07.05	06.22	07.44	08.61	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	19.03	17.97	20.08	21.14	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-39) 2018	µg/m ³	43.83	45.13	40.58	39.93	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-08) 2019	µg/m ³	27.10	25.94	28.27	30.20	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	
9.	Arsenic (As)	USEPA/IO 3.2:1999	ng/m ³	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	

Prescribed Limit Environmental (Protection) Rules, 1986, Schedule VI.

Archived by - [Archives Gemini](#)

Reviewed by
(E.A. Kumar)
Institute of Geol.

12
3/23/16/23
Issued by
Hilary Gao

Authorized Signatory
EPIC LabTech Pvt. Ltd



EPIC LabTech Private Limited

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CIN - U74999JH2022PTC055555 Accredited by -
Statewise 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	RL0204252416	Group	Atmospheric Pollution					
Issue date/time	13.06.2025/ 10:10	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 MINE	Contact Person Mr. Ankit Das	Contact Number +919971034775	Email Id ankit.das@adityabirla.com					
	Order Date 31.03.2025/ 10:10	Order Number 13612313868						
References of Quality Management System (Days of Issuability Date)								
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°					
Sampling Location(s) with GPS coordinate(s)								
S. Location A	Near Bunglapur Village	GPS coordinate	22°32'42.29" / 84°36'54.23"					
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	22°33'11.75" / 84°37'28.46"					
S. Location C	Near Utkarmit Raksha Prathmik Vidyalaya Bunglapur Village	GPS coordinate	22°32'46.99" / 84°36'00.39"					
S. Location D	Near Utkarmit Raksha Prathmik Vidyalaya Dumrapur Village	GPS coordinate	22°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	A	B	C	D	Limits
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12) 2004	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/HAR/01/00	mg/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-
-Test Results End -								

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

Operational Status Unit was Operational During sampling.

Analyzed by - AK Seha




Reviewed by
(A.K. Seha)
Technical Head


Signed by
Ankit Das
Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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

• 0651-4660292
• 98357 86477
• 93649 73994
• epiclabtech@gmail.com

CIN - U74888JH2022PTC019625 | Accredited by -
Jharkhand State Pollution Control Board
Certified by -
ISO 17025:2017 and ISO 9001:2015

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 Mr. Ankit Das	Contact Number +91 9971034775	Email Id ankit.das@adityabirla.com
References of Quality Management System (Date of Issuability Date)			
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 5.0.50 (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°
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
-Test Results-			
Sl.	Test Parameters	Method used	Results
1.	L _{eq}	IS: 9989:1981	dB (A) A B Limits
			74.4 72.3 85
--Test Results End --			
Prescribed Limit			
Operational Status			
Analyzed by - AK Das			
			
Reviewed by (AK Kumar) Technical Head			
			
Issued by (Ankit Das) Quality Head			
Authorized Signatory EPIC LabTech Pvt. Ltd. Ranchi, Jharkhand			



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CIN - U74999MH2008PTC078885
PAN - AAHCES87CM
GST - 25AAHCES87CM123

Accredited by -
ISO, license number 15, 12887
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000540	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 (Days of Traceability Data)

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	Received 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' 05.36" / 84° 37' 04.76"

Data(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 ₁₀)	IS:5182 (P-23) 2022	µg/m ³	84.19	79.46	82.36	75.47	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	36.36	34.25	35.79	31.97	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	08.73	09.07	09.47	10.24	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	22.14	22.04	25.25	23.18	80 (24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	49.30	50.42	46.22	44.26	400 (24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	37.85	36.26	34.35	31.80	180 (1 hr)
7.	Lead (Pb)	IS:5182 (P-22) 2019	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182 (P-26) 2020	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)
9.	Arsenic (As)	USEPA 10.3.2:2009	ng/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)

-Test Results End -

Prescribed Limit: Environmental (Protection) Rules-1996, Schedule VII.
Operational Status: Unit was Operational During sampling.

Analyzed by - Vishal Kumar

Reviewed by
(Vishal Kumar)
Technical Head

Issued by
(Ankit Das)
Authorized Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.

Branch: Jaiparganj

Page 1 of 1



Analytical 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 9871034775	Email Id ankit.das@adityabirla.com					
	Order Date 31.03.2025/ 10:10	Order Number 13612313868						
References of Quality Management System (Steps of Traceability Detail)								
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/ 12:15	Sampling End (D/T)	07.07.2025/ 09:10					
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)	25					
		Humidity %	60					
		Wind direction	220°-40°					
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	09.07.2025/ 12:11	Test completion date	14.07.2025/ 14:10					
-Test Results-								
Sl.	Test Parameters	Method used	Unit	A	B	C	D	Limits
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12) 2004	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AN/01/00	mg/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-
-Test Results End -								

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Kumar




Reviewed by
Vishal Kumar
Technical Test





TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000641	Discipline	Chemical
Report Unique ID	RL02312528942	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@udityabiru.com
	Order Date	31.03.2025/ 10:10
	Order Number	13612313868

References of Quality Management System (Copy of Traceability Document)

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	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	09.07.2025/ 11:37	Sampling End (D/T)	09.07.2025/ 11:41
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 Bunglapur Village	GPS coordinate	23° 32' 42.29" / 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.76" / 84° 37' 28.46"
S. Location C	Near Utkarsh Rajkiya Prashiksha Vidyalaya Bunglapur Village	GPS coordinate	23° 32' 46.89" / 84° 36' 00.39"
S. Location D	Near Utkarsh Rajkiya Prashiksha Vidyalaya Dumrapur 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 ₁₀)	IS:5182 (P-23) 2022	µg/m ³	62.45	64.38	67.57	65.63	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	27.59	29.16	28.07	30.44	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	06.82	07.97	07.20	07.95	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	18.95	16.86	20.00	21.02	80 (24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	42.58	44.26	39.78	38.65	400 (24 hr)
6.	Ozone (O ₃)	IS:5182 (P-08) 2019	µg/m ³	26.08	24.81	27.35	29.58	180 (1 hr)
7.	Lead (Pb)	IS:5182 (P-22) 2019	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0 (24 hr)
8.	Nickel (Ni)	IS:5382 (P-26) 2020	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)
9.	Arsenic (As)	USEPA 10.2.2:1999	ng/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)

-Test Results End -

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mongaraj


 Reviewed by
(E.K. Kumar)
Technical Head


 Issued by
(Deepak Saini)
Laboratory Head

Authorized Signatory

EPIC LabTech Private Limited

Page 2 of 1

Important Notes: 1. The laboratory accepts responsibility for the content of this report. 2. Test performed at laboratory's convenient factory. 3. Sampled environmental conditions are not required and results relate only to the sample tested in prescribed Date & time. 4. The Test report shall not be reproduced (full or in part) & can't be used as proof of environmental issue. 5. Any litigation above this report should be conducted in writing within 10 days of its issue. 6. Test facility of EPIC LabTech Pvt. Ltd. will be treated to be in a secured area. 7. All samples are subjected to Random Verification and maximum liability of the laboratory does not exceed the testing and sampling charges. 8. Options does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any claim by use or misuse of this report. 9. When the results are from external provider are marked as "narr". 10. Abbreviation - BDL (Below Detection Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantification).



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@uditvibhav.com
Order Date
31.03.2025/ 10:10
Order Number
13612313868

References of Quality Management System (Steps of Traceability Data)

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 Bunglapur 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 Prachinik Vidyalaya Bunglapur Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.30"
S. Location D	Near Utkarmit Rajkiya Prachinik Vidyalaya Dumrapur Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.30"

Data(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 ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12) 2004	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/5091AP/01/00	mg/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-

-Test Results End -

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Kumar


 Reviewed by
(Vishal Kumar)
Technical Head




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CIN - U74999IN222PTC05585
PAN - AAHCCE381TM
SET - 23AAHCCE381TM12X

Accredited by -
NABL, Lab. certificate number IC-12862
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12867

Sampled Test Certificate

Unique Lab Report No.	TC1286725000000542	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 (Copy 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/ 14:30
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" / 64° 36' 30.05"
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Data(s) of performance of the laboratory activities

Test start date	09.07.2025/ 12:20	Test completion date	14.07.2025/ 15:00
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--Test Result--

Sl.	Test Parameters	Method used	Unit	Results	Acceptance limit	Permissible limit
1.	pH value at 25.1°C	IS 3025 (P-11) 2022	-	6.61	5.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 2004	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 ₃)	IS 3025 (P-23) 2019	mg/l	94.00	300	300
9.	Total Hardness (as CaCO ₃)	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) 1998	mg/l	BDL (NDL-0.4)	0.7	1
12.	Sulphate (as SO ₄ ²⁻)	IS 3025 (P-24/Sec-1) 2022	mg/l	8.00	200	400
13.	Nitrate (as NO ₃ ⁻)	APHA 4520 B 2023	mg/l	2.03	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL (NDL-0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3520 Mg E 2023	mg/l	14.09	30	100

Page 1 of 2

Important Notes : 1. The laboratory accepts responsibility for content of this report. 2. Test performed at laboratory's permanent facility at specific environmental condition at test time required and results relate only to the sample tested as prescribed Date & time. 3. The Test report shall not be reproduced full or in part. 4. No responsibility accepted in the event of loss. 5. Any complaint about this report should be communicated in writing within 10 days of its issue. 6. Test facility of EPIC LabTech Pvt. Ltd. will be tested to functional accuracy only. 7. All disputes are subject to Ranchi jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges. 8. Ourselves does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any责任 for use or misuse of this report. 9. When the results are from external provider are marked as * mark. 10. Abbreviations - BDL (Below Detectable Limit), NDL (Non-Detectable Limit), Log (Base of Logarithm).



Analytical Test Certificate

Unique Lab Report No.	TC1288725000000842	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 9871034775
ankit.das@adityabirla.com
31.03.2025/ 10:10
13612313868

Group-Hesidues and Contaminants in Water

				Sub Group- Trace Metals Elements		
16.	Copper (as Cu)	APHA 2111-B 2023	mg/l	BDL(MDL-0.2)	0.05	1.5
17.	Iron (as Fe)	APHA 2111-B 2023	mg/l	BDL(MDL-0.1)	1.0	No relaxation
18.	Lead (as Pb)	APHA 2111-B 2023	mg/l	BDL(MDL-0.01)	0.01	No relaxation
19.	Cadmium (as Cd)	APHA 2111-B 2023	mg/l	BDL(MDL-0.003)	0.003	No relaxation
20.	Total Chromium (as Cr)	APHA 2111-B 2023	mg/l	BDL(MDL-0.05)	0.05	No relaxation
21.	Nickel (as Ni)	APHA 2111-B 2023	mg/l	BDL(MDL-0.02)	0.02	No relaxation
22.	Total Arsenic (as As)	APHA 2114-B 2023	mg/l	BDL(MDL-0.005)	0.01	0.05
23.	Selenium (as Se)	APHA 2114-B 2023	mg/l	BDL(MDL-0.005)	0.01	No relaxation
24.	Manganese (as Mn)	APHA 2111-B 2023	mg/l	BDL(MDL-0.09)	0.1	0.3
25.	Zinc (as Zn)	APHA 2111-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 Mengraj



Approved by
(B.K. Kumar)
Technical Head

Issued by
(Bimal Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





Environmental 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
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 (Step 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, H-2003		
Description/condition of sample			Recent 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/ 16:00
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-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible limit

Group-Residues and Contaminants in Water

1. Fluoride (as F)	APHA-4500 F-C 2023	mg/l	BDL(MDL-0.1)	1.0	1.5
Sub Group-Trace Metals Elements					
2. Aluminum	IS 3025 (P-86) 2019	mg/l	BDL(MDL-0.1)	0.03	0.2
3. Boron	IS 3025 (P-27) 2021	mg/l	BDL(MDL-0.1)	0.5	1.0
4. Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(MDL-0.2)	0.5	No relaxation
5. Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(MDL-0.05)	0.1	No relaxation

Group-Residues and Contaminants in Water

6. Aluminum	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(MDL-0.5)	25	No relaxation
Sub Group-Pesticides					
7. Atrazine	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(MDL-0.5)	2.0	No relaxation
8. Dieldrin	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(MDL-0.02)	0.03	No relaxation
9. Alpha HCH	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(MDL-0.005)	0.01	No relaxation
10. Beta HCH	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(MDL-0.02)	0.04	No relaxation
11. Butachlor	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(MDL-0.5)	125.0	No relaxation
12. Chlorynphos	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(MDL-0.5)	30.0	No relaxation
13. Delta HCH	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(MDL-0.02)	0.04	No relaxation
14. Ethion	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(MDL-0.5)	3.0	No relaxation
15. Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(MDL-0.5)	2.0	No relaxation

Contracted Note | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility of specific environmental conditions as method required and results made only to the sample tested is presented 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. Test facility of EPIC LabTech Pvt. Ltd. will be limited to limited amount only | 6. All samples are subject to basic jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges | 7. Operator does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any责任 for use or misuse of this report | 8. When the results are from external provider are marked as "extern" | 9. Abbreviations - BDL (Below Detectable Limit), MDL (Detectable Limit), SDQ (Sum of Quantities) | Page 1 of 8



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. Ankut Das
+91 9971034775
ankut.das@adityabirla.com
31.03.2025/ 10:10
13612313868

16. Malathion	EPIC/LAB/SOP/WA/01/00	ppb	BOL(MOL-0.5)	190.0	No relaxation
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	ppb	BOL(MOL-0.2)	0.3	No relaxation
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	ppb	BOL(MOL-0.5)	1.0	No relaxation
19. Phorate	EPIC/LAB/SOP/WA/01/00	ppb	BOL(MOL-0.5)	2.0	No relaxation
20. CDT (o, p and p, p'-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	ppb	BOL(MOL-0.5)	1.0	No relaxation
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	ppb	BOL(MOL-0.05)	0.4	No relaxation

--Test result End --

Prescribed Limit
Operational Status
Analysed by - Vimal Mangaraj

IS 10500:2021
Unit was Operational During sampling


Reviewed by
(EX. Aman)
Technical Head


Issued by
(Vimal Mangaraj)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

Address:
C/o - R.K. Tripathi, Ranchi,
Ranchi - 834005, India

Tel: 0651 4886292
98357 88677
93049 72994
Email: epiclabtech@gmail.com

CIN - U74999JH2022PTC079683 Accredited by -
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 14001:2015

Environmental 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
13812313868

References of Quality Management System (Date of Issuability Date)

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/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/	Test completion date	14.07.2025/ 10:05
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--Test Result--

S.	Test Parameters	Method used	Unit	Results	Limits
1.	Total Coliform	IS 10500:2021	Per 100 ml	Not Detected	Shall not be detectable in any 100 ml sample
2.	E.Coli	IS 10500:2021	Per 100 ml	Not Detected	

--Test result End --

Prescribed Limit

IS 10500:2021
Unit was Operational During sampling.

Analysed by -Sujata Kumar


Reviewed by
(SK Kumar)
Technical Head


Reviewed by
(Vishal Kumar)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





Environmental 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 9871034775 Email Id ankit.das@adityabirla.com Order Date 31.03.2025/ 10:10 Order Number 13612313868							
References of Quality Management System (Class of Traceability 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)	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°					
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 -8	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					
-Test Results-								
Sl	Test Parameters	Method used	Unit	A	B	C	D	Limits
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12) 2004	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01/00	mg/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-
-Test Results End -								

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangat

Reviewed by
(EX. Kumar)
Technical Head



TC-12887

Sampled 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 Data)

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°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapur 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 Rakhiya Prathmik Vidyalaya Bunglapur Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.39"
S. Location D	Near Utkarmit Rakhiya Prathmik Vidyalaya Dumrapur 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 ₁₀)	IS:5182 (P-23) 2022	µg/m ³	61.44	63.40	66.59	64.63	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	26.61	25.17	27.05	29.51	50 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	06.33	07.44	07.06	07.83	50 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	17.58	15.50	19.61	20.71	80 (24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	42.02	43.70	39.21	38.09	400 (24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	25.76	24.49	27.03	29.26	180 (1 hr)
7.	Lead (Pb)	IS:5182 (P-23) 2019	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182 (P-26) 2020	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0 (24 hr)
9.	Arsenic (As)	USEPA ID 3.2:1999	µg/m ³	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	1.0 (24 hr)

-Test Results End -

Prescribed Limit
 Operational Status

Environmental (Protection) Rules-1986, Schedule VI.

Unit was Operational During sampling

Analyzed by - Vishal Mangraj


 Reviewed by
 (A.K. Kumar)
 Technical Head


 Issued by
 (A.K. Kumar)
 Laboratory Head

Authorized Signature

EPIC LabTech Private Limited

Page 1 of 2

Disclaimer Note: 1. The laboratory accepts responsibility for content of this report : a. that performed at laboratory's premises, b. that results are as per method required and results relate only to the sample tested as prescribed Date & time. 2. The Test report shall not be reproduced full or in part without written permission of the court of law. 3. Any complaint about this report should be communicated in writing within 10 days of its issue. 4. Test facility of EPIC LabTech Pvt. Ltd. will be limited to chemical analysis only. 5. All disputes are subject to Jharkhand Judicial Arbitration and Mediation Board. 6. The laboratory does not exceed the testing and sampling charges. 7. Optimum does not imply enhancement of the tested product by laboratory. Under no circumstances, laboratory accepts any reward by sale or issue of test report. 8. When the results are true natural provider are marked as "mark". 9. Abbreviations - TDS: Dissolved Dissolved Solids, NTSC: Dissolved Dissolved Nitrate, TOC: Dissolved Dissolved Oxidizable Carbon.



Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02632534002	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 (Copy of Traceability Chart)

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/ 12:15	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	22° 32' 42.29" / 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75" / 84° 37' 26.46"
S. Location C	Near Utkarsh Rajkiya Prachinik Vidyalaya Bunglapart Village	GPS coordinate	22° 32' 46.59" / 84° 36' 00.39"
S. Location D	Near Utkarsh Rajkiya Prachinik 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.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12) 2004	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/API/01/00	mg/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-

-Test Results End-

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangarji

Reviewed by
(E.K. Kumar)
Technical HeadIssued by
(Ankit Das)
Laboratory Head

Authorized Signatory

EPIC LabTech Pvt. Ltd.,
Ranchi, Jharkhand

**Sample Details and Contact**

Unique Lab Report No.	TC1288725000000997	Discipline	Chemical
Report Unique ID	PL02632534003	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	13612313888

References of Quality Management System (Days of Traceability Date)

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/ 16:00	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)

5. Location A	Near Utkarsh Rupiya Prathmik Vidyalaya Dumka part 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
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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	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	275.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	45.33	200	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	128.00	200	600
9.	Total Hardness (as CaCO ₃)	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-25) 1986	mg/l	BDL(MDL-0.4)	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1) 2022	mg/l	13.10	200	400
13.	Nitrate (as NO ₃)	APHA 4500-N 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	0.003
15.	Magnesium (as Mg)	APHA 2500-Mg E 2023	mg/l	17.01	30	100



Address:
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CIN - U74999JH2022PTC079485
RAN - AAHC3671M
GST - 25AAHC3671M12X

Admitted by -
Ranu, via certificate Number 1C - 12887
Shrikhandi Suresh Prakash Kumar Incept
Certified by -
ISO 9001:2015 and IS45000:2018

An ISO 9001:2015 Certified Lab

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
13812313868

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

-Test result End -

Prescribed Limit

Operational Status

Analysed by - Pappu Kumar



IS 10500:2023

(Unit was Operational During sampling.

Reviewed by
(P.K. Kumar)
Technical Head
Issued by
(Ankit Das)
Laboratory HeadAuthorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

Page 2 of 2



Analytical 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	+919971034775
	Email Id	ankit.das@adityabirla.com
	Order Date	31.03.2025/ 10:10
	Order Number	13612313868

References of Quality Management System (Days of Traceability Data)

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)

5. Location A	Near Utkarsh Raksha Prathmik Vidyalaya Dumrapur Village	GPS coordinate	22°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		Acceptable Limit	Permissible limit
				Result	SDL/MDL		
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	SDL/MDL-0.1	1.0	1.5	

Group-Residues and Contaminants in Water

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

Group-Residues and Contaminants in Water

6.	Aalachlor	EPIC/LAB/SOP/WA/01/00	µg/l	SDL/MDL-0.5	20	No relaxation
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	SDL/MDL-0.5	2.0	No relaxation
8.	Dieldrin	EPIC/LAB/SOP/WA/01/00	µg/l	SDL/MDL-0.02	0.03	No relaxation
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	SDL/MDL-0.008	0.01	No relaxation
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	SDL/MDL-0.02	0.04	No relaxation
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	SDL/MDL-0.5	125.0	No relaxation
12.	Chlopyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	SDL/MDL-0.5	30.0	No relaxation
13.	Delta-HCH	EPIC/LAB/SOP/WA/01/00	µg/l	SDL/MDL-0.02	0.04	No relaxation
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	SDL/MDL-0.5	3.0	No relaxation



Environmental 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		Contact Person	Mr. Ankit Das		
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE		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	MDL	BDL(MDL-0.5)	2.0	No relaxation
16. Malathion	EPIC/LAB/SOP/WA/01/00	MDL	BDL(MDL-0.5)	190.0	No relaxation
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	MDL	BDL(MDL-0.2)	0.3	No relaxation
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	MDL	BDL(MDL-0.5)	1.0	No relaxation
19. Phorate	EPIC/LAB/SOP/WA/01/00	MDL	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	MDL	BDL(MDL-0.5)	1.0	No relaxation
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	MDL	BDL(MDL-0.05)	0.4	No relaxation

-Test result End -

Prescribed Limit

15.10500/2021

Operational Status

Unit was Operational During sampling.




Reviewed by
(Pappa Kumar)
Technical Head


Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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CIN: U74999JH2022PTC079483 | Accredited by -
State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 17025:2018

Analytical 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 9671034775
Email Id
ankit.das@adityabirla.com
Order Date
31.03.2025/ 10:10
Order Number
13612313868

References of Quality Management System (Days of Traceability Data)

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 Rajkya Prathmik Vidyalaya Dumrasapar 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/ 10:30	Test completion date	23.08.2025/ 11:15
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—Test Result—

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Total Coliform	IS 10500:2021	Per 100 ml	Not Detected	Should not be detectable in any 100 ml sample
2.	E.Coli	IS 10500:2021	Per 100 ml	Not Detected	

—Test result End —

Prescribed Limit
IS 10500:2021

Operational Status
Unit was Operational During sampling.

Analyzed by - Sojata Kumar


Reported by
(S. Kumar)
Technical Head


Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





Environmental Test Certificate

Unique Lab Report No.	TC1288725000000998	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 +919971034775 Email id ankit.das@adityabirla.com Order Date 31.03.2025/ 10:10 Order Number 13612313868
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References of Quality Management System (Date of Traceability Date)

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/ 16:40
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" E 84° 36' 34.82"
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Data(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 25.9°C	IS 3025 (P-11) 2022	-	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-56) 2006	mg/l	80.00	150.0
4.	Oil & Grease	IS 3025 (P-36) 2021	mg/l	BDL(MDL-04)	10.0
5.	Total Suspended Solid	IS 3025 (P-17) 2022	mg/l	42.00	50.0
6.	Phosphate	IS 3025 (P-31/Sec-1) 2022	mg/l	0.58	-
7.	Zinc	APHA 3111B 2023	mg/l	BDL(MDL-04)	-

-Test result End -

Prescribed Limit
Operational Status
Analyzed by -Pappu Kumar

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

UNIT was Operational During Sampling.


Reviewed by
(S.N. Kumar)
Technical Head


Issued by
(S.N. Kumar)
Laboratory Head
Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





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@adityabirla.com Order Date 31.03.2025/ 10:10 Order Number 13612313868
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References of Quality Management System (Steps of Traceability Chart)

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" N 84° 36' 34.82" E
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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.	Total Dissolve Solids (TDS)	IS 3025 (P-16) 2023	mg/l	220.00	-
2.	Dissolve Oxygen (DO)	IS 3025 (P-36) 2006	mg/l	0.9	-

-Test result End -

Prescribed Limit
Operational Status
Analyzed by - Pappu Kumar

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

Unit was Operational During sampling.


Analyzed by
(Pappu Kumar)
Technical Head


Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



**Environmental Test Report**

Unique Lab Report No.	TC1288725000001178	Discipline	Chemical
Report Unique ID	R102912537017	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 Mr. Ankit Das
	Contact Number +91 9871034775
	Email Id ankit.das@adityasbirla.com
	Order Date 31.03.2025/ 10:10
	Order Number 13612313866

References of Quality Management System (Steps of Traceability Data)

Customer Registration No.	EPIC/OTH/0291	Sample Booking Number	EPIC-2537017
Sample(s) Code	2537017 (A) (B) (C) (D)	Sample Receipt (D/T)	13.09.2025/ 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/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 %	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° 00' 00.33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88" / 84° 06' 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"

Detail(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 ₁₀)	IS:5182 (P-23) 2022	µg/m ³	57.96	56.91	56.92	59.92	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	27.75	25.29	26.62	23.79	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-03) 2023	µg/m ³	09.11	10.24	09.44	11.32	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	17.83	18.97	17.83	18.86	80 (24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	24.09	24.37	24.65	24.93	400 (24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	13.36	13.68	13.99	14.63	100 (1 hr)
7.	Lead (Pb)	IS:5182 (P-22) 2019	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182 (P-26) 2020	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0 (24 hr)
9.	Arsenic (As)	USEPA 10.3.2:1999	µg/m ³	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	MDL-0.001

-Test Results End -

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

Analyzed by - Vishal Mangat

Reported by
(S.K. Mangat)
Technical Head
Issued by
(S.K. Mangat)
Laboratory HeadAuthorized Signatory
EPIC LabTech Pvt. Ltd.

Page 1 of 1

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Identified Test Category

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RID2912537017	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: Mr. Ankit Das
Contact Number: +919971034775
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-2537017
Sample(s) Code	2537017 (A) (B) (C) (D)	Sample Receipt (D/T)	13.09.2025/ 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 %	65	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°36'58.76"
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.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12) 2004	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/ISORAP/01/00	mg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-

-Test Results End -

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

Operational Status: Unit was Operational During sampling.

Analysed by: Vimal Mangat


 Reviewed by
(E.K. Kumar)
Technical Head


 Issued by
(Ankit Das)
Laboratory Head

 Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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	Contact Person	Mr. Ankit Das
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 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 Transparency Chart)			
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°

Sampling Location(s) with GPS coordinate(s)							
S. Location A	Near Bunglapur Village			GPS coordinate	23° 32' 42.29" / 84° 36' 04.23"		
S. Location B	Vatri Shed (Near K-10)			GPS coordinate	23° 33' 11.75" / 84° 37' 28.46"		
S. Location C	Near Utkarmit Rajkya Prathmik Vidyalaya Bunglapur Village			GPS coordinate	23° 32' 46.50" / 84° 36' 00.39"		
S. Location D	Near Utkarmit Rajkya Prathmik Vidyalaya Dumrapur Village			GPS coordinate	23° 33' 38.14" / 84° 37' 30.39"		

Details of performance of the laboratory activities							
Test start date	11.09.2025/ 11:35			Test completion date	13.09.2025/ 16:00		

Sl.	Test Parameters	Method used	Unit	Test Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	63.85	65.45	68.88	66.38	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	28.16	27.14	29.43	31.68	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	07.44	08.17	08.51	09.59	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-08) 2022	µg/m ³	19.64	17.53	21.59	22.53	80 (24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	24.37	24.09	24.65	24.93	400 (24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	15.90	16.54	16.86	17.81	180 (1 hr)
7.	Lead (Pb)	IS:5182 (P-22) 2019	µg/m ³	BDL (MDL 0.1)	BDL (MDL 0.1)	BDL (MDL 0.1)	BDL (MDL 0.1)	1.0 (24 hr)
8.	Nickel (Ni)	IS:5582 (P-26) 2020	ng/m ³	BDL (MDL 0.1)	BDL (MDL 0.1)	BDL (MDL 0.1)	BDL (MDL 0.1)	
9.	Arsenic (As)	USEPA ID 3.2:1999	ng/m ³	BDL (MDL 0.001)	BDL (MDL 0.001)	BDL (MDL 0.001)	BDL (MDL 0.001)	

-Test Results End-

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

Analysed by - Ishita Kargave


Reviewed by
(S.K. Kargave)
Technical Head


Issued by
(S.K. Kargave)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.

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Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical					
Report Unique ID	PL02912537018	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 (QMS) / Traceability Data								
Customer Registration No.	EPIC/OTH/0293	Sample Booking Number	EPIC-2537018					
Sample(s) Code	2537018 (A) (B) (C) (D)	Sample Receipt (D/T)	13.09.2025/ 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°					
Sampling Location(s) with GPS coordinate(s)								
S. Location A	Near Bunglapur 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' 26.46"					
S. Location C	Near Utkarmit Rajkiya Prathmik Vidyalaya Bunglapur Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.39"					
S. Location D	Near Utkarmit Rajkiya Prathmik Vidyalaya Dumrapur Village	GPS coordinate	23° 33' 56.14" / 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					
Test Results								
Sl.	Test Parameters	Method used	Unit	A	B	C	D	Limits
1.	Benzene (C ₆ H ₆)	IS:5182(P-11)2006	µg/m ³	BDL (MDL-0.2)	BDL (MDL-0.2)	BDL (MDL-0.2)	BDL (MDL-0.2)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12)2004	ng/m ³	BDL (MDL-0.2)	BDL (MDL-0.2)	BDL (MDL-0.2)	BDL (MDL-0.2)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AF/01/00	mg/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-
Test Results End								

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

Operational Status Unit was Operational During sampling.

Analysed by - Vichal Mongaraj


 Received by
(R.K. Karmal)
Technical Head


 Issued by
(R.K. Karmal)
Laboratory Head

 Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Analytical 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 (Days of Traceability Date)

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)

5. Location A	Near Bunglapur 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) 2023	-	5.93	-
2.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	25.0	-
3.	Calcium (as Ca)	IS 3025 (P-40) 1993	mg/l	6.41	-

Group - Residues and Contaminants in Water.

4.	Iron (as Fe)	APHA 2111 B 2023	Sub Group - Trace Metals Elements
			BDL(HDL-0.1)

-Test result End -

Operational Status

UNIT was Operational During sampling.

Analysed by - Pappu Kumar


 Reviewed by
Pappu Kumar
Technical Head


Page 1 of 1

Disclaimer Note | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility, at specific environmental condition as marked on report and results relate only to the sample tested in prescribed date & time | 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law | 4. Any complaint about this report should be communicated in writing within 10 days of its issue | 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to assessed amount only | 6. All the samples are subjected to Health, Safety and maximum liability of the laboratory does not exceed the testing and sampling charges | 7. Above does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any claim by user or receiver of this report | 8. When the results are from external provider are marked as "mark".

Measurement - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LOD (Limit of Quantitation)



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 833302
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 (Date of Issuability Date)

Customer Registration No.	EPIC/OTH/0291	Sample Booking Number	EPIC-2537019
Sample(s) Code	2537019	Sample Receipt (D/T)	11.09.2025/11:18

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 %	60	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bungapar Village	GPS coordinate	22° 32' 39.61" E 84° 38' 07.66" N
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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-30) 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-56) 2006	mg/l	44.0	-
5.	Total Suspended Solids (TSS)	IS 3025 (P-17) 2022	mg/l	48	-
6.	Oil & Grease	IS 3029 (P-30) 2021	mg/l	BDL(MDL-04)	-

Group - Residues and Contaminants in Water,	Sub Group - Trace Metals Elements
7. Aluminum (as Al)	BDL (MDL 0.1)

-Test result End -

Operational Status	Unit was Operational During sampling.
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Analysed by - Pappu Kumar




Analysed by
(Pappu Kumar)
Technical Head



Page 1 of 1

**Analytical 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	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	13612313868

References of Quality Management System (Cross of Traceability Chart)

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	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Block - B, Quarry No.03	GPS coordinate	23°32'24.31" N 84°38'09.95" E
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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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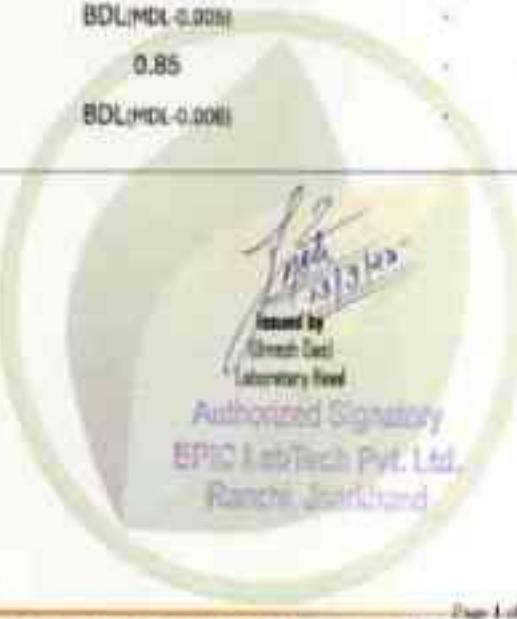
-Test Result-

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	µmho	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**

Analyzed by - Ishika Singh

Unit was Operational During sampling.


Reviewed by
AKASH KUMAR
Technical Head



EPIC LabTech Private Limited

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

CEST-AWEE222
CEST-B6477
CEST-72254
epiclabtech@gmail.com

CIN-U74999JH2222PTC011683 Accredited by:
State Pollution Control Board
Certified by:
ISO 9001:2015 and ISO 14001:2015

Sample Test Report

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
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9871034775
ankit.das@udityabiria.com
31.03.2025/ 10:10
13612313868

References of Quality Management System (Steps of Traceability Data)

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)	26	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.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.	Chloride (as Cl)	EPIC/LAB/SOP/PE/01/00	%	0.000	-
2.	Mercury (as Hg)	USEPA3050 B-1996	mg/kg	BDL(MDL-0.005)	-

-Test result End -

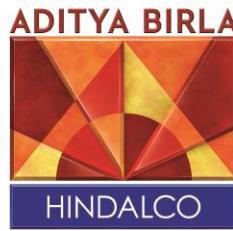
Operational Status:
Analyzed by - Ishika Singh

Unit was Operational During sampling.


Reviewed by
(B.S. Kumar)
Technical Head


Issued by
(Shashi 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.



Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)

Annexure 4

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

Annexure 4

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

*Static information about the mines included in the above table



Basudev Gangopadhyay
AVP (Planning, Environment and Compliance)

Annexure-5

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

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

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

**Part of OB removed cost



Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)



ENVIRONMENT POLICY

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

To achieve this, we shall:

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

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



Satish Pai
MD, Hindalco Industries Limited
Date : 9th August, 2022