

HIL/LHD/ENV/MoEF&CC/413

Date: 24<sup>th</sup> 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 Gurdari (584.19 Ha) Bauxite Mining project of M/s Hindalco Industries Limited, Gumla Jharkhand for the period from April 2025 to September 2025.

**Ref:** Environmental Clearance letter No. J-11015/136/2006-IA.II (M), dated 7<sup>th</sup> February 2007.

Dear Sir,

With reference to the above, we are submitting herewith the Compliance status report of EC conditions for **Gurdari (584.19 Ha)** Bauxite Mining project of **M/s Hindalco Industries Limited** located in Gumla, Jharkhand for the period from **April 2025 to September 2025** for your kind perusal please.

The lease details are below:

| Lease area (ha) | Production Capacity (MT) | Lease Period             |
|-----------------|--------------------------|--------------------------|
| 584.19          | 325000                   | 23.03.1985 to 22.03.2035 |

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](mailto:ro.ranchi-mef@gov.in), [mef@ori.nic.in](mailto:mef@ori.nic.in), [mef@nic.in](mailto:mef@nic.in), [mef.or@nic.in](mailto:mef.or@nic.in), [mscb.cpcb@nic.in](mailto:mscb.cpcb@nic.in), [zokolkatta.cpcb@nic.in](mailto:zokolkatta.cpcb@nic.in), [ranchijspcb@gmail.com](mailto:ranchijspcb@gmail.com), [roranchi47@gmail.com](mailto:roranchi47@gmail.com)

**Name of the Project** : **Gurdari Bauxite Mine (584.19 ha)**  
**M/s Hindalco Industries Limited,**

**Environment Clearance No & date** : **J-11015/136/2006-IA. II (M), dated 07.02.2007.**

**Period of compliance Report** : **From 1<sup>st</sup> April 2025 to 30<sup>th</sup> September 2025**

#### **A. Specific Conditions**

**Condition 1- All the conditions stipulated by the State Pollution Control Board in their NOC should be effectively implemented.**

**Reply to Condition 1** - Implementations of stipulated conditions in NOC are fulfilled post which consent to operate has been granted by SPCB from time to time. The existing consent to operate is valid up to 31.03.2027. Production of bauxite is within limits specified in Consent to Operate.

**Condition 2- 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 to Condition 2**- Land acquisition is being done with the 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 the norms set in the agreement. Thus, land acquisition has the approval of the State Government.

**Condition 3- The exploration shall be completed within 2.5 years and thereafter the proponent shall come up with a firm proposal for mining, based on the estimated reserves. The reclamation plan, post mine land use and progressive greenbelt development plan shall also be prepared and submitted with the revised proposal.**

**Reply to Condition 3**- Required exploration is already done. Mining plan/ Mining Scheme based on current reserves/resource estimate is duly approved by IBM. The reclamation plan, post mine land use and progressive greenbelt development plan have been covered in Mining Plan/Mining scheme which is approved by IBM.

**Condition 4- Mining shall not intersect groundwater. The mine working shall be restricted to ground water table. Prior approval of the Ministry of Environment & Forests and Central Ground Water Authority shall be obtained for mining below water table.**

**Reply to Condition 4-** 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 maintained in future also. Moreover, we regularly monitoring the groundwater table through the installation of a piezometer. A copy of the water level report is attached herewith as **Annexure-1**.

**Condition 5- Topsoil shall be stacked properly with proper slope with adequate measures and should be used for reclamation and rehabilitation of mined out areas.**

**Reply to Condition 5-** Topsoil is being stacked properly with proper slope as and when required for reclamation and rehabilitation. Sequential backfilling and reclamation of the mined-out area are being exercised for which topsoil is being spread on backfilled area for reclamation. 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**.

**Condition 6- The waste generated shall be concurrently backfilled in the mined-out area. There shall be no external OB dump. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forest on a six-month basis.**

**Reply to Condition 6-** 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 7- Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from mine working. 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 monsoon and maintained properly.**

**Garland drains (size, gradient and length) shall be constructed for mine pit 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 setting of silt material. Sedimentation pits should be constructed at the corners of the garland drains and desilted at regular intervals.**

**Reply to Condition 7-** To collect & manage rainwater during monsoon, part of mined out area is used as a 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.



Garland drain around mine pit.



Catch drain Near mine pit.

**Condition 8- Plantation shall be raised in an area of 78.44 ha including a green belt of adequate width by planting the native species around the ML area, roads, reclaimed area etc. in consultation with the local DFO / Agriculture Department. The density of the trees should be around 1500 plants per ha.**

**Reply to Condition 8-** Progressive plantation of native species is being carried out in and around mining lease, reclaimed area etc. in consultation with local forest department on a regular basis. During FY 2025-26 till September, a total of 7080 saplings have been planted on reclaimed areas. Cumulative 27.40 ha areas have been planted till date. In addition to this agricultural activity is going on reclaimed land as per the consent from the landowners. Rest to be complied during project period.



Plantation and Agriculture on Reclaimed land

**Condition 9- The project authority should implement suitable conservation measures to augment ground water resources in area in consultation with Regional Director, Central Ground Water Board.**

**Reply to Condition 9-** A detailed plan to augment groundwater has been prepared, and suitable measures like the creation of water harvesting ponds, etc., are being taken for the augmentation of groundwater in the area, in consultation with the Central Ground Water Board.



Rainwater Harvesting Pond.

**Condition 10-** Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring should be carried out four times in a year – pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to MOEF, Central Ground water Authority and Regional Director Central Ground Water Board.

**Reply to Condition 10-** We are not using ground water for mining purposes. Shallow depth mining is being carried out, hence there is no intersection of ground water table during the mining operation at present and in future. A piezometer has been installed for monitoring the ground water level. The Water level and water quality reports are being sent regularly to regional office of Ministry, CGWA and JSPCB. The same is attached herewith as **Annexure 1 & 2**



**Condition 11- Prior permission from the competent authority should be obtained for drawl of water from the surface water bodies.**

**Reply to Condition 11-** We are not using any water from natural streams/ ground water for mining operation. Rainwater harvesting ponds with proper fencing have been already constructed in the mine premises. Rainwater harvested during the 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 the same NOC and photographs of Rainwater harvesting ponds are attached below.

|   |   |   |
|---|---|---|
| भारत सरकार<br>जल शक्ति मंत्रालय<br>जल संरक्षण विभाग<br>केंद्रीय पुष्पि जल प्रधिकरण<br>GOVERNMENT OF INDIA<br>MINISTRY OF JAL SHAKTI<br>DEPARTMENT OF WATER RESOURCES,<br>RIVER DEVELOPMENT & GANGA REJUVENATION<br>CENTRAL GROUND WATER AUTHORITY |  |  |
| भूजल निकासी हेतु अनापत्ति प्रमाण पत्र<br>NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION  |   |   |
| PROJECT NAME GURDARI BAUXITE MINING   |   |   |
| PROJECT ADDRESS GURDARI BAUXITE MINING (584.19 HA) VILLAGES -<br>GURDARI, AMBAKONA, RAJADERA AND JANAWAL TEHSIL - BISHNUPUR   |   | PIN CODE 835302   |
| STATE JHARKHAND   | DISTRICT GUMLA  | TOWN/BLOCK<br>BISHNUPUR   |
| COMMUNICATION ADDRESS MINES DIVISION, COURT ROAD  |   |   |
| ADDRESS OF CGWB REGIONAL OFFICE 6th& 7th Floor, Lok Nayak Jai Prakash Bhawan, Frazer Road, Dak Banglow, Patna-800011, Bihar.  |   |   |
| 1. NOC NO. NOC/MIN/JH/2025/8319/R-3/3   | 2. DATE OF ISSUANCE 24/09/2025  |   |
| 3. APPLICATION NO. MIN/JH/2025/8319/R-3   | 4. APPLICATION TYPE Mining  |   |
| 5. PROJECT STATUS Existing Project  | 6. NOC TYPE Renew   |   |
| 7. VALID FROM 09/09/2025  | 8. VALID UP TO 08/09/2027   |   |
| 9. WATER QUALITY TYPE Fresh Water   | 10. AREA TYPE CATEGORY Safe (GWRE-2024)   |   |

#### NOC for Ground water Extraction

**Condition 12- Water monitoring both for quality and quantity shall be carried out at four locations namely one spring and three streams. Six monthly report should be submitted to the Ministry of Environment and Forest and its Regional Office located at Bhubaneshwar.**

**Reply to Condition 12-** Water Monitoring of Spring and Stream water are being monitored and Analysis report is attached as **Annexure 2**. Six monthly reports are being submitted regularly. Now, the Regional office of MoEF&CC is located in Ranchi.

**Condition 13- Vehicular emissions should be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and transportation of minerals. The vehicles should be covered with a tarpaulin and shall not be overloaded.**

**Reply to Condition 13-** 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. Photographs of Tarpaulin Covered Vehicle and PUC Certificate are attached below.



Tarpaulin covered Vehicle

| Pollution Under Control Certificate  |                              |                       |                           |  |                 |  |   |   |   |   |   |                  |                      |                |            |   |                       |     |                       |    |                |          |   |     |     |               |        |   |     |     |                              |         |
|--|------------------------------|-----------------------|---------------------------|--|-----------------|--|---|---|---|---|---|------------------|----------------------|----------------|------------|---|-----------------------|-----|-----------------------|----|----------------|----------|---|-----|-----|---------------|--------|---|-----|-----|------------------------------|---------|
| [See rules 115 (2)]  |                              |                       |                           |  |                 |  |   |   |   |   |   |                  |                      |                |            |   |                       |     |                       |    |                |          |   |     |     |               |        |   |     |     |                              |         |
| Authored by<br>Government of Jharkhand   |                              |                       |                           |  |                 |  |   |   |   |   |   |                  |                      |                |            |   |                       |     |                       |    |                |          |   |     |     |               |        |   |     |     |                              |         |
| Date   | 02/07/2025                   |                       |                           |  |                 |  |   |   |   |   |   |                  |                      |                |            |   |                       |     |                       |    |                |          |   |     |     |               |        |   |     |     |                              |         |
| Time   | 18:43:23 PM                  |                       |                           |  |                 |  |   |   |   |   |   |                  |                      |                |            |   |                       |     |                       |    |                |          |   |     |     |               |        |   |     |     |                              |         |
| Validity upto  | 01/07/2026                   |                       |                           |  |                 |  |   |   |   |   |   |                  |                      |                |            |   |                       |     |                       |    |                |          |   |     |     |               |        |   |     |     |                              |         |
| Certificate SL. No. : JH01900240000826<br>Registration No. : JH081623<br>Date of Registration : 29/06/2023<br>Month & Year of Manufacturing : February-2023<br>Valid Mobile Number : 9895113200<br>Emission Norms : BHM-IV STAGE VI<br>Fuel : DIESEL<br>PUC Code : JH0190024<br>GSTIN :<br>Fees : Rs.120.00<br>M/s Observation : No  |                              |                       |                           |  |                 |  |   |   |   |   |   |                  |                      |                |            |   |                       |     |                       |    |                |          |   |     |     |               |        |   |     |     |                              |         |
| Vehicle Photo with Registration plate<br>60 mm x 30 mm   |                              |                       |                           |  |                 |  |   |   |   |   |   |                  |                      |                |            |   |                       |     |                       |    |                |          |   |     |     |               |        |   |     |     |                              |         |
|  |                              |                       |                           |  |                 |  |   |   |   |   |   |                  |                      |                |            |   |                       |     |                       |    |                |          |   |     |     |               |        |   |     |     |                              |         |
| <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Pollutant (as applicable)</th> <th>Units (as applicable)</th> <th>Emission limits</th> <th>Measured Value (upto 2 decimal places)</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Idling Emissions</td> <td>Carbon Monoxide (CO)</td> <td>percentage (%)</td> <td rowspan="2">2500 ± 200</td> <td rowspan="2">-</td> </tr> <tr> <td>Hydrocarbon, (THC/HC)</td> <td>ppm</td> </tr> <tr> <td rowspan="2">High idling emissions</td> <td>CO</td> <td>percentage (%)</td> <td rowspan="2">1 ± 0.03</td> <td rowspan="2">-</td> </tr> <tr> <td>LEH</td> <td>RPM</td> </tr> <tr> <td rowspan="2">Smoke Density</td> <td>Lambda</td> <td>-</td> <td rowspan="2">0.7</td> <td rowspan="2">0.6</td> </tr> <tr> <td>Light absorption coefficient</td> <td>1/metre</td> </tr> </tbody> </table> |                              | Sr. No.               | Pollutant (as applicable) | Units (as applicable)                  | Emission limits | Measured Value (upto 2 decimal places) | 1 | 2 | 3 | 4 | 5 | Idling Emissions | Carbon Monoxide (CO) | percentage (%) | 2500 ± 200 | - | Hydrocarbon, (THC/HC) | ppm | High idling emissions | CO | percentage (%) | 1 ± 0.03 | - | LEH | RPM | Smoke Density | Lambda | - | 0.7 | 0.6 | Light absorption coefficient | 1/metre |
| Sr. No.  | Pollutant (as applicable)    | Units (as applicable) | Emission limits           | Measured Value (upto 2 decimal places) |                 |  |   |   |   |   |   |                  |                      |                |            |   |                       |     |                       |    |                |          |   |     |     |               |        |   |     |     |                              |         |
| 1  | 2                            | 3                     | 4                         | 5                                      |                 |  |   |   |   |   |   |                  |                      |                |            |   |                       |     |                       |    |                |          |   |     |     |               |        |   |     |     |                              |         |
| Idling Emissions   | Carbon Monoxide (CO)         | percentage (%)        | 2500 ± 200                | -                                      |                 |  |   |   |   |   |   |                  |                      |                |            |   |                       |     |                       |    |                |          |   |     |     |               |        |   |     |     |                              |         |
|  | Hydrocarbon, (THC/HC)        | ppm                   |                           |  |                 |  |   |   |   |   |   |                  |                      |                |            |   |                       |     |                       |    |                |          |   |     |     |               |        |   |     |     |                              |         |
| High idling emissions  | CO                           | percentage (%)        | 1 ± 0.03                  | -                                      |                 |  |   |   |   |   |   |                  |                      |                |            |   |                       |     |                       |    |                |          |   |     |     |               |        |   |     |     |                              |         |
|  | LEH                          | RPM                   |                           |  |                 |  |   |   |   |   |   |                  |                      |                |            |   |                       |     |                       |    |                |          |   |     |     |               |        |   |     |     |                              |         |
| Smoke Density  | Lambda                       | -                     | 0.7                       | 0.6                                    |                 |  |   |   |   |   |   |                  |                      |                |            |   |                       |     |                       |    |                |          |   |     |     |               |        |   |     |     |                              |         |
|  | Light absorption coefficient | 1/metre               |                           |  |                 |  |   |   |   |   |   |                  |                      |                |            |   |                       |     |                       |    |                |          |   |     |     |               |        |   |     |     |                              |         |
| This PUC certificate is system generated through the national register of motor vehicles and does not require any signature.   |                              |                       |                           |  |                 |  |   |   |   |   |   |                  |                      |                |            |   |                       |     |                       |    |                |          |   |     |     |               |        |   |     |     |                              |         |
| Note : 1. Vehicle owners to link their mobile numbers to registered vehicle by logging to <a href="https://puc.parivahan.gov.in">https://puc.parivahan.gov.in</a><br>Authorised Signature with stamp of PUC Operator   |                              |                       |                           |  |                 |  |   |   |   |   |   |                  |                      |                |            |   |                       |     |                       |    |                |          |   |     |     |               |        |   |     |     |                              |         |
| 60mm x 30 mm   |                              |                       |                           |  |                 |  |   |   |   |   |   |                  |                      |                |            |   |                       |     |                       |    |                |          |   |     |     |               |        |   |     |     |                              |         |

PUC Certificate

**Condition 14- Drills should either be operated with dust extractors or should be equipped with a water injection system.**

**Reply to Condition 14-** Wet drilling is in practice



Wet drilling is being carried out.

**Condition 15- Blasting operation should be carried out only during the daytime. Controlled blasting should be practiced. The mitigative measures for control of ground vibration and to arrest fly rocks and boulders should be implemented.**

**Reply to Condition 15-** 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 reduce the impact of the blast.

**Condition 16- Consent to operate should be obtained from SPCB prior to start of enhanced production from the mine.**

**Reply to Condition 16-** We have already obtained the Consent to Operate for Bauxite Ore as per production capacity mentioned in EC.

**Condition 17- Sewage treatment plant should be installed for the colony. ETP should also be provided for workshops and wastewater generated from mining operations.**

**Reply to Condition 17-** No wastewater is generated from our mining operation. However, only negligible amount of effluent is being generated from workshop and Oil & grease trap system is already installed for treatment of this effluent. The treated water is in close circuit and being reused for washing of vehicle in the workshop. We are not discharging any wastewater outside the mine lease area.

Furthermore, the quality of this treated water is being monitored regularly and the monitoring report is enclosed herewith as **Annexure 2**. The sewage water from domestic uses is being collected through individual Septic Tank and followed by Soak Pit.



Washing Ramp with Oil and Grease trap

**Condition 18- The project proponent should take all precautionary measures during mining operation for conservation and protection of endangered fauna such as Indian Python, Presbytis phayrei , Melsurus ursinus etc. Spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. The necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. A copy of the action plan may be submitted to the Ministry and its Regional Office within 3 months.**

**Reply to Condition 18-** 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.
3. Daily water sprinkling on haul road.
4. Transportation is carried out during the 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 Site-Specific Wildlife Conservation Plan (WLCP) 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. 48 dated 02.12.2021 for conservation and protection of flora and fauna in the core and buffer zone for Gurdari Bauxite Mine. A copy of same Approval letter has been submitted to your good office on 21.02.2022



**Office of the Principal Chief Conservator of Forests,  
Wildlife & Chief Wildlife Warden, Jharkhand**  
Jharkhand, India  
Email: [cccf@jharforest.nic.in](mailto:cccf@jharforest.nic.in) | Phone No. 0653-2682744

**Office Order No. 48**  
Dated: 02.12.2021

**General Order of the Action Plan for Conservation of Flora and Fauna prepared in compliance with the condition laid by the MoEFCC towards Environmental Clearance granted for expansion of Gurdari Bauxite Mine Project of M/s. Hindalco Industries Ltd. in Gurdari District of Jharkhand.**

The instant Action Plan for Conservation of Flora and Fauna (referred to as "the Plan" hereinafter) has been prepared by Gems Projects Pvt. Ltd. on behalf of M/s. Hindalco Industries Ltd., in pursuance of the Specific Condition laid under Environment (Approval) of Environment, Forest & Climate Change (MoEFCC), vide No. 2-1101/31/36/2006-SA (JDN) dated 07<sup>th</sup> February, 2007, granting Environmental Clearance for expansion of Gurdari Bauxite Mining Project (referred to as "the Project" hereinafter) for production capacity of 6.325 MTPA of Bauxite ore by open cut soil remoulding mining in mining lease area of 584.19 ha of M/s. Hindalco Industries Ltd. (referred to as "the Project Proponent" or "the PP" or "M/s. Hindalco Industries Ltd." hereinafter) in village(s) Gurdari, Ambonia, Keler, Rajendra and Jaiswali, Dist. Gomti, Jharkhand.

The aforesaid condition laid by the Central government reads as follows:

"4. (i) The project proponent should take all precautionary measures during mining operation for conservation and protection of endangered fauna such as Indian Python, Presbytis phayrei, Melsurus ursinus etc. spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. Necessary allocation of funds for implementation of the conservation plan shall be included in the project cost. Copy of action plan may be submitted to the Ministry and its Regional Office within three months."

The Plan was discussed with the representative of the Project Proponent and the forest official on 25.10.2021. It was unanimously decided that the Plan needs review. Regional Chief Conservator of Forests submitted the Revised Plan vide his letter no. 2941 dated 28.11.2021 to this office for its due sanction.

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**Site Specific Wildlife  
Conservation Plan  
for  
Gurdari Bauxite Mine (584.19 Ha)  
Bishnupur, Dist – Gomti, Jharkhand**

**Applicant**  
M/s Hindalco Industries Ltd.  
Court Road, Lohardaga, Jharkhand, 835302



**Principal Expert**  
**Pradeep Kumar, IFS**  
(Ex PCCF, Wildlife, Jharkhand & Chief Wildlife Warden, Jharkhand  
Ex Chairman, Jharkhand Biodiversity Board)

**Consultant**  
**Gems Projects Pvt.Ltd.**  
155/2, Lajpat Nagar, Near Lala Lajpat Rai School, Puriya, Agra, Uttar Pradesh – 282006  
Phone: +91-9403135263, +91-9314030700  
E-mail: [gems.projects@yaahoo.in](mailto:gems.projects@yaahoo.in), [reducanimpex@gmail.com](mailto:reducanimpex@gmail.com)  
[www.gemsprojects.in](http://www.gemsprojects.in)

Site Specific Wildlife Conservation Plan

**Condition 19- A Final Mine Closure plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forest 5 years in advance of final mine closure for approval.**

**Reply to Condition 19-** 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 guideline 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.

**B. General Conditions**

**Condition 1- No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forest.**

**Reply to Condition 1-** Noted.

**Condition 2- No change in the calendar plan including excavation, quantum of mineral bauxite and waste should be made.**

**Reply to Condition 2-** 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 3- Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RPM, SPM, SO<sub>2</sub>, NOx monitoring. Location of the stations should be decided based on the metrological 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 to Condition 3-** We have already established four ambient air quality monitoring stations in the core zone as well as the buffer zone. Monitoring is being carried out and reported to the concerned authorities. Monitoring Report is attached as **Annexure 2**.

**Condition 4- Data on ambient air quality (RPM, SPM, SO<sub>2</sub>, NOx) should be regularly submitted to the Ministry including its Regional office located at Bhubneshwar and the State Pollution Control Board / Central pollution Control Board once in six months.**

**Reply to Condition 4-** 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 5- Fugitive dust emission from all the sources should be controlled regularly. Water spraying arrangements on haul roads, loading and unloading and at transfer points should be provided and properly maintained.**

**Reply to Condition 5-** Water tankers have been provided for sprinkling of water on haul roads and active mining areas to suppress the fugitive dust. Water spraying at loading, unloading, etc. is also being done regularly.



Water Tanker for dust suppression

**Condition 6- Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operation of HEMM, etc. should be provided with ear plug / muffs.**

**Reply to Condition 6-** Noise monitoring is being done regularly. Workers engaged in the operation of HEMMs, etc., have also been provided with PPEs such as ear plugs and earmuffs. Monitoring of noise levels is being conducted at various locations of the work zone area. The report is attached as Annexure 2.

**Condition 7- Industrial wastewater (workshops and wastewater from the mine) Should be properly collected and treated so as to conform to the standards prescribed under GSR 422 (E) dated 19<sup>th</sup> May 1993 and 31<sup>st</sup> December 1993 or as amended from time to time. Oil and grease traps should be installed before discharge of workshop effluents.**

**Reply to Condition 7-** There is no industrial wastewater generation from mining operation. We are not discharging any wastewater outside the mine lease area. However, negligible amount of wastewater is generated in workshop from washing vehicles and Oil & grease trap system is already installed for treatment of this effluent. The treated water is in a closed circuit and being reused for washing vehicles in the workshop.

Furthermore, the quality of this treated water is monitored regularly, and all water parameters are within permissible limits. The monitoring report is attached herewith as **Annexure- 2**. Photograph of Oil and grease traps is already attached below.



Washing Ramp with Oil and Grease trap

**Condition 8- Personnel working in dusty areas should wear protective respiratory devices and they should also provide 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 to Condition 8-** 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 9- 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 to Condition 9-** 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 attached herewith as **Annexure 3**.

**Condition 10- The project authorities should inform the Regional Office located at Bhubaneshwar regarding the date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.**

**Reply to Condition 10-** This is an operating mine. Hence, the provision related to financial closure is not applicable. Now, the regional office of MoEF&CC is in Ranchi.

**Condition 11- The funds earmarked for environmental protection measures should be kept in separate accounts and should not be diverted for other purposes. Year-wise expenditure should be reported to the Ministry and its Regional Office located at Bhubaneswar.**

**Reply to Condition 11-** Every year, the funds earmarked for environmental protection measures are 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 12- The Regional Office of this Ministry located at Bhubaneshwar 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 to Condition 12-** Noted and Agreed.

**Condition 13- A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.**

**Reply to Condition 13-** Complied. A copy of the clearance letter has already been submitted.

**Condition 14- State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Center and Collector's office / Tehsildar's Office for 30 days.**

**Reply to Condition 14-** Noted. The EC Letter has been submitted to JSPCB for display of same at its regional office and other government offices.

**Condition 15-** The project authorities should advertise at least in two local newspapers widely circulated, one of which locality concerned, within 7days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment and Forests at <http://envfor.nic.in> and a copy of the same should be forwarded to the Regional Office of this Ministry located Bhubaneshwar.

**Reply to Condition 15-** 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 vide letter no HIL/GMO(M)/ENV/140 Dated 23.04.2007. Now, the regional office of MoEF&CC is in Ranchi.

**Piezometer Monitoring Report**

**Mine: Gurdari Bauxite Mine (584.19 Ha)**

| S No | Month  | Ground Water Level (BGL)<br>in meter |
|------|--------|--------------------------------------|
| 1    | Apr-25 | 33.52                                |
| 2    | May-25 | 33.57                                |
| 3    | Jun-25 | 33.05                                |
| 4    | Jul-25 | 32.73                                |
| 5    | Aug-25 | 32.53                                |
| 6    | Sep-25 | 32.89                                |





#### EPIC

|                       |                   |            |                       |
|-----------------------|-------------------|------------|-----------------------|
| Unique Lab Report No. | N/A               | Discipline | Chemical              |
| Report Unique ID      | RL0142251065      | Group      | Atmospheric Pollution |
| Issue date/time       | 26.04.2025/ 11:10 | Sub Group  | Ambient Air Quality   |

Recent human in-

M/s - HINDALCO INDUSTRIES LIMITED  
VILLAGE-COURT ROAD,  
POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA  
STATE-JHARKHAND, INDIA-835302  
MONITORING SITE-CHUNDRI 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: T9612233988

References of Quality Management Systems

Customer Registration No. EPIC/07H/0142 Sample Booking Number EPIC-251866  
Business/Code 251866 (A) (B) (C) (D) Sample Date/Time 18-04-2025/12:00

#### Resource References

|                      |  |                       |                        |
|----------------------|--|-----------------------|------------------------|
| Type of industry     | Bauxite Mines  | Ref. of Sampling Plan | EPIC/LAB/R036          |
| Sampling method used | IS 9182 and CPCB Air Manual Volume – 1 [NAAQW36/2012-13] |                       |                        |
| Sampling Start (D/T) | 17.04.2025/ 11:30  | Sampling End (D/T)    | 18.04.2025/ 07:05      |
| Mode of Sampling     | Conducted by Laboratory                                  | Sample collected by   | Mr. Karan Kumar & Team |

Description/condition of sample Receipt sample(s) were fit for analysis

#### Environmental Conditions during sampling

Weather conditions: Clear, Temperature (°C): 29, Humidity (%): 49, Wind direction: 270°, Wind speed (m/s): 0.5

#### Section 1 question(s) with EES mark(s) and

|               |                         |                 |                                 |
|---------------|-------------------------|-----------------|---------------------------------|
| 5. Location A | Near Mine Office        | GPS coordinates | 23° 18' 59.00" / 84° 14' 44.15" |
| 5. Location B | Near Kathawapatti Ph-23 | GPS coordinates | 23° 20' 48.11" / 84° 14' 16.11" |
| 5. Location C | Near Mine Weigh Bridge  | GPS coordinates | 23° 19' 09.00" / 84° 14' 40.30" |
| 5. Location D | Near Dhebi Kutumb       | GPS coordinates | 23° 18' 58.11" / 84° 15' 42.03" |

#### Role(s) of performers at the interview setting

Test start date: 19.04.2025/ 13:05 Last connection date: 25.04.2025/ 16:00  
→ See Results

| Sl. | Test Parameters                                  | Method used           | Unit              | Results   |           |           |           | Units |
|-----|--|-----------------------|-------------------|-----------|-----------|-----------|-----------|-------|
|     |  |                       |                   | A         | B         | C         | D         |       |
| 1.  | Benzene (C <sub>6</sub> H <sub>6</sub> )         | IS:1620(P-11):2000    | µg/m <sup>3</sup> | BOL       | SDL       | BOL       | BOL       | -     |
|     |  |                       |                   | (NDL-0.1) | (NDL-0.1) | (NDL-0.1) | (NDL-0.1) |       |
| 2.  | Benz (a) Pyrene (Bap)-<br>Particulate phase only | IS:6162P-12:2004      | ng/m <sup>3</sup> | BOL       | SDL       | BOL       | BOL       | -     |
|     |  |                       |                   | (NDL-0.1) | (NDL-0.1) | (NDL-0.1) | (NDL-0.1) |       |
| 3.  | Carbon Monoxide (CO)                             | EP/14/AMSDS/Part 1:19 | mg/m <sup>3</sup> | BOL       | SDL       | BOL       | BOL       | -     |
|     |  |                       |                   | (NDL-1.0) | (NDL-1.0) | (NDL-1.0) | (NDL-1.0) |       |

Environmental (Protection) Rules-2016, Schedule VI

#### ANSWER

✓  
Checked by  
(D. Ramey)

✓ 100%  
✓ 200%

Authorised Signatory  
EPC LabTech Pvt. Ltd.  
Branch - Dehradoon





Buddhist Trail Conference

|                       |                   |            |                |
|-----------------------|-------------------|------------|----------------|
| Unique Lab Report No. | TC128572500000354 | Discipline | Chemical       |
| Report Unique ID      | RL0142261588      | Group      | Water          |
| Issue date/time       | 26.04.2025/ 11:12 | Sub Group  | Drinking Water |

### Report from the

M/s - HINDALCO INDUSTRIES LIMITED  
VILLAGE-COURT ROAD,  
POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA  
STATE-BHARATIAND, INDIA 135202  
MONITORING SITE: GUARDARI BAUXITE MINE

Contact Person: Mr. Ankit Das  
Contact Number: +91 9871004775  
Email ID: ankit.das@adityabirla.com  
Order Date: 31.03.2025/19:53  
Order Number: 13612313868

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Sulfide-Grown Trace-Metal Sulfide

|                            |                  |      |                |       |               |
|----------------------------|------------------|------|----------------|-------|---------------|
| 16. Copper (as Cu)         | APHA 2111-B-2023 | mg/L | SDL(FeB-4.2)   | 0.05  | 1.5           |
| 17. Iron (as Fe)           | APHA 2111-B-2023 | mg/L | SDL(FeB-0.1)   | 1.0   | No regulation |
| 18. Lead (as Pb)           | APHA 2111-B-2023 | mg/L | SDL(FeB-0.01)  | 0.01  | No regulation |
| 19. Cadmium (as Cd)        | APHA 2111-B-2023 | mg/L | SDL(FeB-0.001) | 0.003 | No regulation |
| 20. Total Chromium (as Cr) | APHA 2111-B-2023 | mg/L | SDL(FeB-0.001) | 0.05  | No regulation |
| 21. Nickel (as Ni)         | APHA 2111-B-2023 | mg/L | SDL(FeB-0.001) | 0.02  | No regulation |
| 22. Total Arsenic (as As)  | APHA 2114-B-2023 | mg/L | SDL(FeB-0.001) | 0.01  | 0.05          |
| 23. Selenium (as Se)       | APHA 2114-B-2023 | mg/L | SDL(FeB-0.001) | 0.05  | No regulation |
| 24. Manganese (as Mn)      | APHA 2111-B-2023 | mg/L | SDL(FeB-0.001) | 0.1   | 0.2           |
| 25. Zinc (as Zn)           | APHA 2111-B-2023 | mg/L | SDL(FeB-0.001) | 0     | 10            |

476 *Journal of Health Politics*

Prescribed Until: 05/10/2024  
Concentrated Saline

Journal of Clinical Dentistry

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H. E. Howell  
January 2001

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Laboratory food  
Autoclavable  
EVO Lab-Tech Pvt. Ltd.  
Bengaluru, India





## EPIC An Agent of Good Government

|  |                       |                          |                |       |              |
|--|-----------------------|--------------------------|----------------|-------|--------------|
| Unique Lab Report No.  | WA                    | Discipline               | Chemical       |       |              |
| Report Unique ID   | RLB142251666          | Group                    | Water          |       |              |
| Issue date/time  | 26.04.2026/ 11:12     | Sub-Group                | Drinking Water |       |              |
| Report Issue to  |                       |                          |                |       |              |
| M/s - HINDALCO INDUSTRIES LIMITED<br>VILLAGE-COURT ROAD,<br>POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA,<br>STATE-JHARKHAND, INDIA 835302 | Contact Person        | Mr. Amit Das             |                |       |              |
| MONITORING SITE- GURDARI BAUROTE MINE  | Contact Number        | +91 9871634775           |                |       |              |
|  | Email ID              | amit.das@adityanilta.com |                |       |              |
|  | Order Date            | 31.03.2026/ 10:10        |                |       |              |
|  | Order Number          | 13802313866              |                |       |              |
| 15. Gamma-HCH(Lindane)   | EPIC/LAB/SOP/WA/01/00 | HF                       | BDL(HDL-LS)    | 0.0   | No detection |
| 16. Parathion  | EPIC/LAB/SOP/WA/01/00 | HF                       | BDL(HDL-LS)    | 100.0 | No detection |
| 17. Methyl parathion   | EPIC/LAB/SOP/WA/01/00 | HF                       | BDL(HDL-E2)    | 0.0   | No detection |
| 18. Monocrotophos  | EPIC/LAB/SOP/WA/01/00 | HF                       | BDL(HDL-LS)    | 1.0   | No detection |
| 19. Phorate  | EPIC/LAB/SOP/WA/01/00 | HF                       | BDL(HDL-LS)    | 2.0   | No detection |
| 20. DDT (a, p and o, p-isomer of DDT, DDE and DDD)   | EPIC/LAB/SOP/WA/01/00 | HF                       | BDL(HDL-LS)    | 1.0   | No detection |
| 21. Endosulfan (alpha, beta, and sulphate)   | EPIC/LAB/SOP/WA/01/00 | HF                       | BDL(HDL-LS)    | 0.0   | No detection |

Prescription Unit  
Continental Studies  
11/09/2021  
11/09/2021  
11/09/2021

Analysed by: [Francesca Saccoccia](#) / [Andrea Saccoccia](#)

100

✓ Verified by  
Sarah East  
Liaison East

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THEORY OF THE CLOUDS

|                       |                    |            |              |
|-----------------------|--------------------|------------|--------------|
| Unique Lab Report No. | TC1288725000000385 | Discipline | Chemical     |
| Report Unique ID      | RL0142251568       | Group      | Water        |
| Issue Date/Time       | 26.04.2025/ 11:18  | Sub-Group  | Ground Water |

### Report based on

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

Contact Person: Mr. Ankit Das  
Contact Number: +91 98971004775  
Email Id: ankit.das@digibharat.com  
Order Date: 31-03-2025 / 10:10  
Order Number: 136122110008

Behavior of Quality Management System Score of University Professors

|                           |               |                       |                   |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/0TH/0342 | Sample Booking Number | EPIC-253668       |
| Sample(s) Code            | 253668        | Sample Receipt (DT)   | 19.04.2025/ 12:14 |

Kurt Römer

|                                 |  |                       |                        |
|---------------------------------|--|-----------------------|------------------------|
| Type of Industry                | Bauxite Mines                            | Ref. of Sampling Plan | EPIC/LAS/R/036         |
| Sampling method used            | IS : 3025 [Part-1] 1887, B-2003          |                       |                        |
| Sampling Start (D/T)            | 17.04.2025/ 17:00                        | Sampling End (D/T)    | 17.04.2025/ 17:10      |
| Mode of Sampling                | Conducted by Laboratory                  | Sample collected by   | Mr. Taran Kumar & Team |
| Description/Condition of sample | Receipt sample(s) were fit for analysis. |                       |                        |

Description/condition of sample      Receipt sample(s) were fit for analysis

#### Environmental Condition during sampling

Weather condition: Clear, Temperature (°C): 25, Humidity %: 45, Wind direction: 220°-so

#### Section 1 contains all sub-PPG contributions

Location A Near Main Gate GPS coordinates 27° 18' 59.53" N/ 14° 43' 30" E

### Details of performance of the bimonthly activities

Test start date 19.04.2025/ 12:40 Test completion date 25.04.2025/ 14:00

| Sl. | Test Parameters                          | Method used               | Unit | Results        | Limits           |                   |
|-----|--|---------------------------|------|----------------|------------------|-------------------|
|     |  |                           |      |                | Acceptable limit | Permissible limit |
| 1.  | pH value at 25°C                         | IS 3025 (P-11) 2022       | -    | 6.76           | 8.4-8.8          | No regulation     |
| 2.  | Turbidity                                | IS 3025 (P-10) 1984       | NTU  | 0.48           | 1                | 8                 |
| 3.  | Colour                                   | IS 3025 (P-14) 2021       | None | <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) 2022       | mg/l | 256.00         | 600              | 2000              |
| 7.  | Chloride (as Cl)                         | IS 3025 (P-32) 2019       | mg/l | 35.47          | 700              | 1300              |
| 8.  | Total Alkalinity (as CaCO <sub>3</sub> ) | IS 3025 (P-23) 2019       | mg/l | 118.00         | 200              | 400               |
| 9.  | Total Hardness (as CaCO <sub>3</sub> )   | IS 3025 (P-21) 2009       | mg/l | 164.00         | 200              | 600               |
| 10. | Calcium (as Ca)                          | IS 3025 (P-40) 1993       | mg/l | 26.45          | 75               | 200               |
| 11. | Free Residual Chlorine                   | IS 3025 (P-20) 1980       | mg/l | BDL (0.0-0.4)  | 0.1              | 1                 |
| 12. | Sulphate (as SO <sub>4</sub> )           | IS 3025 (P-24/Sec-1) 2022 | mg/l | 08.40          | 200              | 400               |
| 13. | Nitrate (as NO <sub>3</sub> )            | APHA 4500-N 2023          | mg/l | 02.11          | 40               | No regulation     |
| 14. | Phenolic Compound                        | IS 3025 (P-43/Sec-1) 2022 | mg/l | BDL (0.0-0.01) | 0.01             | 0.002             |
| 15. | Magnesium (as Mg)                        | APHA 2500-Mg/E 2023       | mg/l | 23.81          | 30               | 100               |



Tensile Properties

### Prepaid Lines

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|                       |                   |            |              |
|-----------------------|-------------------|------------|--------------|
| Unique Lab Report No. | N/A               | Discipline | Chemical     |
| Report Unique ID      | RL0142251968      | Group      | Water        |
| Issue date/time       | 26.04.2025/ 11:30 | Sub Group  | Ground Water |

#### Forget house to

M/s - HINDALCO INDUSTRIES LIMITED  
VILLAGE-COURT ROAD,  
POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA  
STATE-BHARUCH, INDIA 363502  
MONITORING SITE: GURDARI BANDH MINE

Contact Person: Mr. Ankit Das  
Contact Number: +91 9071004775  
Email ID: ankit.das@adityabirla.com  
Order Date: 31.03.2005 / 10:10  
Order Number: 13917013868

|   |                       |     |               |     |             |
|---|-----------------------|-----|---------------|-----|-------------|
| 15. Gamma-HCH(lindane)                              | EPIC/LAB/SOP/WA/01/00 | ref | 80L(mol-0.5)  | 1.6 | No revision |
| 16. Heptachlor                                      | EPIC/LAB/SOP/WA/01/00 | ref | 80L(mol-0.5)  | 1.6 | No revision |
| 17. Methyl parathion                                | EPIC/LAB/SOP/WA/01/00 | ref | 80L(mol-0.2)  | 0.3 | No revision |
| 18. Monocrotophos                                   | EPIC/LAB/SOP/WA/01/00 | ref | 80L(mol-0.5)  | 1.6 | No revision |
| 19. Phorate   | EPIC/LAB/SOP/WA/01/00 | ref | 80L(mol-0.5)  | 2.6 | No revision |
| 20. DDT (o, p and p, p'-isomer of DDT, DDE and DDD) | EPIC/LAB/SOP/WA/01/00 | ref | 80L(mol-0.5)  | 1.6 | No revision |
| 21. Endosulfan (alpha, beta, and gamma isomers)     | EPIC/LAB/SOP/WA/01/00 | ref | 80L(mol-0.00) | 0.4 | No revision |

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Prescription Line

#### Government Studies

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JMK  
Date 10/10/2018

checked by  
J.W. Evans  
January 1981

100

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## Analytical Test Certificate

|                       |                   |            |                       |
|-----------------------|-------------------|------------|-----------------------|
| Unique Lab Report No. | NA                | Discipline | Chemical              |
| Report Unique ID      | RL0175252030      | Group      | Atmospheric Pollution |
| Issue date/time       | 29.05.2025/ 12:40 | Sub Group  | Ambient Air Quality   |

## Report Issue To:

M/s - HINDALCO INDUSTRIES LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST - LOHARDAGA, STATE - JHARKHAND, INDIA 833302  
MONITORING SITE : GURDARI BAUXITE MINE

Contact Person : Mr. Arvind Das  
Contact Number : +91 9971034775  
Email Id : arvind.con@hdfcbILT.com  
Order Date : 31.03.2025/ 10:10  
Order Number : 13612313868

## References of Quality Management System (List of Frequency/Unit)

|                           |                        |                       |                   |
|---------------------------|------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0175          | Sample Booking Number | EPIC-252030       |
| Sample(s) Code            | 252030 (A) (B) (C) (D) | Sample Receipt (DT)   | 15.05.2025/ 11:14 |

## Sampling References:

|                                 |  |                       |                         |
|---------------------------------|--|-----------------------|-------------------------|
| Type of industry                | Raunder Mines  | Ref. of Sampling Plan | EPIC/LAB/R/036          |
| Sampling Start (DT)             | 13.05.2025/ 11:30  | Sampling End (DT)     | 14.05.2025/ 08:27       |
| Mode of Sampling                | Conducted by Laboratory                                  | Sample collected by   | Mr. Vishal Kumar & Team |
| Sampling method used            | IS 5162 and CPCB Air Manual Volume - 1 (NAQM/06/2012-13) |                       |                         |
| Description/condition of sample | Receipt sample(s) were fit for analysis.                 |                       |                         |

## Environmental Condition during sampling

|                   |       |                  |    |            |    |                |          |
|-------------------|-------|------------------|----|------------|----|----------------|----------|
| Weather condition | Clear | Temperature (°C) | 28 | Humidity % | 40 | Wind direction | 240°-40° |
|-------------------|-------|------------------|----|------------|----|----------------|----------|

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

|               |                        |                |                               |
|---------------|------------------------|----------------|-------------------------------|
| S. Location A | Near Mine Office       | GPS coordinate | 23°18'50.00" N 84°14'44.15" E |
| S. Location B | Near Kathawans Pt. 23  | GPS coordinate | 23°20'48.18" N 84°14'16.11" E |
| S. Location C | Near Mine Weigh Bridge | GPS coordinate | 23°19'00.00" N 84°14'40.36" E |
| S. Location D | Near Dholi Kumb        | GPS coordinate | 23°19'58.11" N 84°15'42.03" E |

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 15.05.2025/ 11:20 | Test completion date | 19.05.2025/ 13:00 |
|-----------------|-------------------|----------------------|-------------------|

## -Test Results-

| Sl. | Test Parameters                                  | Method used            | Unit              | Results          |                  |                  |                  | Limits |
|-----|--|------------------------|-------------------|------------------|------------------|------------------|------------------|--------|
|     |  |                        |                   | A                | B                | C                | D                |        |
| 1.  | Benzene (C <sub>6</sub> H <sub>6</sub> )         | IS 33202P-1D/2006      | µg/m <sup>3</sup> | BDL<br>(MDL-0.1) | BDL<br>(MDL-0.1) | BDL<br>(MDL-0.1) | BDL<br>(MDL-0.1) | -      |
| 2.  | Benz (a) Pyrene (Bap)-<br>Particulate phase only | IS 33202P-1D/2004      | µg/m <sup>3</sup> | BDL<br>(MDL-0.1) | BDL<br>(MDL-0.1) | BDL<br>(MDL-0.1) | BDL<br>(MDL-0.1) | -      |
| 3.  | Carbon Monoxide (CO)                             | EPIC/LAB/SD/0000/01/00 | mg/m <sup>3</sup> | BDL<br>(MDL-0.1) | BDL<br>(MDL-0.1) | BDL<br>(MDL-0.1) | BDL<br>(MDL-0.1) | -      |

## -Test Results End -

Prescribed User: Environmental (Protection) Rules- 2006, Schedule VI.

Operational Status: Unit was Open/operated During sampling.

Analyzed by - A.K. Srivastava

  
Reviewed by  
A.K. Srivastava  
Technical Head

15/05/2025  
A.K. Srivastava  
Reviewed by  
A.K. Srivastava  
Technical Head  
Authorized Signature  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





# EPIC LabTech Private Limited



Address:  
C/o - R.A. Tripathi, Indrapuri,  
Road No. - G. Ranchi,  
Ranchi - 835002, India

Tel: 09831-4000100  
09831-94077  
09831-71886  
Email: [epiclabtech@gmail.com](mailto:epiclabtech@gmail.com)

CLB - U71999JH2012PLT00001 Accredited by:  
ISO - 17025:2017  
ISI - IS/IEC 17025:2017  
Certified by:  
NABL (National Accreditation Board of India) and NABL (National Accreditation Board of India)

## Analytical Test Certificate

|                       |                   |            |                         |
|-----------------------|-------------------|------------|-------------------------|
| Unique Lab Report No. | N/A               | Discipline | Chemical                |
| Report Unique ID      | RLU175252032      | Group      | Pollution & Environment |
| Issue date/time       | 20.05.2025/ 12:45 | Sub-Group  | Waste Water (Effluent)  |

### Report Issue to:

M/s - HINDALCO INDUSTRIES LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDABA,  
DIST-LOHARDABA, STATE-JHARKHAND, INDIA 835302  
MONITORING SITE : GURDAR BAUXITE MINE

Contact Person  
Mr. Arind Das  
Contact Number  
+91 9971034775  
Email Id  
[arind.das@aditya-birla.com](mailto:arind.das@aditya-birla.com)  
Order Date  
31.03.2025/ 10:10  
Order Number  
1234567890

### References of Quality Management System (Date of Issuability Date):

|                           |               |                       |                   |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0175 | Sample Booking Number | EPIC-252032       |
| Sample(s) Code:           | 252032        | Sample Receipt (D/T)  | 15.05.2025/ 11:21 |

### Sampling References

|                                 |                                   |  |                         |
|---------------------------------|-----------------------------------|--|-------------------------|
| Type of Industry                | Bauxite Mines                     | Ref. of Sampling Plan                    | EPIC/LAB/PR/036         |
| Sampling Start (D/T)            | 15.05.2025/ 16:45                 | Sampling End (D/T)                       | 15.05.2025/ 16:55       |
| Mode of Sampling                | Conducted by Laboratory           | Sample collected by                      | Mr. Vishal Kumar & Team |
| Sampling method used            | IS : 3025 (Part - I) 1987, B.2003 |  |                         |
| Description/condition of sample |                                   | Receipt sample(s) were fit for analysis. |                         |

### Environmental Condition during sampling

|                   |       |                  |    |            |    |                |          |
|-------------------|-------|------------------|----|------------|----|----------------|----------|
| Weather condition | Clear | Temperature (°C) | 28 | Humidity % | 49 | Wind direction | 240°-40° |
|-------------------|-------|------------------|----|------------|----|----------------|----------|

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

|               |                   |                |                               |
|---------------|-------------------|----------------|-------------------------------|
| S. Location A | Work Shop (Outer) | GPS coordinate | 23°18'50.00" N 84°14'44.70" E |
|---------------|-------------------|----------------|-------------------------------|

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 15.05.2025/ 11:40 | Test completion date | 18.05.2025/ 14:00 |
|-----------------|-------------------|----------------------|-------------------|

### -Test Result-

| Sl. | Test Parameters             | Method used         | Unit | Results | Limits |
|-----|-----------------------------|---------------------|------|---------|--------|
| 1.  | Total Dissolve Solids (TDS) | IS 3025 (P-18) 2003 | mg/L | 636.00  | -      |

### -Test result End -

Prescribed Limit  
Environmental (Protection) Rules-1986, Schedule I, Serial No. 134.  
Operational Status  
Unit was Operational During Sampling.

Tested by  
R.K. Kumar  
Technical Head

Issued by  
Umesh Patel  
Laboratory Head  
Authorized Signature  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand







#### EPIC | *epic moments*

|                       |                  |            |                       |
|-----------------------|------------------|------------|-----------------------|
| Unique Lab Report No. | N/A              | Discipline | Chemical              |
| Report Unique ID      | RJ020025427      | Group      | Atmospheric Pollution |
| Issue date/time       | 16-06-2026/13:20 | Sub Group  | Ambient Air Quality   |

### Report from the

**H/15 - HENDALCO INDUSTRIES LIMITED**  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DISTT.-LOHARDAGA, STATE-JHARKHAND, INDIA 835301  
**MONITORING SITE: GUARDARI BAUXITE MINE**

**Contact Person** Mr. Ankit Das  
**Contact Number** +91 9971034775  
**Email Id** ankitdas@skybora.com  
**Order Date** 31.03.2025/ 10:10  
**Order Number** 136123123456

References of Quality Management System: Case of Transport Sector

Customer Registration No. EPIC/OTH/0026 Sample Booking Number EPIC 253427  
Commercial Party 26/04/2011 10:17:17  
Customer Reference 26/04/2011 10:17:17

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#### Second set References

| Type of Industry     | Brassite Minet  | Ref. of Sampling Plan | EPIC/LAB/RU096          |
|----------------------|---|-----------------------|-------------------------|
| Sampling Start (D/T) | 10.06.2025/ 11:48   | Sampling End (D/T)    | 11.06.2025/ 08:42       |
| Mode of Sampling     | Conducted by Laboratory                                     | Sample collected by   | Mr. Vishal Kumar & Team |
| Sampling method used | IS 5180/ and CPCB Air Manual Volume – 1 (NAACM/V36/2012-13) |                       |                         |

#### Environmental Conditions Affecting *Aspergillus*

Wind direction: NNE, Wind speed: 10.0 km/h, Relative humidity: 80%, Temperature: 20.0 °C, Date: 2023-05-15, Time: 10:00:00

**Section 1: location(s) with GPS coordinates**

| Sampling Location | Location Name & Description | GPS coordinates | Estimated Altitude (m)      |
|-------------------|-----------------------------|-----------------|-----------------------------|
| 1. Location A     | Near Mine Office            | GPS coordinate  | 23°15'09.00" / 84°14'44.10" |
| 2. Location B     | Near Kethwarpuri Pit-23     | GPS coordinate  | 23°20'48.18" / 84°14'10.11" |
| 3. Location C     | Near Mine Weigh Bridge      | GPS coordinate  | 23°15'09.66" / 84°14'40.38" |
| 4. Location D     | Near Choti Kuthar           | GPS coordinate  | 23°16'58.11" / 84°16'42.03" |

### Statistical performance of the laboratory methods

Test start date 12-06-2020 19:36 Test conclusion date 19-06-2020 10:00

© 2007 Pearson

| Sl | Test Parameters                                   | Method used        | Unit              | Results          |                  |                  |                  | Limits |
|----|---|--------------------|-------------------|------------------|------------------|------------------|------------------|--------|
|    |   |                    |                   | A                | B                | C                | D                |        |
| 1. | Benzene (C <sub>6</sub> H <sub>6</sub> )          | 61332(P-11) 2006   | µg/m <sup>3</sup> | BDL<br>(MDL-0.1) | BDL<br>(MDL-0.1) | BDL<br>(MDL-0.1) | BDL<br>(MDL-0.1) | -      |
| 2. | Benzo (a) Pyrene (Bap)-<br>Particulate phase only | 61332(P-12) 2006   | ng/m <sup>3</sup> | BDL<br>(MDL-0.1) | BDL<br>(MDL-0.1) | BDL<br>(MDL-0.1) | BDL<br>(MDL-0.1) | -      |
| 3. | Carbon Monoxide (CO)                              | EPIC/LAB/SOP/01/08 | mg/m <sup>3</sup> | BDL<br>(MDL-1.0) | BDL<br>(MDL-1.0) | BDL<br>(MDL-1.0) | BDL<br>(MDL-1.0) | -      |

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— 1 —

**Prescribed Limit Environmental Protection Rules-1**

Journal of Clinical Anesthesia

  
Michael S.  
Sparer  
US Consul  
Honolulu, HI



Authorised Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



EPIC  
The Personal Test Computer

|                       |                  |            |                       |
|-----------------------|------------------|------------|-----------------------|
| Unique Lab Report No. | N/A              | Discipline | Chemical              |
| Report Unique ID      | RJ0208252428     | Group      | Atmospheric Pollution |
| Issue date/time       | 18.06.2025/13:22 | Sub Group  | Work Zone None        |

**Report from the**

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

**Contact Person** Mr. Arsh Das  
**Contact Number** +91 9871024775  
**Email Id** arsh.das@myabita.com  
**Order Date** 21.03.2025/ 10:19  
**Order Number** 1234567890

Reference of Quality Management System Page of Frequency Check

|                           |                |                       |                  |
|---------------------------|----------------|-----------------------|------------------|
| Customer Registration No. | EPIC/09/00208  | Sample Booking Number | EPIC-202428      |
| Sample(s) Code            | 202428 (A) (B) | Sample Request (DT)   | 12.06.2025/10:30 |

#### Journal References

| Sampling Details                | Sampled Mines   | Ref. of Sampling Plan | EPICLAB/IR/036          |
|---------------------------------|---|-----------------------|-------------------------|
| Type of Industry                | Haute Mines   | Ref. of Sampling Plan | EPICLAB/IR/036          |
| Sampling Start (D)              | 10.06.2025  | Sampling End (D)      | 10.06.2025              |
| Mode of Sampling                | Conducted by Laboratory   | Sample collected by   | Mr. Vishal Kumar & Team |
| Sampling method used            | IS 9080:1981 (IA 2020) & CPCB Method D.50 (E) dated 11/01/2010. |                       |                         |
| Description/condition of sample | Received sample(s) were fit for analysis.                       |                       |                         |

#### Environmental Condition during service

Weather condition: Clear, Temperature (°C): 25, Humidity (%): 45, Wind direction: 200°, Wind speed: 10 m/s

#### Session 1 question(s) with EES question(s)

|               |                                  |                |                                 |
|---------------|----------------------------------|----------------|---------------------------------|
| E. Location A | Near Kathupani Pit               | GPS coordinate | 23° 20' 45.00" / 64° 14' 07.00" |
| E. Location B | Gandari Bauxite Mine (584.13 ha) | GPS coordinate | 23° 20' 46.81" / 64° 14' 08.10" |

### Criteria of performance of the laboratory activities

Test start date 12.06.2025/ 10:51 Test completion date 18.06.2025/ 10:43

| Sl. | Test Parameters | Method used   | Test Results |      |      | Limits |
|-----|-----------------|---------------|--------------|------|------|--------|
|     |                 |               | Unit         | A    | B    |        |
| 1.  | $L_{eq}$        | IS: 9989:1981 | dB (A)       | 70.1 | 75.3 | 55     |

Prescribed Limit NIOSH - Publication No. 96-126 in 1973. Table 1-1  
Overexposure Status Limit was Occupational Exposure averaging

  
H. H. Keween

12  
JULY 1968  
ISSUED BY

The seal of the University of Michigan, featuring a central shield with a building and a crest above it, surrounded by the text "UNIVERSITY OF MICHIGAN" and "1817".

Authorised Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi Jharkhand





EFIC | [www.efic.org](http://www.efic.org)

|                       |                   |            |                       |
|-----------------------|-------------------|------------|-----------------------|
| Unique Lab Report No. | N/A               | Discipline | Chemical              |
| Report Unique ID      | RL02382628077     | Group      | Atmospheric Pollution |
| Issue date/time       | 17.07.2025/ 17:10 | Sub Group  | Ambient Air Quality   |

Recent Issues

**M/s - HINDALCO INDUSTRIES LIMITED**  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 83532  
**MONITORING SITE: GURUDARSI BALKHIT MINE**

**Contact Person** Mr. Amit Das  
**Contact Number** +91 9975034775  
**Email Id** amit.das@citytutora.com  
**Order Date** 31.03.2025/ 10:30  
**Order Number** 1234567890

References of Quality Management Systems: Case of Hospitality Sector

Customer Registration No. ERIC03030235 Sample Booking Number ERIC-2526077  
Kumudini P. Date 2019-07-11 10:10:00  
Kumudini P. Date 2019-07-11 10:10:00

#### Further References

| Sampling Area/Location         | Basalt Mines   | Ref. of Sampling Plan | EN/CAUR/036            |
|--------------------------------|--|-----------------------|------------------------|
| Type of Industry               | Basalt Mines   | Ref. of Sampling Plan | EN/CAUR/036            |
| Sampling Start (D/T)           | 19.07.2025/ 11:30  | Sampling End (D/T)    | 11.07.2025/ 09:43      |
| Hope of Sampling               | Conducted by Laboratory                                    | Sample collected by   | Mr. Akash Kumar & team |
| Sampling method used           | IS 5182 and CPCB Air Monitor Volume - 1 (NAAQM/06/2012-13) |                       |                        |
| Description/position of sample | Recent sample(s) were fit for analysis.                    |                       |                        |

Environmental Health Perspectives and

Weather condition: Clear, Temperature (°C): 25, Humidity (%): 50, Wind direction: NE - 10MPH

#### Sample I (cont'd) with EES model(s)

| Detailed description of the location with a map |                        | GPS coordinate | 2D/ 3D                       |
|---|------------------------|----------------|------------------------------|
| S. Location A                                   | Near Mine Office       | GPS coordinate | 23° 18' 59.00" / 84° 14' 44" |
| S. Location B                                   | Near Kathuwegari Pt-23 | GPS coordinate | 23° 20' 45.18" / 84° 14' 10" |
| S. Location C                                   | Near Mine Weigh Bridge | GPS coordinate | 23° 19' 09.00" / 84° 14' 40" |
| S. Location D                                   | Near Dholi Kurumb      | GPS coordinate | 23° 16' 58.11" / 84° 15' 43" |

Test start date: 13.07.2020 13:23

1990-9001-0000 12.07-004001 13.428 1990-007-000001-000000 8.7407-004001 13.000

### -Test Results

| Sl. | Test Parameters                                | Method used       | Unit              | Results          |                  |                  |                  | Limits |
|-----|--|-------------------|-------------------|------------------|------------------|------------------|------------------|--------|
|     |  |                   |                   | A                | B                | C                | D                |        |
| 1.  | Benzene (C <sub>6</sub> H <sub>6</sub> )       | USECIP-13/2006    | ng/m <sup>3</sup> | BDL<br>(MDL-0.1) | BDL<br>(MDL-0.1) | BDL<br>(MDL-0.1) | BDL<br>(MDL-0.1) | -      |
| 2.  | Benz (a) Pyrene (BaP)-<br>Fuliculic phase only | USECIP-12/2004    | ng/m <sup>3</sup> | BDL<br>(MDL-0.1) | BDL<br>(MDL-0.1) | BDL<br>(MDL-0.1) | BDL<br>(MDL-0.1) | -      |
| 3.  | Carbon Monoxide (CO)                           | ERCLANSONIP/01/03 | ng/m <sup>3</sup> | BDL<br>(MDL-1.0) | BDL<br>(MDL-1.0) | BDL<br>(MDL-1.0) | BDL<br>(MDL-1.0) | -      |

Prescribed List Environmental Protection Rules 2008, Schedule V

Operational Status: Unit was Operational During sampling.

Analysed by - Viniti Marwani

Reviewed by  
J. K. Lauer  
University of  
Illinois

→ **Issue by**  
**Brand-Lock**  
**Intertech, Inc.**

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranjith Jhunjhunwala



ERIC

|                       |                    |            |                |
|-----------------------|--------------------|------------|----------------|
| Unique Lab Report No. | TC1288725000000872 | Discipline | Chemical       |
| Report Unique ID      | RL0235258076       | Group      | Water          |
| Issue date/time       | 17.07.2025/17:13   | Sub Group  | Drinking Water |

### Report issued to:

M/s - HINDALCO INDUSTRIES LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA-835301  
MONITORING SITE- GUNDARI SAUXITE MINE

**Contact Person** Mr. Ankit Dasi  
**Contact Number** +91 9971034775  
**Email Id** ankit.dasi@softyutu.com  
**Order Date** 31-03-2025 10:10  
**Order Number** 1234567890

References of Quality Management System: 2000/1999/2000

Customer Registration No. ERIC10TH9225 Sample Booking Number ERIC-2828078  
Samples) Code 2536078 Sample Receipt (D/T) 12/07/2025/12:48

#### Section References

| Type of Industry     | Bauxite Mines                   | Ref. of Sampling Plan | EPIC/LAB/R/036         |
|----------------------|---------------------------------|-----------------------|------------------------|
| Sampling Start (DT)  | 10.07.2025/ 14:05               | Sampling End (DT)     | 10.07.2025/ 14:15      |
| mode of Sampling     | Conducted by Laboratory         | Sample collected by   | Mr. Akash Kumar & Team |
| Sampling method used | IS : 3625 (Part-1) 1987, R-2003 |                       |                        |

Description/condition of sample      Receipt sample(s) were fit for analysis

#### Environmental Condition during sampling

Weather-condition Clear Temperature (°C) 25 Humidity % 65 Wind-direction 0°-180°

**Sampling Location(s) with GPS coordinate(s):**

Location A Near Office GPS coordinates 23° 19' 00.28" S 84° 14' 44.95" E Date(s) of performance of the laboratory activities

Tom Scott

| Sl. | Test Parameters                          | Method used               | Unit  | Results            | Limits           |                   |
|-----|--|---------------------------|-------|--------------------|------------------|-------------------|
|     |  |                           |       |                    | Acceptable Limit | Permissible limit |
| 1.  | pH value at 25.5°C                       | IS 3025 (P-11) 2022       | -     | 6.88               | 6.5-8.5          | No restriction    |
| 2.  | Turbidity                                | IS 3025 (P-10) 1984       | NTU   | 0.42               | 1                | 5                 |
| 3.  | Colour                                   | IS 3025 (P-04) 2021       | Hazen | <5                 | 5                | 15                |
| 4.  | Odour                                    | IS 3025 (P-06) 2018       | -     | Aptenable          | Aptenable        | Aptenable         |
| 5.  | Taste                                    | IS 3025 (P-07) 2017       | -     | Aptenable          | Aptenable        | Aptenable         |
| 6.  | Total Dissolved Solids (TDS)             | IS 3025 (P-16) 2023       | mg/l  | 183.00             | 500              | 2000              |
| 7.  | Chloride (as Cl)                         | IS 3025 (P-32) 2019       | mg/l  | 26.81              | 200              | 1000              |
| 8.  | Total Alkalinity (as CaCO <sub>3</sub> ) | IS 3025 (P-23) 2019       | mg/l  | 90.00              | 200              | 500               |
| 9.  | Total Hardness (as CaCO <sub>3</sub> )   | IS 3025 (P-21) 2008       | mg/l  | 100.00             | 200              | 500               |
| 10. | Calcium (as Ca)                          | IS 3025 (P-40) 1991       | mg/l  | 18.23              | 75               | 200               |
| 11. | Free Residual Chlorine                   | IS 3025 (P-36) 1990       | mg/l  | RD (avg. 0.4)      | 0.7              | 1                 |
| 12. | Sulphate (as SO <sub>4</sub> )           | IS 3025 (P-24/Sec-1) 2022 | mg/l  | 6.80               | 200              | 400               |
| 13. | Nitrate (as NO <sub>3</sub> )            | APHA 2500 N-2023          | mg/l  | 1.40               | 45               | No restriction    |
| 14. | Phenolic Compound                        | IS 3025 (P-43/Sec-1) 2022 | mg/l  | SDL (mg/l: 0.0001) | 0.001            | 0.002             |
| 15. | Magnesium (as Mg)                        | APHA 2500 Mg-2023         | mg/l  | 12.12              | 35               | 100               |



Address:  
C/1A - P.G. Tengarao, Jharkhand,  
Road No. - 5, Ranchi  
Jharkhand - 834005, India

Tel: 0651 4956300  
E-mail: 28117 86077  
28118 73880  
28119 14603  
ContactTech@gmail.com

CIN: U74749JH2017PLC19983  
Accredited by:  
ISO 9001:2015  
Certified by:  
NABL, NABL 2015 and NABL 2016

ISO/IEC 17025:2017  
ISO/IEC 17020:2018  
ISO/IEC 17065:2018  
ISO/IEC 17043:2010  
ISO/IEC 17050-1:2012

TC-12887

## Analytical Test Certificate

|   |                    |  |                |       |            |
|---|--------------------|--|----------------|-------|------------|
| Unique Lab Report No.   | TC1288725830000872 | Discipline                               | Chemical       |       |            |
| Report Unique ID  | RL028872583078     | Group                                    | Water          |       |            |
| Issue date/time   | 17.07.2025/ 17:13  | Sub Group                                | Drinking Water |       |            |
| <b>Report Issue to</b>  |                    |  |                |       |            |
| M/s - HINDALCO INDUSTRIES LIMITED<br>VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,<br>DIST-LOHARDAGA, STATE-JHARKHAND, INDIA 835302<br>MONITORING SITE: GURDARI BAUXITE MINE | Contact Person     | Mr. Arpit Das                            |                |       |            |
|   | Contact Number     | +91 9871034775                           |                |       |            |
|   | Email Id           | arpit.das@advibeta.com                   |                |       |            |
|   | Order Date         | 31.03.2025/ 10:10                        |                |       |            |
|   | Order Number       | 12612313988                              |                |       |            |
| <b>Group - Residues and Contaminants in Water</b>   |                    | <b>Sub Group - Trace Metals Elements</b> |                |       |            |
| 16. Copper (as Cu)  | APHA 21111 B 2023  | mg/L                                     | BDL(HDL 0.2)   | 0.06  | 1.8        |
| 17. Iron (as Fe)  | APHA 21111 B 2023  | mg/L                                     | BDL(HDL 0.1)   | 1.0   | No residue |
| 18. Lead (as Pb)  | APHA 21111 B 2023  | mg/L                                     | BDL(HDL 0.01)  | 0.01  | No residue |
| 19. Cadmium (as Cd)   | APHA 21111 B 2023  | mg/L                                     | BDL(HDL 0.001) | 0.001 | No residue |
| 20. Total Chromium (as Cr)  | APHA 21111 B 2023  | mg/L                                     | BDL(HDL 0.05)  | 0.05  | No residue |
| 21. Nickel (as Ni)  | APHA 21111 B 2023  | mg/L                                     | BDL(HDL 0.02)  | 0.02  | No residue |
| 22. Total Arsenic (as As)   | APHA 21134 B 2023  | mg/L                                     | BDL(HDL 0.005) | 0.01  | 0.05       |
| 23. Selenium (as Se)  | APHA 21134 B 2023  | mg/L                                     | BDL(HDL 0.005) | 0.01  | No residue |
| 24. Manganese (as Mn)   | APHA 21111 B 2023  | mg/L                                     | BDL(HDL 0.05)  | 0.1   | 0.3        |
| 25. Zinc (as Zn)  | APHA 21133 B 2023  | mg/L                                     | BDL(HDL 0.04)  | 5     | 35         |

## -Test result End-

Prescribed Limit: 0.1 mg/L  
Operational Status: Unit was Operational During sampling

Analyzed by - Total Nitrate




Reviewed by  
DK Kewal  
Technical Head



Issued by  
Dinesh Das  
Director Head  
Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





## Report ID: RL02362028078

|                       |                   |            |                |
|-----------------------|-------------------|------------|----------------|
| Unique Lab Report No. | N/A               | Discipline | Chemical       |
| Report Unique ID      | RL02362028078     | Group      | Water          |
| Issue date/time       | 17/07/2025/ 17:13 | Sub Group  | Drinking Water |

## Report Issue to:

M/s - HINDALCO INDUSTRIES LIMITED,  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST-LOHARDAGA, STATE-JHARKHAND, INDIA 835502  
MONITORING SITE: GURDARI BAUXITE MINE

Contact Person : Mr. Arkit Das  
Contact Number : +91 9871034779  
Email Id : arkit.das@advibeta.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/0236 | Sample Booking Number: | EPIC-2628078     |
| Sample(s) Code            | 2628078       | Sample Receipt (D/T)   | 12.07.2025/12:49 |

## Sampling References

|                                 |                                   |  |                        |
|---------------------------------|-----------------------------------|--|------------------------|
| Type of Industry                | Bauxite Mines                     | Ref. of Sampling Plan:                   | EPIC/LAB/R/036         |
| Sampling Start (D/T)            | 10.07.2025/ 14:05                 | Sampling End (D/T)                       | 10.07.2025/ 14:35      |
| mode of Sampling                | Conducted by Laboratory           | Sample collected by                      | Mr. Akash Kumar & Team |
| Sampling method used            | IS : 3025 (Part-1) IS:877, R-2003 |  |                        |
| Description/condition of sample |                                   | Receipt sample(s) were fit for analysis. |                        |

## Environmental Condition during sampling

|                   |       |                  |    |            |    |                |         |
|-------------------|-------|------------------|----|------------|----|----------------|---------|
| Weather condition | Clear | Temperature (°C) | 25 | Humidity % | 60 | Wind direction | 0°-180° |
|-------------------|-------|------------------|----|------------|----|----------------|---------|

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

|               |             |                 |                                 |
|---------------|-------------|-----------------|---------------------------------|
| 1. Location A | Near Office | GPS coordinates | 23° 19' 00.28" / 84° 14' 44.96" |
|---------------|-------------|-----------------|---------------------------------|

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 12.07.2025/ 13:09 | Test completion date | 17.07.2025/ 15:00 |
|-----------------|-------------------|----------------------|-------------------|

## -Test Result-

| Sl.                                      | Test Parameters                         | Method used           | Unit | Results                        | Limits               |                   |
|--|---|-----------------------|------|--------------------------------|----------------------|-------------------|
|  |   |                       |      |                                | Acceptable Limit     | Permissible limit |
| 1.                                       | Fluoride (as F)                         | APHA:4500-F-C-2019    | mg/L | SDL/MOL-0.1                    | 1.0                  | 1.0               |
| Group-Residues and Contaminants in Water |   |                       |      | Sub Group-Trace Metal Elements |                      |                   |
| 2.                                       | Aluminum                                | IS 3025 (P-65)-2019   | mg/L | SDL/MOL-0.1                    | 0.03                 | 0.2               |
| 3.                                       | Boron                                   | IS 3025 (P-67)-2021   | mg/L | SDL/MOL-0.1                    | 0.3                  | 1.0               |
| 4.                                       | Polychlorinated biphenyls               | EPIC/LAB/SOP/WA/01/00 | ng/L | SDL/MOL-0.2                    | 0.1                  | No relaxation     |
| 5.                                       | Polynuclear Aromatic Hydrocarbons (PAH) | EPIC/LAB/SOP/WA/01/00 | ng/L | SDL/MOL-0.05                   | 0.1                  | No relaxation     |
| Group-Residues and Contaminants in Water |   |                       |      |                                | Sub Group-Pesticides |                   |
| 6.                                       | Aachlor                                 | EPIC/LAB/SOP/WA/01/00 | ng/L | SDL/MOL-0.5                    | 20                   | No relaxation     |
| 7.                                       | Atrazine                                | EPIC/LAB/SOP/WA/01/00 | ng/L | SDL/MOL-0.5                    | 2.0                  | No relaxation     |
| 8.                                       | Dieletrin                               | EPIC/LAB/SOP/WA/01/00 | ng/L | SDL/MOL-0.02                   | 0.03                 | No relaxation     |
| 9.                                       | Alpha HCH                               | EPIC/LAB/SOP/WA/01/00 | ng/L | SDL/MOL-0.005                  | 0.01                 | No relaxation     |
| 10.                                      | Beta HCH                                | EPIC/LAB/SOP/WA/01/00 | ng/L | RD1 (MOL-0.01)                 | 0.04                 | No relaxation     |
| 11.                                      | Butachlor                               | EPIC/LAB/SOP/WA/01/00 | ng/L | SDL/MOL-0.5                    | 100.0                | No relaxation     |
| 12.                                      | Chlopyrifos                             | EPIC/LAB/SOP/WA/01/00 | ng/L | SDL/MOL-0.5                    | 30.0                 | No relaxation     |
| 13.                                      | Delta HCH                               | EPIC/LAB/SOP/WA/01/00 | ng/L | SDL/MOL-0.02                   | 0.04                 | No relaxation     |
| 14.                                      | Ethion                                  | EPIC/LAB/SOP/WA/01/00 | ng/L | SDL/MOL-0.5                    | 3.0                  | No relaxation     |

Important Note : 1. The laboratory accepts responsibility for the content of this report. 2. Test performed at laboratory's designated facility, at specific environmental condition, no method required and results relate only to the sample tested as prescribed. Date & Hour : 3. The Test report shall not be reproduced full or in part & it can't be used as proof in the court of law. 4. Any comments about this report should be communicated by writing within 10 days of its issue. 5. Traceability of EPIC LabTech Private Ltd. is not to be implied to individual analyst or test. 6. All changes are subject to review. 7. Test and analysis results of the laboratory does not exceed the testing and sampling charges. 8. Reference values and limit measurement of the tested product by laboratory. Order as chromatograms, laboratory reports are copied for use or storage of this report. 9. Please, Our results are from external provider are marked by \* mark. 10. Reference : SUL (Sulphur Determination Limit), MOL (Maximum Allowable Limit), LOD (Limit of Quantification).



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|                       |                  |            |                |
|-----------------------|------------------|------------|----------------|
| Unique Lab Report No. | N/A              | Discipline | Chemical       |
| Report Unique ID      | RL02352528078    | Group      | Water          |
| Issue date/time       | 17.07.2026/17:13 | Sub Group  | Drinking Water |

### Report from the

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

**Contact Person** Mr. Ankit Das  
**Contact Number** +91 9871036776  
**Email Id** ankit.das@w3fhybris.com  
**Order Date** 31-03-2024/ 10:30  
**Order Number** 12001234567890

| Chemical Name                                      | EROLAB/SOP/WW/01/06 | ref | BDL/mol-0.5  | 3.0 | No inhibition |
|--|---------------------|-----|--------------|-----|---------------|
| 15. Gamma-HCH(Indene)                              | EROLAB/SOP/WW/01/06 | ref | BDL/mol-0.5  | 3.0 | No inhibition |
| 16. Malathion                                      | EROLAB/SOP/WW/01/06 | ref | BDL/mol-0.5  | 3.0 | No inhibition |
| 17. Methyl parathion                               | EROLAB/SOP/WW/01/06 | ref | BDL/mol-0.5  | 3.0 | No inhibition |
| 18. Monocrotophos                                  | EROLAB/SOP/WW/01/06 | ref | BDL/mol-0.5  | 3.0 | No inhibition |
| 19. Phorate  | EROLAB/SOP/WW/01/06 | ref | BDL/mol-0.5  | 3.0 | No inhibition |
| 20. DDT (s, p and p, p-isomer of DDT, DDE and DDD) | EROLAB/SOP/WW/01/06 | ref | BDL/mol-0.5  | 3.0 | No inhibition |
| 21. Endosulfan (alpha, beta, and sulphate)         | EROLAB/SOP/WW/01/06 | ref | BDL/mol-0.00 | 3.4 | No inhibition |

-Test results -

Prescribed Unit IS 38888-2021  
Operational Status Unit was Operational During sampling

  
S. S. Ganesh

18  
1997-1998  
Signed by  
Gretchen Goss  
Administrator

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranbir, Jharkhand





## Report ID: RL02362528079

|                       |                   |            |                |
|-----------------------|-------------------|------------|----------------|
| Unique Lab Report No. | N/A               | Discipline | Biological     |
| Report Unique ID      | RL02362528079     | Group      | Water          |
| Issue Date/Time       | 17.07.2025/ 17:10 | 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: GURDARI BAUXITE MINE

Contact Person: Mr. Ankit Das  
Contact Number: +91 9871034775  
Email Id: ankit.das@adhritisra.com  
Order Date: 31.03.2025/ 10:10  
Order Number: 1234567890

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

|                           |               |                        |                   |
|---------------------------|---------------|------------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0235 | Sample Booking Number: | EPIC-2528079      |
| Sample(s) Code            | 2528079       | Sample Receipt (D/T)   | 12.07.2025/ 12:43 |

## Sampling References

|                                  |                                |  |                        |
|----------------------------------|--------------------------------|--|------------------------|
| Type of Industry                 | Bauxite Mines                  | Ref. of Sampling Plan:                   | EPIC/LAB/R/036         |
| Sampling Start (D/T)             | 10.07.2025/ 14:05              | Sampling End (D/T)                       | 10.07.2025/ 14:15      |
| Place of Sampling                | Conducted by Laboratory        | Sample collected by:                     | Mr. Vinay Kumar & Team |
| Sampling method used:            | IS: 3025 (Part-1) 1987, R-2003 |  |                        |
| Description/condition of sample: |                                | Receipt sample(s) were fit for analysis. |                        |

## Environmental Condition during sampling

|                   |       |                  |    |            |    |                |         |
|-------------------|-------|------------------|----|------------|----|----------------|---------|
| Weather condition | Clear | Temperature (°C) | 25 | Humidity % | 60 | Wind direction | 0°-180° |
|-------------------|-------|------------------|----|------------|----|----------------|---------|

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

|               |             |                 |                                 |
|---------------|-------------|-----------------|---------------------------------|
| S. Location A | Near Office | GPS coordinate: | 23° 19' 00.28" E 84° 14' 44.95" |
|---------------|-------------|-----------------|---------------------------------|

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

|                 |                   |                       |                   |
|-----------------|-------------------|-----------------------|-------------------|
| Test start date | 12.07.2025/ 13:10 | Test completion date: | 17.07.2025/ 10:30 |
|-----------------|-------------------|-----------------------|-------------------|

## -Test Result-

| Sl. | Test Parameters | Method used:  | Unit       | Results      | Limits  |
|-----|-----------------|---------------|------------|--------------|---|
| 1.  | Total Coliform  | IS 10185:2002 | Per 100 ml | Not Detected | Should not be detectable in any 100 ml sample |
| 2.  | E. Coli         | IS 10185:2002 | Per 100 ml | Not Detected |   |

## -Test result End -

Prescribed Limit: IS 10185:2002

Unit was Operational During sampling.



  
Submitted by  
[Signature]  
Technical Head

  
Submitted by  
[Signature]  
Authorized Signatory

EPIC LabTech Pvt. Ltd.,  
Ranchi, Jharkhand



Address:

C/o - S. S. Nigam, Industrial  
Road No - 5, Ranchi,  
Jharkhand - 834006, India

Reg. No.:

9999999999

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9999999999

epiclabtech@gmail.com

CEN-13887/EPIC/2025/1331

Date-14/03/2025

Page-1/1

1331-2025-0001917

Issued by -

1406, 10th Floor, 10th Avenue, 10 - 11th Main

American Plaza, Sector 10, Gurugram, Haryana, India

Certified No -

1331-2025-0001917

## Environmental Test Certificate

|                       |                  |            |                       |
|-----------------------|------------------|------------|-----------------------|
| Unique Lab Report No. | TCL2025100001917 | Discipline | Chemical              |
| Report Unique ID      | RL02510001917    | Group      | Atmospheric Pollution |
| Issue Date/Time       | 25.03.2025/13:31 | 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 : GURDARI BAUXITE MINE

Contact Person: Mr. Ankit Das  
Contact Number: +91 9887103475  
Email ID: ankit.das@epiclabtech.com  
Order Date: 31.03.2025/ 10:10  
Order Number: 1331-2025-0001917

## References of Quality Management System (Date of Issuance Date)

|                           |                         |                       |                   |
|---------------------------|-------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/00287          | Sample Booking Number | EPIC-2024029      |
| Sample(s) Code            | 2024029 (A) (B) (C) (D) | Sample Receipt (D/T)  | 25.03.2025/ 11:02 |

## Sampling References

Type of Industry: Bauxite Mines  
Sampling Start (D/T): 18.03.2025/ 11:56  
Mode of Sampling: Conducted by Laboratory  
Sampling method used: IS 6152 and CPCB Air Manual Volume - 1 (NAAQM/39/2012-13)  
Description/condition of sample: Receipt sample(s) were fit for analysis.

## Environmental Condition during sampling

|                   |        |                  |    |            |    |                |           |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity % | 70 | Wind direction | 120°-300° |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|

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

|               |                        |                |                               |
|---------------|------------------------|----------------|-------------------------------|
| 1. Location A | Near Mine Office       | GPS coordinate | 23°18'59.00" N 84°14'44.35" E |
| 2. Location B | Near Kothiwaghad PR-23 | GPS coordinate | 23°20'48.10" N 84°14'10.11" E |
| 3. Location C | Near Mine Weigh Bridge | GPS coordinate | 23°19'09.06" N 84°14'40.38" E |
| 4. Location D | Near Ghosi Kumbi       | GPS coordinate | 23°18'58.11" N 84°15'43.93" E |

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 25.03.2025/ 11:23 | Test completion date | 25.03.2025/ 12:00 |
|-----------------|-------------------|----------------------|-------------------|

## -Test Results-

| Sl. | Test Parameters                              | Method used         | Unit              | Results |       |       |       | Units         |
|-----|--|---------------------|-------------------|---------|-------|-------|-------|---------------|
|     |  |                     |                   | A       | B     | C     | D     |               |
| 1.  | Particulate Matter (PM <sub>10</sub> )       | IS 1382 (P-23) 2022 | µg/m <sup>3</sup> | 67.86   | 77.35 | 84.02 | 78.55 | 100 (24 hr)   |
| 2.  | Fine Particulate Matter (PM <sub>2.5</sub> ) | IS 1382 (P-24) 2022 | µg/m <sup>3</sup> | 29.88   | 35.00 | 41.12 | 33.66 | 60 (24 hr)    |
| 3.  | Sulphur Dioxide (SO <sub>2</sub> )           | IS 1382 (P-02) 2022 | µg/m <sup>3</sup> | 06.16   | 06.19 | 06.14 | 06.66 | 80 (24 hr)    |
| 4.  | Nitrogen Dioxide (NO <sub>2</sub> )          | IS 1382 (P-03) 2022 | µg/m <sup>3</sup> | 19.57   | 18.52 | 22.62 | 19.52 | 80 (24 hr)    |
| 5.  | Ammonia (NH <sub>3</sub> )                   | IS 1382 (P-20) 2022 | µg/m <sup>3</sup> | 38.73   | 36.96 | 45.13 | 34.94 | 400 (24 hr)   |
| 6.  | Ozone (O <sub>3</sub> )                      | IS 1382 (P-18) 2022 | µg/m <sup>3</sup> | 20.00   | 22.15 | 21.82 | 21.16 | 100 (1 hr)    |
| 7.  | Lead (Pb)                                    | IS 1382 (P-22) 2022 | µg/m <sup>3</sup> | BDL     | BDL   | BDL   | BDL   | 1.0 (24 hr)   |
| 8.  | Nickel (Ni)                                  | IS 1382 (P-26) 2022 | µg/m <sup>3</sup> | BDL     | BDL   | BDL   | BDL   | 1.0 (24 hr)   |
| 9.  | Arsenic (As)                                 | USEPA 60.2:2006     | µg/m <sup>3</sup> | BDL     | BDL   | BDL   | BDL   | 0.010 (24 hr) |

## -Test Results End -

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

Operational Status: Unit was Operational During sampling.

Analyzed by - Tushar Mangat

Reviewed by  
(S.K. Goyal)  
Technical Head

Reviewed by  
(C. S. Patel)  
Monitoring Head



EPIC LabTech Private Limited

Authorised Signature

EPIC LabTech Private Limited

Sampled, analyzed and

Certified by

EPIC LabTech Private Limited

Report No. 1331-2025-0001917

Date: 25.03.2025

Page 1 of 1

Comments: Note 1: If the laboratory accepts responsibility for content of this report. 2. Test performed at laboratory's premises. Notified by the laboratory that the results are not valid unless and unless stated only in the sample tested is representative. Note 3: 3. The Test report shall not be reproduced full or in part or otherwise used without the written permission of the laboratory. Note 4: Any request for this report should be communicated in writing and no later than 10 days of issue. 5. This laboratory is not liable to the customer for any damage or loss caused by any error in this report. 6. All disputes are subject to the jurisdiction and exclusive liability of the laboratory over the entire value of testing and no action can be taken against the laboratory for any damage or loss caused by any error in this report. 7. Update does not imply re-measurement of the tested product by customer. Data re-interpretation, Monitoring acceptability is based on reason of this report. 8. When the results are from external provider are treated as "Data".  
Definitions: BDL (Below Detection Limit), ND (Not Detected Limit), LAL (Limit of Acceptable Limit), LOQ (Limit of Quantification).



## Report No. 00000000000000000000000000000000

|                       |                   |             |                       |
|-----------------------|-------------------|-------------|-----------------------|
| Unique Lab Report No. | N/A               | Discipline: | Chemical              |
| Report Unique ID      | PL02672534029     | Group:      | Atmospheric Pollution |
| Issue date/time       | 26.08.2025/ 13:21 | 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 : GURDARI BAUXITE MINE

Contact Person: M. Ankit Das  
Contact Number: +91 9891285151  
Email Id: anikita@epicbirla.com  
Order Date: 21.03.2025/ 10:10  
Order Number: 13612313668

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

|                           |                         |                       |                   |
|---------------------------|-------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0267           | Sample Booking Number | EPIC-2534029      |
| Sample(s) Code:           | 2534029 (A) (B) (C) (D) | Sample Receipt (D/T)  | 26.08.2025/ 13:02 |

## Sampling References

|                                 |  |                      |                              |
|---------------------------------|--|----------------------|------------------------------|
| Type of Industry                | Bauxite Mine   | No. of Sampling Plan | EPIC/LAB/R/036               |
| Sampling Start (D/T)            | 18.08.2025/ 11:58  | Sampling End (D/T)   | 19.08.2025/ 09:41            |
| Mode of Sampling                | Conducted by Laboratory                                  | Sample collected by  | Mr. Pawan Deep Bhagat & Team |
| Sampling method used            | IS 5182 and CPCB Air Manual Volume - 1 (NAQM/36/2012-13) |                      |                              |
| Description/condition of sample | Receipt sample(s) were fit for analysis.                 |                      |                              |

## Environmental Condition during sampling

|                    |        |                  |    |            |    |                |           |
|--------------------|--------|------------------|----|------------|----|----------------|-----------|
| Weather condition: | Cloudy | Temperature (°C) | 27 | Humidity % | 70 | Wind direction | 120°-300° |
|--------------------|--------|------------------|----|------------|----|----------------|-----------|

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

|               |                        |                |                               |
|---------------|------------------------|----------------|-------------------------------|
| S. Location A | Near Mine Office       | GPS coordinate | 23°18'59.60" N 84°14'44.13" E |
| S. Location B | Near Kutharsapai Ph-23 | GPS coordinate | 23°20'48.18" N 84°14'36.11" E |
| S. Location C | Near Mine Weigh Bridge | GPS coordinate | 23°19'09.06" N 84°14'40.36" E |
| S. Location D | Near Dholi Kutharsa    | GPS coordinate | 23°16'58.31" N 84°15'42.03" E |

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 20.08.2025/ 11:22 | Test completion date | 26.08.2025/ 12:00 |
|-----------------|-------------------|----------------------|-------------------|

## -Test Results-

| Sl. | Test Parameters                                   | Method used           | Unit              | Results          |                  |                  |                  | Limits |
|-----|---|-----------------------|-------------------|------------------|------------------|------------------|------------------|--------|
|     |   |                       |                   | A                | B                | C                | D                |        |
| 1.  | Benzene (C <sub>6</sub> H <sub>6</sub> )          | IS 5182(P-11) 2006    | μg/m <sup>3</sup> | BDL<br>(PDL-1.1) | BDL<br>(PDL-1.1) | BDL<br>(PDL-1.1) | BDL<br>(PDL-1.1) | -      |
| 2.  | Benzo (a) Pyrene (Bap)-<br>Particulate phase only | IS 5182(P-12) 2004    | ng/m <sup>3</sup> | BDL<br>(PDL-1.1) | BDL<br>(PDL-1.1) | BDL<br>(PDL-1.1) | BDL<br>(PDL-1.1) | -      |
| 3.  | Carbon Monoxide (CO)                              | EPIC/LAB/SDP/NP/01/01 | mg/m <sup>3</sup> | BDL<br>(PDL-1.1) | BDL<br>(PDL-1.1) | BDL<br>(PDL-1.1) | BDL<br>(PDL-1.1) | -      |

## -Test Results (d) -

Prescribed limit: Environmental Protection Rules-2008, Schedule VI,  
Operational Status: Unit was Operational During sampling.

Analyzed by - Wimal Mangat

Reviewed by  
J. K. Tomy  
Technical Head

Approved by  
G. K. Birla  
Secretary Head

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



Address:

C/o : R.K. Trigardhi, Jind-Aligarh,  
Road No. - 3, Bawali,  
Muzaffarnagar - 224801, India

Ph: 91 921 4444260

E-mail: 92327784277

92327773888

92327784277@gmail.com

CEN-17-TP-000112023-07-201968

PAN-NAHC33677M

GST-12AAH1339HMKX

Accredited By -

ISO/IEC 17025:2017 (Exempted)

International Organization for Standardization

Certification No. -

120190012073 and 12019001208

TC-12867

## Environmental Test Report Application

|                       |                    |            |              |
|-----------------------|--------------------|------------|--------------|
| Unique Lab Report No. | TCI20072500000103R | Discipline | Chemical     |
| Report Unique ID      | RL00672504030      | Group      | Water        |
| Issue date/time       | 25.08.2025/ 13:34  | 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: GURDARI BAUXITE MINE**

Contact Person: Mr. Ankit Das  
 Contact Number: +91 9871034779  
 Email Id: ankit.das@edbybita.com  
 Order Date: 31.03.2025/ 10:10  
 Order Number: 12612312368

## Reference of Quality Management System (Scope of Traceability Detail)

|                           |               |                       |                   |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTR/0267 | Sample Booking Number | EPIC-2504030      |
| Sample(s) Code            | 2534030       | Sample Receipt (D/T)  | 20.08.2025/ 11:03 |

## Sampling References

|                                 |                                 |                       |   |
|---------------------------------|---------------------------------|-----------------------|---|
| Type of Industry                | Raw material                    | Ref. of Sampling Plan | EPIC/LAB/R/036                            |
| Sampling Start (D/T)            | 18.08.2025/ 15:10               | Sampling End (D/T)    | 18.08.2025/ 15:15                         |
| Mode of Sampling                | Conducted by Laboratory         | Sample collected by   | Mr. Pawan Deep Bhagat & Team              |
| Sampling method used            | IS : 3025 (Part-1) 1987, R-2003 |                       |   |
| Description/condition of sample |                                 |                       | Received sample(s) were fit for analysis. |

## Environmental Condition during sampling

|                   |        |                  |    |            |    |                |           |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity % | 70 | Wind direction | 120°-300° |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|

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

|               |                |                |                                    |
|---------------|----------------|----------------|------------------------------------|
| S. Location A | Near Main Gate | GPS coordinate | 23° 10' 59.03" E/ 84° 14' 43.88" N |
|---------------|----------------|----------------|------------------------------------|

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 20.08.2025/ 11:23 | Test completion date | 25.08.2025/ 11:50 |
|-----------------|-------------------|----------------------|-------------------|

## -Test Result-

| Sl. | Test Parameters                          | Method used              | Unit   | Results         | Limits           |                   |
|-----|--|--------------------------|--------|-----------------|------------------|-------------------|
|     |  |                          |        |                 | Acceptable limit | Permissible limit |
| 1.  | pH value at 25.7°C                       | IS:3025 (P-11) 2023      | -      | 6.91            | 6.5-8.5          | No restriction    |
| 2.  | Turbidity                                | IS:3025 (P-30) 2014      | NTU    | 0.83            | 1                | 5                 |
| 3.  | Colour                                   | IS:3025 (P-04) 2021      | Nature | <5              | 5                | 15                |
| 4.  | Odour                                    | IS:3025 (P-08) 2018      | -      | Agraceable      | Agraceable       | Agraceable        |
| 5.  | Taste                                    | IS:3025 (P-07) 2017      | -      | Agraceable      | Agraceable       | Agraceable        |
| 6.  | Total Dissolved Solids (TDS)             | IS:3025 (P-31) 2023      | mg/l   | 258.00          | 500              | 2000              |
| 7.  | Chloride (as Cl)                         | IS:3025 (P-32) 2018      | mg/l   | 33.47           | 250              | 1000              |
| 8.  | Total Alkalinity (as CaCO <sub>3</sub> ) | IS:3025 (P-23) 2020      | mg/l   | 111.00          | 200              | 600               |
| 9.  | Total Hardness (as CaCO <sub>3</sub> )   | IS:3025 (P-23) 2020      | mg/l   | 157.00          | 200              | 600               |
| 10. | Calcium (as Ca)                          | IS:3025 (P-40) 2001      | mg/l   | 24.61           | 75               | 200               |
| 11. | Free Residual Chlorine                   | IS:3025 (P-21) 2008      | mg/l   | BDL (MDL 0.04)  | 0.2              | 1                 |
| 12. | Sulphate (as SO <sub>4</sub> )           | IS:3025 (P-24/5m-1) 2002 | mg/l   | 7.00            | 200              | 400               |
| 13. | Nitrate (as NO <sub>3</sub> )            | APHA 2505-B-2023         | mg/l   | 1.92            | 40               | No restriction    |
| 14. | Phenolic Compound                        | IS:3025 (P-43/5m-1) 2022 | mg/l   | BDL (MDL 0.003) | 0.003            | 0.003             |
| 15. | Magnesium (as Mg)                        | APHA 2505-B-2023         | mg/l   | 21.81           | 50               | 100               |

**Important Note:** 1. The laboratory accepts responsibility for the content of this report. 2. Test performed at laboratory's premises/factory. All specific environmental condition are not included required and results relate only to the sample tested in prescribed date & time. 3. The final report shall not be reproduced full or in part & must not be used, as proof in the court of law. 4. All results are tentative until the report is confirmed by the concerned authority. 5. This laboratory is not liable to be liable for any damage or loss caused by the use of this report. 6. All data and results are provided on "AS IS" basis.

**Disclaimer:** ECL (Ecowise Environmental Limited), MDL (Microbiological Laboratory), LAL (Laboratory of Analytical Services).



TC-13867

## Environmental Test Certificate

|                       |                    |            |              |
|-----------------------|--------------------|------------|--------------|
| Unique Lab Report No. | TC1288725600001018 | Discipline | Chemical     |
| Report Unique ID      | PL02672534030      | Group      | Water        |
| Issue date/time       | 26.03.2025/ 10:24  | 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: GURDARI BAUXITE MINE**

Contact Person: Mr. Ankit Das  
Contact Number: +91 98671034775  
Email Id: [ankit.das@cdtiaabria.com](mailto:ankit.das@cdtiaabria.com)  
Order Date: 21.03.2025/ 10:10  
Order Number: 13612313868

| Group - Residues and Contaminants in Water: |                 |      | Sub Group - Trace Metals Elements |       |               |
|---|-----------------|------|-----------------------------------|-------|---------------|
| 16. Copper (as Cu)                          | APHA 31118 2023 | mg/l | BDL(HDL-0.2)                      | 0.05  | 1.5           |
| 17. Iron (as Fe)                            | APHA 31118 2023 | mg/l | BDL(HDL-0.1)                      | 1.0   | No relaxation |
| 18. Lead (as Pb)                            | APHA 31118 2023 | mg/l | BDL(HDL-0.01)                     | 0.01  | No relaxation |
| 19. Cadmium (as Cd)                         | APHA 31118 2023 | mg/l | BDL(HDL-0.002)                    | 0.002 | No relaxation |
| 20. Total Chromium (as Cr)                  | APHA 31118 2023 | mg/l | BDL(HDL-0.001)                    | 0.001 | No relaxation |
| 21. Nickel (as Ni)                          | APHA 31118 2023 | mg/l | BDL(HDL-0.02)                     | 0.02  | No relaxation |
| 22. Total Arsenic (as As)                   | APHA 31118 2023 | mg/l | BDL(HDL-0.005)                    | 0.01  | 0.05          |
| 23. Selenium (as Se)                        | APHA 31118 2023 | mg/l | BDL(HDL-0.005)                    | 0.01  | No relaxation |
| 24. Manganese (as Mn)                       | APHA 31118 2023 | mg/l | BDL(HDL-0.001)                    | 0.1   | 0.3           |
| 25. Zinc (as Zn)                            | APHA 31118 2023 | mg/l | BDL(HDL-0.04)                     | 1     | 15            |

- Test result End -

Prescribed Limit: 15 10000/2023

Operational Status: Lab was Operational During sampling.

Analyzed by - Pappu Kumar



Reviewed by:  
B.B. Kumar  
Technical Head

Reviewed by:  
B.B. Kumar  
Technical Head  
Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





## Environmental Test Certificate

|                       |                   |             |              |
|-----------------------|-------------------|-------------|--------------|
| Unique Lab Report No. | N/A               | Discipline: | Chemical     |
| Report Unique ID      | RLS0672534030     | Group:      | Water        |
| Issue datetime        | 25.06.2025/ 13:34 | 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: GURDARI BAUXITE MINE

Contact Person: Mr. Amit Das  
Contact Number: +91 9973034775  
Email Id: amit.das@adityabirla.com  
Order Date: 31.03.2025/ 10:10  
Order Number: 138122513868

## References of Quality Management System (Date of Issuance Date)

|                           |               |                       |                  |
|---------------------------|---------------|-----------------------|------------------|
| Customer Registration No. | EPIC/OTH/0267 | Sample Booking Number | EPIC/2004030     |
| Sample(s) Code            | 2534030       | Sample Receipt (D/T)  | 25.06.2025/11:03 |

## Sampling References:

|                                 |  |                       |                               |
|---------------------------------|--|-----------------------|-------------------------------|
| Type of Industry                | Bauxite Mines                            | Ref. of Sampling Plan | EPIC/LAB/R/038                |
| Sampling Start (D/T)            | 18.06.2025/ 15:10                        | Sampling End (D/T)    | 18.06.2025/ 15:15             |
| Mode of Sampling                | Conducted by Laboratory                  | Sample collected by   | Mr. Rakesh Deep Bhagat & Team |
| Sampling method used            | IS : 2025 (Part-1) 1007, R-2003          |                       |                               |
| Descriptive/condition of sample | Receipt sample(s) were fit for analysis. |                       |                               |

## Environmental Condition during sampling

|                   |        |                  |    |            |    |                |           |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity % | 70 | Wind direction | 120°-300° |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|

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

|            |                |                |                                     |
|------------|----------------|----------------|-------------------------------------|
| Location A | Near Main Gate | GPS coordinate | 23° 58' 59.53" N / 84° 14' 43.00" E |
|------------|----------------|----------------|-------------------------------------|

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 20.06.2025/ 11:23 | Test completion date | 25.06.2025/ 11:50 |
|-----------------|-------------------|----------------------|-------------------|

## -Test Result-

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

|   |   |                      |      |               |      |              |
|---|---|----------------------|------|---------------|------|--------------|
| 1.  | Fluoride (as F)                         | APIA-4000 F-C 2023   | mg/l | BDL(MDL-0.1)  | 1.0  | 1.5          |
| <b>Group-Residues and Contaminants in Water</b> |   |                      |      |               |      |              |
| 2.  | Aluminum                                | IS:3025 (P-05) 2018  | mg/l | BDL(MDL-0.1)  | 0.03 | 0.2          |
| 3.  | Boron                                   | IS:3025 (P-07) 2021  | mg/l | BDL(MDL-0.1)  | 2.0  | 1.0          |
| 4.  | Polychlorinated biphenyls               | EPIC/LAB/SOP/NA/0100 | ppb  | BDL(MDL-0.1)  | 0.0  | No detection |
| 5.  | Polynuclear Aromatic Hydrocarbons (PAH) | EPIC/LAB/SOP/NA/0100 | ppb  | BDL(MDL-0.00) | 0.1  | No detection |

|     |            |                      |     |               |       |              |
|-----|------------|----------------------|-----|---------------|-------|--------------|
| 6.  | Aalachlor  | EPIC/LAB/SOP/NA/0100 | ppb | BDL(MDL-0.0)  | 2.0   | No detection |
| 7.  | Atrazine   | EPIC/LAB/SOP/NA/0100 | ppb | BDL(MDL-0.1)  | 2.0   | No detection |
| 8.  | Deetdrin   | EPIC/LAB/SOP/NA/0100 | ppb | BDL(MDL-0.00) | 0.03  | No detection |
| 9.  | Alpha-HCH  | EPIC/LAB/SOP/NA/0100 | ppb | BDL(MDL-0.00) | 0.01  | No detection |
| 10. | Beta-HCH   | EPIC/LAB/SOP/NA/0100 | ppb | BDL(MDL-0.00) | 0.04  | No detection |
| 11. | Butachlor  | EPIC/LAB/SOP/NA/0100 | ppb | BDL(MDL-0.0)  | 125.0 | No detection |
| 12. | Chloryphos | EPIC/LAB/SOP/NA/0100 | ppb | BDL(MDL-0.0)  | 30.0  | No detection |
| 13. | Delta-HCH  | EPIC/LAB/SOP/NA/0100 | ppb | BDL(MDL-0.00) | 0.04  | No detection |
| 14. | Ethion     | EPIC/LAB/SOP/NA/0100 | ppb | BDL(MDL-0.0)  | 3.0   | No detection |

**Important Note:** 1. The laboratory accepts responsibility for analysis of this report. 2. The performance of Environmental pollution facility at specific environmental conditions as mentioned and results relate only to the sample tested as per test Date & Time. 3. The Test report shall not be reproduced full or in part or used as proof in the court of law. 4. Any complaint about this report should be communicated in writing within 15 days of the issue. 5. Total liability of EPIC LabTech is 200/- INR for each test item mentioned in the report only. 6. All disputes are subject to Indian jurisdiction and maximum liability of law laboratory does not exceed the testing and sampling charges. 7. The report does not apply to each element of the tested product or substance. 8. The test is痕量 analysis, laboratory accepts any claim by user in nature of this report. 9. When the results are out of range no greater are stated as "n/a".

**Abbreviations:** BDL (Below Detection Limit), MDL (Method Detection Limit), LOD (Limit of Quantitation).



www.english-test.net

|                       |                  |            |              |
|-----------------------|------------------|------------|--------------|
| Unique Lab Report No. | N/A              | Discipline | Chemical     |
| Report Unique ID      | RL00672534030    | Group      | Water        |
| Issue date/time       | 25-08-2020/13:24 | Sub Group  | Ground Water |

### Report hours to

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

**Contact Person** Mr. Arind Das  
**Contact Number** +91 9871034775  
**Email Id** arind.das@adityabirla.com  
**Order Date** 31-03-2025/10:10  
**Order Number** 1234567890

|  |                       |     |              |       |               |
|--|-----------------------|-----|--------------|-------|---------------|
| 16. Gamma-HCH(Indane)                              | EPIC/LAB/SOP/NA/01/00 | ref | BDL(MDL-0.5) | 2.0   | No resolution |
| 18. Malathion                                      | EPIC/LAB/SOP/NA/01/00 | ref | BDL(MDL-0.5) | 190.0 | No resolution |
| 17. Methyl parathion                               | EPIC/LAB/SOP/NA/01/00 | ref | BDL(MDL-0.5) | 0.3   | No resolution |
| 18. Monocrotophos                                  | EPIC/LAB/SOP/NA/01/00 | ref | BDL(MDL-0.5) | 1.0   | No resolution |
| 19. Phorate  | EPIC/LAB/SOP/NA/01/00 | ref | BDL(MDL-0.5) | 2.0   | No resolution |
| 20. DDT (o, p and p, p-isomer of DDT, DDE and DDD) | EPIC/LAB/SOP/NA/01/00 | ref | BDL(MDL-0.5) | 1.0   | No resolution |
| 21. Endosulfan (alpha, beta, and isomeric)         | EPIC/LAB/SOP/NA/01/00 | ref | BDL(MDL-0.5) | 0.4   | No resolution |

-First result find -

Prescribed Limit  
Quarantine Stamp

as 10000 2021  
Unternehmen Operieren auf Basis von Empfehlungen

✓  
B. M. S.

Reviewed by  
J. H. Koenig  
Stanford University



18  
1993  
18  
Entered by  
Joseph Goss

Authorized Signatory  
EPIQ LabTech Pvt. Ltd.  
Ranbir Singhania



Address:

C/o : K.A. Tripathi, Jharkhand  
Road No : S. Ranchi,  
Ranchi - 834002, India

A-109-21-1998202

093337 80077

093337 73008

epiclabtech@gmail.com

CRN-UT44991420220712079482

PAN - H4RCE3200W

GST - 23AABCD991423X

Accredited by -

Accredited by National Accreditation Board

Certified by -

ISO 9001:2015 and ISO 17025:2017

## Environmental Test Certificate

|                       |                   |            |              |
|-----------------------|-------------------|------------|--------------|
| Unique Lab Report No. | N/A               | Discipline | Biological   |
| Report Unique ID      | PLD037/2023031    | Group      | Water        |
| Issue date/time       | 20.06.2023/ 11:27 | 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: GURDARI BAUDOTE MINE

Contact Person : Mr. Arpit Das  
Contact Number : +91 9897103477  
Email Id : arpit.das@adityabirla.com  
Order Date : 31.03.2023/ 10:18  
Order Number : 1234567890

## References of Quality Management System (Days of Traceability Date)

|                           |               |                       |                  |
|---------------------------|---------------|-----------------------|------------------|
| Customer Registration No. | EPIC/OTW/0367 | Sample Booking Number | EPIC-2534031     |
| Sample(s) Code            | 2534031       | Sample Receipt (D/T)  | 20.06.2023/11:00 |

## Sampling References

|                                 |                                 |  |                             |
|---------------------------------|---------------------------------|--|-----------------------------|
| Type of industry                | baudote mines                   | Ref. of Sampling Plan                    | EPIC/SAB/R/036              |
| Sampling Start (D/T)            | 18.06.2023/ 15:10               | Sampling End (D/T)                       | 18.06.2023/ 15:15           |
| Mode of Sampling                | Conducted by Laboratory         | Sample collected by                      | Mr. Pawan Deep Bisht & Team |
| Sampling method used            | IS : 3025 (Part-1) 1987, R-2002 |  |                             |
| Description/condition of sample |                                 | Receipt sample(s) were fit for analysis. |                             |

## Environmental Condition during sampling

|                   |        |                  |    |              |    |                |           |
|-------------------|--------|------------------|----|--------------|----|----------------|-----------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity (%) | 70 | Wind direction | 120°/300° |
|-------------------|--------|------------------|----|--------------|----|----------------|-----------|

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

|               |                |                |                                   |
|---------------|----------------|----------------|-----------------------------------|
| S. Location A | Near Main Gate | GPS coordinate | 23° 18' 59.53" N 84° 14' 43.80" E |
|---------------|----------------|----------------|-----------------------------------|

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 20.06.2023/ 11:23 | Test completion date | 20.06.2023/ 11:30 |
|-----------------|-------------------|----------------------|-------------------|

## -Test Result-

| Sl. | Test Parameters | Method used   | Unit       | Results      | Limit   |
|-----|-----------------|---------------|------------|--------------|---|
| 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 : IS 10500:2021  
Operational Status : Unit was Operational During sampling.

Reviewed by  
S.K. Gaur,  
Technical Head

Reviewed by  
S. Bisht (S.B.)  
Laboratory Head  
Authorized Signature  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





ERIC

|                       |                    |            |               |
|-----------------------|--------------------|------------|---------------|
| Unique Lab Report No. | TC1288725000001019 | Discipline | Chemical      |
| Report Unique ID      | RJU0672534032      | Group      | Water         |
| Issue date/time       | 25-04-2025/13:30   | Sub Group  | Surface Water |

### Report issued by

M/S - HINDALCO INDUSTRIES LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST-LOHARDAGA, STATE-JHARKHAND, INDIA 835002  
MONITORING SITE : GURDARI BAUXITE MINE

Contact Person: Mr. Ankit Das  
Contact Number: +91 9871034775  
Email Id: ankit.das@ibnlindia.com  
Order Date: 31-03-2020 10:10  
Order Number: 13852312846

References of Quality Management System (One of Frequency One)

Customer Registration No. EPIC10TH-0297 Sample Booking Number EPIC-2534320  
Supplier's Code 2534022 Sample Request ID 0171 28-08-2024 11:28

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#### Reading References

|                                 |   |                       |                              |
|---------------------------------|---|-----------------------|------------------------------|
| Type of Industry                | Rauza Mines                               | Ref. of Sampling Plan | EPIC/LAB/R/036               |
| Sampling Start (D/T)            | 18.08.2025/ 15:21                         | Sampling End (D/T)    | 18.08.2025/ 15:21            |
| Mode of Sampling                | Conducted by Laboratory                   | Sample collected by   | Mr. Pawan Deep Bhagat & Team |
| Sampling method used            | IS : 3025 (Part-1) 1987, R-2003           |                       |                              |
| Description/condition of sample | Received sample(s) were fit for analysis. |                       |                              |

#### Environmental Condition during sampling

Weather condition: Cloudy Temperature (°C): 27 Humidity %: 70 Wind direction: 120°-300°

### Sampling Locations with GPS coordinates

Location A: Sakhuapan (Spring Water) GPS coordinate: 23° 19' 38.32" N 64° 15' 42.32" W

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

Test start date 20.08.2025/ 11:25 Test completion date 25.08.2025/ 11:00

—Test Script—

| Sl. | Test Parameters                          | Method used               | Unit  | Results         | Units |
|-----|--|---------------------------|-------|-----------------|-------|
| 1.  | pH value at 25°C                         | IS 3025 (P-13) 2023       | -     | 6.85            | -     |
| 2.  | Turbidity                                | IS 3025 (P-10) 1994       | NTU   | 1.6             | -     |
| 3.  | Colour                                   | IS 3025 (P-04) 2023       | Haier | 5               | -     |
| 4.  | Odour                                    | IS 3025 (P-05) 2018       | -     | Agraceable      | -     |
| 5.  | Taste                                    | IS 3025 (P-07) 2017       | -     | Agraceable      | -     |
| 6.  | Total Dissolved Solids (TDS)             | IS 3025 (P-16) 2023       | mg/l  | 197.00          | -     |
| 7.  | Chloride (as Cl)                         | IS 3025 (P-02) 2018       | mg/l  | 31.04           | -     |
| 8.  | Total Alkalinity (as CaCO <sub>3</sub> ) | IS 3025 (P-22) 2018       | mg/l  | 105.00          | -     |
| 9.  | Total Hardness (as CaCO <sub>3</sub> )   | IS 3025 (P-21) 2023       | mg/l  | 150.6           | -     |
| 10. | Calcium (as Ca)                          | IS 3025 (P-40) 1991       | mg/l  | 29.00           | -     |
| 11. | Free Residual Chlorine                   | IS 3025 (P-30) 1994       | mg/l  | 80 (NDL 8.4)    | -     |
| 12. | Sulphate (as SO <sub>4</sub> )           | IS 3025 (P-24) Sec-1/2023 | mg/l  | 4.80            | -     |
| 13. | Nitrate (as NO <sub>3</sub> )            | APHA 4500-N 2023          | mg/l  | 2.06            | -     |
| 14. | Phenolic Compound                        | IS 3025 (P-43) Sec-1/2023 | mg/l  | NDL (NDL-0.011) | -     |



Address:  
G-6, A.C. Nagar, Jharkhand,  
Ranchi - 834006, India

Tel: 0651-4468212  
0651-222278477  
0651-222278844  
epiclabtech@gmail.com

CTN: U74599JH2022CPT021999  
Reg. No.: 3442301196  
SST: 0344HC030196129

Accredited by:  
Code of Practice Number 10: 1030  
Particulars: Water Pollution Control Board  
Confidence No.:  
0651-222278477 and 0651-222278844

TC-12867

## Analytical Test Configuration

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | TC128672500001019 | Discipline | Chemical      |
| Report Unique ID      | RL02672534032     | Group      | Water         |
| Issue Date/Time       | 26.06.2025/10:10  | Sub Group  | Surface Water |

## Report Issue is

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

Contact Person: Mr. Amit Das  
Contact Number: +91 9971034775  
Email Id: amit.das@dhvatrifa.com  
Order Date: 31.03.2025/10:10  
Order Number: 12612313868

| Group - Residues and Contaminants in Water, |                 |      | Sub Group - Trace Metal Elements |   |
|---|-----------------|------|----------------------------------|---|
| 15. Copper (as Cu)                          | APHA 31118 2023 | mg/l | BDL(HDL-0.2)                     | - |
| 16. Iron (as Fe)                            | APHA 31118 2023 | mg/l | BDL(HDL-0.2)                     | - |
| 17. Lead (as Pb)                            | APHA 31118 2023 | mg/l | BDL(HDL-0.01)                    | - |
| 18. Cadmium (as Cd)                         | APHA 31118 2023 | mg/l | BDL(HDL-0.003)                   | - |
| 19. Total Chromium (as Cr)                  | APHA 31118 2023 | mg/l | BDL(HDL-0.003)                   | - |
| 20. Nickel (as Ni)                          | APHA 31118 2023 | mg/l | BDL(HDL-0.02)                    | - |
| 21. Total Arsenic (as As)                   | APHA 31148 2023 | mg/l | BDL(HDL-0.001)                   | - |
| 22. Selenium (as Se)                        | APHA 31148 2023 | mg/l | BDL(HDL-0.002)                   | - |
| 23. Manganese (as Mn)                       | APHA 31118 2023 | mg/l | BDL(HDL-0.01)                    | - |
| 24. Zinc (as Zn)                            | APHA 31118 2023 | mg/l | BDL(HDL-0.04)                    | - |

## -Test result Test-

## Prescribed Limit

## Operational Status

Analyzed by - Pappu Kumar

Site was Operational During Sampling

Reviewed by  
(E.R. Kumar)  
Technical HeadIssued by  
Suresh Das  
Jharkhand  
Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



## Environmental Test Certificate

| Unique Lab Report No.  | N/A                                      | Discipline            | Chemical                        |  |       |
|--|--|-----------------------|---------------------------------|--|-------|
| Report Unique ID   | PL02672534032                            | Group                 | Water                           |  |       |
| Issue date/time  | 26.08.2025/ 10:30                        | Sub Group             | Surface Water                   |  |       |
| <b>Report Issue to:</b>  |  |                       |                                 |  |       |
| <b>M/s - HINDALCO INDUSTRIES LIMITED</b><br>VILLAGE-COURT ROAD, POST OFFICE-LOHARDABA,<br>DIST. - LOHARDABA, STATE - JHARKHAND, INDIA 853502 | Contact Person                           | M. Amit Das           |                                 |  |       |
| <b>MONITORING SITE : GURDARI BAUXITE MINE</b>  | Contact Number                           | +91 9975034775        |                                 |  |       |
|  | Email Id                                 | amit.das@epiclab.com  |                                 |  |       |
|  | Order Date                               | 21.03.2025/ 10:10     |                                 |  |       |
|  | Order Number                             | 13612313668           |                                 |  |       |
| <b>References of Quality Management System (One of Inclusive Date)</b>   |  |                       |                                 |  |       |
| Customer Registration No.  | EPIC/OTU/0267                            | Sample Booking Number | EPIC-2534032                    |  |       |
| Sample(s) Code   | 2534032                                  | Sample Receipt (D/T)  | 20.08.2025/ 11:35               |  |       |
| <b>Sampling References</b>   |  |                       |                                 |  |       |
| Type of Industry   | Bauxite Mines                            | No. of Sampling Plan  | EPIC/LAB/R/036                  |  |       |
| Sampling Start (D/T)   | 18.06.2025/ 15:21                        | Sampling End (D/T)    | 18.08.2025/ 15:25               |  |       |
| Mode of Sampling   | Conducted by Laboratory                  | Sample collected by   | Mr. Pawan Deep Bhagat & Team    |  |       |
| Sampling method used   | IS : 3025 (Part 1) 1987, B-2003          |                       |                                 |  |       |
| Description/condition of sample  | Receipt sample(s) were fit for analysis. |                       |                                 |  |       |
| <b>Environmental Condition during sampling</b>   |  |                       |                                 |  |       |
| Weather condition  | Cloudy                                   | Temperature (°C)      | 27                              |  |       |
|  |  | Humidity %            | 70                              |  |       |
|  |  | Wind direction        | 120°-300°                       |  |       |
| <b>Sampling Location(s) with GPS coordinate(s)</b>   |  |                       |                                 |  |       |
| S. Location A  | Sakhuapani (Spring Water)                | GPS coordinate        | 22° 19' 18.91" / 84° 15' 42.32" |  |       |
| <b>Date(s) of performance of the laboratory activities</b>   |  |                       |                                 |  |       |
| Test start date  | 20.08.2025/ 11:30                        | Test completion date  | 26.08.2025/ 11:30               |  |       |
| <b>-Test Result-</b>   |  |                       |                                 |  |       |
| #  | Test Parameters                          | Method used           | Unit                            | Results                                | Units |
| 1.   | Fluoride (µs F)                          | APHA 4500-F-C/2023    | mg/l                            | BDL/MOL-0.1                            | -     |
| <b>Group-Radiotracers and Contaminants in Water</b>  |  |                       |                                 | <b>Sub-Group-Trace Metals Elements</b> |       |
| 2.   | Aluminum                                 | IS 3025 (P-55)2023    | mg/l                            | BDL/MOL-0.1                            | -     |
| 3.   | Boron                                    | IS 3025 (P-57)2023    | mg/l                            | BDL/MOL-0.1                            | -     |
| 4.   | Polychlorinated biphenyls                | EPIC/LAB/SOP/WA/01/00 | µg/l                            | BDL/MOL-0.2                            | -     |
| 5.   | Polynuclear Aromatic Hydrocarbons (PAH)  | EPIC/LAB/SOP/WA/01/00 | µg/l                            | BDL/MOL-0.05                           | -     |
| <b>Group-Radiotracers and Contaminants in Water</b>  |  |                       |                                 | <b>Sub-Group-Pesticides</b>            |       |
| 6.   | Aldichlor                                | EPIC/LAB/SOP/WA/01/00 | µg/l                            | BDL/MOL-0.5                            | -     |
| 7.   | Atrazine                                 | EPIC/LAB/SOP/WA/01/00 | µg/l                            | BDL/MOL-0.5                            | -     |
| 8.   | Dieldrin                                 | EPIC/LAB/SOP/WA/01/00 | µg/l                            | BDL/MOL-0.001                          | -     |
| 9.   | Alpha HCH                                | EPIC/LAB/SOP/WA/01/00 | µg/l                            | BDL/MOL-0.001                          | -     |
| 10.  | Beta HCH                                 | EPIC/LAB/SOP/WA/01/00 | µg/l                            | BDL/MOL-0.02                           | -     |
| 11.  | Butachlor                                | EPIC/LAB/SOP/WA/01/00 | µg/l                            | BDL/MOL-0.5                            | -     |
| 12.  | Chlopyrifos                              | EPIC/LAB/SOP/WA/01/00 | µg/l                            | BDL/MOL-0.5                            | -     |
| 13.  | Delta HCH                                | EPIC/LAB/SOP/WA/01/00 | µg/l                            | BDL/MOL-0.001                          | -     |
| 14.  | Ethion                                   | EPIC/LAB/SOP/WA/01/00 | µg/l                            | BDL/MOL-0.5                            | -     |



Address:

C/o - S.S. Tripathi, Traders off  
Road No - S. Pant Rd,  
Raebareli - 234001, India

Mobile: +91 98330 98832

Email: +91 98330 98832

+91 98330 98834

+91 98330 98835

LIC: 0-19999992320710219683

Regd. - 20160221776

GST - 29AAKCEW119129

Reviewed by -

Anil Dasi, Senior Manager (Chemical)

Certified by -

091 98330 98832 +91 98330 98835

## Analytical Test Report

|  |                      |                     |               |
|--|----------------------|---------------------|---------------|
| Unique Lab Report No.  | NA                   | Discipline          | Chemical      |
| Report Unique ID   | RL02672504032        | Group               | Water         |
| Issue date/time  | 25.03.2025 / 13:30   | Sub Group           | Surface Water |
| <b>Report Issue To:</b>  |                      |                     |               |
| M/s - HENDALCO INDUSTRIES LIMITED<br>VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,<br>DIST - LOHARDAGA, STATE - JHARKHAND, INDIA 835302<br>MONITORING SITE : GURDARI BAURITE MINE | Contact Person       | Mr. Anil Dasi       |               |
|  | Contact Number       | +91 98330 98832     |               |
|  | Email Id             | anil.dasi@hdcia.com |               |
|  | Order Date           | 21.03.2025 / 10:10  |               |
|  | Order Number         | 136123123668        |               |
| 15. Gamma-HCH (Lindane)  | EPIC/LAB/SCPWA/01/09 | u/g                 | BDL(HDL-0.3)  |
| 16. Malathion  | EPIC/LAB/SCPWA/01/08 | u/g                 | BDL(HDL-0.5)  |
| 17. Methyl parathion   | EPIC/LAB/SCPWA/01/09 | u/g                 | BDL(HDL-0.3)  |
| 18. Monocrotophos  | EPIC/LAB/SCPWA/01/08 | u/g                 | BDL(HDL-0.5)  |
| 19. Phorate  | EPIC/LAB/SCPWA/01/08 | u/g                 | BDL(HDL-0.5)  |
| 20. DDT (o, p and p, p-isomer of<br>DDT, DDE and DDD)  | EPIC/LAB/SCPWA/01/08 | u/g                 | BDL(HDL-0.5)  |
| 21. Endosulfan (alpha, beta, and<br>sulphate)  | EPIC/LAB/SCPWA/01/08 | u/g                 | BDL(HDL-0.05) |

-Test result End-

Prescribed Limit  
Operational Status

Analysed by - Pappu Kumar

Unit was Operational During Sampling

Notified by  
(Ex. Name)  
Technical HeadAnil Dasi  
Certified by  
Anil Dasi  
Laboratory Head  
Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Raebareli, Jharkhand



## Environmental Test Certificate

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | NA                | Discipline | Biological    |
| Report Unique ID      | RL0267254033      | Group      | Water         |
| Issue date/time       | 25.08.2025/ 13:30 | Sub Group  | Surface Water |

## Report Issuer

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

Contact Person: Mr. Amit Das  
Contact Number: +91 9671034779  
Email Id: [amit.das@hdbtindia.com](mailto:amit.das@hdbtindia.com)  
Order Date: 21.08.2025/ 10:10  
Order Number: 13812213868

## References of Quality Management System (Date of Issuance/ Date)

|                           |               |                       |                   |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH40267 | Sample Booking Number | EPIC-2534033      |
| Sample ID                 | 2534033       | Sample Receipt (D/T)  | 20.08.2025/ 11:30 |

## Sampling References

|                                 |                                 |  |                              |
|---------------------------------|---------------------------------|--|------------------------------|
| Type of Industry                | Bauxite Mines                   | Ref. of Sampling Plan                    | EPIC/LAB/6/036               |
| Sampling Start (D/T)            | 18.08.2025/ 15:21               | Sampling End (D/T)                       | 18.08.2025/ 15:25            |
| Mode of Sampling                | Conducted by Laboratory         | Sample collected by                      | Mr. Pawan Deep Bhagat & Team |
| Sampling method used            | IS : 3020 (Part-1) 1987, R-2003 |  |                              |
| Description/condition of sample |                                 | Receipt sample(s) were fit for analysis. |                              |

## Environmental Condition during sampling

|                   |        |                  |    |            |    |                |           |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity % | 70 | Wind direction | 130°-300° |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|

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

|            |                          |                |                                   |
|------------|--------------------------|----------------|-----------------------------------|
| Location A | Sathupani (Spring Water) | GPS coordinate | 23° 39' 16.91" N 84° 10' 42.32" E |
|------------|--------------------------|----------------|-----------------------------------|

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 20.08.2025/ 11:25 | Test completion date | 25.08.2025/ 11:00 |
|-----------------|-------------------|----------------------|-------------------|

## -Test Result-

| Sl. | Test Parameters | Method used    | Unit       | Results | Units |
|-----|-----------------|----------------|------------|---------|-------|
| 1.  | Total Coliform  | IS 105185-2002 | Per 100 ml | 420     | —     |
| 2.  | E.Coli          | IS 105185-2002 | Per 100 ml | 370     | —     |

## -Test result End -

## Prescribed Limit

## Operational Status

Analyzed by -Sopita Kumar

Unit was Operational During sampling

  
 Certified by  
(Sopita Kumar)  
Technical Head

  
 Issued by  
Gopal Das  
Laboratory Head

 Authorized Signature  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



Address:  
Km. - 4.5, Tripathi, Haldia  
Road No. - S. No. 10  
District - 834302, India

Tel: +91 98330 02020  
+91 98330 30977  
+91 98330 71884  
epiclabtech@gmail.com

Land: +91 98330 02020  
Fax: +91 98330 30977  
SST: +91 98330 119420

Accredited by:  
A2LA, USA (Accredited Number: 2010-0001)  
National Board of Accreditation (NBA)  
Certified by:  
ISO 9001:2015 and ISO 14001:2015

## Document ID: Code: LabTech001

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | TCL20272500001020 | Discipline | Chemical      |
| Report Unique ID      | RL0272504034      | Group      | Water         |
| Issue date/time       | 29.08.2025/ 13:30 | 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 : CURDARI BAUXITE MINE

Contact Person: Mr. Ankit Das  
Contact Number: +91 9871034779  
Email Id: ankit.das@hindalcoindia.com  
Order Date: 21.03.2025/ 10:10  
Order Number: 12612312868

## References of Quality Management System (Date of Issuance Date)

|                           |               |                       |                   |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0287 | Sample Booking Number | EPIC 2004034      |
| Sample(s) Code            | 2534034       | Sample Receipt (D/T)  | 29.08.2025/ 13:30 |

## Sampling References

|                      |                                 |                       |                              |
|----------------------|---------------------------------|-----------------------|------------------------------|
| Type of Industry     | Bauxite Mines                   | Ref. of Sampling Plan | EPIC/LAB/R/036               |
| Sampling Start (D/T) | 18.08.2025/ 15:28               | Sampling End (D/T)    | 18.08.2025/ 15:33            |
| Mode of Sampling     | Conducted by Laboratory         | Sample collected by   | Mr. Pawan Deep Bhagat & Team |
| Sampling method used | IS : 3025 (Part-1) 1987, P-2003 |                       |                              |

Description/condition of sample: Receipt sample(s) were fit for analysis.

## Environmental Condition during sampling

|                   |        |                  |    |            |    |                |           |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity % | 70 | Wind direction | 120°-300° |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|

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

|                |                           |                |                                   |
|----------------|---------------------------|----------------|-----------------------------------|
| SL. Location A | Sarki River (Down Stream) | GPS coordinate | 23° 17' 00.70" E 84° 12' 40.54" N |
|----------------|---------------------------|----------------|-----------------------------------|

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

|                  |                   |                      |                   |
|------------------|-------------------|----------------------|-------------------|
| Test start date: | 20.08.2025/ 12:00 | Test completion date | 29.08.2025/ 11:00 |
|------------------|-------------------|----------------------|-------------------|

## -Test Result-

| Sl. | Test Parameters                          | Method used               | Unit  | Results       | Limits |
|-----|--|---------------------------|-------|---------------|--------|
| 1.  | pH value at 25.7°C                       | IS 3025 (P-11) 2023       | -     | 7.06          | -      |
| 2.  | Turbidity                                | IS 3025 (P-10) 2023       | NTU   | 9.88          | -      |
| 3.  | Colour                                   | IS 3025 (P-04) 2023       | Numer | 5             | -      |
| 4.  | Odour                                    | IS 3025 (P-06) 2018       | -     | Agreeable     | -      |
| 5.  | Taste                                    | IS 3025 (P-07) 2017       | -     | Agreeable     | -      |
| 6.  | Total Dissolved Solids (TDS)             | IS 3025 (P-08) 2023       | mg/l  | 195.00        | -      |
| 7.  | Chloride (as Cl)                         | IS 3025 (P-12) 2018       | mg/l  | 32.02         | -      |
| 8.  | Total Alkalinity (as CaCO <sub>3</sub> ) | IS 3025 (P-13) 2019       | mg/l  | 95.00         | -      |
| 9.  | Total Hardness (as CaCO <sub>3</sub> )   | IS 3025 (P-21) 2009       | mg/l  | 144.57        | -      |
| 10. | Calcium (as Ca)                          | IS 3025 (P-40) 1991       | mg/l  | 25.65         | -      |
| 11. | Free Residual Chlorine                   | IS 3025 (P-26) 1988       | mg/l  | SDU/HOL 6.40  | -      |
| 12. | Sulphate (as SO <sub>4</sub> )           | IS 3025 (P-24) Sec-1/2023 | mg/l  | 4.8           | -      |
| 13. | Nitrate (as NO <sub>3</sub> )            | APHA 4500-N 2023          | mg/l  | 2.04          | -      |
| 14. | Phenolic Compound                        | IS 3025 (P-45) Sec-1/2023 | mg/l  | SDU/HOL 0.000 | -      |



**Important Note:** a. The laboratory accepts responsibility for content of this report. b. The performance of laboratory's personnel, facility, or specific environmental condition as outlined and received relate only to the sample tested as prescribed Date & time. c. The test report shall not be reproduced full or in part or in any way as per law or in the event of law, i.e., any complaint about this report should be communicated in writing within 10 days of issuance of this report. d. Total liability of 2000/- (Two Thousand Rupees only) will be levied for laboratory's omission only. e. All disputes are subject to the jurisdiction and exclusive liability of the laboratory does not exceed the testing and sampling charges. f. Laboratory does not accept responsibility of the results for incomplete, false or inaccurate, misleading or any cause by any reason of this report. g. When the results are being issued provider are subject to +/- 5%.

**Abbreviations:** SDU (Sieve Inhibition Limit), HOL (Maximum Inhibition Limit), mg/l (Unit of Quantification).



www.english-test.net

|                       |                      |            |               |
|-----------------------|----------------------|------------|---------------|
| Unique Lab Report No. | TC128657250000019320 | Discipline | Chemical      |
| Report Unique ID      | RJU0672534034        | Group      | Water         |
| Issue date/time       | 25.04.2025/ 13:36    | Sub Group  | Surface Water |

### Report from the

**P/U - HINDALCO INDUSTRIES LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835502  
MONITORING SITE : GURDARI BAUNITE MINE**

**Contact Person** Mr. Ankit Dua  
**Contact Number** +91 9671034776  
**Email Id** ankit.dua@actuitybeta.com  
**Order Date** 31-03-2026 10:10  
**Order Number** 13612213866

## Review: Research and Experiments in Design

Sub Group - Trace Metal Elements

|                            |                  |      |                |
|----------------------------|------------------|------|----------------|
| 15. Copper (as Cu)         | APHA 2111 B 2023 | mg/l | BDL(MDL-0.2)   |
| 16. Iron (as Fe)           | APHA 2111 B 2023 | mg/l | BDL(MDL-0.1)   |
| 17. Lead (as Pb)           | APHA 2111 B 2023 | mg/l | BDL(MDL-0.01)  |
| 18. Cadmium (as Cd)        | APHA 2111 B 2023 | mg/l | BDL(MDL-0.001) |
| 19. Total Chromium (as Cr) | APHA 2111 B 2023 | mg/l | BDL(MDL-0.05)  |
| 20. Nickel (as Ni)         | APHA 2111 B 2023 | mg/l | BDL(MDL-0.02)  |
| 21. Total Arsenic (as As)  | APHA 2114 B 2023 | mg/l | BDL(MDL-0.001) |
| 22. Selenium (as Se)       | APHA 2114 B 2023 | mg/l | BDL(MDL-0.001) |
| 23. Manganese (as Mn)      | APHA 2111 B 2023 | mg/l | BDL(MDL-0.001) |
| 24. Zinc (as Zn)           | APHA 2111 B 2023 | mg/l | BDL(MDL-0.001) |

### Test example 2

Prepared and Edited

OpenStax

reshynd by - Poppy Kurner

Using spatial Operational Duscusses during the

  
Reviewed by  
S. N. Kumar  
Technical Head

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Authorised Signatory  
EPIC LabTech Pvt. Ltd  
Ramesh Chand





## Authored Test Certificate

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | N/A               | Discipline | Chemical      |
| Report Unique ID      | RL02672534034     | Group      | Water         |
| Issue date/time       | 25.06.2025/ 13:30 | Sub Group  | Surface Water |

## Report issued to:

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

Contact Person : Mr. Ankit Das  
Contact Number : +91 9871034775  
Email Id : ankit.das@adhyatma.com  
Order Date : 31.03.2025/ 10:30  
Order Number : E361223123668

|  |                     |     |             |   |
|--|---------------------|-----|-------------|---|
| 14. Ethion   | EPCLAB/SOP/WA/01/00 | ref | BDL/HOL-6.0 | - |
| 15. Gamma-HCH(Endane)                              | EPCLAB/SOP/WA/01/00 | ref | BDL/HOL-6.0 | - |
| 16. Malathion                                      | EPCLAB/SOP/WA/01/00 | ref | BDL/HOL-6.0 | - |
| 17. Methyl parathion                               | EPCLAB/SOP/WA/01/00 | ref | BDL/HOL-6.0 | - |
| 18. Monocrotophos                                  | EPCLAB/SOP/WA/01/00 | ref | BDL/HOL-6.0 | - |
| 19. Phorate  | EPCLAB/SOP/WA/01/00 | ref | BDL/HOL-6.0 | - |
| 20. DDT (o, p and p, p-isomer of DDT, DDE and DDD) | EPCLAB/SOP/WA/01/00 | ref | BDL/HOL-6.0 | - |
| 21. Endosulfan (alpha, beta, and sulphate)         | EPCLAB/SOP/WA/01/00 | ref | BDL/HOL-6.0 | - |

## -Test result list -

## Prescribed Limit

## Operational Status

Analyzed by - Pappu Kumar

Unit was Operational During sampling.

  
 Signed by  
Pappu Kumar  
Technician

  
 Signed by  
Ankit Das  
Technician

Authored Signatory  
EPIC LabTech Pvt. Ltd.  
Panchi, Jharkhand





## Analytical Test Details

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | N/A               | Discipline | Chemical      |
| Report Unique ID      | RL02672534035     | Group      | Water         |
| Issue Date/Time       | 29-08-2025/ 13:30 | 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 : CURDARI BAURITE MINE

Contact Person: Mr. Ankit Das  
Contact Number: +91 9871634779  
Email Id: [ankit.das@hdybhr.com](mailto:ankit.das@hdybhr.com)  
Order Date: 21-08-2025/ 10:10  
Order Number: 13612312868

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

|                           |               |                       |                   |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0207 | Sample Booking Number | EPIC-2534030      |
| Sample(s) Code            | 2534035       | Sample Receipt (Dt)   | 20-08-2025/ 11:36 |

## Sampling References

|                                 |                                |  |                              |
|---------------------------------|--------------------------------|--|------------------------------|
| Type of Industry                | Bauxite Mines                  | No. of Sampling Plan                     | EPIC/LAB/N/036               |
| Sampling Start (Dt)             | 18-08-2025/ 16:28              | Sampling End (Dt)                        | 18-08-2025/ 13:33            |
| Mode of Sampling                | Conducted by Laboratory        | Sample collected by                      | Mr. Pawan Deep Bhagat & Team |
| Sampling method used            | IS: 2025 (Part-1) 1987, H-2000 |  |                              |
| Description/condition of sample |                                | Receipt sample(s) were fit for analysis. |                              |

## Environmental Condition during sampling

|                   |        |                  |    |            |    |                |           |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity % | 75 | Wind direction | 120°-300° |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|

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

|                |                          |                |                                   |
|----------------|--------------------------|----------------|-----------------------------------|
| SL. Location A | Sora River (Down Stream) | GPS coordinate | 23° 17' 00.79" E 84° 12' 40.54" N |
|----------------|--------------------------|----------------|-----------------------------------|

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 20-08-2025/ 12:00 | Test completion date | 29-08-2025/ 11:30 |
|-----------------|-------------------|----------------------|-------------------|

## -Test Result-

| Sl. | Test Parameters | Method used    | Unit       | Results | Limits |
|-----|-----------------|----------------|------------|---------|--------|
| 1.  | Total Coliform  | IS: 10585 2000 | Per 100 ml | 430     | —      |
| 2.  | E.Coli          | IS: 10585 2000 | Per 100 ml | 360     | —      |

## -Test result End-

## Prescribed Limit

## Operational Status

Analyzed by -Sopan Kumar

Unit was Operational During sampling.

  
 Received by  
(Sopan Kumar)  
Technical Head

  
 Issued by  
Ankit Das  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





Address:  
C/o - R.R. Tripathi, Industrial  
Road No. - 5, Ranchi  
Jharkhand - 834002, India

Tel: +91 98352 90010  
+91 9237 36077  
+91 98352 72884  
epiclabtech@gmail.com

Line: +91 98352 90010/219682  
Email: support@epiclabtech.com  
SST: 2014/10/CE/01/1794/23

Accredited by -  
ISO 9001:2015 Certificate Number: 101-10000  
Chemical, Water & Wastewater Quality  
Certified by -  
ISO 17025:2017 and ISO 17034:2016

TC-13887

## Environmental Test Certificate

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | TCI28872500001021 | Discipline | Chemical      |
| Report Unique ID      | RLI28872500001021 | Group      | Water         |
| Issue Date/Time       | 25.06.2025/ 13:42 | 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 : GURDARI BAUXITE MINE

Contact Person: Mr. Arun Das  
Contact Number: +91 9871034779  
Email Id: arun.das@hdcitybharat.com  
Order Date: 31.03.2025/ 10:10  
Order Number: 13612312868

## References of Quality Management System (Days of Traceability Date)

|                           |               |                       |                   |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0287 | Sample Booking Number | EPIC/2504336      |
| Sample(s) Cycle           | 2504336       | Sample Receipt (D/T)  | 25.06.2025/ 11:30 |

## Sampling References

|                      |                                 |                       |                              |
|----------------------|---------------------------------|-----------------------|------------------------------|
| Type of Industry     | Bauxite Mines                   | Ref. of Sampling Plan | EPIC/LAB/R/038               |
| Sampling Start (D/T) | 18.06.2025/ 15:35               | Sampling End (D/T)    | 18.06.2025/ 15:40            |
| Mode of Sampling     | Conducted by Laboratory         | Sample collected by   | Mr. Pawan Deep Bhagat & Team |
| Sampling method used | IS : 3625 (Part-1) 1987, R-2003 |                       |                              |

Description/Condition of sample: Receipt sample(s) were fit for analysis.

## Environmental Condition during sampling

|                   |        |                  |    |            |    |                |           |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity % | 70 | Wind direction | 120°-300° |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|

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

|                |                        |                |                                   |
|----------------|------------------------|----------------|-----------------------------------|
| Sl. Location A | Sank River (Up Stream) | GPS coordinate | 23° 19' 10.11" E 84° 16' 15.32" N |
|----------------|------------------------|----------------|-----------------------------------|

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

|                  |                   |                      |                   |
|------------------|-------------------|----------------------|-------------------|
| Test start date: | 20.06.2025/ 11:28 | Test completion date | 25.06.2025/ 11:50 |
|------------------|-------------------|----------------------|-------------------|

## -Test Result-

| Sl. | Test Parameters                          | Method used                 | Unit  | Results        | Limits |
|-----|--|-----------------------------|-------|----------------|--------|
| 1.  | pH value at 25.7°C                       | IS 3025 (P-11) 2023         | -     | 7.2            | -      |
| 2.  | Turbidity                                | IS 3025 (P-10) 2004         | NTU   | 8.06           | -      |
| 3.  | Colour                                   | IS 3025 (P-04) 2023         | Haier | 5              | -      |
| 4.  | Odour                                    | IS 3025 (P-05) 2018         | -     | Agreeable      | -      |
| 5.  | Taste                                    | IS 3025 (P-07) 2017         | -     | Agreeable      | -      |
| 6.  | Total Dissolved Solids (TDS)             | IS 3025 (P-16) 2023         | mg/l  | 196.00         | -      |
| 7.  | Chloride (as Cl)                         | IS 3025 (P-12) 2019         | mg/l  | 30.06          | -      |
| 8.  | Total Alkalinity (as CaCO <sub>3</sub> ) | IS 3025 (P-20) 2019         | mg/l  | 100.00         | -      |
| 9.  | Total Hardness (as CaCO <sub>3</sub> )   | IS 3025 (P-21) 2009         | mg/l  | 148.50         | -      |
| 10. | Calcium (as Ca)                          | IS 3025 (P-40) 1991         | mg/l  | 26.45          | -      |
| 11. | Free Residual Chlorine                   | IS 3025 (P-26) 2006         | mg/l  | SOL/HOL (0.4)  | -      |
| 12. | Sulphate (as SO <sub>4</sub> )           | IS 3025 (P-24) 2001-12/2022 | mg/l  | 4.90           | -      |
| 13. | Nitrate (as NO <sub>3</sub> )            | APHA 2505 B.2003            | mg/l  | 2.06           | -      |
| 14. | Phenolic Compound                        | IS 3025 (P-40) Sec-1 2022   | mg/l  | SOL/HOL (0.00) | -      |

**Important Note:** 1. The laboratory accepts responsibility for analysis of this report. 2. This report is issued at laboratory's judgement. Majority of specific environmental conditions are not defined and results relate only to the sample tested as presented. Data & Item 3. The Test report shall not be reproduced fully or in part. It can't be used as proof in the court of law. 4. Any one place where this report should be communicated in writing without a copy of this note. 5. The validity of 2012/14/2020 P.106 will be limited to informed assessment only. 6. All charges are automatical. Bauxite, Acidification and Discharge. Validity of the laboratory does not exceed the testing and sampling charges. 7. Options does not imply understanding of the tested product by laboratory. Under no circumstances, laboratory accepts any caused by use or misuse of the result. 8. When the results are truly external provider are marked as "mark". Disclaimer: EPIC (Environmental Lab), M/s. Bauxite Discharge (Bauxite), Solt (Solute) of Discharge.



Address:  
G-6, R.C. Nagar, Deoghar  
Post Box - 13, Deoghar  
Jharkhand - 834001, India

Regd. No.: 2001-AH002  
Regd. Date: 08/08/2001  
Email ID: [epiclabtech@gmail.com](mailto:epiclabtech@gmail.com)

CLB-0799912502271982  
PAN - ALIN02201  
GST - DAHAN001194129

Accredited by  
ISO 9001:2015 certificate Number 101-1382  
particulars from Indian Society of Quality  
Certified by -  
080-6800-2273 and 080-6800-2274

## Environmental Test Certificate

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | TCI20172500001921 | Discipline | Chemical      |
| Report Unique ID      | RLI0672534036     | Group      | Water         |
| Issue date/time       | 25.08.2020/ 13:42 | 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 : GURDARI BAUXITE MINE

Contact Person: Mr. Ankit Das  
Contact Number: +91 9871034779  
Email Id: [ankit.das@hdcitybirla.com](mailto:ankit.das@hdcitybirla.com)  
Order Date: 31.03.2020/ 10:10  
Order Number: 13612312868

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

|                            |                  |      |                |
|----------------------------|------------------|------|----------------|
| 15. Copper (as Cu)         | APHA 3111 B 2023 | mg/l | BDL(HDL-0.3)   |
| 16. Iron (as Fe)           | APHA 3111 B 2023 | mg/l | BDL(HDL-0.1)   |
| 17. Lead (as Pb)           | APHA 3111 B 2023 | mg/l | BDL(HDL-0.01)  |
| 18. Cadmium (as Cd)        | APHA 3111 B 2023 | mg/l | BDL(HDL-0.003) |
| 19. Total Chromium (as Cr) | APHA 3111 B 2023 | mg/l | BDL(HDL-0.03)  |
| 20. Nickel (as Ni)         | APHA 3111 B 2023 | mg/l | BDL(HDL-0.02)  |
| 21. Total Arsenic (as As)  | APHA 3114 B 2023 | mg/l | BDL(HDL-0.005) |
| 22. Selenium (as Se)       | APHA 3114 B 2023 | mg/l | BDL(HDL-0.005) |
| 23. Manganese (as Mn)      | APHA 3111 B 2023 | mg/l | BDL(HDL-0.08)  |
| 24. Zinc (as Zn)           | APHA 3111 B 2023 | mg/l | BDL(HDL-0.04)  |

-Test result End -

## Prescribed Limit:

## Operational Status:

Analyzed by - Pappu Kumar

Under went Operational During sampling.

Reviewed by  
DK Kumar  
Technical Head

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





## Sampling and Test Configuration

|                       |                   |             |               |
|-----------------------|-------------------|-------------|---------------|
| Unique Lab Report No. | N/A               | Discipline: | Chemical      |
| Report Unique ID      | RL02672534036     | Group:      | Water         |
| Issue date/time       | 25.08.2025/ 13:42 | Sub Group:  | Surface Water |

## Report Issue to:

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

Contact Person: Mr. Anil Das  
Contact Number: +91 9871034779  
Email Id: [anil.das@hdybtlia.com](mailto:anil.das@hdybtlia.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/0257 | Sample Booking Number | EPIC-2534036      |
| Sample(s) Code            | 2534036       | Sample Receipt (D/T)  | 25.08.2025/ 11:06 |

## Sampling References

|                      |                                 |                       |                              |
|----------------------|---------------------------------|-----------------------|------------------------------|
| Type of Industry     | Baunite Mines                   | Ref. of Sampling Plan | EPIC/LAB/R/036               |
| Sampling Start (D/T) | 18.08.2025/ 10:25               | Sampling End (D/T)    | 18.08.2025/ 13:40            |
| Mode of Sampling     | Conducted by Laboratory         | Sample collected by   | Mr. Pawan Deep Bhagat & Team |
| Sampling method used | IS : 3025 (Part-1) 1987, P-2003 |                       |                              |

Description/condition of sample: Receipt sample(s) were fit for analysis.

## Environmental Condition during sampling

|                   |        |                  |    |            |    |                |           |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity % | 75 | Wind direction | 130°-300° |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|

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

|                |                        |                |                                    |
|----------------|------------------------|----------------|------------------------------------|
| SL. Location A | Sara River (UP Stream) | GPS coordinate | 23° 10' 10.11" E/ 84° 10' 15.92" N |
|----------------|------------------------|----------------|------------------------------------|

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 20.08.2025/ 11:28 | Test completion date | 25.08.2025/ 11:30 |
|-----------------|-------------------|----------------------|-------------------|

## -Test Result-

| Sl. | Test Parameters | Method used | Unit | Results | Limits |
|-----|-----------------|-------------|------|---------|--------|
|-----|-----------------|-------------|------|---------|--------|

|  |   |                       |      |              |   |
|--|---|-----------------------|------|--------------|---|
| 1.   | Fluoride (as F)                         | APHA 4500 F-2023      | mg/l | BDL/HDL 0.1  | - |
| <b>Group: Residues and Contaminants in Water</b> |   |                       |      |              |   |
| 2.   | Aluminum                                | IS 3025 (P-50)2013    | mg/l | BDL/HDL 0.3  | - |
| 3.   | Boron                                   | IS 3025 (P-57)2013    | mg/l | BDL/HDL 0.3  | - |
| 4.   | Polychlorinated biphenyls               | EPIC/LAB/SOP/WA/01/08 | ug/l | BDL/HDL 0.2  | - |
| 5.   | Polynuclear Aromatic Hydrocarbons (PAH) | EPIC/LAB/SOP/WA/01/08 | ug/l | BDL/HDL 0.05 | - |

|     |              |                       |      |               |   |
|-----|--------------|-----------------------|------|---------------|---|
| 6.  | Alachlor     | EPIC/LAB/SOP/WA/01/08 | ug/l | BDL/HDL 0.5   | - |
| 7.  | Atrazine     | EPIC/LAB/SOP/WA/01/08 | ug/l | BDL/HDL 0.5   | - |
| 8.  | Dimethoate   | EPIC/LAB/SOP/WA/01/08 | ug/l | BDL/HDL 0.02  | - |
| 9.  | Alpha HCH    | EPIC/LAB/SOP/WA/01/08 | ug/l | BDL/HDL 0.005 | - |
| 10. | Beta HCH     | EPIC/LAB/SOP/WA/01/08 | ug/l | BDL/HDL 0.02  | - |
| 11. | Butachlor    | EPIC/LAB/SOP/WA/01/08 | ug/l | BDL/HDL 0.5   | - |
| 12. | Chlorpyrifos | EPIC/LAB/SOP/WA/01/08 | ug/l | BDL/HDL 0.5   | - |
| 13. | Delta HCH    | EPIC/LAB/SOP/WA/01/08 | ug/l | BDL/HDL 0.02  | - |

Disclaimer Note: 1. This laboratory warrants responsibility for content of this report. 2. The performance of laboratory's personnel facility of specific environmental monitoring required reported results relate only to the samples tested as prescribed Date & time. 3. The Test report shall not be reproduced full or part & shall be used as per its issue date. 4. No responsibility will be taken for any damage or loss caused by any unauthorized person. 5. Traceability of sample is maintained. The test will be located by location number only. 6. All disputes are subject to Ranchi jurisdiction and exclusive jurisdiction of the laboratory. 7. No reward via testing and testing charges. 8. Options download copy, under license of the holder by subscriber. Under no circumstances, liability excepted caused by use or misuse of the report. 9. When the results are more external, greater are placed as "n/a".



|                       |                  |            |               |
|-----------------------|------------------|------------|---------------|
| Unique Lab Report No. | N/A              | Discipline | Chemical      |
| Report Unique ID      | RLJ0872534036    | Group      | Water         |
| Issue date/time       | 25/08/2025/13:42 | Sub Group  | Surface Water |

### Report issue to

**M/s - HINDALCO INDUSTRIES LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835002  
MONITORING SITE : GURDARI BAUXITE MINE**

**Contact Person** Mr. Ankit Das  
**Contact Number** +91 9871034778  
**Email Id** ankit.das@adityasirta.com  
**Order Date** 31-03-2025 12:10  
**Order Number** 1234567890

|     |  |                     |     |              |
|-----|--|---------------------|-----|--------------|
| 14. | Ethion   | EPICLAB50PYWA/01/00 | ref | BDL/mol-0.51 |
| 15. | Gamma-HCH(Lindane)                             | EPICLAB50PYWA/01/00 | ref | BDL/mol-0.51 |
| 16. | Malathion                                      | EPICLAB50PYWA/01/00 | ref | BDL/mol-0.51 |
| 17. | Methyl parathion                               | EPICLAB50PYWA/01/00 | ref | BDL/mol-0.21 |
| 18. | Monocrotophos                                  | EPICLAB50PYWA/01/00 | ref | BDL/mol-0.51 |
| 19. | Phoxate  | EPICLAB50PYWA/01/00 | ref | BDL/mol-0.51 |
| 20. | DDT (o, p and p, p-isomer of DDT, DDE and DDD) | EPICLAB50PYWA/01/00 | ref | BDL/mol-0.51 |
| 21. | Endosulfan (alpha, beta, and sulphate)         | EPICLAB50PYWA/01/00 | ref | BDL/mol-0.51 |

→ Last result list →

### Presented Line

### Operational Status

Analysed by - Pappu Kumar

#### Units Opened During Sampling

Followed by  
(14 hours)  
Indicates the

Followed by  
(14 hours)  
Indicates the

10-18-15  
Received by  
Circulation Dept.

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Panaji, Goa, India





## Environmental Test Certificate

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | N/A               | Discipline | Biological    |
| Report Unique ID      | RL020672534037    | Group      | Water         |
| Issue Date/Time       | 29.06.2025/ 13:45 | 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 : GURDARI BAUXITE MINE

Contact Person : Mr. Ankit Das  
Contact Number : +91 9971034775  
Email Id : [ankit.das@dhvabits.com](mailto:ankit.das@dhvabits.com)  
Order Date : 31.03.2025/ 10:10  
Order Number : 126123123868

## Reference of Quality Management System (Steps of Traceability Detail)

|                           |               |                       |                   |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0287 | Sample Booking Number | EPIC-2534037      |
| Sample(s) Code            | 2534037       | Sample Receipt (D/T)  | 29.06.2025/ 11:08 |

## Sampling References:

|                                 |                                 |  |                              |
|---------------------------------|---------------------------------|--|------------------------------|
| Type of industry                | Bauxite Mines                   | No. of Sampling Plan                     | EPIC/LAB/R/008               |
| Sampling Start (D/T)            | 29.06.2025/ 18:35               | Sampling End (D/T)                       | 29.06.2025/ 19:49            |
| Mode of Sampling                | Conducted by Laboratory         | Sample collected by                      | Mr. Pawan Deep Bhagat & Team |
| Sampling method used            | IS : 2025 (Part-1) 1967, R-2003 |  |                              |
| Description/condition of sample |                                 | Receipt sample(s) were fit for analysis. |                              |

## Environmental Condition during sampling

|                   |        |                  |    |            |    |                |           |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity % | 70 | Wind direction | 120°-300° |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|

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

|               |                        |                |                                 |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Sank River (UP Stream) | GPS coordinate | 23° 15' 10.11" E 84° 10' 15.92" |
|---------------|------------------------|----------------|---------------------------------|

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 29.06.2025/ 11:28 | Test completion date | 29.06.2025/ 11:53 |
|-----------------|-------------------|----------------------|-------------------|

## -Test Result-

| Sl. | Test Parameters | Method used   | Unit       | Results | Limits |
|-----|-----------------|---------------|------------|---------|--------|
| 1.  | Total Coliform  | IS 10586:2002 | Per 100 ml | 480     | —      |
| 2.  | E.Coli          | IS 10586:2002 | Per 100 ml | 380     | —      |

## -Test result End -

## Prescribed Limit

## Operational Status

Analyzed by -Supta Kumar

Unit was Operational During sampling.

  
 Verified by  
Supta Kumar  
Technical Head

  
 Issued by  
Ankit Das  
Laboratory Head

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




| Unique Lab Report No.  | TC1298725000021022   | Discipline   | Chemical                          |                |        |
|--|--|--|-----------------------------------|----------------|--------|
| Report Unique ID   | RL02672534038  | Group  | Water                             |                |        |
| Issue date/time  | 25.08.2025/13:48   | Sub-Group  | Surface Water                     |                |        |
| <b>Report Issue to:</b>  |  |  |                                   |                |        |
| H/M - HINDALCO INDUSTRIES LIMITED<br>VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,<br>DIST-LOHARDAGA, STATE-JHARKHAND, INDIA 835302<br>MONITORING SITE : GUNDARI BAUSITE MINE | Contact Person<br>Contact Number<br>Email Id<br>Order Date<br>Order Number | Mr. ANAND DAS<br>+91 9971034775<br>anand.das@adityabirla.com<br>31.03.2025/ 10:10<br>13612213868 |                                   |                |        |
| <b>References of Quality Management System (QMS) (as per IS 14001:2015)</b>  |  |  |                                   |                |        |
| Customer Registration No.  | EPIC/OTH/0267  | Sample Booking Number  | EPIC 2534038                      |                |        |
| Sample(s) Code   | 2534038  | Sample Receipt (D/T)   | 26.08.2025/ 11:09                 |                |        |
| <b>Sampling References</b>   |  |  |                                   |                |        |
| Type of Industry   | Bauxite Mines  | Ref. of Sampling Plan  | EPIC/LAB/0266                     |                |        |
| Sampling Start (D/T)   | 18.08.2025/ 18:45  | Sampling End (D/T)   | 18.08.2025/ 15:50                 |                |        |
| Mode of Sampling   | Conducted by Laboratory  | Sample collected by  | Mr. Pawan Deep Bhagat & Team      |                |        |
| Sampling method used   | IS: 3025 (Part-1) 1987, H-2003   |  |                                   |                |        |
| Description/condition of sample  | Receipt sample(s) were fit for analysis.                                   |  |                                   |                |        |
| <b>Environmental Condition during sampling</b>   |  |  |                                   |                |        |
| Weather condition  | Cloudy   | Temperature (°C)   | 27                                |                |        |
|  |  | Humidity %   | 70                                |                |        |
|  |  | Wind direction   | 120°-300°                         |                |        |
| <b>Sampling Location(s) with GPS coordinate(s)</b>   |  |  |                                   |                |        |
| Location A   | Dhurthani Nach (UP Stream)   | GPS coordinate   | 23° 37' 05.11" N 84° 10' 12.76" E |                |        |
| <b>Detail(s) of performance of the laboratory activities</b>   |  |  |                                   |                |        |
| Test start date  | 20.08.2025/ 11:29  | Test completion date   | 26.08.2025/ 11:50                 |                |        |
| <b>-Test Result-</b>   |  |  |                                   |                |        |
| Sl.  | Test Parameters  | Method used  | Unit                              | Results        | Limits |
| 1.   | pH value at 25.7°C   | IS 3625 (P-11) 2022  | -                                 | 7.1            | -      |
| 2.   | Turbidity  | IS 3625 (P-18) 2022  | NTU                               | 0.85           | -      |
| 3.   | Colour   | IS 3625 (P-04) 2022  | Hazen                             | 10             | -      |
| 4.   | Odour  | IS 3625 (P-26) 2022  | -                                 | Agreeable      | -      |
| 5.   | Taste  | IS 3625 (P-07) 2022  | -                                 | Agreeable      | -      |
| 6.   | Total Dissolved Solids (TDS)   | IS 3625 (P-16) 2022  | mg/l                              | 290.00         | -      |
| 7.   | Chloride (as Cl)   | IS 3625 (P-32) 2022  | mg/l                              | 31.04          | -      |
| 8.   | Total Alkalinity (as CaCO <sub>3</sub> )                                   | IS 3625 (P-25) 2022  | mg/l                              | 105            | -      |
| 9.   | Total Hardness (as CaCO <sub>3</sub> )                                     | IS 3625 (P-23) 2022  | mg/l                              | 350.6          | -      |
| 10.  | Calcium (as Ca)  | IS 3625 (P-48) 1991  | mg/l                              | 27.25          | -      |
| 11.  | Free Residual Chlorine   | IS 3625 (P-28) 2022  | mg/l                              | BDL/HDL 0.4    | -      |
| 12.  | Sulphate (as SO <sub>4</sub> )   | IS 3625 (P-24/54) 2022   | mg/l                              | 6.80           | -      |
| 13.  | Nitrate (as NO <sub>3</sub> )  | APHA 2585 B 2023   | mg/l                              | 2.04           | -      |
| 14.  | Phenolic Compound  | IS 3625 (P-43/54) 2022   | mg/l                              | BDL/HDL 0.0311 | -      |

**Non-essential items:** 1. The laboratory's non-essential items that consist of this report [a], test performed at laboratory's permanent facility, or specific procedures used in connection with the test results made only to the test performed in accordance Table 2 item [a]. Test report shall not be reproduced in part or in part or as a whole, in part or in the event of loss [2-4]. Any incomplete item in this report should be communicated by writing the lab ID along with the reason. 2. The laboratory of CPC shall charge the CPC will be liable for the amount of the test report [2-4]. Any incomplete item in this report should be communicated by writing the lab ID along with the reason. 3. The laboratory of CPC shall charge the CPC will be liable for the amount of the test report [2-4]. Any incomplete item in this report should be communicated by writing the lab ID along with the reason. 4. The laboratory of CPC shall charge the CPC will be liable for the amount of the test report [2-4]. Any incomplete item in this report should be communicated by writing the lab ID along with the reason.



## Authorized Test Certificate

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | TCJ2087250000102  | Discipline | Chemical      |
| Report Unique ID      | RLJ20872534038    | Group      | Water         |
| Issue Date/Time       | 23.04.2025/ 13:48 | 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 : GURGARI BAUXITE MINE

Contact Person: PV. Ashutosh  
Contact Number: +91 9871034779  
Email Id: [ashutosh@hilti.com](mailto:ashutosh@hilti.com)  
Order Date: 21.03.2025/ 10:10  
Order Number: 12612312368

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

|                            |                   |      |                 |
|----------------------------|-------------------|------|-----------------|
| 15. Copper (as Cu)         | APHA 31211 B 2023 | mg/L | SDI (NDL-0.3)   |
| 16. Iron (as Fe)           | APHA 31211 B 2023 | mg/L | SDI (NDL-0.3)   |
| 17. Lead (as Pb)           | APHA 31211 B 2023 | mg/L | SDI (NDL-0.01)  |
| 18. Cadmium (as Cd)        | APHA 31211 B 2023 | mg/L | SDI (NDL-0.001) |
| 19. Total Chromium (as Cr) | APHA 31211 B 2023 | mg/L | SDI (NDL-0.05)  |
| 20. Nickel (as Ni)         | APHA 31211 B 2023 | mg/L | SDI (NDL-0.02)  |
| 21. Total Arsenic (as As)  | APHA 31214 B 2023 | mg/L | SDI (NDL-0.005) |
| 22. Selenium (as Se)       | APHA 31214 B 2023 | mg/L | SDI (NDL-0.001) |
| 23. Manganese (as Mn)      | APHA 31211 B 2023 | mg/L | SDI (NDL-0.08)  |
| 24. Zinc (as Zn)           | APHA 31211 B 2023 | mg/L | SDI (NDL-0.04)  |

- Test result End -

## Prescribed Limit:

## Operational Status:

Analyzed by - Pappu Kumar

Unit was Operational During sampling.


  
Analyzed by  
Pappu Kumar  
Technical Head


  
Analyzed by  
Deepak Kumar  
Technical Head

Authorized Signature  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



## Environmental Test Certificate

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | N/A               | Discipline | Chemical      |
| Report Unique ID      | RLD0272534038     | Group      | Water         |
| Issue date/time       | 29.08.2025/ 11:48 | 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 : GURDANI BAUSITE MINE**

Contact Person: Mr. Arun Das  
Contact Number: +91 9871034775  
Email Id: [arun.das@adhyaalita.com](mailto:arun.das@adhyaalita.com)  
Order Date: 31.08.2025/ 10:10  
Order Number: 33612313868

## References of Quality Management System (Spec &amp; Testability Detail)

|                           |               |                       |                   |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0267 | Sample Booking Number | EPIC 2534038      |
| Sample(s) Code            | 2534038       | Sample Receipt (D/T)  | 20.08.2025/ 11:09 |

## Sampling References

|                                  |                                 |  |                              |
|----------------------------------|---------------------------------|--|------------------------------|
| Type of industry                 | Bauxite Mines                   | Ref. of Sampling Plan:                   | EPIC/LAB/R/036               |
| Sampling Start (D/T)             | 18.08.2025/ 15:45               | Sampling End (D/T)                       | 18.08.2025/ 15:55            |
| Mode of Sampling                 | Conducted by Laboratory         | Sample collected by                      | Mr. Pawan Deep Bhagat & Team |
| Sampling method used             | IS : 3625 (Part-1) 1987, R-2003 |  |                              |
| Description/condition of sample: |                                 | Receipt sample(s) were fit for analysis. |                              |

## Environmental Condition during sampling

|                   |        |                  |    |            |    |                |           |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity % | 70 | Wind direction | 120°-300° |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|

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

|               |                            |                |                               |
|---------------|----------------------------|----------------|-------------------------------|
| 1. Location A | Dhurdhani Nadi (UP Stream) | GPS coordinate | 22°19' 00.11" / 84°16' 12.76" |
|---------------|----------------------------|----------------|-------------------------------|

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 29.08.2025/ 11:29 | Test completion date | 29.08.2025/ 11:50 |
|-----------------|-------------------|----------------------|-------------------|

## -Test Result-

| S. | Test Parameters | Method used       | Unit | Results      | Limits |
|----|-----------------|-------------------|------|--------------|--------|
| 1. | Fluoride (µS F) | APHA 4500-F/C2023 | mg/l | BDL(MOL-0.1) | -      |

## Group-Residues and Contaminants in Water

## Sub Group Trace Metals Elements

|    |   |                       |      |               |   |
|----|---|-----------------------|------|---------------|---|
| 2. | Aluminum                                | IS 3025 (P-56)2019    | mg/l | BDL(MOL-0.1)  | - |
| 3. | Boron                                   | IS 3025 (P-57)2019    | mg/l | BDL(MOL-0.1)  | - |
| 4. | Polychlorinated biphenyls               | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MOL-0.1)  | - |
| 5. | Polynuclear Aromatic Hydrocarbons (PAH) | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MOL-0.05) | - |

## Group-Residues and Contaminants in Water

## Sub Group Pesticides

|     |             |                       |      |               |   |
|-----|-------------|-----------------------|------|---------------|---|
| 6.  | Alachlor    | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MOL-0.1)  | - |
| 7.  | Atrazine    | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MOL-0.1)  | - |
| 8.  | Deetdin     | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MOL-0.02) | - |
| 9.  | Alpha HCH   | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MOL-0.06) | - |
| 10. | Beta HCH    | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MOL-0.02) | - |
| 11. | Butachlor   | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MOL-0.1)  | - |
| 12. | Chlorynphos | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MOL-0.1)  | - |
| 13. | Delta HCH   | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MOL-0.12) | - |



## Environmental Test Certificate

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | NA                | Discipline | Chemical      |
| Report Unique ID      | RL02672534008     | Group      | Water         |
| Issue date/Time       | 20.05.2025/ 12:46 | 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 : GURDARI BAUXITE PLATE

Contact Person  
Contact Number  
Email Id  
Order Date  
Order Number

Mr. Ankit Das  
+91 9871034775  
ankit.cas@epicbirla.com  
31.03.2025/ 10:10  
13613223868

|  |                      |     |              |   |
|--|----------------------|-----|--------------|---|
| 14. Ethion   | EPICLAB/SOP/NA/01/00 | ap1 | BDL/HOL-0.01 | - |
| 15. Gamma-HCH(Lindane)                             | EPICLAB/SOP/NA/01/00 | ap1 | BDL/HOL-0.01 | - |
| 16. Malathion                                      | EPICLAB/SOP/NA/01/00 | ap1 | BDL/HOL-0.01 | - |
| 17. Methyl parathion                               | EPICLAB/SOP/NA/01/00 | ap1 | BDL/HOL-0.01 | - |
| 18. Monocrotophos                                  | EPICLAB/SOP/NA/01/00 | ap1 | BDL/HOL-0.01 | - |
| 19. Phorate  | EPICLAB/SOP/NA/01/00 | ap1 | BDL/HOL-0.01 | - |
| 20. DDT (o, p and p, p-isomer of DDT, DDE and DDD) | EPICLAB/SOP/NA/01/00 | ap1 | BDL/HOL-0.01 | - |
| 21. Endosulfan (alpha, beta, and sulphate)         | EPICLAB/SOP/NA/01/00 | ap1 | BDL/HOL-0.01 | - |

## -Test result (in -

Prescribed Limit

Operational Status

Analyzed by - Pappu Kumar

Unit was Operational During Sampling



Reviewed by  
(P. Kumar)  
Technical Head



Issued by  
(Gaurav Birla)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





Address:  
C/o : R. K. Nagarka, Ranchi-200001  
Road No : 3, Ranchi  
Jharkhand - 834001, India

Tel : 919231 9199379  
919231 9199377  
919231 9199378  
919231 9199379

CIN : U74749JH2017PLC019442  
PAN : AANCTD9110P  
GST : 25AAHCTD91102Z

Accredited by :  
ISO/IEC 17025:2017  
Certified by :  
NABL: 2000-2021 and ISO: 2008-2024

## Analytical Test Certificate

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | N/A               | Discipline | Biological    |
| Report Unique ID      | PL02672534639     | Group      | Water         |
| Issue date/time       | 25.08.2025/ 13:51 | 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 : GURDARI BAUXITE MINE

Contact Person : Mr. Anil Das  
Contact Number : +91 9973034775  
Email Id : anil.das@cityatlas.com  
Order Date : 31.07.2025/ 10:10  
Order Number : 13612312868

## References of Quality Management System (Copy of Incentive Deal)

|                           |               |                       |                   |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0367 | Sample Booking Number | EPIC-2534639      |
| Sample(s) Code            | 2534639       | Sample Receipt (D/T)  | 25.08.2025/ 11:39 |

## Sampling References

|                                 |                                 |  |                              |
|---------------------------------|---------------------------------|--|------------------------------|
| Type of Industry                | Bauxite Mines                   | Ref. of Sampling Plan                    | EPIC/LAB/9/036               |
| Sampling Start (D/T)            | 18.08.2025/ 15:45               | Sampling End (D/T)                       | 18.08.2025/ 15:50            |
| Mode of Sampling                | Conducted by Laboratory         | Sample collected by                      | Mr. Pawan Deep Bhagat & Team |
| Sampling method used            | IS : 2025 (Part 1) 1987, B-2003 |  |                              |
| Description/condition of sample |                                 | Receipt sample(s) were fit for analysis. |                              |

## Environmental Condition during sampling

|                   |        |                  |    |            |    |                |           |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity % | 70 | Wind direction | 130°-300° |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|

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

|               |                            |                |                                 |
|---------------|----------------------------|----------------|---------------------------------|
| S. Location A | Dharmdham Nadi (UP Stream) | GPS coordinate | 23° 19' 03.11" / 84° 16' 12.76" |
|---------------|----------------------------|----------------|---------------------------------|

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 25.08.2025/ 11:29 | Test completion date | 25.08.2025/ 11:50 |
|-----------------|-------------------|----------------------|-------------------|

## -Test Result-

| Sl. | Test Parameters | Method used   | Unit       | Results | Limits |
|-----|-----------------|---------------|------------|---------|--------|
| 1.  | Total Coliform  | IS:16686:2002 | Per 100 ml | 450     | -      |
| 2.  | E.Coli          | IS:16686:2002 | Per 100 ml | 380     | -      |

## -Test result End -

## Prescribed Limit

## Operational Status

Analyzed by - Supta Kumar

Unit was Quantified During sampling:

  
 Verified by  
(Supta Kumar)  
Technical Head

  
 Issued by  
S. S. Das  
Laboratory Head

Authorized Signature  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



## Analytical Test Report Information

| Unique Lab Report No.   | TC1288725000001023                        | Discipline   | Chemical                        |              |        |
|---|---|--|---------------------------------|--------------|--------|
| Report Unique ID  | RLD2672534040                             | Group  | Water                           |              |        |
| Issue date/time   | 25.06.2025/ 11:54                         | Sub Group  | Surface Water                   |              |        |
| <b>Report Issue:</b>  |   |  |                                 |              |        |
| <b>M/s - HINDALCO INDUSTRIES LIMITED</b><br>VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,<br>DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302<br><b>MONITORING SITE: GURDARI BAUITE MINE</b> | Contact Person                            | M. Arsh Das  |                                 |              |        |
|   | Contact Number                            | +91 9871034779   |                                 |              |        |
|   | Email Id                                  | <a href="mailto:arsh.das@adhyatma.com">arsh.das@adhyatma.com</a> |                                 |              |        |
|   | Order Date                                | 31.03.2025/ 10:10  |                                 |              |        |
|   | Order Number                              | 136133333868   |                                 |              |        |
| <b>References of Quality Management System (Date of Issuance/ Date)</b>   |   |  |                                 |              |        |
| Customer Registration No.   | EPIC/OT/4/0267                            | Sample Booking Number  | EPIC - 2534040                  |              |        |
| Sample(s) Code  | 2534040                                   | Sample Receipt (D/T)   | 25.06.2025/ 11:58               |              |        |
| <b>Sampling References</b>  |   |  |                                 |              |        |
| Type of industry  | Bauite Mines                              | Ref. of Sampling Plan  | EPIC/LAB/R/036                  |              |        |
| Sampling Date (D/T)   | 18.06.2025/ 16:00                         | Sampling End (D/T)   | 18.06.2025/ 16:00               |              |        |
| Mode of Sampling  | Conducted by Laboratory                   | Sample collected by  | M. Pawan Deep Bhagat & Team     |              |        |
| Sampling method used  | IS: 3025 (Part-1) 1987, H-2003            |  |                                 |              |        |
| Description/condition of sample   | Received sample(s) were fit for analysis. |  |                                 |              |        |
| <b>Environmental Condition during sampling</b>  |   |  |                                 |              |        |
| Weather condition   | Cloudy                                    | Temperature (°C)   | 27                              |              |        |
|   |   | Humidity %   | 70                              |              |        |
|   |   | Wind direction   | 120°-300°                       |              |        |
| <b>Sampling Location(s) with GPS coordinate(s)</b>  |   |  |                                 |              |        |
| S. Location A   | Cool River (Up Stream)                    | GPS coordinate   | 29° 29' 47.47" / 84° 19' 20.19" |              |        |
| <b>Term(s) of performance of the laboratory activities</b>  |   |  |                                 |              |        |
| Test start date   | 25.06.2025/ 11:30                         | Test completion date   | 25.06.2025/ 11:50               |              |        |
| <b>-Test Result-</b>  |   |  |                                 |              |        |
| Sl.   | Test Parameters                           | Method used  | Unit                            | Results      | Limits |
| 1.  | pH value at 25.7°C                        | IS:3025 (P-11) 2022  | -                               | 7.2          | -      |
| 2.  | Turbidity                                 | IS:3025 (P-18) 2004  | NTU                             | 9.90         | -      |
| 3.  | Colour                                    | IS:3025 (P-04) 2021  | Haem                            | 10           | -      |
| 4.  | Odour                                     | IS:3025 (P-05) 2018  | -                               | Agreeable    | -      |
| 5.  | Taste                                     | IS:3025 (P-07) 2017  | -                               | Agreeable    | -      |
| 6.  | Total Dissolved Solids (TDS)              | IS:3025 (P-28) 2022  | mg/l                            | 205.00       | -      |
| 7.  | Chloride (as Cl)                          | IS:3025 (P-32) 2019  | mg/l                            | 32.02        | -      |
| 8.  | Total Alkalinity (as CaCO <sub>3</sub> )  | IS:3025 (P-29) 2022  | mg/l                            | 110.00       | -      |
| 9.  | Total Hardness (as CaCO <sub>3</sub> )    | IS:3025 (P-31) 2009  | mg/l                            | 152.6        | -      |
| 10.   | Calcium (as Ca)                           | IS:3025 (P-46) 2001  | mg/l                            | 28.06        | -      |
| 11.   | Free Residual Chlorine                    | IS:3025 (P-28) 2006  | mg/l                            | 80.00 (0.4)  | -      |
| 12.   | Sulphate (as SO <sub>4</sub> )            | IS:3025 (P-34) 2019-2022   | mg/l                            | 4.90         | -      |
| 13.   | Nitrate (as NO <sub>3</sub> )             | APHA 4500-N-2023   | mg/l                            | 2.06         | -      |
| 14.   | Phenolic Compound                         | IS:3025 (P-43) 2011-2022   | mg/l                            | 80.00 (0.00) | -      |



Address:

526, 5th floor, 7th Avenue,  
Road No. - 5, Ranchi,  
Jharkhand - 834002, India

Mobile: +91 98351 49422

Email: 98351 49422

98351 49477

930008 72999

98351 49477

Email: support@epiclabtech.com

CEN: 0149991H2322P1231942

Permit No.: 2020-2021

Permit Date: 2020-01-01

Expiry Date: 2021-01-01

Certified by:

ISO 9001:2015 certified

Accredited by:

NABL (National Accreditation Board for Testing and Calibration Laboratories)

Jharkhand State Calibration Council Board

Certified by:

ISO 17025:2017 certified

ISO 17025:2017 certified

TC-12887

## Report No. TC12887/25000001023

Unique Lab Report No. TC12887/25000001023  
 Report Unique ID RL02672534640  
 Issue date/time 20.08.2025/ 12:54

Discipline Chemical  
 Group Water  
 Sub Group Surface Water

## Report Issue to:

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

Contact Person Mr. Anil Das  
 Contact Number +91 9875034775  
 Email Id anil.das@adityabirla.com  
 Order Date 21.03.2025/ 10:10  
 Order Number 136123133648

## Group - Residues and Contaminants in Water.

## Sub Group - Trace Metal Elements

|                            |                  |      |               |
|----------------------------|------------------|------|---------------|
| 15. Copper (as Cu)         | APHA 3111 8.2023 | mg/l | BDL/HDL 0.25  |
| 16. Iron (as Fe)           | APHA 3111 8.2023 | mg/l | BDL/HDL 0.10  |
| 17. Lead (as Pb)           | APHA 3111 8.2023 | mg/l | BDL/HDL 0.01  |
| 18. Cadmium (as Cd)        | APHA 3111 8.2023 | mg/l | BDL/HDL 0.005 |
| 19. Total Chromium (as Cr) | APHA 3111 8.2023 | mg/l | BDL/HDL 0.05  |
| 20. Nickel (as Ni)         | APHA 3111 8.2023 | mg/l | BDL/HDL 0.01  |
| 21. Total Arsenic (as As)  | APHA 3114 8.2023 | mg/l | BDL/HDL 0.005 |
| 22. Selenium (as Se)       | APHA 3114 8.2023 | mg/l | BDL/HDL 0.005 |
| 23. Manganese (as Mn)      | APHA 3111 8.2023 | mg/l | BDL/HDL 0.05  |
| 24. Zinc (as Zn)           | APHA 3111 8.2023 | mg/l | BDL/HDL 0.04  |

- Test result End -

## Prescribed Unit:

## Operational Status:

Analyzed by - Pappu Kumar

Unit was Operational During Sampling.

Reviewed by  
[DK Guru]  
Technical HeadIssued by  
[DK Guru]  
Authorised HeadAuthorized Signature  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



## Environmental Test Certificate

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | NRK               | Discipline | Chemical      |
| Report Unique ID      | PLD/672534040     | Group      | Water         |
| Issue date/time       | 20.08.2025/ 13:54 | Sub Group  | Surface Water |

## Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST-LOHARDAGA, STATE-JHARKHAND, INDIA 835002  
MONITORING SITE: GURDARI BAUXITE MINE

Contact Person: Mr. Amit Das  
Contact Number: +91 9871034775  
Email Id: [amit.das@advibabu.com](mailto:amit.das@advibabu.com)  
Order Date: 31.03.2025/ 10:30  
Order Number: 13612353868

## References of Quality Management System (QMS) (Insertivity Data)

|                           |               |                       |                   |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0267 | Sample Booking Number | EPIC - 2534040    |
| Sample(s) Code            | 2534040       | Sample Receipt (D/T)  | 20.08.2025/ 13:18 |

## Sampling References

|                                 |                                 |  |                              |
|---------------------------------|---------------------------------|--|------------------------------|
| Type of Industry                | Bauxite Mine,                   | Ref. of Sampling Plan                    | EPIC/LAB/R/036               |
| Sampling Start (D/T)            | 18.08.2025/ 15:00               | Sampling End (D/T)                       | 18.08.2025/ 16:00            |
| Mode of Sampling                | Conducted by Laboratory         | Sample collected by                      | Mr. Pawan Deep Bhagat & Team |
| Sampling method used            | IS : 3025 (Part-1) 1987, P-2003 |  |                              |
| Description/condition of sample |                                 | Receipt sample(s) were fit for analysis. |                              |

## Environmental Condition during sampling

|                   |        |                  |    |            |    |                |           |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity % | 70 | Wind direction | 120°-300° |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|

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

|               |                        |                |                               |
|---------------|------------------------|----------------|-------------------------------|
| 1. Location A | Koti River (Up Stream) | GPS coordinate | 23°25'47.47" N 84°19'20.90" E |
|---------------|------------------------|----------------|-------------------------------|

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 20.08.2025/ 11:30 | Test completion date | 25.08.2025/ 11:50 |
|-----------------|-------------------|----------------------|-------------------|

## -Test Result-

| Sl. | Test Parameters | Method used | Unit | Results | Units |
|-----|-----------------|-------------|------|---------|-------|
|-----|-----------------|-------------|------|---------|-------|

|  |   |                       |      |               |   |
|--|---|-----------------------|------|---------------|---|
| 1.   | Fluoride (as F)                         | APHA 8109-F/C2023     | mg/l | BDL(MDL-0.0)  | - |
| <b>Group: Residues and Contaminants in Water</b> |   |                       |      |               |   |
| 2.   | Aluminum                                | IS:3629 (P-51)2019    | mg/l | BDL(MDL-0.0)  | - |
| 3.   | Boron                                   | IS:3629 (P-67)2021    | mg/l | BDL(MDL-0.0)  | - |
| 4.   | Polychlorinated biphenyls               | EPIC/LAB/SOP/WA/01/00 | ug/l | BDL(MDL-0.0)  | - |
| 5.   | Polynuclear Aromatic Hydrocarbons (PAH) | EPIC/LAB/SOP/WA/01/00 | ug/l | BDL(MDL-0.00) | - |

|     |              |                       |      |                |   |
|-----|--------------|-----------------------|------|----------------|---|
| 6.  | Aachlor      | EPIC/LAB/SOP/WA/01/00 | ug/l | BDL(MDL-0.0)   | - |
| 7.  | Atrazine     | EPIC/LAB/SOP/WA/01/00 | ug/l | BDL(MDL-0.0)   | - |
| 8.  | Delephin     | EPIC/LAB/SOP/WA/01/00 | ug/l | BDL(MDL-0.00)  | - |
| 9.  | Alpha HCH    | EPIC/LAB/SOP/WA/01/00 | ug/l | BDL(MDL-0.005) | - |
| 10. | Beta HCH     | EPIC/LAB/SOP/WA/01/00 | ug/l | BDL(MDL-0.00)  | - |
| 11. | Butachlor    | EPIC/LAB/SOP/WA/01/00 | ug/l | BDL(MDL-0.0)   | - |
| 12. | Chlorpyrifos | EPIC/LAB/SOP/WA/01/00 | ug/l | BDL(MDL-0.0)   | - |
| 13. | Delta HCH    | EPIC/LAB/SOP/WA/01/00 | ug/l | BDL(MDL-0.00)  | - |

**Important Notes:** 1. The laboratory accepts responsibility for content of this report. 2. The performed at laboratory's premises facility, at specific environmental condition as outlined required and does not relate only to the sample tested to generate this report. 3. The Test report shall not be reproduced full or in part or used as proof in the court of law. 4. Any reprocessing of this report should be communicated in writing within 10 days of issuance. 5. The laboratory will not be liable for any damage caused by use of this report. 6. All diagrams are copyrighted by EPIC. All trademarks and registered trademark of the laboratory does not exceed the testing and analysis charged. 7. Expenses does not imply under service of the testing product by laboratory. Under no circumstances, laboratory accepts any liability for use or misuse of this report. 8. When the results are below detection power are marked as "n.d." 9. BDL (Below Detection Limit), MDL (Minimum Detection Limit), LoQ (Limit of Quantification).



## Report ID: 00000000000000000000000000000000

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | NW                | Discipline | Chemical      |
| Report Unique ID      | RL02672534640     | Group      | Water         |
| Issue date/Time       | 20.05.2025/ 12:54 | 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 : GURDANI BAUXITE PRIME

Contact Person  
Contact Number  
Email Id  
Order Date  
Order Number

Mr. Ankit Das  
+91 9871034775  
[ankit.das@adhyaabira.com](mailto:ankit.das@adhyaabira.com)  
31.03.2025/ 10:10  
13612313968

|  |                     |     |              |   |
|--|---------------------|-----|--------------|---|
| 14. Ethion   | EPOLAB/SOP/NW/01/00 | ap1 | BDL(HDL-0.1) | - |
| 15. Gamma- HCH(lindane)                            | EPOLAB/SOP/NW/01/00 | ap1 | BDL(HDL-0.1) | - |
| 16. Malathion                                      | EPOLAB/SOP/NW/01/00 | ap1 | BDL(HDL-0.1) | - |
| 17. Methyl parathion                               | EPOLAB/SOP/NW/01/00 | ap1 | BDL(HDL-0.1) | - |
| 18. Monocrotophos                                  | EPOLAB/SOP/NW/01/00 | ap1 | BDL(HDL-0.1) | - |
| 19. Phorate  | EPOLAB/SOP/NW/01/00 | ap1 | BDL(HDL-0.1) | - |
| 20. DDT (o, p and p, p-isomer of DDT, DDE and DDD) | EPOLAB/SOP/NW/01/00 | ap1 | BDL(HDL-0.1) | - |
| 21. Endosulfan (alpha, beta, and sulphate)         | EPOLAB/SOP/NW/01/00 | ap1 | BDL(HDL-0.1) | - |

-Test result (1) -

Prescribed Limit

Operational Status

Analysed by - Pappu Kumar

Unit was Operational During sampling

Reviewed by  
(B.B. Kumar)  
Technician HeadIssued by  
B.B. Kumar  
Authorized Signatory  
EPIC LabTech Pvt. Ltd.,  
Ranikhet, Jharkhand



## Report ID: RL02672534041

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | NA                | Discipline | Biological    |
| Report Unique ID      | RL02672534041     | Group      | Water         |
| Issue date/time       | 25.08.2025/ 11:57 | 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 : GURDAR BAUXITE MINE

Contact Person: Mr. Arshil Das  
Contact Number: +91 9871034775  
Email Id: arshil.das@arshiberts.com  
Order Date: 21.08.2025/ 10:18  
Order Number: 136123133868

## References of Quality Management System (Days of Traceability Data):

|                           |               |                       |                   |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0267 | Sample Booking Number | EPIC - 2534041    |
| Sample(s) Code            | 2534041       | Sample Receipt (D/T)  | 20.08.2025/ 11:10 |

## Sampling References

|                                 |                                 |  |                              |
|---------------------------------|---------------------------------|--|------------------------------|
| Type of Industry                | Raunder Mines                   | Ref. of Sampling Plan                    | EPIC/LAB/IR/036              |
| Sampling Start (D/T)            | 18.08.2025/ 13:55               | Sampling End (D/T)                       | 18.08.2025/ 16:00            |
| Mode of Sampling                | Conducted by Laboratory         | Sample collected by                      | Mr. Pawan Deep Bhagat & Team |
| Sampling method used            | IS : 3025 (Part-1) 1987, R-2003 |  |                              |
| Description/condition of sample |                                 | Receipt sample(s) were fit for analysis. |                              |

## Environmental Condition during sampling

|                   |        |                  |    |            |    |                |           |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity % | 70 | Wind direction | 120°-300° |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|

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

|               |                        |                |                                   |
|---------------|------------------------|----------------|-----------------------------------|
| S. Location A | Koti River (Up Stream) | GPS coordinate | 23° 25' 47.47" N 84° 19' 20.50" E |
|---------------|------------------------|----------------|-----------------------------------|

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 20.08.2025/ 11:30 | Test completion date | 25.08.2025/ 11:50 |
|-----------------|-------------------|----------------------|-------------------|

## -Test Result-

| Sl. | Test Parameters | Method used   | Unit       | Results | Limits |
|-----|-----------------|---------------|------------|---------|--------|
| 1.  | Total Coliform  | IS 13485:2002 | Per 100 ml | 425     | —      |
| 2.  | E. Coli         | IS 13485:2002 | Per 100 ml | 360     | —      |

## -Test result End -

## Prescribed Limit

## Operational Status

Analyzed by - Sujata Kumar

Unit wise Operational During sampling

  
 Received by  
(Sujata Kumar)  
Technical Head

  
 Issued by  
Gopal Das  
Laboratory Head

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



Address:

• 2003 年 6 月 20 日  
• 2003 年 6 月 21 日  
• 2003 年 6 月 22 日

certified by -

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | TC128872000001024 | Discipline | Chemical      |
| Report Unique ID      | RL02672534042     | Group      | Water         |
| Issue date/time       | 25/04/2025 14:00  | Sub Group  | Surface Water |

#### Report issued to:

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

**Contact Person** Mr. Ankit Das  
**Contact Number** +91 98973034778  
**Email Id** ankit.das@idtptabria.com  
**Order Date** 31/03/2025 10:10  
**Order Number** 13612312848

Information of Quality Management System (List of Inconsistency Due

|                           |                |                       |                     |
|---------------------------|----------------|-----------------------|---------------------|
| Customer Registration No. | EPIC-X0TH-0267 | Sample Booking Number | EPIC-2534042        |
| Sample Collection Date    | 2023-04-03     | Sample Receipt (DT)   | 2023-04-03 11:11:11 |

---

#### *Sampling References*

|                                 |  |                       |                              |
|---------------------------------|--|-----------------------|------------------------------|
| Type of Industry                | House Hold                               | Ref. of Sampling Plan | EPIC/LAB/R/036               |
| Sampling Start (D/T)            | 18.08.2025/ 16:10                        | Sampling End (D/T)    | 18.08.2025/ 16:15            |
| Mode of Sampling                | Conducted by Laboratory                  | Sample collected by   | Mr. Powar Deep Bhagat & Team |
| Sampling method used            | IS: 2025 (Part 1) 1907, R-2003           |                       |                              |
| Description/condition of sample | Except samples 1- were fit for analysis. |                       |                              |

#### Environ Mol Biol: *Environmental Biology*

University Center serving students

Wavelength (nm) 365 380 400 420 440 460 480 500 520 540 560 580 600 620 640 660 680 700 720 740 760 780 800

Sampling Locations with GPS coordinates

Location A Xeol River Diver: [REDACTED] GPS-coordinate: 29° 25' 03.00" / 64° 10' 55.21"

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

Test start date: 20.08.2025/ 11:33 Test completion date: 29.08.2025/ 11:50

**--Test Results--**

| Sl. | Test Parameters                          | Method used         | Unit  | Results      | Limits |
|-----|--|---------------------|-------|--------------|--------|
| 1.  | pH value at 25.7°C                       | IS 3020 (P-13) 2022 | -     | 7.26         | -      |
| 2.  | Turbidity                                | IS 3020 (P-12) 2022 | NTU   | 4.9          | -      |
| 3.  | Colour                                   | IS 3020 (P-04) 2022 | Marsh | 5            | -      |
| 4.  | Odour                                    | IS 3020 (P-06) 2022 | -     | Agreeable    | -      |
| 5.  | Taste                                    | IS 3020 (P-07) 2022 | -     | Agreeable    | -      |
| 6.  | Total Dissolved Solids (TDS)             | IS 3020 (P-18) 2022 | mg/l  | 255.00       | -      |
| 7.  | Chloride (as Cl)                         | IS 3020 (P-32) 2022 | mg/l  | 30.5         | -      |
| 8.  | Total Alkalinity (as CaCO <sub>3</sub> ) | IS 3020 (P-23) 2022 | mg/l  | 130.00       | -      |
| 9.  | Total Hardness (as CaCO <sub>3</sub> )   | IS 3020 (P-21) 2022 | mg/l  | 190.6        | -      |
| 10. | Calcium (as Ca)                          | IS 3020 (P-40) 2022 | mg/l  | 25.65        | -      |
| 11. | Free Residual Chlorine                   | IS 3020 (P-30) 2022 | mg/l  | 80.00 (6.4)  | -      |
| 12. | Sulphate (as SO <sub>4</sub> )           | IS 3020 (P-24) 2022 | mg/l  | 5.2          | -      |
| 13. | Nitrate (as NO <sub>3</sub> )            | APHA 2500 K 2022    | mg/l  | 1.73         | -      |
| 14. | Phenolic Compound                        | IS 3020 (P-43) 2022 | mg/l  | 80.00 (6.30) | -      |

卷之三

practitioner. **None** [3]. The following example summarizes the outcome of this project: 1.4. Your performance at **Technische Universität Berlin**: At specific, well-defined milestones we measured and discussed what really fit the project presented in **Presentation** (Table 4.10). 2. **The Test report** should use the required word limit to **part A** & **part B** (as we specified in the **Goal** of 1.4). 3. **My employer** should **trust** that **my report** can be considered as **working software** of the **system**. 4. **Final delivery** of the **Test Report** (part A and B) to **the customer** in **documented** **format** only. 4.1. All **deliverables** are **submitted** to **Technische Universität Berlin** and **measured** by **the supervisor**. Above **not** required: **lip-reading** and **reciting** chapter 1.5. **Optimizes** **cooperation** **highly**. Under **control** of the **level** **product**

На відмінність від інших видів підсвітки, використані в комп'ютерах сканерів та принтерах, відображені відповідні відхилення від прямолінійності.



TC-13887

## Report No. TC1288725000001024

|                       |                    |            |               |
|-----------------------|--------------------|------------|---------------|
| Unique Lab Report No. | TC1288725000001024 | Discipline | Chemical      |
| Report Unique ID      | PL02672534042      | Group      | Water         |
| Issue date/time       | 26.03.2025/ 14:00  | Sub Group  | Surface Water |

## Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDADA,  
DIST - LOHARDADA, STATE - JHARKHAND, INDIA 835302  
MONITORING SITE - GURDARI BAURITE MINE

Contact Person: Mr. Arun Das  
Contact Number: +91 9897103477  
Email Id: anit.das@vdtatirria.com  
Order Date: 21.03.2025/ 10:10  
Order Number: 13612312668

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

|                            |                  |      |               |
|----------------------------|------------------|------|---------------|
| 15. Copper (as Cu)         | APHA 3111.8.2023 | mg/l | BDL/HDL-0.03  |
| 16. Iron (as Fe)           | APHA 3111.8.2023 | mg/l | BDL/HDL-0.02  |
| 17. Lead (as Pb)           | APHA 3111.8.2023 | mg/l | BDL/HDL-0.01  |
| 18. Cadmium (as Cd)        | APHA 3111.8.2023 | mg/l | BDL/HDL-0.003 |
| 19. Total Chromium (as Cr) | APHA 3111.8.2023 | mg/l | BDL/HDL-0.05  |
| 20. Nickel (as Ni)         | APHA 3111.8.2023 | mg/l | BDL/HDL-0.02  |
| 21. Total Arsenic (as As)  | APHA 3114.8.2023 | mg/l | BDL/HDL-0.025 |
| 22. Selenium (as Se)       | APHA 3114.8.2023 | mg/l | BDL/HDL-0.05  |
| 23. Manganese (as Mn)      | APHA 3111.8.2023 | mg/l | BDL/HDL-0.08  |
| 24. Zinc (as Zn)           | APHA 3111.8.2023 | mg/l | BDL/HDL-0.04  |

Test result End -

Prescribed Limit

Operational Status

Analysis by - Pappu Kumar

Unit was Operational During sampling.

Entered by  
(X) Pappu  
Kumar

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



| Unique Lab Report No.   | N/A   | Discipline   | Chemical                       |  |        |
|---|---|--|--------------------------------|--|--------|
| Report Unique ID  | RJAUW7Z53H42  | Group  | Water                          |  |        |
| Issue date/time   | 29.08.2025/ 14:00   | Sub Group  | Stream Water                   |  |        |
| <b>Report Issue to</b>  |   |  |                                |  |        |
| <b>HUS - HINDALCO INDUSTRIES LIMITED</b><br>VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,<br>DISTT.-LOHARDAGA, STATE-JHARKHAND, INDIA 833502 | <b>Contact Person</b><br><b>Contact Number</b><br><b>Email Id</b><br><b>Order Date</b><br><b>Order Number</b> | <b>Mr. Arunk Das</b><br>+91 9871034775<br>arunk.das@hindalco.com<br>21.03.2025/ 10:10<br>13612313868 |                                |  |        |
| <b>MONITORING SITE : GURDARI BAUXITE MINE</b>   |   |  |                                |  |        |
| <b>References of Quality Management System</b> (Line of Traceability Chain)   |   |  |                                |  |        |
| Customer Registration No.   | EPIC/OTH/0207   | Sample Booking Number  | EPIC - 2534042                 |  |        |
| Sample ID Code  | 2534042   | Sample Receipt (D/T)   | 20.08.2025/ 11:11              |  |        |
| <b>Sampling References</b>  |   |  |                                |  |        |
| Type of Industry  | Bauxite Mines   | Ref. of Sampling Plan  | EPIC/LAB/R/036                 |  |        |
| Sampling Start (D/T)  | 18.08.2025/ 10:10   | Sampling End (D/T)   | 18.08.2025/ 10:15              |  |        |
| Mode of Sampling  | Conducted by Laboratory   | Sample collected by  | Mr. Pawan Deep Bhagat & Team   |  |        |
| Sampling method used  | IS : 3625 (Part-1) 1987, R-2003   | Description/Condition of sample  |                                |  |        |
| Receipt sample(s) were fit for analysis.  |   |  |                                |  |        |
| <b>Environmental Condition during sampling</b>  |   |  |                                |  |        |
| Weather condition   | Cloudy  | Temperature (°C)   | 27                             |  |        |
|   |   | Humidity %   | 70                             |  |        |
|   |   | Wind direction   | 120°-300°                      |  |        |
| <b>Sampling Location(s) with GPS coordinate(s)</b>  |   |  |                                |  |        |
| S. Location A   | Kosi River (Down Stream)  | GPS coordinate   | 23°25'01.89" E/ 84°12'55.21" N |  |        |
| <b>Goal(s) of performance of the laboratory activities</b>  |   |  |                                |  |        |
| Test start date   | 20.08.2025/ 11:00   | Test completion date   | 29.08.2025/ 11:00              |  |        |
| <b>-Test Result-</b>  |   |  |                                |  |        |
| Sl.   | Test Parameters   | Method used  | Unit                           | Results                                | Limits |
| 1.  | Fluoride ( $\mu$ s F)   | APHA 4500 F-C 2023   | mg/l                           | BDL(mol-0.1)                           | -      |
| <b>Group-Residues and Contaminants in Water</b>   |   |  |                                | <b>Sub Group</b> Trace Metals Elements |        |
| 2.  | Aluminum  | IS 3025 (P-01) 2023  | mg/l                           | BDL(mol-0.1)                           | -      |
| 3.  | Boron   | IS 3025 (P-07) 2023  | mg/l                           | BDL(mol-0.1)                           | -      |
| 4.  | Polychlorinated biphenyls   | EPIC/LAB/SOP/IVWA/01/00  | ug/l                           | BDL(mol-0.1)                           | -      |
| 5.  | Polynuclear Aromatic Hydrocarbons (PAH)   | EPIC/LAB/SOP/IVWA/01/00  | ug/l                           | BDL(mol-0.001)                         | -      |
| <b>Group-Residues and Contaminants in Water</b>   |   |  |                                | <b>Sub Group</b> Pesticides            |        |
| 6.  | Alachlor  | EPIC/LAB/SOP/IVWA/01/00  | ug/l                           | BDL(mol-0.1)                           | -      |
| 7.  | Atrazine  | EPIC/LAB/SOP/IVWA/01/00  | ug/l                           | BDL(mol-0.1)                           | -      |
| 8.  | Diuron  | EPIC/LAB/SOP/IVWA/01/00  | ug/l                           | BDL(mol-0.01)                          | -      |
| 9.  | Alpha HCH   | EPIC/LAB/SOP/IVWA/01/00  | ug/l                           | BDL(mol-0.001)                         | -      |
| 10.   | Beta HCH  | EPIC/LAB/SOP/IVWA/01/00  | ug/l                           | BDL(mol-0.01)                          | -      |
| 11.   | Butachlor   | EPIC/LAB/SOP/IVWA/01/00  | ug/l                           | BDL(mol-0.1)                           | -      |
| 12.   | Chlopyrifos   | EPIC/LAB/SOP/IVWA/01/00  | ug/l                           | BDL(mol-0.1)                           | -      |
| 13.   | Delta HCH   | EPIC/LAB/SOP/IVWA/01/00  | ug/l                           | BDL(mol-0.01)                          | -      |



Address:

City - K.A. Tripathi, Deoghar,  
State No. - 3, Ranchi,  
Jharkhand - 834003, India

Ph. 0931 4666212

09337 86277

09349 71000

epiclabtech@gmail.com

CR-07199900001/PC/2020/001

Date - 04-06-2020

NET - 25000/2020/001

Issued by -

Aditya Birla Pollution Control Board

Certified by -

093-46662013 066-666-40000-2000

## Report No. 00000000000000000000000000000000

|                       |                    |            |             |
|-----------------------|--------------------|------------|-------------|
| Unique Lab Report No. | NA                 | Discipline | Chemical    |
| Report Unique ID      | RL02572534642      | Group      | Water       |
| Issue date/time       | 20.05.2020 / 14:00 | Sub Group  | Stain Water |

## Report Issue to:

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

Contact Person  
 Contact Number  
 Email Id  
 Order Date  
 Order Number

Mr. Anil Das  
 +91 9871034775  
 anil.das@adhyabirba.com  
 31.03.2020 / 10:30  
 13612213868

|  |                       |     |              |   |
|--|-----------------------|-----|--------------|---|
| 14. Ethion   | EPIC/LAB/SOP/WA/01/00 | ap1 | BDL/HOL-0.01 | - |
| 15. Gamma-HCH(Lindane)                             | EPIC/LAB/SOP/WA/01/00 | ap1 | BDL/HOL-0.01 | - |
| 16. Malathion                                      | EPIC/LAB/SOP/WA/01/00 | ap1 | BDL/HOL-0.01 | - |
| 17. Methyl parathion                               | EPIC/LAB/SOP/WA/01/00 | ap1 | BDL/HOL-0.01 | - |
| 18. Monocrotophos                                  | EPIC/LAB/SOP/WA/01/00 | ap1 | BDL/HOL-0.01 | - |
| 19. Phorate  | EPIC/LAB/SOP/WA/01/00 | ap1 | BDL/HOL-0.01 | - |
| 20. DDT (o, p and p, p-isomer of DDT, DDE and DDD) | EPIC/LAB/SOP/WA/01/00 | ap1 | BDL/HOL-0.01 | - |
| 21. Endosulfan (alpha, beta, and sulphate)         | EPIC/LAB/SOP/WA/01/00 | ap1 | BDL/HOL-0.01 | - |

-Test result End -

Prescribed Limit

Operational Status

Unusual Operational During sampling

Analyzed by - Peppu Kumar

Reviewed by  
(P.K. Kumar)  
Technical HeadAuthorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



## Environmental Test Certificate

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | N/A               | Discipline | Biological    |
| Report Unique ID      | FLU2672534043     | Group      | water         |
| Issue date/time       | 26.08.2025/ 10:00 | Sub Group  | Surface Water |

## Report Issue to:

M/s - HINDALCO INDUSTRIES LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST - LOHARDAGA, STATE-JHARKHAND, INDIA 835103  
MONITORING SITE : GURDARI BAUXITE MINE

Contact Person: Mr. Ankit Das  
Contact Number: +91 9807103475  
Email ID: [ankit.das@udtvafrica.com](mailto:ankit.das@udtvafrica.com)  
Order Date: 21.03.2025/ 10:10  
Order Number: 13612312868

## References of Quality Management System (Scope of Testability Data)

|                           |               |                       |                   |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTU/0367 | Sample Booking Number | EPIC - 2534043    |
| Sample(s) Code            | 2534043       | Sample Receipt (D/T)  | 26.08.2025/ 11:11 |

## Sampling References

|                                 |                                 |  |                               |
|---------------------------------|---------------------------------|--|-------------------------------|
| Type of Industry                | Bauxite Mines                   | Ref. of Sampling Plan                    | EPIC/LAB/9/006                |
| Sampling Start (D/T)            | 16.08.2025/ 16:10               | Sampling End (D/T)                       | 16.08.2025/ 16:15             |
| Mode of Sampling                | Conducted by Laboratory         | Sample collected by                      | Mr. Pawash Deep Bhagat & Team |
| Sampling method used            | IS : 2020 (Part-1) 1967, R-2003 |  |                               |
| Description/condition of sample |                                 | Receipt sample(s) were fit for analysis. |                               |

## Environmental Condition during sampling

|                   |        |                  |    |            |    |                |           |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity % | 70 | Wind direction | 120°-300° |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|

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

|            |                          |                |                                    |
|------------|--------------------------|----------------|------------------------------------|
| Location A | Koil River (Down Stream) | GPS coordinate | 23° 25' 01.90" E/ 84° 19' 55.21" N |
|------------|--------------------------|----------------|------------------------------------|

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 26.08.2025/ 11:31 | Test completion date | 26.08.2025/ 11:50 |
|-----------------|-------------------|----------------------|-------------------|

## -Test Result-

| Sl | Test Parameters | Method used   | Unit       | Results | Limits |
|----|-----------------|---------------|------------|---------|--------|
| 1. | Total Coliform  | IS 15185:2002 | Per 100 ml | 440     | —      |
| 2. | E.Coli          | IS 15186:2002 | Per 100 ml | 350     | —      |

## -Test result End -

## Prescribed Limit

## Operational Status

Analyzed by - Sujata Kumar

Unit was Operational during sampling.

  
 Certified by  
Sujata Kumar  
Technical Head

  
 Issued by  
Sujata Kumar  
Authorized Signatory

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



Address:  
C/o - P.B. Trigonda, Jamnagar,  
Road No - G. Road No.,  
Harmal - 362405, India

Tel: 91911 1999200  
98257 86277  
98257 77880  
Email: labtech@epiclab.com

CIN - U74999GU2022PTC019641  
PAN - RAHCTE2015M  
GST - 20AAN0389PMZP

Accredited by -  
ISO, IAF, BSI, NABL, NABL Water Quality  
Certified by -  
ISO 9001:2015 and ISO 17025:2017

TC-12587

## Environmental Test Report Sample

|                       |                    |            |               |
|-----------------------|--------------------|------------|---------------|
| Unique Lab Report No. | TCI208725000001925 | Discipline | Chemical      |
| Report Unique ID      | HLU6/2534044       | Group      | Water         |
| Issue Date/Time       | 25-08-2025/14:00   | Sub Group  | Surface Water |

## Report Issue to:

MR. S. HINDALCO INDUSTRIES LIMITED  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST - LOHARDAGA, STATE-JHARKHAND, INDIA 833302  
MONITORING SITE: GURDARI BAUXITE MINE

Contact Person: Mr. Ankit Das  
Contact Number: +91 9871034779  
Email Id: ankit.das@birla.com  
Order Date: 21-03-2025/ 10:10  
Order Number: 13612313868

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

|                           |               |                       |                   |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/2027 | Sample Booking Number | EPIC - 2534044    |
| Sample(s) Code            | 2534044       | Sample Receipt (D/T)  | 20-08-2025/ 11:35 |

## Sampling References

|                      |                                 |                       |                              |
|----------------------|---------------------------------|-----------------------|------------------------------|
| Type of Industry     | Bauxite Mines                   | Ref. of Sampling Plan | EPIC/LAB/R/036               |
| Sampling Start (D/T) | 18-08-2025/ 10:10               | Sampling End (D/T)    | 18-08-2025/ 10:15            |
| Mode of Sampling     | Conducted by Laboratory         | Sample collected by   | Mr. Pawan Deep Bhagat & Team |
| Sampling method used | IS : 3025 (Part-1) 1987, P-2003 |                       |                              |

Description/condition of sample: Receipt sample(s) were fit for analysis.

## Environmental Condition during sampling

|                   |        |                  |    |            |    |                |           |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity % | 70 | Wind direction | 120°-300° |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|

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

|               |                             |                |                                 |
|---------------|-----------------------------|----------------|---------------------------------|
| S. Location A | Dhondhan Nadi (Down Stream) | GPS coordinate | 23° 17' 10.03" / 34° 17' 30.30" |
|---------------|-----------------------------|----------------|---------------------------------|

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 20-08-2025/ 11:35 | Test completion date | 20-08-2025/ 11:00 |
|-----------------|-------------------|----------------------|-------------------|

## -Test Result-

| S.  | Test Parameters                          | Method used              | Unit | Results        | Limits |
|-----|--|--------------------------|------|----------------|--------|
| 1.  | pH value at 25.7°C                       | IS 3025 (P-11) 2023      | -    | 7.36           | -      |
| 2.  | Turbidity                                | IS 3025 (P-10) 2004      | NTU  | 4.89           | -      |
| 3.  | Colour                                   | IS 3025 (P-04) 2021      | None | 5              | -      |
| 4.  | Odour                                    | IS 3025 (P-05) 2018      | -    | Acceptable     | -      |
| 5.  | Taste                                    | IS 3025 (P-07) 2017      | -    | Acceptable     | -      |
| 6.  | Total Dissolved Solids (TDS)             | IS 3025 (P-06) 2023      | mg/l | 198.00         | -      |
| 7.  | Chloride (as Cl)                         | IS 3025 (P-20) 2018      | mg/l | 31.04          | -      |
| 8.  | Total Alkalinity (as CaCO <sub>3</sub> ) | IS 3025 (P-20) 2018      | mg/l | 105.00         | -      |
| 9.  | Total Hardness (as CaCO <sub>3</sub> )   | IS 3025 (P-21) 2009      | mg/l | 146.58         | -      |
| 10. | Calcium (as Ca)                          | IS 3025 (P-40) 1991      | mg/l | 24.85          | -      |
| 11. | Free Residual Chlorine                   | IS 3025 (P-26) 2006      | mg/l | BDL(BDL 0.4)   | -      |
| 12. | Sulphate (as SO <sub>4</sub> )           | IS 3025 (P-24) 2015/2022 | mg/l | 5.1            | -      |
| 13. | Nitrate (as NO <sub>3</sub> )            | APHA 2500 N-2023         | mg/l | 1.81           | -      |
| 14. | Phenolic Compound                        | IS 3025 (P-45) 2015/2022 | mg/l | BDL(BDL 0.001) | -      |



General Notes: 1. This laboratory accepts responsibility for the contents of this report. 2. This document is laboratory's permanent facility, or specific environmental condition or method required and results where only to be samples tested is presented duly & true. 3. The test report shall not be reproduced full or in part or used as proof in the court of law. 4. Any discrepancy which this report should be communicated in writing within 10 days of issuance. 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to revised amount only. 6. Disputes are subject to Jharkhand jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges. 7. Unless done otherwise, measurement of the tested product by laboratory. 8. Test report contains, Monitoring sample may caused by use or misuse of the report. 9. Effect the results for later issued portion are stated in "x" axis. 10. BDL (Below Detection Limit), 100% Positive Detection Limit, 100% Limit of Quantification.







|   |   |   |               |
|---|---|---|---------------|
| Unique Lab Report No.   | N/A   | Discipline  | Chemical      |
| Report unique ID  | BLUW/2536044  | Group   | Water         |
| Issue date/time   | 25.08.2025/14:00  | Sub Group   | Surface Water |
| Report Issue to   |   |   |               |
| <b>M/s - HINDALCO INDUSTRIES LIMITED</b><br>VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,<br>DIST-LOHARDAGA, STATE-JHARKHAND, INDIA 816003 | <b>Contact Person</b><br><b>Contact Number</b><br><b>Email Id</b><br><b>Order Date</b><br><b>Order Number</b> | <b>Mr. Arkit Das</b><br>+91 9871034775<br>arkit.das@ashvabiria.com<br>31.03.2025/10:10<br>13612313868 |               |
| <b>MONITORING SITE: GURDARI BAUXITE MINE</b>  |   |   |               |
| 14. Ethion  | EPCLAB/SOPYWA/01/00   | ref   | BDL/HOL-0.0   |
| 15. Gamma-HCH(indane)   | EPCLAB/SOPYWA/01/00   | ref   | BDL/HOL-0.0   |
| 16. Malathion   | EPCLAB/SOPYWA/01/00   | ref   | BDL/HOL-0.0   |
| 17. Methyl parathion  | EPCLAB/SOPYWA/01/00   | ref   | BDL/HOL-0.0   |
| 18. Monocrotophos   | EPCLAB/SOPYWA/01/00   | ref   | BDL/HOL-0.0   |
| 19. Phorate   | EPCLAB/SOPYWA/01/00   | ref   | BDL/HOL-0.0   |
| 20. DDT (o, p and p, p-isomer of DDT, DDE and DDD)  | EPCLAB/SOPYWA/01/00   | ref   | BDL/HOL-0.0   |
| 21. Endosulfan (alpha, beta, and sulphate)  | EPCLAB/SOPYWA/01/00   | ref   | BDL/HOL-0.0   |

--first result find --

Presented by:

### Operational Status

#### Unitary Operational Domains

Reviewed by  
JBN Kumar

10  
10/10/2028  
Issued by  
Street Seal

Autographed Signature  
EPIC LabTech Pvt. Ltd.  
Branch: Bharatpur





## Environmental Test Certificate

|  |  |                        |   |
|--|--|------------------------|---|
| Unique Lab Report No.  | N/A                                      | Discipline             | Biological  |
| Report Unique ID   | HLU06/2534045                            | Group                  | Water   |
| Issue Date/Time  | 25.08.2025/ 14:09                        | Sub Group              | Surface Water   |
| Report Issue To:   |  |                        |   |
| M/s - HINDALCO INDUSTRIES LIMITED<br>VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,<br>DIST - LOHARDAGA, STATE - JHARKHAND, INDIA 835303<br>MONITORING SITE : GURDARI BAUXITE MINE |  |                        | Contact Person<br>Mr. Ankit Das<br>Contact Number<br>+91 9871034775<br>Email Id<br>ankit.das@utthabirta.com<br>Order Date<br>31.07.2025/ 10:10<br>Order Number<br>12612312868 |
| Reference of Quality Management System (Scope of Testability Detail)   |  |                        |   |
| Customer Registration No.  | EPIC/OTH-0267                            | Sample Booking Number  | EPIC - 2534045  |
| Sample(s) Code   | 2534045                                  | Sample Receipt (D/T)   | 25.08.2025/ 11:15   |
| Sampling References  |  |                        |   |
| Type of Industry   | Bauxite Mine                             | Ref. of Sampling Plan: | EPIC/LAB/R/038  |
| Sampling Start (D/T)   | 18.08.2025/ 16:10                        | Sampling End (D/T)     | 18.08.2025/ 16:15   |
| Mode of Sampling   | Conducted by Laboratory                  | Sample collected by    | Mr. Pawan Deep Bhagat & Team  |
| Sampling method used   | IS : 3025 (Part -1) 1987, R-2003         |                        |   |
| Description/condition of sample  | Received sample/s were fit for analysis. |                        |   |
| Environmental Condition during sampling  |  |                        |   |
| Weather condition  | Cloudy                                   | Temperature (°C)       | 37  |
|  |  | Humidity %             | 70  |
|  |  | Wind direction         | 120°-300°   |
| Sampling Location(s) with GPS coordinate(s)  |  |                        |   |
| S. Location A  | Dhurdhani Nadi (Down Stream)             | GPS coordinate         | 23° 17' 10.53" / 84° 17' 38.99"   |
| Date(s) of performance of the laboratory activities  |  |                        |   |
| Test start date  | 20.08.2025/ 11:35                        | Test completion date   | 25.08.2025/ 11:55   |
| -Test Result-  |  |                        |   |
| Sl.  | Test Parameters                          | Method used            | Unit  |
| 1.   | Total Coliform                           | IS-15185:2002          | Per 100 ml  |
| 2.   | E.Coli                                   | IS-15185:2002          | Per 100 ml  |
| -Test result End -   |  |                        |   |

## Prescribed Limit

## Operational Status

Analysed by - Supta Kumar

Unit was Operational During sampling.

  
 Reviewed by  
Supta Kumar  
Technical Head

  
 Issued by  
Supta Kumar  
Laboratory Head

 Authorized Signature  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand




Address:

C/o - A.R. Tripathi, 10th Floor  
Road No. - G. Road No.  
Mahanagar - 824002, Ranchi

Ph: +91 9835250250

E-mail: 9835250250

9835250250

9835250250@gmail.com

CIN - U74909JH2012PT000001

PAN - KAR000000M

GST - 23AAH1234567890

Accredited by -

ISO 9001:2015 Certified Number: 11-1387

Certification Body: NABL (National Accreditation Board)

Certified by -

ISO 9001:2015 and ISO 17025

TC-12867

## Report No. &amp; Date

|                       |                   |            |                        |
|-----------------------|-------------------|------------|------------------------|
| Unique Lab Report No. | TC128872500001025 | Discipline | Chemical               |
| Report unique ID      | HL025/250446      | Group      | Position & Environment |
| Issue date/time       | 25.08.2025/ 14:12 | Sub Group  | Waste Water (Effluent) |

## Report Issue is

**M/s - HINDALCO INDUSTRIES LIMITED**  
**VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,**  
**DIST-LOHARDAGA, STATE-JHARKHAND, INDIA 853502**  
**MONITORING SITE : GURDARI BAUXITE MINE**

Contact Person: Mr. Amit Das  
 Contact Number: +91 9871034775  
 Email Id: amit.das@dhyaanita.com  
 Order Date: 31.03.2025/ 10:10  
 Order Number: 12612313868

## References of Quality Management System (Days of Traceability Date):

|                           |               |                       |                   |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0287 | Sample Booking Number | EPIC-2534046      |
| Sample(s) Code            | 2534046       | Sample Receipt (D/T)  | 26.08.2025/ 11:18 |

## Sampling References

|                                 |                                   |                       |   |
|---------------------------------|-----------------------------------|-----------------------|---|
| Type of Industry                | Beachu Mines                      | Ref. of Sampling Plan | EPIC/LAS/0208                             |
| Sampling Start (D/T)            | 18.08.2025/ 15:18                 | Sampling End (D/T)    | 18.08.2025/ 15:30                         |
| Mode of Sampling                | Conducted by Laboratory           | Sample collected by   | Mr. Pawan Deep Bhagat & Team              |
| Sampling method used            | IS : 2025 (Part - I) 1987, B-2003 |                       |   |
| Description/condition of sample |                                   |                       | Received sample(s) were fit for analysis. |

## Environmental Condition during sampling

|                   |        |                  |    |            |    |                |           |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity % | 70 | Wind direction | 120°-300° |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|

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

|               |                    |                |                                   |
|---------------|--------------------|----------------|-----------------------------------|
| 1. Location A | Work Shop (Outlet) | GPS coordinate | 23° 59' 58.08" S 84° 10' 44.70" E |
|---------------|--------------------|----------------|-----------------------------------|

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 25.08.2025/ 11:36 | Test completion date | 25.08.2025/ 11:50 |
|-----------------|-------------------|----------------------|-------------------|

## -Test Result-

| Sl. | Test Parameters       | Method used               | Unit | Results      | Limits  |
|-----|-----------------------|---------------------------|------|--------------|---------|
| 1.  | pH value at 25.7°C    | IS 3025 (P-51) 2022       | -    | 6.89         | 6.5-6.3 |
| 2.  | BOD (3 days at 27°C)  | IS 3025 (P-46) 2020       | mg/l | 14.00        | -       |
| 3.  | COD                   | IS 3025 (P-56) 2020       | mg/l | 64.00        | 150     |
| 4.  | Oil & Grease          | IS 3025 (P-39) 2021       | mg/l | SDL(MD, 94)  | 33.0    |
| 5.  | Total Suspended Solid | IS 3025 (P-17) 2022       | mg/l | 48.00        | 50.0    |
| 6.  | Phosphate             | IS 3025 (P-31-Sec-1) 2022 | mg/l | 0.53         | -       |
| 7.  | Zinc (as Zn)          | APHA 21111-B 2022         | mg/l | SDL(MD, 054) | -       |

## -Test result End-

Prescribed Limit: Environmental (Protection) Rules-1986, Schedule I, Serial No. 134.  
 Operational Status: Unit was Operational During sampling.

Analysed by - Pappu Kaur

Certified by  
(B.R. Kaur)  
Technical Head



## Analytical Test Certificate

|                       |                   |            |                         |
|-----------------------|-------------------|------------|-------------------------|
| Unique Lab Report No. | NA                | Discipline | Chemist                 |
| Report Unique ID      | RL02672334046     | Group      | Pollution & Environment |
| Issue date/time       | 25.06.2025/ 14:12 | Sub Group  | Waste Water (Effluent)  |

## Report Issue to:

**HJS - HINDALCO INDUSTRIES LIMITED**  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST. LOHARDAGA, STATE JHARKHAND, INDIA 835303  
**MONITORING SITE: GURDARI BAUXITE MINE**

Contact Person  
Mr. Arun Das  
Contact Number  
+91 9871034779  
Email ID  
[arun.das@adhyabita.com](mailto:arun.das@adhyabita.com)  
Order Date  
31.05.2025/ 10:10  
Order Number  
326123313868

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

|                           |               |                       |                   |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OT/40267 | Sample Booking Number | EPIC-2534046      |
| Sample(s) Code            | 2534046       | Sample Receipt (D/T)  | 25.06.2025/ 11:18 |

## Sampling References

|                                 |                                 |  |                              |
|---------------------------------|---------------------------------|--|------------------------------|
| Type of Industry                | Bauxite Mines                   | Ref. of Sampling Plan                    | EPIC/LAB/R/038               |
| Sampling Start (D/T)            | 18.06.2025/ 15:38               | Sampling End (D/T)                       | 19.06.2025/ 16:20            |
| Mode of Sampling                | Conducted by Laboratory         | Sample collected by                      | Mr. Pawan Deep Bhagat & Team |
| Sampling method used            | IS : 2025 (Part-1) 1987, B-2003 |  |                              |
| Description/condition of sample |                                 | Receipt sample(s) were fit for analysis. |                              |

## Environmental Condition during sampling

|                   |        |                  |    |            |    |                |           |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity % | 70 | Wind direction | 120°-300° |
|-------------------|--------|------------------|----|------------|----|----------------|-----------|

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

|               |                    |                |                                 |
|---------------|--------------------|----------------|---------------------------------|
| S. Location A | Work Shop (Outlet) | GPS coordinate | 23° 18' 38.08" / 82° 14' 46.70" |
|---------------|--------------------|----------------|---------------------------------|

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start Date | 25.06.2025/ 11:30 | Test completion Date | 25.06.2025/ 11:50 |
|-----------------|-------------------|----------------------|-------------------|

## -Test Result-

| Sl. | Test Parameters             | Method used         | Unit | Results | Limits |
|-----|-----------------------------|---------------------|------|---------|--------|
| 1.  | Total Dissolve Solids (TDS) | IS:3828 (P-16) 2025 | mg/l | 663.0   | -      |

## -Test result Ref-

Prescribed Limit  
Operational Status  
Analyzed by - Pawan Deep

Environmental (Prescribed) Rules-1995, Schedule I, Serial No.334.  
Unit was Operational During sampling.

  
Approved by  
Pawan Deep  
Technical Head

  
Issued by  
Dr. Amit Das  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

Environmental Test Certificate

|                       |                    |            |                       |
|-----------------------|--------------------|------------|-----------------------|
| Unique Lab Report No. | TC1288725000001183 | Discipline | Chemical              |
| Report Unique ID      | PL02052537032      | Group      | Atmospheric Pollution |
| Issue date/time       | 17.09.2025/ 13:27  | Sub Group  | Ambient Air Quality   |

## Report Issue is

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

Contact Person: Mr. Ankit Das  
Contact Number: +91 9971034775  
Email Id: [ankit.das@uditvabira.com](mailto:ankit.das@uditvabira.com)  
Order Date: 31.08.2025/ 10:10  
Order Number: 13612313868

## References of Quality Management System (Copy of Issuance Date)

|                           |                         |                       |                   |
|---------------------------|-------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0205           | Sample Booking Number | EPIC-2537032      |
| Sample(s) Code            | 2537032 (A) (B) (C) (D) | Sample Relegit (D/T)  | 13.09.2025/ 11:31 |

## Sampling References

|                                 |   |                       |                                |
|---------------------------------|---|-----------------------|--------------------------------|
| Type of Industry                | Bauxite Mines   | Ref. of Sampling Plan | EPIC/LAB/R/036                 |
| Sampling Start (D/T)            | 11.09.2025/ 12:00   | Sampling End (D/T)    | 12.09.2025/ 09:47              |
| Mode of Sampling                | Conducted by Laboratory                                   | Sample collected by   | Mr. Pawan Deep (Inagat & Team) |
| Sampling method used            | IS:1562 and CPCB Air Manual Volume - 1 (NAAQM/30/2012-13) |                       |                                |
| Description/condition of sample | Recent sample(s) were fit for analysis.                   |                       |                                |

## Environmental Condition during sampling

|                   |        |                  |    |            |    |                |         |
|-------------------|--------|------------------|----|------------|----|----------------|---------|
| Weather condition | Cloudy | Temperature (°C) | 30 | Humidity % | 67 | Wind direction | SE-225° |
|-------------------|--------|------------------|----|------------|----|----------------|---------|

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

|               |                        |                |                             |
|---------------|------------------------|----------------|-----------------------------|
| 1. Location A | Near Mine Office       | GPS coordinate | 23°19'58.80" E 84°14'44.13" |
| 2. Location B | Near Kithwaspur Ph.23  | GPS coordinate | 23°20'48.18" E 84°14'10.11" |
| 3. Location C | Near Mine Weigh Bridge | GPS coordinate | 23°19'09.00" E 84°14'45.38" |
| 4. Location D | Near Dholi Kurni       | GPS coordinate | 23°19'58.11" E 84°13'43.09" |

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 13.09.2025/ 11:51 | Test completion date | 17.09.2025/ 11:00 |
|-----------------|-------------------|----------------------|-------------------|

| Sl. | Test Parameters                              | Method used          | Unit              | Test Results |       |       |       | Limits        |
|-----|--|----------------------|-------------------|--------------|-------|-------|-------|---------------|
|     |  |                      |                   | A            | B     | C     | D     |               |
| 1.  | Particulate Matter (PM <sub>10</sub> )       | IS:15102 (P-23) 2022 | µg/m <sup>3</sup> | 57.91        | 58.94 | 54.95 | 56.92 | 300 (24 hr)   |
| 2.  | Fine Particulate Matter (PM <sub>2.5</sub> ) | IS:15102 (P-24) 2019 | µg/m <sup>3</sup> | 27.08        | 24.21 | 26.50 | 26.48 | 90 (24 hr)    |
| 3.  | Sulphur Dioxide (SO <sub>2</sub> )           | IS:15102 (P-23) 2022 | µg/m <sup>3</sup> | 09.26        | 08.66 | 08.86 | 07.74 | 80 (24 hr)    |
| 4.  | Nitrogen Dioxide (NO <sub>2</sub> )          | IS:15102 (P-26) 2022 | µg/m <sup>3</sup> | 19.55        | 18.51 | 19.47 | 18.44 | 60 (24 hr)    |
| 5.  | Ammonia (NH <sub>3</sub> )                   | IS:15102 (P-25) 2018 | µg/m <sup>3</sup> | 27.66        | 27.37 | 27.06 | 26.55 | 400 (24 hr)   |
| 6.  | Ozone (O <sub>3</sub> )                      | IS:15102 (P-08) 2019 | µg/m <sup>3</sup> | 23.47        | 25.79 | 27.77 | 24.80 | 300 (3 hr)    |
| 7.  | Lead (Pb)                                    | IS:15102 (P-22) 2019 | µg/m <sup>3</sup> | BDL          | BDL   | BDL   | BDL   | 1.0 (24 hr)   |
| 8.  | Nickel (Ni)                                  | IS:15102 (P-26) 2020 | µg/m <sup>3</sup> | BDL          | BDL   | BDL   | BDL   | 0.01 (24 hr)  |
| 9.  | Arsenic (As)                                 | USEPA 10.3.2:1999    | µg/m <sup>3</sup> | BDL          | BDL   | BDL   | BDL   | 0.005 (24 hr) |

-Test Results End -

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

Operational Status: Unit was Operational During sampling.

Analysed by - Trishla Mangeri

Reviewed by  
(E.M. Sarker)  
Technical HeadIssue by  
(C. Sarker)  
Customer HeadEnvironmental Agency  
EPIC LabTech Pvt. Ltd.

Page 4 of 6

**Disclaimer Note:** 1. The laboratory accepts responsibility for content of this report. 2. Our performance at laboratory's premises satisfies applicable environmental conditions for method required and results relate only to the sample tested in given context & time. 3. The Test report shall not be reproduced in part or in full as per section 14, any reprint or other form of this report should be communicated in writing before issuance of results. 4. Test results of CPCB Laboratory (Pb), will be issued to concerned concerned entity. 5. All descriptive are subjected to factory's discretion and measured validity of the parameter may have not exceed the testing and sampling changes. 6. Outputs observed apply exclusively at the tested parameter by laboratory. Under no circumstances, laboratory accepts any claim by use of content of this report. 7. All the results are true, accurate, provided as stated in "as is" basis.

Disclaimer: ECR, (Sister Environmental Lab), HCL, (Hazardous Chemical Lab), LQG (Labs of Quantification).



## Report ID: 2537032 | Report Type: Environmental Audit Report

|                       |                   |            |                       |
|-----------------------|-------------------|------------|-----------------------|
| Unique Lab Report No. | N/A               | Discipline | Chemical              |
| Report Unique ID      | RLD2537032        | Group      | Atmospheric Pollution |
| Issue date/time       | 17.09.2025/ 11:27 | Sub Group  | Ambient Air-Quality   |

## Report Issue to:

M/s - HINDALCO INDUSTRIES LIMITED  
VILLAGE- COURT ROAD, POST OFFICE- LOHARDAGA,  
DIST- LOHARDAGA, STATE- JHARKHAND, INDIA 835002  
MONITORING SITE: GURDARI BAUXITE MINE

Contact Person: Mr. Ankit Das  
Contact Number: +91 9871034775  
Email Id: [ankit.das@adityabirla.com](mailto:ankit.das@adityabirla.com)  
Order Date: 31.03.2025/ 10:10  
Order Number: 13612333868

## References of Quality Management System (Copy / Traceability Data)

|                           |                         |                       |                   |
|---------------------------|-------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTM/0295           | Sample Booking Number | EPIC-2537032      |
| Sample(s) Code:           | 2537032 (A) (B) (C) (D) | Sample Receipt (D/T)  | 13.09.2025/ 11:31 |

## Sampling References

|                                 |   |                       |                              |
|---------------------------------|---|-----------------------|------------------------------|
| Type of Industry                | Bauxite Mines   | Ref. of Sampling Plan | EPIC/LAB/01/036              |
| Sampling Start (D/T)            | 11.09.2025/ 12:05   | Sampling End (D/T)    | 12.09.2025/ 09:47            |
| Mode of Sampling                | Conducted by Laboratory                                   | Sample collected by   | Mr. Pawan Deep Bragat & Team |
| Sampling method used            | IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/08/2012-13) |                       |                              |
| Description/condition of sample | Receipt sample(s) were fit for analysis.                  |                       |                              |

## Environmental Condition during sampling

|                   |        |                  |    |            |    |                |          |
|-------------------|--------|------------------|----|------------|----|----------------|----------|
| Weather condition | Cloudy | Temperature (°C) | 30 | Humidity % | 67 | Wind direction | 45°-225° |
|-------------------|--------|------------------|----|------------|----|----------------|----------|

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

|               |                        |                |                                 |
|---------------|------------------------|----------------|---------------------------------|
| 1. Location A | Near Mine Office       | GPS coordinate | 23° 18' 59.00" E 84° 14' 44.10" |
| 2. Location B | Near Kathwani P-16-23  | GPS coordinate | 23° 20' 48.10" E 84° 14' 30.11" |
| 3. Location C | Near Mine Weigh Bridge | GPS coordinate | 23° 19' 09.00" E 84° 14' 46.38" |
| 4. Location D | Near Dandi Kunjra      | GPS coordinate | 23° 18' 58.13" E 84° 15' 42.03" |

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 13.09.2025/ 11:51 | Test completion date | 17.09.2025/ 11:00 |
|-----------------|-------------------|----------------------|-------------------|

## -Test Results-

| Sl. | Test Parameters                                 | Method used           | Unit              | Results |     |     |     | Limits |
|-----|---|-----------------------|-------------------|---------|-----|-----|-----|--------|
|     |   |                       |                   | A       | B   | C   | D   |        |
| 1.  | Benzene (C <sub>6</sub> H <sub>6</sub> )        | IS:5182P-13/2006      | µg/m <sup>3</sup> | BDL     | BDL | BDL | BDL | -      |
| 2.  | Benz(a) Pyrene (BaP)-<br>Particulate phase only | IS:5360P-12/2004      | µg/m <sup>3</sup> | BDL     | BDL | BDL | BDL | -      |
| 3.  | Carbon Monoxide (CO)                            | EPIC/LAB/SOP/AF/01/02 | mg/m <sup>3</sup> | BDL     | BDL | BDL | BDL | -      |

## -Test Results End -

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

Operational Status: Unit was Operational During sampling.

Analyzed by - Vinita Margaria

Reviewed by  
(S. K. Jaiswal)  
Technical Head

Issued by  
(S. K. Jaiswal)  
Quality Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





TC-12345

## Environmental Test Certificate

|                       |                     |             |               |
|-----------------------|---------------------|-------------|---------------|
| Unique Lab Report No. | TC12345678900001234 | Discipline: | Chemical      |
| Report Unique ID      | RL02962537033       | Group:      | Water         |
| Issue Date/Time       | 17.09.2025/ 13:30   | 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: GURDARI BAUXITE MINE

Contact Person: Mr. Ankit Das  
Contact Number: +91 98351 64477  
Email ID: ankit.das@edifybirla.com  
Order Date: 31.08.2025/ 10:10  
Order Number: 1234567890123456789

## References of Quality Management System (Date of Issuance/ Date)

|                           |                |                       |                   |
|---------------------------|----------------|-----------------------|-------------------|
| Customer Registration No. | EPIC-OTH/02295 | Sample Booking Number | EPIC-2537033      |
| Sample/Job Code           | 2537033        | Sample Receipt (D/T)  | 13.09.2025/ 11:32 |

## Sampling References

|                                  |                                 |  |                              |
|----------------------------------|---------------------------------|--|------------------------------|
| Type of Industry                 | Bauxite Mines                   | Ref. of Sampling Plan                    | EPIC-LABPV/030               |
| Sampling Start (D/T)             | 17.09.2025/ 15:30               | Sampling End (D/T)                       | 11.09.2025/ 15:40            |
| Mode of Sampling                 | Conducted by Laboratory         | Sample collected by:                     | Mr. Pawan Deep Bhager & Team |
| Sampling method used             | IS : 3025 (Part-1) 3987, R-2003 |  |                              |
| Description/condition of sample: |                                 | Receipt sample(s) were fit for analysis. |                              |

## Environmental Condition during sampling

|                   |        |                  |    |            |    |                |          |
|-------------------|--------|------------------|----|------------|----|----------------|----------|
| Weather condition | Cloudy | Temperature (°C) | 30 | Humidity % | 67 | Wind direction | 45°-225° |
|-------------------|--------|------------------|----|------------|----|----------------|----------|

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

|               |                         |                |                                    |
|---------------|-------------------------|----------------|------------------------------------|
| S. Location A | Near Kothwaspur Pt - 23 | GPS coordinate | 23° 20' 48.19" N/ 84° 14' 16.10" E |
|---------------|-------------------------|----------------|------------------------------------|

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

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 13.09.2025/ 11:52 | Test completion date | 17.09.2025/ 15:58 |
|-----------------|-------------------|----------------------|-------------------|

## -Test Result-

| Sl. | Test Parameters              | Method used       | Unit | Results | Limits |
|-----|------------------------------|-------------------|------|---------|--------|
| 1.  | pH value at 25°C             | 0.3025/P-131/2023 | -    | 7.2     | -      |
| 2.  | Total Dissolved Solids (TDS) | 0.3025/P-36/2023  | mg/l | 205.00  | -      |
| 3.  | Calcium (as Ca)              | 0.3025/P-40/2023  | mg/l | 28.06   | -      |

## Group - Residues and Contaminants in Water,

## Sub Group - Trace Metals/Elements

|    |              |                  |
|----|--------------|------------------|
| 4. | Iron (as Fe) | APHA 2111.8/2023 |
|----|--------------|------------------|

BDL/HDL-G-01

## -Test result End -

## Operational Status: Unit was Operational During sampling.

Analysed by - Pappu Kurna:

Analysed by  
(P.K. Kurna)  
Technical Head

Issued by  
Gireesh Das  
Technical Head  
Authorised Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



## Analytical Test Certificate

|                       |                   |            |               |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | N/A               | Discipline | Chemical      |
| Report Unique ID      | RL0266252703      | Group      | Water         |
| Issue date/time       | 17.09.2025/ 13:30 | Sub-Group  | Surface Water |

## Report Issue to:

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

Contact Person: Mr. Arsh Dasi  
Contact Number: +91 9871034779  
Email Id: [arsh.dasi@udayzirfa.com](mailto:arsh.dasi@udayzirfa.com)  
Order Date: 11.09.2025/ 10:10  
Order Number: 136123123668

## References of Quality Management System (Specified Facility Data)

|                           |               |                       |                   |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0295 | Sample Booking Number | EPIC-2637033      |
| Sample(s) Code            | 2537033       | Sample Receipt (D/T)  | 13.09.2025/ 11:32 |

## Sampling References

|                      |                                 |                       |                              |
|----------------------|---------------------------------|-----------------------|------------------------------|
| Type of Industry     | Bauxite Mines                   | Ref. of Sampling Plan | EPIC/LABR/036                |
| Sampling Start (D/T) | 11.09.2025/ 15:30               | Sampling End (D/T)    | 11.09.2025/ 15:40            |
| Mode of Sampling     | Conducted by Laboratory         | Sample collected by   | Mr. Pawan Deep Bhagat & Team |
| Sampling method used | IS : 3025 (Part-I) 1987, P-2003 |                       |                              |

Description/condition of sample: Receipt sample(s) were fit for analysis.

## Environmental Condition during sampling

|                   |        |                  |    |            |    |                |          |
|-------------------|--------|------------------|----|------------|----|----------------|----------|
| Weather condition | Cloudy | Temperature (°C) | 30 | Humidity % | 67 | Wind direction | 45°-225° |
|-------------------|--------|------------------|----|------------|----|----------------|----------|

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

|               |                           |                |                                    |
|---------------|---------------------------|----------------|------------------------------------|
| S. Location A | Near Kathuwaonki Pte - 23 | GPS coordinate | 22° 20' 46.19" E/ 86° 14' 36.10" N |
|---------------|---------------------------|----------------|------------------------------------|

## Details of performance of the laboratory activities

|                 |                   |                      |                   |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 13.09.2025/ 11:32 | Test completion date | 17.09.2025/ 10:55 |
|-----------------|-------------------|----------------------|-------------------|

## -Test Result-

| Sl. | Test Parameters              | Method used         | Unit | Results      | Units |
|-----|------------------------------|---------------------|------|--------------|-------|
| 1.  | Temperature                  | IS 3025 (P-09) 2006 | °C   | 25.3         | -     |
| 2.  | Dissolve Oxygen (DO)         | IS 3025 (P-38) 2009 | mg/l | 5.3          | -     |
| 3.  | BOD (3days at 27°C)          | IS 3025 (P-44) 2006 | mg/l | 2.00         | -     |
| 4.  | COG                          | IS 3025 (P-08) 2006 | mg/l | 24.00        | -     |
| 5.  | Total Suspended Solids (TSS) | IS 3025 (P-07) 2002 | mg/l | 15.00        | -     |
| 6.  | Oil & Grease                 | IS 3025 (P-36) 2001 | mg/l | BDL (NDL-04) | -     |

## Group - Residues and Contaminants in Water,

## Sub Group - Trace Metals Elements

|    |                  |                     |   |              |   |
|----|------------------|---------------------|---|--------------|---|
| 7. | Aluminum (as Al) | IS 3025 (P-08) 2001 | - | BDL (NDL-04) | - |
|----|------------------|---------------------|---|--------------|---|

## -Test result End-

## Operational Status: Uniform Operational During sampling.

Analyzed by - Pappa Kumar

  
Reviewed by  
(R. Kumar)  
Technician







Address:

C/o. - A.A. Tripathi, Jodhpur  
Road No. - 5, Ranchi  
Jharkhand - 834003, India

Reg. No. 2020-2021-0000000000000000

GSTIN 98327 90427

MSTIN 73000

Email: lab@epiclabtech.com

CIN - U74902JH2017PTC071968

PAN - AEAT2573K

TIN - 234410078HMCX

Accredited by:

International Organization for Standardization

Certification:

ISI 3000:2015 and ISO 17025:2017

## Analytical Test Certificate

|                       |                   |             |                         |
|-----------------------|-------------------|-------------|-------------------------|
| Unique Lab Report No. | N/A               | Discipline: | Chemical                |
| Report Unique ID      | BL02962537034     | Group:      | Pollution & Environment |
| Issue date/time       | 17.09.2025/ 10:30 | 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: GURDAN BAUXITE MINE**

Contact Person: Mr. Ankit Das  
 Contact Number: +91 9873034775  
 Email ID: ankit.das@cityofbiria.com  
 Order Date: 21.09.2025/ 10:30  
 Order Number: 13612312866

## References of Quality Management System (Seqs of Testability Date):

|                           |               |                       |                   |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0205 | Sample Booking Number | EPIC-2537034      |
| Sample(s) Date:           | 2537034       | Sample Receipt (DT)   | 13.09.2025/ 11:35 |

## Sampling References:

Type of Industry: Bauxite Mines Ref. of Sampling Plan: EPIC/LAB/R/036  
 Sampling Start (DT): 13.09.2025/ 10:00 Sampling End (DT): 13.09.2025/ 10:18  
 Mode of Sampling: Conducted by Laboratory Sample collected by: Mr. Pawan Deep Bhagat & Team  
 Sampling method used: IS : 2020 (Part-1) 15077, B. 2005  
 Description/condition of sample: Receipt sample(s) were fit for analysis.

## Environmental Condition during sampling:

Weather condition: Cloudy Temperature (°C): 30 Humidity %: 67 Wind direction: 45°-225°

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

S. Location & Near Karmaspani PH-23 GPS coordinate: 23° 20' 48.18" E 84° 1' 16.17"

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

Test start date: 13.09.2025/ 12:30 Test completion date: 17.09.2025/ 10:30

## -Test Result:-

| Sl. | Test Parameters  | Method used          | Unit  | Results         | Limits |
|-----|------------------|----------------------|-------|-----------------|--------|
| 1.  | Chloride (as Cl) | EPICAL/AN/0006/01/00 | %     | 0.063           | -      |
| 2.  | Mercury (as Hg)  | ICP-MS 3020 B 1390   | mg/kg | 8DL (0.01-0.03) | -      |

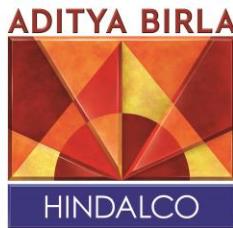
## -Test result fail:-

Operational Status: Unit was Operational During sampling.

Analyzed by - Ishika Singh

  
 Signed by  
 [Ishika Singh]  
 Technical Head

  
 Signed by  
 Deepak Singh  
 Laboratory Head  
 Authorised Signature  
 EPIC LabTech Pvt. Ltd.  
 Ranchi, Jharkhand



## Annexure 3

Date – 01.11.2025

### Office Order

Environmental Cell has been re-constituted for Gurdari Bauxite Mine (Area 584.19 Ha) comprising below mentioned team members. The team will ensure compliance with the Environment Acts, Rules & Regulations in respect of the said mines of Hindalco Industries Limited.

1. Mr. Vidya Singh (Coordinator)
2. Mr. Gyan Panda (Geologist)
3. Mr. Girija Tamrakar (Environment Engineer)
4. Mr. Anand Prakash Tiwari (Environment Engineer)

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

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

Basudev Gangopadhyay  
AVP (Planning, Environment & Compliance)

**Annexure 4**

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

**Annexure 4**

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

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



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

## Annexure-5

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

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

| S. No | Description   | Budget (in Rupees)<br>FY 2025-26<br>(From Apr'25 to Sep'25) | Actual (in Rupees)<br>FY 2025-26<br>(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)