

HIL/LHD/ENV/MoEF&CC/416

Date: 24th November 2025

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

Sub: Six Monthly EC Compliance Report for Amtipani (190.95 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-11015/241/2005-IA.II (M), dated 14th August 2006.

Dear Sir,

With reference to the above, we are submitting herewith the Compliance status report of EC conditions for **Amtipani (190.95 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 as below:

| Lease area (ha) | Production Capacity (MT) | Lease Period |
|-----------------|--------------------------|--------------------------|
| 190.95 | 150000 | 13.03.2006 to 12.03.2056 |

Hope you will find the same in order.

Thanking You

Yours faithfully,
For **Hindalco Industries Limited**

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

Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)

Enclosure: - As Above

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

Name of the Project

**: Amtipani Bauxite Mine (190.95 ha)
M/s Hindalco Industries Limited,**

Environment Clearance No & date : J - 11015/241/2005-IA. II (M), dated 14.08.2006.

Period of compliance Report

: From 1st April 2025 to 30th September 2025

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 full filled post which consent to operate has been granted by SPCB from time to time. The existing consent to operate is valid up to 31.12.2025. Productions of bauxite are within limits specified in Consent to Operate.

Condition 2- The mining operations shall not intersect the groundwater table. Prior approval of the MoEF and CGWA shall be obtained for mining below the water table.

Reply to Condition 2- 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 tables. We undertake that no mining is carried out below ground water table and the same status will be maintained in future also. Moreover, we regularly monitor the groundwater table through the installation of a piezometer. A copy of the water level report is attached herewith as **Annexure-1**.

Condition 3- 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 3- Land acquisition is being carried out with permission of competent authority of State Government, i.e. concerned Deputy Commissioner (D.C.) under CNT Act. The land lease agreement has been made with raiyat (Landowner) after permission of the State Govt with provision of returning the land as per 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 4- 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 4- Topsoil is being stacked temporally properly with proper slope as and when required for reclamation and rehabilitation. Sequential backfilling and reclamation of 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**.



Reclaimed area

Condition 5- The waste generated in the initial period shall be dumped temporarily and backfilled in the mined-out area. There shall be no permanent external OB dump in the project area. Concurrent backfilling should start from the fifth year onwards. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests on six monthly basis.

Reply to Condition 5- 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 continues 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 6- Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil and mineral dump. 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 settling of silt material. Sedimentation pits should be constructed at the corners of the garland drains and desilted at regular intervals.

Reply to Condition 6- 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.



Retaining wall and siltation pit to prevent solid



Garland drains around

Condition 7- Plantation shall be raised in an area of 79.3 ha including a green belt of adequate width by planting the native species around the ML area, roads, etc. in consultation with the local DFO/Agriculture Department. The density of the trees should be around 1500 plants per ha.

Reply to Condition 7- Progressive plantation of native species is being carried out in and around mining lease, reclaimed area etc. in consultation with local forest department on regular basis During FY 2025-26 till September, a total of 2710 nos. saplings have been planted in the mining premises. Cumulative 21.195 ha areas have been planted till date. In addition to this agricultural activity is going on in reclaimed land with the consent of landowners. The Green belt development programme is in progress with the progress of mining activities.



Plantation and Agricultural activity on reclaimed land and Safety zone

Condition 8- The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.

Reply to Condition 8- 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 at Mines

Condition 9- 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 9- 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 of ground water level. The ground water level and water quality reports are being sent regular to regional office of Ministry, CGWA and JSPCB. The same is attached herewith as **Annexure 1 & 2**.



Piezometer Installed at Mine

Condition 10- Prior permission from the competent authority should be obtained for the drawl of water from the surface water bodies.

Reply to Condition 10- 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 rainy season is being used for sprinkling on haul roads and raising plantation.

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

भारत सरकार
पानी की संरक्षण
एवं पानी की वितरण
मंत्रालय
GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI
DEPARTMENT OF WATER RESOURCES,
RIVER DEVELOPMENT & GANGA REJUVENATION
CENTRAL GROUND WATER AUTHORITY

भूजल निकाती हेतु उत्तमायने प्रमाणात्मक
NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION

PROJECT NAME: AMTIPANI BAUXITE MINING PROJECT (190.85 HA)

PROJECT ADDRESS: AMTIPANI BAUXITE MINING PROJECT VILL - KUJAM, CHIRODIH TEHSIL - BISHUNPUR

STATE: JHARKHAND DISTRICT: GUMLA PIN CODE: 835302 TOWN/BLOCK: BISHUNPUR

COMMUNICATION ADDRESS: MINES DIVISION, COURT ROAD

ADDRESS OF CGWB REGIONAL OFFICE: 6th & 7th Floor, Lok Nayak Jai Prakash Bhawan, Frazer Road, Duk Banglow, Patna- 800011, Bihar.

| | |
|---|---|
| 1. NOC NO. NOC/MIN/JH/2025/8240/R-3/3 | 2. DATE OF ISSUANCE 16/07/2025 |
| 3. APPLICATION NO. MIN/JH/2025/8240/R-3 | 4. APPLICATION TYPE Mining |
| 5. PROJECT STATUS Existing Project | 6. NOC TYPE Renew |
| 7. VALID FROM 06/09/2025 | 8. VALID UP TO 05/09/2027 |
| 9. WATER QUALITY TYPE Fresh Water | 10. AREA TYPE CATEGORY Safe (GWRE-2024) |

NOC for Ground water Extraction

Condition 11- The project proponent shall monitor the spring discharge on long term basis (at least one major spring) both in terms of quantity and quality of water and records maintained. Six monthly reports should be submitted to the Ministry of Environment and Forests and its Regional Office located at Bhubaneswar.

Reply to Condition 11- Water Monitoring of Spring is being conducted and Analysis report is attached as **Annexure 2**. Six monthly report is being submitted regularly. Now, the Regional office of MoEF&CC is in Ranchi.

Condition 12- Vehicular emissions should be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in the transportation of minerals. The vehicles should be covered with a tarpaulin and shall not be overloaded.

Reply to Condition 12- 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. Photograph of Tarpaulin Covered Vehicle is attached below.



Ore Transportation with tarpaulin covered truck.

Condition 13- Drills should either be operated with dust extractors or should be equipped with a water injection system.

Reply to Condition 13- Wet drilling is in practice.



Wet drilling is in practice.

Condition 14- Blasting operation should be carried out only during the daytime. Controlled blasting should be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.

Reply to Condition 14- Blasting time is fixed during Lunch Time i.e. 1.00 PM -2.00 PM. Controlled blasting method is in practice. Ground vibration study has been conducted periodically. All efforts such as use of Nonel and delay, reduction in charge per delay etc. are being taken to mitigate impact of blasting.

Condition 15- Consent to operate should be obtained from SPCB prior to start of production of mine.

Reply to Condition 15- We have obtained Consent to operate prior to start of production. The existing consent to operate is valid up to 31.12.2025

Condition 16- Sewage treatment plants should be installed for the colony. ETP should also be provided for workshops and wastewater generated from mining operations.

Reply to Condition 16- 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.



Oil and Grease Trap at Mines

Condition 17- Land ouster and land loser/affected people should be compensated and rehabilitated as per the National Policy on Resettlement and Rehabilitation of project Affected Families (NPRR), 2003

Reply to Condition 17- Land ouster and land loser/affected people are being compensated and rehabilitated as per statute/guidelines.

Condition 18- The higher benches of the excavated void to be converted into water reservoir shall be terraced and afforested to stabilize the slopes. Peripheral fencing shall be done along the excavated area.

Reply to Condition 18- Water reservoir/harvesting pond has been terraced and afforested to stabilize slopes. Peripheral fencing provided along excavated area.

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

Reply 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 guidelines and timelines mentioned in MCDR/IBM guidelines, who are competent authority to approve the same. Based on present resource estimate and peak rated production capacity mentioned in EC, Mining operation is being carried out.

General Conditions

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

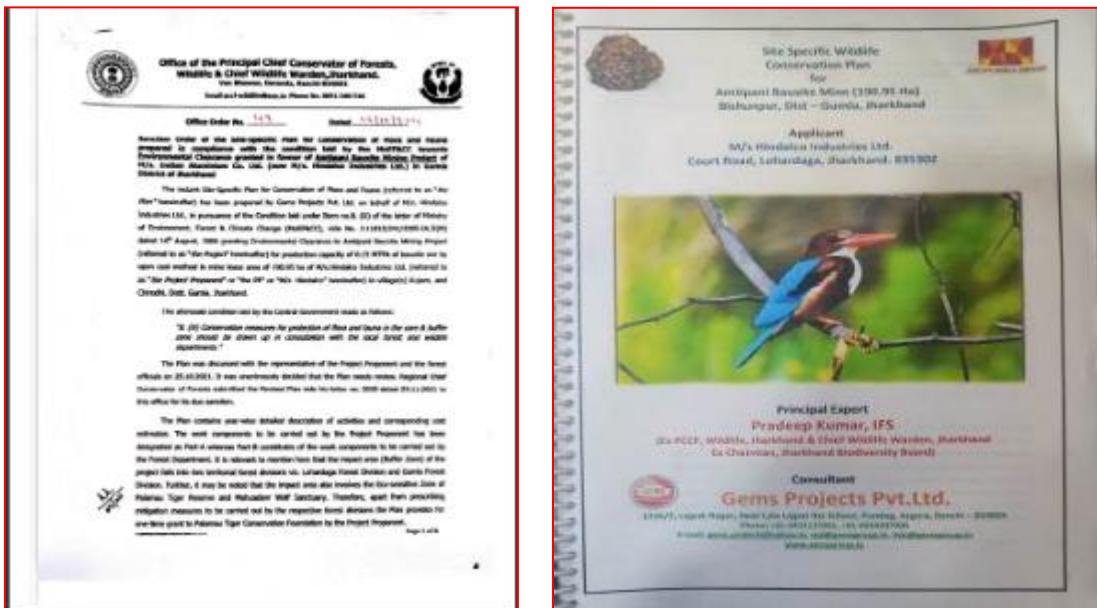
Reply to Condition 1- Noted

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- Conservation measures for protection of flora and fauna in the core & buffer zone should be drawn up in consultation with the local forest and wildlife departments.

Reply to Condition 3- We have 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. 49 dated 02.12.2021 for conservation and protection of flora and fauna in the core and buffer zone for Amtipani Bauxite Mine. A copy of same Approval letter has been submitted to your good office on 21.02.2022.



Site Specific Wildlife Conservation Plan

Condition 4- Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RPM, SPM, SO₂, NO_x monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.

Reply to Condition 4- We have already established four ambient air quality monitoring stations in the core zone as well as buffer zone. Monitoring is being carried out and reported to the concerned authorities. Monitoring Report is attached as **Annexure 2**.

Condition 5- Data on ambient air quality (RPM, SPM, SO₂ and NO_x) should be regularly submitted to the Ministry including its Regional office located at Bhopal and the State Pollution Control Board / Central Pollution Control Board once in six months.

Reply to Condition 5- 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 6- Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading, and unloading and at transfer points should be provided and properly maintained.

Reply to Condition 6- Mobile water tanker with sprinkling facility has been provided along the haul roads, loading, unloading & at transfer points to suppress the dust generation.



Mobile water tanker for dust suppression

Condition 7- Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.

Reply to Condition 7- 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 level is being conducted at various locations of the work zone area.

Report is attached as **Annexure 2**.

Condition 8- Industrial wastewater (workshop and wastewater from the mine) should be properly collected and treated so as to confirm to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.

Reply to Condition 8- 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 of vehicles 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 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.



Oil and Grease Trap at Mines

Condition 9- Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.

Reply to Condition 9- All the workers have been provided with PPEs including dust masks 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 a regular basis. Periodical Occupational health surveillance program of the workers is being carried out and records maintained as per statute.

Condition 10- 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 10- 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 11- The project authorities should inform the Regional Office located at Bhubaneswar 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 11- This is an operating mine, hence provision related to financial closure not applicable. Currently, the Regional Office is in Ranchi.

Condition 12- The funds earmarked for environmental protection measures should be kept in a separate account and should not be diverted for other purpose. Year-wise expenditure should be reported to the Ministry and its Regional Office located at Bhubaneswar.

Reply to Condition 12- Every year, the funds earmarked for environmental protection measures is being budgeted separately and its expenditure is being reported to the Ministry. The copy of the same is attached as **Annexure 5**. Now, the Regional Office of MoEF&CC is in Ranchi.

Condition 13- The project authorities should inform the Regional Office located at Bhubaneswar 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 13- This is an operating mine, hence provision related to financial closure not applicable. Currently, the Regional Office is in Ranchi.

Condition 14- 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 14- Noted and Agreed. Currently, the Regional Office of MoEF&CC is in Ranchi.

Condition 15- A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom and suggestion / representation has been received while processing the proposal.

Reply to Condition 15- Complied. A copy of clearance letter has already submitted.

Condition 16- State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office/ Tehsildar's Office for 30 days.

Reply to Condition 16- Noted. The EC Letter has been submitted to JSPCB for display of same at its Regional office and other government offices.

Condition 17- The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment and Forests at <http://envfor.nic.in> and a copy of the same should be forwarded to the Regional Office of this Ministry located Bhubaneswar.

Reply to Condition 17- 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. Now, the Regional office of MoEF&CC is in Ranchi.

Piezometer Monitoring Report

Mine: Amtipani Bauxite Mine (190.95 Ha)

| S No | Month | Ground Water Level (BGL) in meter |
|-------------|---------------|--|
| 1 | Apr-25 | 33.05 |
| 2 | May-25 | 33.23 |
| 3 | Jun-25 | 33.13 |
| 4 | Jul-25 | 33.01 |
| 5 | Aug-25 | 32.92 |
| 6 | Sep-25 | 32.79 |



Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|-----------------------|
| Unique Lab Report No. | TC1288725000000394 | Discipline | Chemical |
| Report Unique ID | RL0143251711 | Group | Atmospheric Pollution |
| Issue date/time | 26.04.2025 / 13:10 | Sub Group | Ambient Air Quality |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|------------------------|-----------------------|--------------------|
| Customer Registration No. | EPIC/OTH/0143 | Sample Booking Number | EPIC-251711 |
| Sample(s) Code | 251711 (A) (B) (C) (D) | Sample Receipt (D/T) | 21.04.2025 / 11:18 |

Sampling References

| | | | |
|---------------------------------|---|--|------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling method used | IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13) | | |
| Sampling Start (D/T) | 18.04.2025 / 10:56 | Sampling End (D/T) | 19.04.2025 / 07:25 |
| 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 Condition during sampling

| | | | | | | | |
|-------------------|-------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Clear | Temperature (°C) | 30 | Humidity % | 59 | Wind direction | 320°-140° |
|-------------------|-------|------------------|----|------------|----|----------------|-----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 1F | GPS coordinate | 23° 20' 48.16" / 84° 15' 24.28" |
| S. Location D | Mines Near Quarry - 7C | GPS coordinate | 23° 20' 18.12" / 84° 15' 34.07" |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|--------------------|----------------------|--------------------|
| Test start date | 21.04.2025 / 11:45 | Test completion date | 25.04.2025 / 12:50 |
|-----------------|--------------------|----------------------|--------------------|

-Test Result--

| Sl | Test Parameters | Method used | Unit | Results | | | | Limits |
|----|---|---------------------|-------|--------------------|--------------------|--------------------|--------------------|-------------|
| | | | | A | B | C | D | |
| 1. | Particulate Matter (PM _{2.5}) | IS:5182 (P-23) 2022 | µg/m³ | 84.93 | 74.88 | 78.83 | 77.82 | 100 (24 hr) |
| 2. | Fine Particulate Matter (PM ₁₀) | IS:5182 (P-24) 2019 | µg/m³ | 46.30 | 33.43 | 36.91 | 35.55 | 60(24 hr) |
| 3. | Sulphur Dioxide (SO ₂) | IS:5182 (P-02) 2023 | µg/m³ | 09.94 | 10.05 | 08.13 | 07.86 | 80(24 hr) |
| 4. | Nitrogen Dioxide (NO ₂) | IS:5182 (P-06) 2022 | µg/m³ | 25.77 | 22.50 | 23.61 | 22.54 | 80(24 hr) |
| 5. | Ozone (O ₃) | IS:5182 (P-09) 2019 | µg/m³ | 38.47 | 37.83 | 35.89 | 34.59 | 180(1 hr) |
| 6. | Ammonia (NH ₃) | IS:5182 (P-25) 2016 | µg/m³ | 53.07 | 51.18 | 48.02 | 46.75 | 400(24 hr) |
| 7. | Lead (Pb) | IS:5182 (P-22) 2019 | µg/m³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | 1.0(24 hr) |
| 8. | Nickel (Ni) | IS:5182 (P-26) 2020 | ng/m³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | - |
| 9. | Arsenic (As) | USEPA 10.3.2:1999 | ng/m³ | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | - |

-Test Result End--

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

Analysed by - A. K. SHARMA

Checked by
(B.R. Kumar)
Technical HeadVerified & Issued by
(Umesh Das)
Laboratory Head

Unredacted Signatory

Page 1 of 1

Contractual Notes: 1. The laboratory accepts responsibility for content of this report. 2. Test performed at laboratory's permanent facility or specific environmental condition as method required and results relate only to the sample tested in prescribed Date & time. 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law. 4. Any complaint about this report should be communicated in writing within 30 days of its issue. 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to involved amount only. 6. All disputes are subject to Jharkhand jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges. 7. Opinion does not imply endorsement of the tested produce by laboratory. Under no circumstances, laboratory accepts any cause by use or misuse of this report. 8. When the results are from external provider are marked as "mark".

Disclaimer: -MNL, MNL, Maximum Limit; MNL, Minimum Limit; LNL, Limit of Non-detection.



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

• 0651 4666592
• 98357 88677
• 93049 73994
• epiclabtech@gmail.com

CIN - U14999JH2022NIT036865
PAN - AAHCE3611M
GST - 20AAHCE3611M12X

Accredited by -
Bihar State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 17025:2017

Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|-----------------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL0143251711 | Group | Atmospheric Pollution |
| Issue date/time | 26.04.2025 / 13:10 | Sub Group | Ambient Air Quality |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|------------------------|-----------------------|--------------------|
| Customer Registration No. | EPIC/OTH/0143 | Sample Booking Number | EPIC-251711 |
| Sample(s) Code | 251711 (A) (B) (C) (D) | Sample Receipt (D/T) | 21.04.2025 / 11:18 |

Sampling References

| | | | |
|---------------------------------|---|-----------------------|--|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling method used | IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13) | | |
| Sampling Start (D/T) | 18.04.2025 / 10:56 | Sampling End (D/T) | 19.04.2025 / 07:25 |
| 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 Condition during sampling

| | | | | | | | |
|-------------------|-------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Clear | Temperature (°C) | 30 | Humidity % | 59 | Wind direction | 320°-140° |
|-------------------|-------|------------------|----|------------|----|----------------|-----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 1F | GPS coordinate | 23° 20' 48.16" / 84° 15' 24.28" |
| S. Location D | Mines Near Quarry - 7C | GPS coordinate | 23° 20' 18.12" / 84° 15' 34.07" |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|--------------------|----------------------|--------------------|
| Test start date | 21.04.2025 / 11:45 | Test completion date | 25.04.2025 / 12:50 |
|-----------------|--------------------|----------------------|--------------------|

-Test Result --

| Sl. | Test Parameters | Method used | Unit | Results | | | | Limits |
|-----|---|-----------------------|-------------------|------------------|------------------|------------------|------------------|--------|
| | | | | A | B | C | D | |
| 1. | Benzene (C ₆ H ₆) | IS:5182(P-11) 2006 | µg/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | - |
| 2. | Benzo (a) Pyrene (Bap)- Particulate phase only | IS:5182(P-12) 2004 | ng/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | - |
| 3. | Carbon Monoxide (CO) | EPIC/LAB/SOP/AP/01/00 | mg/m ³ | BDL (MDL-1.6) | BDL (MDL-1.6) | BDL (MDL-1.6) | BDL (MDL-1.6) | - |

--Test Result End --

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

Operational Status: Unit was Operational During sampling.

Analysed by -AK SIRIA



Checked by
(S.K. Kumar)
Technical Head

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



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

Tel: 0651 4666292
98357 86677
93049 73394
epiclabtech@gmail.com

CIN: U74899JH2022PTC019645
Accredited by:
NABL, certificate Number IC-12887
Part 4: Water Pollution Control Board
Certified by:
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|----------------|
| Unique Lab Report No. | TC1288725000000395 | Discipline | Chemical |
| Report Unique ID | RL0143251712 | Group | Water |
| Issue date/time | 26.04.2025/ 13:12 | 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: AMTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0143 | Sample Booking Number | EPIC-251712 |
| Sample(s) Code | 251712 | Sample Receipt (D/T) | 21.04.2025/ 11:21 |

Sampling References

| | | | |
|---------------------------------|---------------------------------|--|------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003 | | |
| Sampling Start (D/T) | 18.04.2025/ 11:30 | Sampling End (D/T) | 18.04.2025/ 11:40 |
| 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 Condition during sampling

| | | | | | | | |
|-------------------|-------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Clear | Temperature (°C) | 30 | Humidity % | 59 | Wind direction | 320°-140° |
|-------------------|-------|------------------|----|------------|----|----------------|-----------|

| | | | |
|---|-------------|----------------|-------------------------------|
| Sampling Location(s) with GPS coordinate(s) | | GPS coordinate | 23° 20' 37.08"/84° 15' 32.28" |
| S. Location A | Near office | | |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 21.04.2025/ 11:35 | Test completion date | 26.04.2025/ 14:00 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result --

| Sl | Test Parameters | Method used | Unit | Results | Limits | |
|-----|--|---------------------------|-------|----------------|------------------|-------------------|
| | | | | | Acceptable Limit | Permissible limit |
| 1. | pH value at 24.6°C | IS 3025 (P-11) 2022 | - | 6.80 | 6.5-8.5 | No relaxation |
| 2. | Turbidity | IS 3025 (P-10) 1984 | NTU | 0.37 | 1 | 5 |
| 3. | Colour | IS 3025 (P-04) 2021 | Hazen | <5 | 6 | 15 |
| 4. | Odour | IS 3025 (P-05) 2018 | - | Agreeable | Agreeable | Agreeable |
| 5. | Taste | IS 3025 (P-07) 2017 | - | Agreeable | Agreeable | Agreeable |
| 6. | Total Dissolved Solids (TDS) | IS 3025 (P-16) 2023 | mg/l | 89.00 | 500 | 2000 |
| 7. | Chloride (as Cl) | IS 3025 (P-32) 2019 | mg/l | 18.72 | 250 | 1000 |
| 8. | Total Alkalinity (as CaCO ₃) | IS 3025 (P-23) 2019 | mg/l | 50.00 | 200 | 600 |
| 9. | Total Hardness (as CaCO ₃) | IS 3025 (P-21) 2009 | mg/l | 70.00 | 200 | 600 |
| 10. | Calcium (as Ca) | IS 3025 (P-40) 1991 | mg/l | 12.34 | 75 | 200 |
| 11. | Free Residual Chlorine | IS 3025 (P-26) 1986 | mg/l | BDL(MDL-0.4) | 0.2 | 1 |
| 12. | Sulphate (as SO ₄) | IS 3025 (P-24/Sec-1) 2022 | mg/l | 1.30 | 200 | 400 |
| 13. | Nitrate (as NO ₃) | APHA 4500 B 2023 | mg/l | 1.04 | 45 | No relaxation |
| 14. | Phenolic Compound | IS 3025 (P-43/Sec-1) 2022 | mg/l | BDL(MDL-0.001) | 0.001 | 0.002 |
| 15. | Magnesium (as Mg) | APHA 3500 Mg E 2023 | mg/l | 9.52 | 30 | 100 |

Group - Residues and Contaminants in Water

Sub Group- Trace Metals Elements

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

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



Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|----------------|
| Unique Lab Report No. | TC1288725000000395 | Discipline | Chemical |
| Report Unique ID | RL0143251712 | Group | Water |
| Issue date/time | 26.04.2025/ 13:12 | Sub Group | Drinking Water |

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD,
POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA,
STATE-JHARKHAND, INDIA 836302
MONITORING SITE: AMTIPANI BAUXITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number

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

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

--Test result End--

Prescribed Limit

IS 10500:2021

Operational Status

Unit was Operational During sampling.

Analysed by -Pratima Kumar/ Anjali Kumar



 Checked by
(E.N. Kumar)
Technical Head


 Verified & issued by
(Anil Kumar)
Laboratory Head
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|----------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL0143251712 | Group | Water |
| Issue date/time | 26.04.2025/ 13:12 | 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 : AMTIPANI BAUXITE MINE | Contact Person | Mr. Ankit Das |
| | Contact Number | +91 9971034775 |
| | Email Id | ankit.das@adityabirla.com |
| | Order Date | 31.03.2025/ 10:10 |
| | Order Number | 13612313868 |

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0143 | Sample Booking Number | EPIC-251712 |
| Sample(s) Code | 251712 | Sample Receipt (D/T) | 21.04.2025/ 11:21 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003 | | |
| Sampling Start (D/T) | 18.04.2025/ 11:30 | Sampling End (D/T) | 18.04.2025/ 11:40 |
| 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 Condition during sampling

| | | | | | | | |
|-------------------|-------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Clear | Temperature (°C) | 30 | Humidity % | 59 | Wind direction | 320°-140° |
|-------------------|-------|------------------|----|------------|----|----------------|-----------|

| | | | |
|---|-------------|----------------|---------------------------------|
| Sampling Location(s) with GPS coordinate(s) | | GPS coordinate | 23° 20' 37.08" / 84° 15' 32.28" |
| S. Location A | Near office | | |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 21.04.2025/ 11:35 | Test completion date | 25.04.2025/ 14:00 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result --

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

| | | | | | | |
|----|-----------------|--------------------|------|--------------|-----|-----|
| 1. | Fluoride (as F) | APHA 4500 F-C 2023 | mg/l | BDL(MDL-0.1) | 1.0 | 1.5 |
|----|-----------------|--------------------|------|--------------|-----|-----|

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

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

Group-Residues and Contaminants in Water Sub Group-Pesticides

| | | | | | | |
|-----|-------------|-----------------------|------|----------------|-------|---------------|
| 6. | Alachlor | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.5) | 20 | No relaxation |
| 7. | Atrazine | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.5) | 2.0 | No relaxation |
| 8. | Dieldrin | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.02) | 0.03 | No relaxation |
| 9. | Alpha HCH | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.005) | 0.01 | No relaxation |
| 10. | Beta HCH | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.02) | 0.04 | No relaxation |
| 11. | Butachlor | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.5) | 125.0 | No relaxation |
| 12. | Chlopyrifos | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.5) | 30.0 | No relaxation |
| 13. | Delta HCH | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.02) | 0.04 | No relaxation |
| 14. | Ethion | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.5) | 3.0 | No relaxation |



Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|----------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL0143251712 | Group | Water |
| Issue date/time | 26.04.2025/ 13:12 | 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 : AMTIPANI BAUXITE MINE

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

Order Number
13612313868

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

-Test Result End -

Prescribed Limit IS 10500:2021

Operational Status Unit was Operational During sampling.

Analysed by - Pratima Kumar/ Anjali Kumar



Checked by
(E.N. Kumar)
Technical Head

✓
26/04/25
Verified & Issue by
(Ankit Das)
Laboratory Head

Authorized Signature
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|----------------|
| Unique Lab Report No. | N/A | Discipline | Biological |
| Report Unique ID | RL0143251713 | Group | Water |
| Issue date/time | 26.04.2025/ 13:14 | 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 : AMTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0143 | Sample Booking Number | EPIC-251713 |
| Sample(s) Code | 251713 | Sample Receipt (D/T) | 21.04.2025/ 11:22 |

Sampling References

| | | | |
|---------------------------------|--|--|------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003 & IS 1622 1981 | | |
| Sampling Start (D/T) | 18.04.2025/ 11:30 | Sampling End (D/T) | 18.04.2025/ 11:40 |
| 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 Condition during sampling

| | | | | | | | |
|-------------------|-------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Clear | Temperature (°C) | 30 | Humidity % | 59 | Wind direction | 320°-140° |
|-------------------|-------|------------------|----|------------|----|----------------|-----------|

| | | | |
|---|-------------|----------------|---------------------------------|
| Sampling Location(s) with GPS coordinate(s) | | GPS coordinate | 23° 20' 37.08" / 84° 15' 32.28" |
| S. Location A | Near office | | |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 21.04.2025/ 11:35 | Test completion date | 25.04.2025/ 14:00 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result --

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

--Test Result End --

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

Analysed by -Pratima Kumar/ Anjali Kumar



Checked by
(Anjali Kumar)
Technical Head

Mr.
Ankit Das
26/4/2025

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



Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|--------------|
| Unique Lab Report No. | TC1288725000000396 | Discipline | Chemical |
| Report Unique ID | RL0143251714 | Group | Water |
| Issue date/time | 26.04.2025/ 13:18 | 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: AMTIPANI BAUXITE MINE | Contact Person | Mr. Ankit Das |
| | Contact Number | +91 9971034775 |
| | Email Id | ankit.das@adityabiria.com |
| | Order Date | 31.03.2025/ 10:10 |
| | Order Number | 13612313868 |

References of Quality Management System (Days of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0143 | Sample Booking Number | EPIC-251714 |
| Sample(s) Code | 251714 | Sample Receipt (D/T) | 21.04.2025/ 11:23 |

Sampling References

| | | | |
|---------------------------------|---------------------------------|-----------------------|--|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003 | | |
| Sampling Start (D/T) | 18.04.2025/ 12:00 | Sampling End (D/T) | 18.04.2025/ 12:15 |
| 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 Condition during sampling

| | | | | | | | |
|-------------------|-------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Clear | Temperature (°C) | 30 | Humidity % | 59 | Wind direction | 320°-140° |
|-------------------|-------|------------------|----|------------|----|----------------|-----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|-------------------|----------------|-------------------------------|
| S. Location A | Near Weigh Bridge | GPS coordinate | 23° 20' 38.01"/84° 15' 30.41" |
|---------------|-------------------|----------------|-------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 21.04.2025/ 11:35 | Test completion date | 25.04.2025/ 14:00 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result --

| Sl. | Test Parameters | Method used | Unit | Results | Limits | |
|-----|--|---------------------------|-------|----------------|------------------|-------------------|
| | | | | | Acceptable Limit | Permissible limit |
| 1. | pH value at 25°C | IS 3025 (P-11) 2022 | - | 7.16 | 6.5-8.5 | No relaxation |
| 2. | Turbidity | IS 3025 (P-10) 1984 | NTU | 0.41 | 1 | 5 |
| 3. | Colour | IS 3025 (P-04) 2021 | Hazen | <5 | 5 | 15 |
| 4. | Odour | IS 3025 (P-05) 2018 | - | Agreeable | Agreeable | Agreeable |
| 5. | Taste | IS 3025 (P-07) 2017 | - | Agreeable | Agreeable | Agreeable |
| 6. | Total Dissolved Solids (TDS) | IS 3025 (P-16) 2023 | mg/l | 130 | 500 | 2000 |
| 7. | Chloride (as Cl) | IS 3025 (P-32) 2019 | mg/l | 21.68 | 250 | 1000 |
| 8. | Total Alkalinity (as CaCO ₃) | IS 3025 (P-23) 2019 | mg/l | 68 | 200 | 600 |
| 9. | Total Hardness (as CaCO ₃) | IS 3025 (P-21) 2009 | mg/l | 98 | 200 | 600 |
| 10. | Calcium (as Ca) | IS 3025 (P-40) 1991 | mg/l | 18.44 | 75 | 200 |
| 11. | Free Residual Chlorine | IS 3025 (P-26) 1986 | mg/l | BDL(MDL-0.4) | 0.2 | 1 |
| 12. | Sulphate (as SO ₄) | IS 3025 (P-24/Sec-1) 2022 | mg/l | 2.90 | 200 | 400 |
| 13. | Nitrate (as NO ₃) | APHA 4500 B 2023 | mg/l | 1.99 | 45 | No relaxation |
| 14. | Phenolic Compound | IS 3025 (P-43/Sec-1) 2022 | mg/l | BDL(MDL-0.001) | 0.001 | 0.002 |
| 15. | Magnesium (as Mg) | APHA 3500 Mg E 2023 | mg/l | 12.63 | 30 | 100 |

Group - Residues and Contaminants in Water

Sub Group- Trace Metals Elements



Address:
C/o - R.R. Tripathi, Indrapuri
Roorkee - 247667
Jharkhand - 834009, India

0651 4664392
93337 85677
93049 73993
vjclabtech@gmail.com

CIN - U74999H2022PTC019683
PAN - AAHCES811M
GST - 20AAHCES811M2X
Accredited by -
TUV, ISO certificate number IC-13982
Inhalation Toxic Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018



TC-12887

Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|--------------|
| Unique Lab Report No. | TC1288725000000396 | Discipline | Chemical |
| Report Unique ID | RL0143251714 | Group | Water |
| Issue date/time | 28.04.2025/ 13:18 | 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: AMTIPANI BAUXITE MINE

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

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

-Test Result End -

Prescribed Limit

IS 10500:2021

Operational Status

Unit was Operational During sampling

Analysed by -Pratima Kumar/ Anjaly Kumar



Checked by
(E.N. Kumar)
Technical Head

Verified & Issued by
(E.N. Kumar)
Laboratory Head

Autographed Signature
EPIC LabTech Pvt. Ltd.
Roorkee, Jharkhand



Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|--------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL0143251714 | Group | Water |
| Issue date/time | 26.04.2025/ 13:16 | Sub Group | Ground Water |

Report Issue to

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0143 | Sample Booking Number | EPIC-251714 |
| Sample(s) Code | 251714 | Sample Receipt (D/T) | 21.04.2025/ 11:23 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003 | | |
| Sampling Start (D/T) | 18.04.2025/ 12:00 | Sampling End (D/T) | 18.04.2025/ 12:15 |
| 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 Condition during sampling

| | | | | | | | |
|-------------------|-------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Clear | Temperature (°C) | 30 | Humidity % | 59 | Wind direction | 320°-140° |
|-------------------|-------|------------------|----|------------|----|----------------|-----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|-------------------|----------------|---------------------------------|
| S. Location A | Near Weigh Bridge | GPS coordinate | 23° 20' 38.01" / 84° 15' 30.41" |
|---------------|-------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 21.04.2025/ 11:35 | Test completion date | 25.04.2025/ 14:00 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result --

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



Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|--------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL0143251714 | Group | Water |
| Issue date/time | 26.04.2025/ 13:16 | Sub Group | Ground Water |

Report Issue to

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

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

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

--Test Result End--

Prescribed Limit IS 10500:2021

Operational Status Unit was Operational During sampling.

Analysed by - Pratima Kumar/ Anjali Kumar



 Checked by
(B.N. Kumar)
Technical Head


 Verified & issued by
(Umesh Das)
Laboratory Head

 Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

Address:
C/o - R.R. Tripathi, Ranchi,
Road No. - 5, Ranchi,
Jharkhand - 834003, India

• 0601 4006352
• 98357 86677
• 92043 73994
• epiclabtech@gmail.com

CIN - U74999JH2022PTC019685 Accredited by -
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 16002:2015

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|--------------|
| Unique Lab Report No. | N/A | Discipline | Biological |
| Report Unique ID | RL0143251715 | Group | Water |
| Issue date/time | 26.04.2025/ 13:18 | 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 : AMTIPANI BAUXITE MINE | Contact Person | Mr. Ankit Das |
| | Contact Number | +91 9971034775 |
| | Email Id | ankit.das@adityabirla.com |
| | Order Date | 31.03.2025/ 10:10 |
| | Order Number | 13612313868 |

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0143 | Sample Booking Number | EPIC-251715 |
| Sample(s) Code | 251715 | Sample Receipt (D/T) | 21.04.2025/ 11:23 |

Sampling References

| | | | |
|---------------------------------|---|-----------------------|------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003& IS 1622 1981 | | |
| Sampling Start (D/T) | 18.04.2025/ 12:00 | Sampling End (D/T) | 18.04.2025/ 12:15 |
| 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 Condition during sampling

| | | | | | | | |
|-------------------|-------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Clear | Temperature (°C) | 30 | Humidity % | 58 | Wind direction | 320°-140° |
|-------------------|-------|------------------|----|------------|----|----------------|-----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|-------------------|----------------|-------------------------------|
| S. Location A | Near Weigh Bridge | GPS coordinate | 23° 20' 38.01"/84° 15' 30.41" |
|---------------|-------------------|----------------|-------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 21.04.2025/ 11:35 | Test completion date | 25.04.2025/ 14:00 |
|-----------------|-------------------|----------------------|-------------------|

-Test Result -

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

-Test Result End -

Prescribed Limit IS 10500:2021

Operational Status Unit was Operational During sampling.

Analysed by -Prema Kumar/ Ankit Kumar




Checked by
(B.N. Kumar)
Technical Head


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



EPIC LabTech Private Limited

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

0631-4666392
98357 86677
91049 73994
epiclabtech@gmail.com

CIN - U74999JH2022PTC019683
PAN - AAHC3611M
GST - 20AAHC3611M12R

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



TC-12887

Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|-----------------------|
| Unique Lab Report No. | TC1288725000000525 | Discipline | Chemical |
| Report Unique ID | RL0176252035 | Group | Atmospheric Pollution |
| Issue date/time | 21.05.2025/ 15:14 | 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: AMTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Data)

| | | | |
|---------------------------|------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0176 | Sample Booking Number | EPIC-252035 |
| Sample(s) Code | 252035 (A) (B) (C) (D) | Sample Receipt (D/T) | 16.05.2025/ 10:52 |

Sampling References

| | | | |
|---------------------------------|---|-----------------------|-------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 14.05.2025/ 11:29 | Sampling End (D/T) | 15.05.2025/ 08:32 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Vishal Kumar & Team |
| Sampling method used | IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13) | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|-------|------------------|----|------------|----|----------------|---------|
| Weather condition | Clear | Temperature (°C) | 29 | Humidity % | 52 | Wind direction | 0°-180° |
|-------------------|-------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 1F | GPS coordinate | 23° 20' 48.16" / 84° 15' 24.26" |
| S. Location D | Mines Near Quarry - 7C | GPS coordinate | 23° 20' 18.12" / 84° 15' 34.07" |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 16.05.2025/ 11:15 | Test completion date | 20.05.2025/ 12:00 |
|-----------------|-------------------|----------------------|-------------------|

-Test Results-

| Sl | Test Parameters | Method used | Unit | Results | | | | Limits |
|----|--|---------------------|-------------------|--------------------|--------------------|--------------------|--------------------|-------------|
| | | | | A | B | C | D | |
| 1. | Particulate Matter (PM ₁₀) | IS:5182 (P-23) 2022 | µg/m ³ | 82.00 | 86.98 | 76.98 | 89.99 | 100 (24 hr) |
| 2. | Fine Particulate Matter (PM _{2.5}) | IS:5182 (P-24) 2019 | µg/m ³ | 37.86 | 39.99 | 33.12 | 36.94 | 60(24 hr) |
| 3. | Sulphur Dioxide (SO ₂) | IS:5182 (P-02) 2023 | µg/m ³ | 7.15 | 10.18 | 7.77 | 9.49 | 80(24 hr) |
| 4. | Nitrogen Dioxide (NO ₂) | IS:5182 (P-06) 2022 | µg/m ³ | 1912 | 23.71 | 20.31 | 21.95 | 80(24 hr) |
| 5. | Ammonia (NH ₃) | IS:5182 (P-25) 2018 | µg/m ³ | 40.58 | 38.64 | 43.83 | 47.73 | 400(24 hr) |
| 6. | Ozone (O ₃) | IS:5182 (P-09) 2019 | µg/m ³ | 35.77 | 32.19 | 39.34 | 33.98 | 180(1 hr) |
| 7. | Lead (Pb) | IS:5182 (P-22) 2019 | µg/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | 1.0(24 hr) |
| 8. | Nickel (Ni) | IS:5182 (P-26) 2020 | ng/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | |
| 9. | Arsenic (As) | USEPA IO 3.2:1999 | ng/m ³ | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | |

-Test Results End -

Prescribed Limit
Operational Status
Analysed by - AK Seha

Reviewed by
(AK Seha)
Technical Head

Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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

0651-4666352
98357 86477
93049 73894
epiclabtech@gmail.com

CIN - U74999JH2022PTC019681
PAN - AAHCE3611M
GST - 20AAHCE3611M12X

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

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|-----------------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL0176252035 | Group | Atmospheric Pollution |
| Issue date/time | 21.05.2025/ 15:14 | 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 : ANTIKANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Data)

| | | | |
|---------------------------|------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0176 | Sample Booking Number | EPIC-252035 |
| Sample(s) Code | 252035 (A) (B) (C) (D) | Sample Receipt (D/T) | 16.05.2025/ 10:52 |

Sampling References

| | | | |
|---------------------------------|---|-----------------------|-------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 14.05.2025/ 11:29 | Sampling End (D/T) | 15.05.2025/ 08:32 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Vishal Kumar & Team |
| Sampling method used | IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13) | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|-------|------------------|----|------------|----|----------------|---------|
| Weather condition | Clear | Temperature (°C) | 29 | Humidity % | 52 | Wind direction | 0°-180° |
|-------------------|-------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 1F | GPS coordinate | 23° 20' 48.16" / 84° 15' 24.28" |
| S. Location D | Mines Near Quarry - 7C | GPS coordinate | 23° 20' 18.12" / 84° 15' 34.07" |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 16.05.2025/ 11:15 | Test completion date | 20.05.2025/ 12:00 |
|-----------------|-------------------|----------------------|-------------------|

-Test Results-

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

-Test Results End -

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

Analysed by - AK Seha



Reviewed by
(E. N. Kumar)
Technical Head

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



EPIC LabTech Private Limited

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

0651 4686352
98357 86677
93049 73994
epiclabtech@gmail.com

CIN - U74999JH2022PTC015485
PAN - AAHCE3551M
GST - 25AAHCE3411M12X

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



TC-12887

Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|-----------------------|
| Unique Lab Report No. | TC1288725000000526 | Discipline | Chemical |
| Report Unique ID | RL0176252036 | Group | Atmospheric Pollution |
| Issue date/time | 21.05.2025/ 15:16 | Sub Group | Ambient Noise |

Report Issue to:

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

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

References of Quality Management System (Steps of Traceability Data)

| | | | |
|---------------------------|------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0176 | Sample Booking Number | EPIC-252036 |
| Sample(s) Code | 252036 (A) (B) (C) (D) | Sample Receipt (D/T) | 16.05.2025/ 10:55 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|-------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 14.05.2025/ 11:29 | Sampling End (D/T) | 15.05.2025/ 08:32 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Vishal Kumar & Team |
| Sampling method used | IS 9989:1981 (RA 2020) & CPCB Method S.O.50 (E) dated 11/01/2010 | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|-------|------------------|----|------------|----|----------------|---------|
| Weather condition | Clear | Temperature (°C) | 29 | Humidity % | 52 | Wind direction | 0°-180° |
|-------------------|-------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 1F | GPS coordinate | 23° 20' 48.16" / 84° 15' 24.28" |
| S. Location D | Mines Near Quarry - 7C | GPS coordinate | 23° 20' 18.12" / 84° 15' 34.07" |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 16.05.2025/ 11:20 | Test completion date | 20.05.2025/ 12:05 |
|-----------------|-------------------|----------------------|-------------------|

-Test Results-

| Sl | Test Parameters | Method used | Unit | Results | | | | Limits |
|----|-----------------------------|---------------|--------|---------|------|------|------|--------|
| | | | | A | B | C | D | |
| 1. | L ₁ (Day time) | IS: 9989:1981 | dB(A) | 58.8 | 53.9 | 49.2 | 47.0 | 75 |
| 2. | L ₁ (Night time) | IS: 9989:1981 | dB (A) | 43.9 | 41.8 | 39.8 | 37.4 | 70 |

Prescribed Limit

Environmental (Protection) Rules-1986, Schedule III.

Operational Status

Unit was Operational During sampling.



Reviewed by
(B.K. Kumar)
Technical Head

Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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

0651 4866392
98357 86477
93049 73894
epiclabtech@gmail.com

CIN - U74999JH2022PTC01968
PAN - AAHCE36Y1M
GST - 20AAHCE36Y1M12X

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



TC-12887

Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|-------------------------|
| Unique Lab Report No. | TC1288725000000527 | Discipline | Chemical |
| Report Unique ID | RL0176252037 | Group | Pollution & Environment |
| Issue date/time | 21.05.2025/ 15:18 | Sub Group | Waste Water (Effluent) |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Data)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0176 | Sample Booking Number | EPIC-252037 |
| Sample(s) Code | 252037 | Sample Receipt (D/T) | 16.05.2025/ 10:58 |

Sampling References

| | | | |
|---------------------------------|---------------------------------|--|-------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 14.05.2025/ 16:30 | Sampling End (D/T) | 14.05.2025/ 16:50 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Vishal Kumar & Team |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003 | | |
| Description/condition of sample | | Receipt sample(s) were fit for analysis. | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|-------|------------------|----|------------|----|----------------|---------|
| Weather condition | Clear | Temperature (°C) | 29 | Humidity % | 52 | Wind direction | 0°-180° |
|-------------------|-------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|--------------------|----------------|---------------------------------|
| S. Location A | Work Shop (Outlet) | GPS coordinate | 23° 20' 37.43" / 84° 15' 33.93" |
|---------------|--------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 16.05.2025/ 11:15 | Test completion date | 21.05.2025/ 12:30 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result--

| Sl. | Test Parameters | Method used | Unit | Results | Limits |
|-----|-----------------------|---------------------------|------|-------------|---------|
| 1. | pH value at 25.2°C | IS 3025 (P-11) 2022 | - | 6.55 | 6.5-8.5 |
| 2. | BOD (3 days at 27°C) | IS 3025 (P-44) 2000 | mg/l | 14.00 | - |
| 3. | COD | IS 3025 (P-58) 2006 | mg/l | 64.00 | 150.0 |
| 4. | Oil & Grease | IS 3025 (P-39) 2021 | mg/l | BDL(MDL-04) | 10.0 |
| 5. | Total Suspended Solid | IS 3025 (P-17) 2022 | mg/l | 45.00 | 50.0 |
| 6. | Phosphate | IS 3025 (P-31/Sec-1) 2022 | mg/l | 0.58 | - |
| 7. | Zinc | APHA 3111 B 2023 | mg/l | BDL(MDL-04) | - |

--Test result End --

Prescribed Limit
Operational Status
Analysed by -Anjali Kumar

Environmental (Protection) Rules-1986, Schedule -1, Serial No. 114.
Unit was Operational During sampling.


Reviewed by
(A.N. Kumar)
Technical Head



Page 1 of 3



EPIC LabTech Private Limited

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

Tel: 0651-4668252
98357 88477
93043 73994
epiclabtech@gmail.com

CIN - U74999JH2022PTC019685
PAN - AAHCE3611M
GST - 20AAHCE3611M12X

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

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|-------------------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL0176252037 | Group | Pollution & Environment |
| Issue date/time | 21.05.2025/ 15:18 | Sub Group | Waste Water (Effluent) |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Data)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0176 | Sample Booking Number | EPIC-252037 |
| Sample(s) Code | 252037 | Sample Receipt (D/T) | 16.05.2025/ 10:58 |

Sampling References

| | | | |
|---------------------------------|---------------------------------|--|-------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 14.05.2025/ 16:30 | Sampling End (D/T) | 14.05.2025/ 16:50 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Vishal Kumar & Team |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003 | | |
| Description/condition of sample | | Receipt sample(s) were fit for analysis. | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|-------|------------------|----|------------|----|----------------|---------|
| Weather condition | Clear | Temperature (°C) | 29 | Humidity % | 52 | Wind direction | 0°-180° |
|-------------------|-------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|--------------------|----------------|---------------------------------|
| S. Location A | Work Shop (Outlet) | GPS coordinate | 23° 20' 37.43" / 84° 15' 33.93" |
|---------------|--------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 16.05.2025/ 11:15 | Test completion date | 21.05.2025/ 12:30 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result--

| Sl | Test Parameters | Method used | Unit | Results | Limits |
|----|-----------------------------|---------------------|------|---------|--------|
| 1. | Total Dissolve Solids (TDS) | IS 3025 (P-16) 2023 | mg/l | 161.00 | - |
| 2. | Dissolve Oxygen (DO) | IS 3025 (P-38) 1984 | mg/l | 1.80 | - |

--Test result End --

Prescribed Limit
Environmental (Protection) Rules-1986, Schedule - 1, Serial No. 114,
Operational Status
Unit was Operational During sampling.

Reviewed by
(A.K. Kumar)
Technical Head

Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

Address:
C/o - R.K. Tripathi, Indrapuri,
Road No. - S. Ranchi,
Jharkhand - 834003, India

0633 4666392
98357 86677
93049 71094
epiclabtech@gmail.com

CIN - U74999JH2022PTC019883
PAN - AAHCES311M
GST - 28AAHCES311M12X

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



TC-12887

Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|-----------------------|
| Unique Lab Report No. | TC1288725000000701 | Discipline | Chemical |
| Report Unique ID | RL0209252429 | Group | Atmospheric Pollution |
| Issue date/time | 18.06.2025/ 12:30 | Sub Group | Ambient Air Quality |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Data)

| | | | |
|---------------------------|------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0209 | Sample Booking Number | EPIC-252429 |
| Sample(s) Code | 252429 (A) (B) (C) (D) | Sample Receipt (D/T) | 13.06.2025/ 10:09 |

Sampling References

| | | | |
|---------------------------------|---|-----------------------|-------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 11.06.2025/ 12:34 | Sampling End (D/T) | 12.06.2025/ 09:48 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Vishal Kumar & Team |
| Sampling method used | IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13) | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|-------|------------------|----|------------|----|----------------|----------|
| Weather condition | Clear | Temperature (°C) | 26 | Humidity % | 50 | Wind direction | 240°-60° |
|-------------------|-------|------------------|----|------------|----|----------------|----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|---------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 2 A11 | GPS coordinate | 23° 19' 59.00" / 84° 15' 49.02" |
| S. Location D | Mines Near Quarry - 7C 16 | GPS coordinate | 23° 19' 17.88" / 84° 15' 34.09" |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 13.06.2025/ 10:50 | Test completion date | 17.06.2025/ 11:43 |
|-----------------|-------------------|----------------------|-------------------|

-Test Results-

| Sl. | Test Parameters | Method used | Unit | Results | | | | Limits |
|-----|--|---------------------|-------------------|--------------------|--------------------|--------------------|--------------------|-------------|
| | | | | A | B | C | D | |
| 1. | Particulate Matter (PM ₁₀) | IS:5182 (P-23) 2022 | µg/m ³ | 80.03 | 84.19 | 75.15 | 87.43 | 100 (24 hr) |
| 2. | Fine Particulate Matter (PM _{2.5}) | IS:5182 (P-24) 2019 | µg/m ³ | 35.47 | 38.24 | 30.48 | 34.36 | 60(24 hr) |
| 3. | Sulphur Dioxide (SO ₂) | IS:5182 (P-02) 2023 | µg/m ³ | 07.05 | 09.01 | 06.26 | 08.22 | 80(24 hr) |
| 4. | Nitrogen Dioxide (NO ₂) | IS:5182 (P-06) 2022 | µg/m ³ | 17.97 | 22.20 | 19.03 | 20.08 | 80(24 hr) |
| 5. | Ammonia (NH ₃) | IS:5182 (P-25) 2018 | µg/m ³ | 39.29 | 37.01 | 42.21 | 46.10 | 400(24 hr) |
| 6. | Ozone (O ₃) | IS:5182 (P-09) 2019 | µg/m ³ | 33.26 | 31.12 | 38.27 | 32.19 | 180(1 hr) |
| 7. | Lead (Pb) | IS:5182 (P-22) 2019 | µg/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | 1.0(24 hr) |
| 8. | Nickel (Ni) | IS:5182 (P-26) 2020 | ng/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | |
| 9. | Arsenic (As) | USEPA IO 3.2:1999 | ng/m ³ | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | |

-Test Results End -

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

Operational Status Unit was Operational During sampling.

Analysed by - Archana Gorain


Reviewed by
(E.N. Kumar)
Technical Head


Reviewed by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.

Ranchi, Jharkhand

Page 1 of 1

Contractual Notes | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility | 3. Specific environmental conditions as method required and results relate only to the sample tested in prescribed Date & time | 4. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law | 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to limited amount only. | 6. All disputes are subject to Ranchi jurisdiction and exclusive liability of the laboratory does not exceed the testing and sampling charges | 7. Opinion does not imply endorsement of the tested products by laboratory. Under no circumstances, laboratory accepts any caused by use or misuse of this report. | 8. When the results are from external provider are marked as * mark. | 9. Abbreviations - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation). |



EPIC LabTech Private Limited

Address:
C/o - R.K. Tripathi, Indrapuri,
Road No. - S. Ranchi,
Jharkhand - 834003, India

0651 4866392
98357 86677
98349 73894
epiclabtech@gmail.com

CIN-U74999JH2022PTC019683 Accredited by :-
Jharkhand State Pollution Control Board
Certified by :-
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|-----------------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL0209252429 | Group | Atmospheric Pollution |
| Issue date/time | 18.06.2025/ 12:30 | Sub Group | Ambient Air Quality |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Data)

| | | | |
|---------------------------|------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0209 | Sample Booking Number | EPIC-252429 |
| Sample(s) Code | 252429 (A) (B) (C) (D) | Sample Receipt (D/T) | 13.06.2025/ 10:09 |

Sampling References

| | | | |
|---------------------------------|---|-----------------------|-------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 11.06.2025/ 12:34 | Sampling End (D/T) | 12.06.2025/ 09:48 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Vishal Kumar & Team |
| Sampling method used | IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13) | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|-------|------------------|----|------------|----|----------------|----------|
| Weather condition | Clear | Temperature (°C) | 26 | Humidity % | 50 | Wind direction | 240°-60° |
|-------------------|-------|------------------|----|------------|----|----------------|----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|---------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 2 A11 | GPS coordinate | 23° 19' 59.00" / 84° 15' 49.02" |
| S. Location D | Mines Near Quarry - 7C 16 | GPS coordinate | 23° 19' 17.88" / 84° 15' 34.09" |

Data(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 13.06.2025/ 10:50 | Test completion date | 17.06.2025/ 11:43 |
|-----------------|-------------------|----------------------|-------------------|

-Test Results-

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

-Test Results End-

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

Operational Status: Unit was Operational During sampling.

Analyzed by - Archana Gorain



Reviewed by
(S.N. Kumar)
Technical Head

Reviewed by
(Animesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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

0651-4666392
98357 86677
983049 71934
epiclabtech@gmail.com

CIN - U74999JH2022PTC019683
Accredited by -
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|-----------------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL0209252430 | Group | Atmospheric Pollution |
| Issue date/time | 18.06.2025/ 12:32 | Sub Group | Work Zone Noise |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chart)

| | | | |
|---------------------------|----------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0209 | Sample Booking Number | EPIC-252430 |
| Sample(s) Code | 252430 (A) (B) | Sample Receipt (D/T) | 13.06.2025/ 10:10 |

Sampling References

| | | | |
|---------------------------------|---|--|------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D) | 11.06.2025/ 12:34 | Sampling End (D) | 11.06.2025/ 09:33 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Akash Kumar & Team |
| Sampling method used | IS 9989:1981 (RA 2020) & CPCB MethodS.O.50 (E) dated 11/01/2010 | | |
| Description/condition of sample | | Receipt sample(s) were fit for analysis. | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|-------|------------------|----|------------|----|----------------|----------|
| Weather condition | Clear | Temperature (°C) | 26 | Humidity % | 50 | Wind direction | 240°-60° |
|-------------------|-------|------------------|----|------------|----|----------------|----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|--------------------------|----------------|---------------------------------|
| S. Location A | Near Mines Quarry - 7C16 | GPS coordinate | 23° 19' 59.00" / 84° 15' 49.02" |
| S. Location B | Near Mines Quarry 2A11 | GPS coordinate | 23° 19' 17.88" / 84° 15' 34.09" |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 13.06.2025/ 10:25 | Test completion date | 17.06.2025/ 11:44 |
|-----------------|-------------------|----------------------|-------------------|

--Test Results--

| Sl | Test Parameters | Method used | Unit | Results | | Limits |
|----|-----------------|---------------|--------|---------|------|--------|
| | | | | A | B | |
| 1. | L_{eq} | IS: 9989:1981 | dB (A) | 73.1 | 71.3 | 85 |

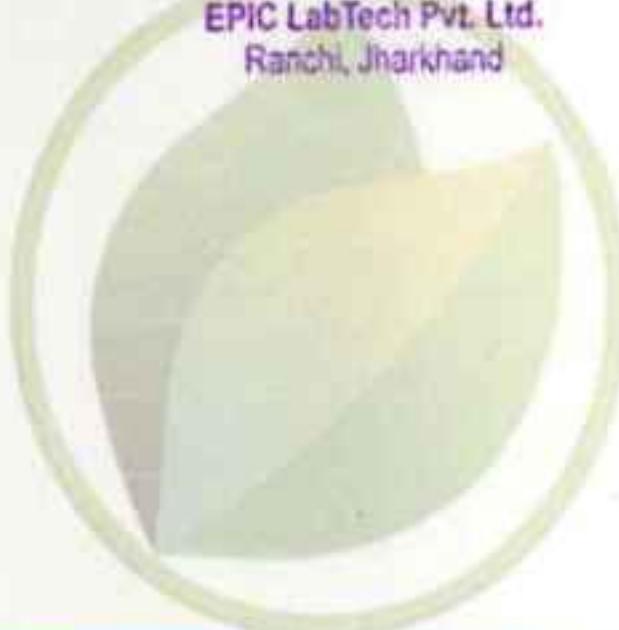
--Test Results End --

Prescribed Limit
Operational Status
Analysed by -AK Saha


 Signature
Date: 18/06/2025
Mr. Ankit Das
Laboratory Head


Reviewed by
(A.K. Saha)
Technical Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|-----------------------|
| Unique Lab Report No. | TC1288725000000884 | Discipline | Chemical |
| Report Unique ID | RL02362529012 | Group | Atmospheric Pollution |
| Issue date/time | 18.07.2025/ 17:25 | 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: AMTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Data)

| | | | |
|---------------------------|-------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0236 | Sample Booking Number | EPIC-2529012 |
| Sample(s) Code | 2529012 (A) (B) (C) (D) | Sample Receipt (D/T) | 14.07.2025/ 11:30 |

Sampling References

| | | | |
|---------------------------------|---|-----------------------|------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 11.07.2025/ 12:50 | Sampling End (D/T) | 12.07.2025/ 08:20 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Akash Kumar & Team |
| Sampling method used | IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13) | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

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

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|---------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 2A11 | GPS coordinate | 23° 19' 59.00" / 84° 15' 49.02" |
| S. Location D | Mines Near Quarry - 7C 16 | GPS coordinate | 23° 19' 17.88" / 84° 15' 34.09" |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 14.07.2025/ 11:50 | Test completion date | 18.07.2025/ 16:00 |
|-----------------|-------------------|----------------------|-------------------|

-Test Results-

| Sl. | Test Parameters | Method used | Unit | Results | | | | Limits |
|-----|--|---------------------|-------------------|--------------------|--------------------|--------------------|--------------------|-------------|
| | | | | A | B | C | D | |
| 1. | Particulate Matter (PM ₁₀) | IS:5182 (P-23) 2022 | µg/m ³ | 76.16 | 80.19 | 71.12 | 83.22 | 100 (24 hr) |
| 2. | Fine Particulate Matter (PM _{2.5}) | IS:5182 (P-24) 2019 | µg/m ³ | 32.11 | 35.31 | 27.64 | 30.85 | 60(24 hr) |
| 3. | Sulphur Dioxide (SO ₂) | IS:5182 (P-02) 2023 | µg/m ³ | 06.49 | 08.54 | 05.31 | 07.78 | 80(24 hr) |
| 4. | Nitrogen Dioxide (NO ₂) | IS:5182 (P-06) 2022 | µg/m ³ | 15.77 | 20.33 | 18.15 | 18.20 | 80(24 hr) |
| 5. | Ammonia (NH ₃) | IS:5182 (P-25) 2018 | µg/m ³ | 36.18 | 34.50 | 39.55 | 44.04 | 400(24 hr) |
| 6. | Ozone (O ₃) | IS:5182 (P-09) 2019 | µg/m ³ | 30.89 | 28.50 | 35.35 | 29.62 | 180(1 hr) |
| 7. | Lead (Pb) | IS:5182 (P-22) 2019 | µg/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | 1.0(24 hr) |
| 8. | Nickel (Ni) | IS:5182 (P-26) 2020 | ng/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | |
| 9. | Arsenic (As) | USEPA 10 3.2:1999 | ng/m ³ | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | |

-Test Results End -

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

Analysed by - Vishal Mangaraj

Reviewed by
(S.N. Kumar)
Technical Head

Reviewed by
(S.N. Kumar)
Laboratory HeadAuthorized Signatory
EPIC LabTech Pvt. Ltd.



EPIC LabTech Private Limited

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

0651 4666392
98357 86677
98349 73994
epiclabtech@gmail.com

CIN - U74999JH2022PTC019683 Accredited by -
Jharkhand State Pollution Control Board
PAN - AAHCE3615M
GST - 26AAHCE3615M12A
Certified by -
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|-----------------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02362529012 | Group | Atmospheric Pollution |
| Issue date/time | 18.07.2025/ 17:25 | 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: AMTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Data)

| | | | |
|---------------------------|-------------------------|-----------------------|------------------|
| Customer Registration No. | EPIC/OTH/0236 | Sample Booking Number | EPIC-2529012 |
| Sample(s) Code | 2529012 (A) (B) (C) (D) | Sample Receipt (D/T) | 14.07.2025/11:30 |

Sampling References

| | | | |
|---------------------------------|---|-----------------------|------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 11.07.2025/ 12:50 | Sampling End (D/T) | 12.07.2025/ 08:20 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Akash Kumar & Team |
| Sampling method used | IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13) | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

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

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|---------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 2A11 | GPS coordinate | 23° 19' 59.00" / 84° 15' 49.02" |
| S. Location D | Mines Near Quarry - 7C 16 | GPS coordinate | 23° 19' 17.88" / 84° 15' 34.09" |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 14.07.2025/ 11:50 | Test completion date | 18.07.2025/ 16:00 |
|-----------------|-------------------|----------------------|-------------------|

-Test Results-

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

-Test Results End -

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj


Reviewed by
(E.N. Kumar)
Technical Head


Issued by
(Omash Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|----------------|
| Unique Lab Report No. | TC1268725000000885 | Discipline | Chemical |
| Report Unique ID | RL02362529013 | Group | Water |
| Issue date/time | 18.07.2025/ 17:27 | 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: ANTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Data)

| | | | |
|---------------------------|---------------|-----------------------|------------------|
| Customer Registration No. | EPIC/OTH/0236 | Sample Booking Number | EPIC-2529013 |
| Sample(s) Code | 2529013 | Sample Receipt (D/T) | 14.07.2025/11:31 |

Sampling References

| | | | |
|---------------------------------|---------------------------------|--|-------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 11.07.2025/ 13:40 | Sampling End (D/T) | 11.07.2025/ 13:52 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Vishal Kumar & Team |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003 | | |
| Description/condition of sample | | Receipt sample(s) were fit for analysis. | |

Environmental Condition during sampling

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

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|-------------|----------------|---------------------------------|
| S. Location A | Near office | GPS coordinate | 23° 20' 37.08" / 84° 15' 32.28" |
|---------------|-------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 14.07.2025/ 11:51 | Test completion date | 18.07.2025/ 14:05 |
|-----------------|-------------------|----------------------|-------------------|

-Test Result-

| Sl. | Test Parameters | Method used | Unit | Results | Acceptable Limit | Limits Permissible limit |
|-----|--|---------------------------|-------|----------------|------------------|-----------------------------|
| 1. | pH value at 25.5°C | IS 3025 (P-11) 2022 | - | 6.90 | 6.5-8.5 | No relaxation |
| 2. | Turbidity | IS 3025 (P-10) 1984 | NTU | 0.40 | 1 | 5 |
| 3. | Colour | IS 3025 (P-04) 2021 | Hazen | <5 | 5 | 15 |
| 4. | Odour | IS 3025 (P-05) 2018 | - | Agreeable | Agreeable | Agreeable |
| 5. | Taste | IS 3025 (P-07) 2017 | - | Agreeable | Agreeable | Agreeable |
| 6. | Total Dissolved Solids (TDS) | IS 3025 (P-16) 2023 | mg/l | 85.00 | 500 | 2000 |
| 7. | Chloride (as Cl) | IS 3025 (P-32) 2019 | mg/l | 17.36 | 250 | 1000 |
| 8. | Total Alkalinity (as CaCO ₃) | IS 3025 (P-23) 2019 | mg/l | 48.00 | 200 | 600 |
| 9. | Total Hardness (as CaCO ₃) | IS 3025 (P-21) 2009 | mg/l | 68.00 | 200 | 600 |
| 10. | Calcium (as Ca) | IS 3025 (P-40) 1991 | mg/l | 11.89 | 75 | 200 |
| 11. | Free Residual Chlorine | IS 3025 (P-26) 1986 | mg/l | BDL(MDL-0.4) | 0.2 | 1 |
| 12. | Sulphate (as SO ₄) | IS 3025 (P-24/Sec-1) 2022 | mg/l | 1.24 | 200 | 400 |
| 13. | Nitrate (as NO ₃) | APHA 4500-B 2023 | mg/l | 1.00 | 45 | No relaxation |
| 14. | Phenolic Compound | IS 3025 (P-43/Sec-1) 2022 | mg/l | BDL(MDL-0.001) | 0.001 | 0.002 |
| 15. | Magnesium (as Mg) | APHA 3500-Mg E 2023 | mg/l | 9.00 | 30 | 100 |



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

0651 4866392
98357 86677
93049 73994
epiclastech@gmail.com

CIN: U74599JH2022PTC079883
PAN: AAHCE3871M
GST: 28AAHCE3871M12X

Accredited by -
NABL, certificate number 10-10867
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018



TC-12887

Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|----------------|
| Unique Lab Report No. | TC1288725000000885 | Discipline | Chemical |
| Report Unique ID | RL02362529013 | Group | Water |
| Issue date/time | 18.07.2025/ 17:27 | 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: ANTIPANI BAUXITE MINE

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

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

--Test result End--

Prescribed Limit

IS 10500:2021

Operational Status

Unit was Operational During sampling.

Analysed by - Veshai Mangraj




Reviewed by
(EK Kumar)
Technical Head


Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|----------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02362529013 | Group | Water |
| Issue date/time | 18.07.2025/ 17:27 | 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: AMTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chart)

| | | | |
|---------------------------|---------------|-----------------------|------------------|
| Customer Registration No. | EPIC/OTH/0236 | Sample Booking Number | EPIC-2529013 |
| Sample(s) Code | 2529013 | Sample Receipt (D/T) | 14.07.2025/11:31 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|-------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 11.07.2025/ 13:40 | Sampling End (D/T) | 11.07.2025/ 13:52 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Vishal Kumar & Team |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003 | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

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

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|-------------|----------------|---------------------------------|
| S. Location A | Near office | GPS coordinate | 23° 20' 37.08" / 84° 15' 32.28" |
|---------------|-------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 14.07.2025/ 11:51 | Test completion date | 11.07.2025/ 10:30 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result--

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



Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|----------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02362529013 | Group | Water |
| Issue date/time | 18.07.2025/ 17:27 | 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: ANTIPANI BAUXITE MINE

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

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

--Test result End--

Prescribed Limit

IS 10500:2021

Operational Status

Unit was Operational During sampling.

Analysed by - Vishal Mangat


 Reviewed by
(B.N. Kumar)
Technical Head


 Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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

T: 0651 4866292
M: 98357 66677
S: 93049 73994
E: epiclabtech@gmail.com

CIN: U74999JH2022PTC019645
PAN: AAHCE3611M
GST: 20AAHCE3611M12X

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

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|----------------|
| Unique Lab Report No. | N/A | Discipline | Biological |
| Report Unique ID | RL02302529014 | Group | Water |
| Issue date/time | 18.07.2025/ 17:29 | 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: ANTIPANI BAUXITE MINE

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

References of Quality Management System (Date of Traceability Data)

| | | | |
|---------------------------|---------------|-----------------------|------------------|
| Customer Registration No. | EPIC/OTH/0236 | Sample Booking Number | EPIC-2529014 |
| Sample(s) Code | 2529014 | Sample Receipt (D/T) | 14.07.2025/11:31 |

Sampling References

| | | | |
|---------------------------------|---------------------------------|--|------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 11.07.2025/ 13:40 | Sampling End (D/T) | 11.07.2025/ 13:52 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Akash Kumar & Team |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003 | | |
| Description/condition of sample | | Receipt sample(s) were fit for analysis. | |

Environmental Condition during sampling

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

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|-------------|----------------|---------------------------------|
| S. Location A | Near office | GPS coordinate | 23° 20' 37.08" / 84° 15' 32.28" |
|---------------|-------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 14.07.2025/ 12:30 | Test completion date | 18.07.2025/ 16:30 |
|-----------------|-------------------|----------------------|-------------------|

-Test Result-

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

--Test result End --

Prescribed Limit

Operational Status

Analysed by - Sujata Kumari

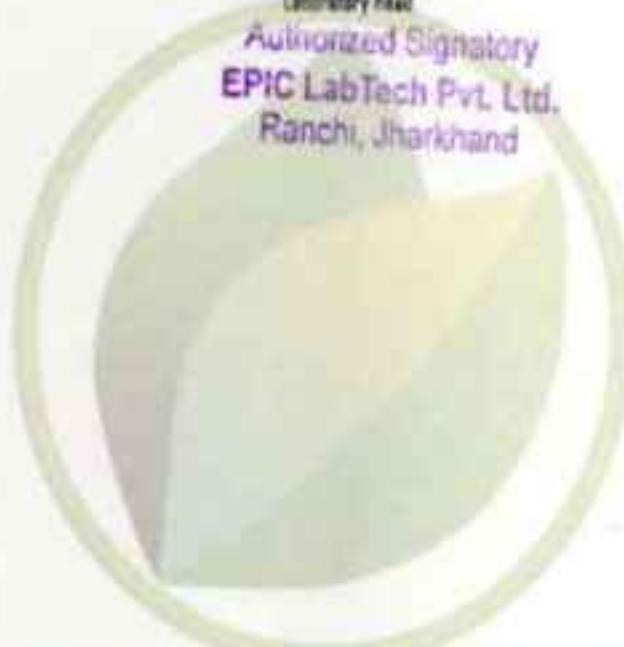
IS 10500:2021

Unit was Operational During sampling.


Reviewed by
(S.K. Kumar)
Technical Head


Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|-----------------------|
| Unique Lab Report No. | TC1268725000001027 | Discipline | Chemical |
| Report Unique ID | RL02682534047 | Group | Atmospheric Pollution |
| Issue date/time | 26.08.2025/ 12:00 | Sub Group | Ambient Air Quality |

Report Issue to

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

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

References of Quality Management System (Days of Traceability Data)

| | | | |
|---------------------------|-------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0268 | Sample Booking Number | EPIC-2534047 |
| Sample(s) Code | 2534047 (A) (B) (C) (D) | Sample Receipt (D/T) | 21.08.2025/ 10:53 |

Sampling References

| | | | |
|---------------------------------|---|-----------------------|-------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 19.08.2025/ 12:51 | Sampling End (D/T) | 20.08.2025/ 08:40 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Pawan Deep & Bhagat |
| Sampling method used | IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13) | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|--------|------------------|----|------------|----|----------------|----------|
| Weather condition | Cloudy | Temperature (°C) | 25 | Humidity % | 70 | Wind direction | 90°-270° |
|-------------------|--------|------------------|----|------------|----|----------------|----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 1F | GPS coordinate | 23° 20' 48.16" / 84° 15' 24.28" |
| S. Location D | Mines Near Quarry - 7C | GPS coordinate | 23° 20' 18.12" / 84° 15' 34.07" |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 21.08.2025/ 11:13 | Test completion date | 26.08.2025/ 11:00 |
|-----------------|-------------------|----------------------|-------------------|

-Test Results-

| Sl. | Test Parameters | Method used | Unit | Results | | | | Limits |
|-----|--|---------------------|-------------------|--------------------|--------------------|--------------------|--------------------|-------------|
| | | | | A | B | C | D | |
| 1. | Particulate Matter (PM ₁₀) | IS:5182 (P-23) 2022 | µg/m ³ | 76.03 | 79.65 | 70.98 | 82.78 | 100 (24 hr) |
| 2. | Fine Particulate Matter (PM _{2.5}) | IS:5182 (P-24) 2019 | µg/m ³ | 31.59 | 35.19 | 27.47 | 30.19 | 60(24 hr) |
| 3. | Sulphur Dioxide (SO ₂) | IS:5182 (P-02) 2023 | µg/m ³ | 06.08 | 08.11 | 06.29 | 07.34 | 60(24 hr) |
| 4. | Nitrogen Dioxide (NO ₂) | IS:5182 (P-06) 2022 | µg/m ³ | 14.65 | 19.14 | 16.91 | 16.99 | 80(24 hr) |
| 5. | Ammonia (NH ₃) | IS:5182 (P-25) 2018 | µg/m ³ | 34.22 | 33.66 | 38.43 | 40.95 | 400(24 hr) |
| 6. | Ozone (O ₃) | IS:5182 (P-09) 2019 | µg/m ³ | 24.52 | 22.93 | 26.75 | 24.20 | 180(1 hr) |
| 7. | Lead (Pb) | IS:5182 (P-22) 2019 | µg/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | 1.0(24 hr) |
| 8. | Nickel (Ni) | IS:5182 (P-26) 2020 | ng/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | - |
| 9. | Arsenic (As) | USEPA ID 3.2:1999 | ng/m ³ | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | - |

-Test Results End -

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

Analysed by - Vishal Mangaraj


Reviewed by
(S.N. Kumar)
Technical Head


Issue by
(Omash Das)
Laboratory Head

Authorized Signatory



EPIC LabTech Private Limited

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

0651-4666332
98357 86677
93049 73994
epiclabtech@gmail.com

CIN - U74999JH2022PTC019685 Accredited by -
Jharkhand State Pollution Control Board
PAN - AAHCE3611M
GST - 20AAHCE3611M12X
Certified by -
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|-----------------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02682534047 | Group | Atmospheric Pollution |
| Issue date/time | 26.08.2025/ 12:00 | Sub Group | Ambient Air Quality |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Data)

| | | | |
|---------------------------|-------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0268 | Sample Booking Number | EPIC-2534047 |
| Sample(s) Code | 2534047 (A) (B) (C) (D) | Sample Receipt (D/T) | 21.08.2025/ 10:53 |

Sampling References

| | | | |
|---------------------------------|---|-----------------------|------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 19.08.2025/ 12:51 | Sampling End (D/T) | 20.08.2025/ 08:40 |
| 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 (NAAQM/36/2012-13) | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|--------|------------------|----|------------|----|----------------|----------|
| Weather condition | Cloudy | Temperature (°C) | 25 | Humidity % | 70 | Wind direction | 90°-270° |
|-------------------|--------|------------------|----|------------|----|----------------|----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 1F | GPS coordinate | 23° 20' 48.16" / 84° 15' 24.28" |
| S. Location D | Mines Near Quarry - 7C | GPS coordinate | 23° 20' 18.12" / 84° 15' 34.07" |

Data(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 21.08.2025/ 11:13 | Test completion date | 26.08.2025/ 11:00 |
|-----------------|-------------------|----------------------|-------------------|

-Test Results-

| Sl. | Test Parameters | Method used | Unit | Results | | | | Limits |
|-----|---|-----------------------|-------------------|------------------|------------------|------------------|------------------|--------|
| | | | | A | B | C | D | |
| 1. | Benzene (C ₆ H ₆) | IS:5182(P-11) 2006 | µg/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | - |
| 2. | Benzo (a) Pyrene (Bap)- Particulate phase only | IS:5182(P-12) 2004 | ng/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | - |
| 3. | Carbon Monoxide (CO) | EPIC/LAB/SOP/AP/01/00 | mg/m ³ | BDL (MDL-1.0) | BDL (MDL-1.0) | BDL (MDL-1.0) | BDL (MDL-1.0) | - |

-Test Results End -

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj


Reviewed by
(B.N. Kumar)
Technical Head


Date: 26/08/2025
Reviewed by
(B.N. Kumar)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|--------------|
| Unique Lab Report No. | TC1288725000001028 | Discipline | Chemical |
| Report Unique ID | RL02682534048 | Group | Water |
| Issue date/time | 26.08.2025/ 12:03 | 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: AMTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0268 | Sample Booking Number | EPIC-2534048 |
| Sample(s) Code | 2534048 | Sample Receipt (D/T) | 21.08.2025/ 10:57 |

Sampling References

| | | | |
|---------------------------------|---------------------------------|--|------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 19.08.2025/ 16:05 | Sampling End (D/T) | 19.08.2025/ 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 | | Receipt sample(s) were fit for analysis. | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|--------|------------------|----|------------|----|----------------|----------|
| Weather condition | Cloudy | Temperature (°C) | 25 | Humidity % | 70 | Wind direction | 90°-270° |
|-------------------|--------|------------------|----|------------|----|----------------|----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|-------------------|----------------|---------------------------------|
| S. Location A | Near Weigh Bridge | GPS coordinate | 23° 20' 38.01" / 84° 15' 30.41" |
|---------------|-------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 21.08.2025/ 11:15 | Test completion date | 26.08.2025/ 10:38 |
|-----------------|-------------------|----------------------|-------------------|

-Test Result-

| Sl. | Test Parameters | Method used | Unit | Results | Acceptable Limit | Limits Permissible limit |
|-----|--|---------------------------|-------|----------------|------------------|-----------------------------|
| 1. | pH value at 25.7°C | IS 3025 (P-11) 2022 | - | 7.57 | 6.5-8.5 | No relaxation |
| 2. | Turbidity | IS 3025 (P-10) 1984 | NTU | 0.46 | 1 | 5 |
| 3. | Colour | IS 3025 (P-04) 2021 | Hazen | <5 | 5 | 15 |
| 4. | Odour | IS 3025 (P-05) 2018 | - | Agreeable | Agreeable | Agreeable |
| 5. | Taste | IS 3025 (P-07) 2017 | - | Agreeable | Agreeable | Agreeable |
| 6. | Total Dissolved Solids (TDS) | IS 3025 (P-18) 2023 | mg/l | 124.00 | 500 | 2000 |
| 7. | Chloride (as Cl) | IS 3025 (P-32) 2019 | mg/l | 20.48 | 250 | 1000 |
| 8. | Total Alkalinity (as CaCO ₃) | IS 3025 (P-23) 2019 | mg/l | 65.00 | 200 | 600 |
| 9. | Total Hardness (as CaCO ₃) | IS 3025 (P-21) 2009 | mg/l | 96.384 | 200 | 600 |
| 10. | Calcium (as Ca) | IS 3025 (P-40) 1991 | mg/l | 17.64 | 75 | 200 |
| 11. | Free Residual Chlorine | IS 3025 (P-26) 1986 | mg/l | BDL(MDL-0.4) | 0.2 | 1 |
| 12. | Sulphate (as SO ₄) | IS 3025 (P-24/Sec-1) 2022 | mg/l | 2.45 | 200 | 400 |
| 13. | Nitrate (as NO ₃) | APHA 2500 B 2023 | mg/l | 1.85 | 45 | No relaxation |
| 14. | Phenolic Compound | IS 3025 (P-43/Sec-1) 2022 | mg/l | BDL(MDL-0.001) | 0.001 | 0.002 |
| 15. | Magnesium (as Mg) | APHA 2500 Mg E 2023 | mg/l | 12.1 | 30 | 100 |



Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|--------------|
| Unique Lab Report No. | TC1288725000001028 | Discipline | Chemical |
| Report Unique ID | RL02682534048 | Group | Water |
| Issue date/time | 26.08.2025/ 12:03 | 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: AMTIPANI BAUXITE MINE

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

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

--Test result End--

Prescribed Limit

IS 10500:2021

Operational Status

Unit was Operational During sampling.

Analysed by - Pappu Kumar



Reviewed by
(P.K. Kumar)
Technical Head

Ankit Das
Reviewed by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|--------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02682534048 | Group | Water |
| Issue date/time | 26.08.2025/ 12:03 | 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: AMTIPANI BAUXITE MINE | Contact Person Mr. Ankit Das |
| | Contact Number +91 9971034775 |
| | Email Id ankit.das@adityabirla.com |
| | Order Date 31.03.2025/ 10:10 |
| | Order Number 13612313868 |

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0268 | Sample Booking Number | EPIC-2534048 |
| Sample(s) Code | 2534048 | Sample Receipt (D/T) | 21.08.2025/ 10:57 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 19.08.2025/ 16:05 | Sampling End (D/T) | 19.08.2025/ 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 | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|--------|------------------|----|------------|----|----------------|----------|
| Weather condition | Cloudy | Temperature (°C) | 25 | Humidity % | 70 | Wind direction | 90°-270° |
|-------------------|--------|------------------|----|------------|----|----------------|----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|-------------------|----------------|---------------------------------|
| S. Location A | Near Weigh Bridge | GPS coordinate | 23° 20' 38.01" / 84° 15' 30.41" |
|---------------|-------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 21.08.2025/ 11:15 | Test completion date | 26.08.2025/ 10:38 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result--

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



Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|--------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02682534048 | Group | Water |
| Issue date/time | 26.08.2025/ 12:03 | 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: ANTIPANI BAUXITE MINE

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

| | | | | | |
|--|-----------------------|------|---------------|-------|---------------|
| 15. Gamma-HCH(Lindane) | EPIC/LAB/SOP/WA/01/00 | ug/l | BDL(MDL-0.5) | 2.0 | No relaxation |
| 16. Malathion | EPIC/LAB/SOP/WA/01/00 | ug/l | BDL(MDL-0.5) | 190.0 | No relaxation |
| 17. Methyl parathion | EPIC/LAB/SOP/WA/01/00 | ug/l | BDL(MDL-0.2) | 0.3 | No relaxation |
| 18. Monocrotophos | EPIC/LAB/SOP/WA/01/00 | ug/l | BDL(MDL-0.5) | 1.0 | No relaxation |
| 19. Phorate | EPIC/LAB/SOP/WA/01/00 | ug/l | BDL(MDL-0.5) | 2.0 | No relaxation |
| 20. DDT (o, p and p, p-isomer of DDT, DDE and DDD) | EPIC/LAB/SOP/WA/01/00 | ug/l | BDL(MDL-0.5) | 1.0 | No relaxation |
| 21. Endosulfan (alpha, beta, and sulphate) | EPIC/LAB/SOP/WA/01/00 | ug/l | BDL(MDL-0.05) | 0.4 | No relaxation |

-Test result End -

Prescribed Limit

IS 10500:2021

Operational Status

Unit was Operational During sampling.

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



EPIC LabTech Private Limited

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

Tel: 0651-4666332
28357 06677
93049 73994
epiclabtech@gmail.com

CIN: U74999JH2022PTC019683. Accredited by:
Jharkhand State Pollution Control Board
Certified by:
ISO 9001:2015 and ISO 45001:2018

Environmental Test Certificate

| | | | |
|-----------------------|-------------------|------------|--------------|
| Unique Lab Report No. | N/A | Discipline | Biological |
| Report Unique ID | RL02682534049 | Group | Water |
| Issue date/time | 26.08.2025/ 12:06 | Sub Group | Ground Water |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0268 | Sample Booking Number | EPIC-2534049 |
| Sample(s) Code | 2534049 | Sample Receipt (D/T) | 21.08.2025/ 10:57 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 19.08.2025/ 16:05 | Sampling End (D/T) | 19.08.2025/ 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 | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|--------|------------------|----|------------|----|----------------|----------|
| Weather condition | Cloudy | Temperature (°C) | 25 | Humidity % | 70 | Wind direction | 90°-270° |
|-------------------|--------|------------------|----|------------|----|----------------|----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|-------------------|----------------|---------------------------------|
| S. Location A | Near Weigh Bridge | GPS coordinate | 23° 20' 38.01" / 84° 15' 30.41" |
|---------------|-------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 21.08.2025/ 11:15 | Test completion date | 26.08.2025/ 10:38 |
|-----------------|-------------------|----------------------|-------------------|

-Test Result-

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

-Test result End -

Prescribed Limit

IS 10500:2021

Operational Status

Unit was Operational During sampling.


Reviewed by
(Sujata Kumar)
Technical Head


Issued by
(Arkit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





Address:
C/o - R.K. Tripathi, Indrapuri,
Road No. - 5, Ranchi,
Jharkhand - 834003, India.

0631 4686392
98357 86677
93049 73994
epiclabtech@gmail.com

CIN: U74399JH2022PTC079583
PAN: KAHCE3881M
GST: 25AAHCE3881M12K
Accredited by -
NABL, MSL certificate Number TC-12887
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018



TC-12887

Analytical Test Certificate

| Unique Lab Report No. | TC1288725000001029 | Discipline | Chemical | | |
|--|--|----------------------------------|---------------------------------------|----------------|--------|
| Report Unique ID | RL02682534050 | Group | Water | | |
| Issue date/time | 26.08.2025/ 12:09 | 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: AMTIPANI BAUXITE MINE | Contact Person Mr. Ankit Das | Contact Number +91 9971034775 | Email Id ankit.das@adityabirla.com | | |
| References of Quality Management System (Days of Traceability Date) | | | | | |
| Customer Registration No. | EPIC/OTH/0268 | Sample Booking Number | EPIC-2534050 | | |
| Sample(s) Code | 2534050 | Sample Receipt (D/T) | 21.08.2025/ 11:01 | | |
| Sampling References | | | | | |
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 | | |
| Sampling Start (D/T) | 19.08.2025/ 14:45 | Sampling End (D/T) | 19.08.2025/ 14:55 | | |
| 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) | 25 | | |
| | | Humidity % | 70 | | |
| | | Wind direction | 90°-270° | | |
| Sampling Location(s) with GPS coordinate(s) | | | | | |
| S. Location A | Khari Part (Spring Water) | GPS coordinate | 23° 21' 03.54" / 84° 15' 44.62" | | |
| Date(s) of performance of the laboratory activities | | | | | |
| Test start date | 21.08.2025/ 11:21 | Test completion date | 26.08.2025/ 11:25 | | |
| --Test Result-- | | | | | |
| Sl. | Test Parameters | Method used | Unit | Results | Limits |
| 1. | pH value at 25.7°C | IS 3025 (P-11) 2022 | - | 6.37 | - |
| 2. | Turbidity | IS 3025 (P-10) 1984 | NTU | 0.12 | - |
| 3. | Colour | IS 3025 (P-04) 2021 | Hazen | <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 | 150.00 | - |
| 7. | Chloride (as Cl) | IS 3025 (P-32) 2019 | mg/l | 12.31 | - |
| 8. | Total Alkalinity (as CaCO ₃) | IS 3025 (P-23) 2019 | mg/l | 30.00 | - |
| 9. | Total Hardness (as CaCO ₃) | IS 3025 (P-21) 2009 | mg/l | 40.16 | - |
| 10. | Calcium (as Ca) | IS 3025 (P-40) 1991 | mg/l | 14.43 | - |
| 11. | Free Residual Chlorine | IS 3025 (P-20) 1986 | mg/l | BDL(MDL-0.4) | - |
| 12. | Sulphate (as SO ₄) | IS 3025 (P-24/Sec-1) 2022 | mg/l | 1.70 | - |
| 13. | Nitrate (as NO ₃) | APHA 4500 N 2023 | mg/l | 1.88 | - |
| 14. | Phenolic Compound | IS 3025 (P-43/Sec-1) 2022 | mg/l | BDL(MDL-0.001) | - |



Contractual Notes | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility at specific environmental condition as method required and results relate only to the sample tested as prescribed Date & time | 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law | 4. Any complaint about this report should be communicated in writing within 30 days of its issue | 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to Unfixed amount only | 6. All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges | 7. Opinion does not imply endorsement of the tested product by laboratory. Under no circumstance, laboratory accepts any claim by use or misuse of this report | 8. When the results are from external provider are marked as * mark | 9. Abbreviations - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation).



Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|---------------|
| Unique Lab Report No. | TC1288725000001029 | Discipline | Chemical |
| Report Unique ID | RL02682534050 | Group | Water |
| Issue date/time | 26.08.2025/ 12:09 | 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: AMTIPANI BAUXITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number

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

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

| | | | | |
|----------------------------|------------------|------|----------------|---|
| 15. Copper (as Cu) | APHA 3111 B 2023 | mg/l | BDL(MDL-0.2) | - |
| 16. Iron (as Fe) | APHA 3111 B 2023 | mg/l | BDL(MDL-0.1) | - |
| 17. Lead (as Pb) | APHA 3111 B 2023 | mg/l | BDL(MDL-0.01) | - |
| 18. Cadmium (as Cd) | APHA 3111 B 2023 | mg/l | BDL(MDL-0.003) | - |
| 19. Total Chromium (as Cr) | APHA 3111 B 2023 | mg/l | BDL(MDL-0.05) | - |
| 20. Nickel (as Ni) | APHA 3111 B 2023 | mg/l | BDL(MDL-0.02) | - |
| 21. Total Arsenic (as As) | APHA 3114 B 2023 | mg/l | BDL(MDL-0.005) | - |
| 22. Selenium (as Se) | APHA 3114 B 2023 | mg/l | BDL(MDL-0.005) | - |
| 23. Manganese (as Mn) | APHA 3111 B 2023 | mg/l | BDL(MDL-0.09) | - |
| 24. Zinc (as Zn) | APHA 3111 B 2023 | mg/l | BDL(MDL-0.04) | - |

-Test result End -

Prescribed Limit

Operational Status

Unit was Operational During sampling.

Analysed by - Pappu Kumar

Reviewed by
(P.K. Kumar)
Technical Head
Ankit Das
26/08/2025Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02682534050 | Group | Water |
| Issue date/time | 26.08.2025/ 12:09 | 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: AMTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0268 | Sample Booking Number | EPIC-2534050 |
| Sample(s) Code | 2534050 | Sample Receipt (D/T) | 21.08.2025/ 11:01 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 19.08.2025/ 14:45 | Sampling End (D/T) | 19.08.2025/ 14:55 |
| 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) | 25 | Humidity % | 70 | Wind direction | 90°-270° |
|-------------------|--------|------------------|----|------------|----|----------------|----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|---------------------------|----------------|---------------------------------|
| S. Location A | Khari Part (Spring Water) | GPS coordinate | 23° 21' 03.54" / 84° 15' 44.62" |
|---------------|---------------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 21.08.2025/ 11:21 | Test completion date | 26.08.2025/ 11:25 |
|-----------------|-------------------|----------------------|-------------------|

-Test Result-

| Sl | Test Parameters | Method used | Unit | Results | Limits |
|--|---|-----------------------|------|----------------|---------------------------------|
| 1. | Fluoride (as F) | APHA 4500 F-C 2023 | mg/l | BDL(MDL-0.1) | - |
| Group-Residues and Contaminants in Water | | | | | Sub Group-Trace Metals Elements |
| 2. | Aluminum | IS 3025 (P-55):2019 | mg/l | BDL(MDL-0.1) | - |
| 3. | Boron | IS 3025 (P-57):2021 | mg/l | BDL(MDL-0.1) | - |
| 4. | Polychlorinated biphenyls | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.2) | - |
| 5. | Polynuclear Aromatic Hydrocarbons (PAH) | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.05) | - |
| Group-Residues and Contaminants in Water | | | | | Sub Group-Pesticides |
| 6. | Alachlor | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.5) | - |
| 7. | Atrazine | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.5) | - |
| 8. | Dieidrin | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.02) | - |
| 9. | Alpha HCH | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.005) | - |
| 10. | Beta HCH | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.02) | - |
| 11. | Butachlor | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.5) | - |
| 12. | Chlopyriphos | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.5) | - |
| 13. | Delta HCH | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.02) | - |
| 14. | Ethion | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.5) | - |



EPIC LabTech Private Limited

Address:

C/o - R.K. Tripathi, Indrapuri,
Road No. - 5, Ranchi,
Jharkhand - 834003, India

0651 4666392

98357 86677

93049 73954

epiclabtech@gmail.com

CIN-U74999JH2012PTC019481

PAN-AKHCE5811M

GST-25AAHCE5811M12X

Accredited by -

Jharkhand State Pollution Control Board

Certified by -

ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02682534050 | Group | Water |
| Issue date/time | 26.08.2025/ 12:09 | 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: AMTIPANI BAUXITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number

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

| | | | | |
|--|-----------------------|------|---------------|---|
| 15. Gamma-HCH(Lindane) | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.5) | - |
| 16. Malathion | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.5) | - |
| 17. Methyl parathion | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.2) | - |
| 18. Monocrotophos | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.5) | - |
| 19. Phorate | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.5) | - |
| 20. DDT (o, p and p, p-isomer of DDT, DDE and DDD) | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.5) | - |
| 21. Endosulfan (alpha, beta, and sulphate) | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.05) | - |

--Test result End--

Prescribed Limit

Operational Status

Unit was Operational During sampling

Reviewed by
(B.K. Kumar)
Technical Head

Reviewed by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





Address:
C/o - R.K. Tripathi, Indrapuri,
Road No. - 5, Ranchi,
Jharkhand - 834003, India

Tel: 0651-4866292
98357 86477
95048 73994
epiclabtech@gmail.com

CIN: U74999JH2022PTC079685 Accredited by:
Jharkhand State Pollution Control Board
Certified by:
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

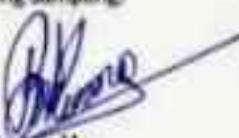
| | | | |
|--|--|----------------------------------|---------------------------------------|
| Unique Lab Report No. | N/A | Discipline | Biological |
| Report Unique ID | RL02682534051 | Group | Water |
| Issue date/time | 26.08.2025/ 12:12 | Sub Group | Surface Water |
| Report Issue to: | | | |
| M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE: AMTIPANI BAUXITE MINE | Contact Person Mr. Ankit Das | Contact Number +91 9971034775 | Email Id ankit.das@adityabirla.com |
| Order Date 31.03.2025/ 10:10 | Order Number 13612313868 | | |
| References of Quality Management System (Steps of Traceability Data) | | | |
| Customer Registration No. | EPIC/OTH/0268 | Sample Booking Number | EPIC-2534051 |
| Sample(s) Code | 2534051 | Sample Receipt (D/T) | 21.08.2025/ 11:02 |
| Sampling References | | | |
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 19.08.2025/ 14:45 | Sampling End (D/T) | 19.08.2025/ 14:55 |
| 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) | 25 |
| | | Humidity % | 70 |
| | | Wind direction | 90°-270° |
| Sampling Location(s) with GPS coordinate(s) | | | |
| S. Location A | Khari Part (Spring Water) | GPS coordinate | 23° 21' 03.54" / 84° 15' 44.62" |
| Date(s) of performance of the laboratory activities | | | |
| Test start date | 21.08.2025/ 11:21 | Test completion date | 26.08.2025/ 11:25 |
| --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

Analyzed by - Sujata Kumar

--
Unit was Operational During sampling.


Reviewed by
(S.K. Kumar)
Technical Head


Issued by
(Umesh Giri)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|-------------------------|
| Unique Lab Report No. | TC1288725000001030 | Discipline | Chemical |
| Report Unique ID | RL02682534052 | Group | Pollution & Environment |
| Issue date/time | 26.08.2025/ 12:15 | Sub Group | Waste Water (Effluent) |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Data)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0268 | Sample Booking Number | EPIC-2534052 |
| Sample(s) Code | 2534052 | Sample Receipt (D/T) | 21.08.2025/ 11:03 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 19.08.2025/ 17:15 | Sampling End (D/T) | 19.08.2025/ 17:20 |
| 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) | 25 | Humidity % | 70 | Wind direction | 90°-270° |
|-------------------|--------|------------------|----|------------|----|----------------|----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|--------------------|----------------|---------------------------------|
| S. Location A | Work Shop (Outlet) | GPS coordinate | 23° 20' 37.43" / 84° 15' 33.93" |
|---------------|--------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 21.08.2025/ 11:23 | Test completion date | 26.08.2025/ 10:38 |
|-----------------|-------------------|----------------------|-------------------|

-Test Result-

| Sl | Test Parameters | Method used | Unit | Results | Limits |
|----|-----------------------|---------------------------|------|---------------|---------|
| 1. | pH value at 25.7°C | IS 3025 (P-11) 2022 | - | 6.89 | 6.5-8.5 |
| 2. | BOD (3 days at 27°C) | IS 3025 (P-44) 2000 | mg/l | 16.0 | - |
| 3. | COD | IS 3025 (P-58) 2006 | mg/l | 68.0 | 150.0 |
| 4. | Oil & Grease | IS 3025 (P-39) 2021 | mg/l | BDL(MDL-04) | 10.0 |
| 5. | Total Suspended Solid | IS 3025 (P-17) 2022 | mg/l | 47.0 | - |
| 6. | Phosphate | IS 3025 (P-31/Sec-1) 2022 | mg/l | 0.55 | - |
| 7. | Zinc | APHA 3111 B 2023 | mg/l | BDL(MDL-0.04) | - |

-Test result End -

Prescribed Limit
Operational Status
Analysed by - Pappu Kumar

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

Unit was Operational During sampling.

Reviewed by
(P.K. Kumar)
Technical Head

Issued by
(Sumeet Das)
Laboratory Head

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





EPIC LabTech Private Limited

Address:
C/o - R.K. Tripathi, Indrapuri,
Road No. - S. Ranchi,
Jharkhand - 834003, India

0631-4666292
98357 85677
93049 73894
epiclabtech@gmail.com

CIN - U74999JH2012PTC019483 | Accredited by -
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 14001:2015

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|-------------------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02682534052 | Group | Pollution & Environment |
| Issue date/time | 26.08.2025/ 12:15 | Sub Group | Waste Water (Effluent) |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0268 | Sample Booking Number | EPIC-2534052 |
| Sample(s) Code | 2534052 | Sample Receipt (D/T) | 21.08.2025/ 11:03 |

Sampling References

| | | | |
|---------------------------------|---------------------------------|--|------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 19.08.2025/ 17:15 | Sampling End (D/T) | 19.08.2025/ 17:20 |
| 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) | 25 | Humidity % | 70 | Wind direction | 90°-270° |
|-------------------|--------|------------------|----|------------|----|----------------|----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|--------------------|----------------|---------------------------------|
| S. Location A | Work Shop (Outlet) | GPS coordinate | 23° 20' 37.43" / 84° 15' 33.93" |
|---------------|--------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 21.08.2025/ 11:23 | Test completion date | 26.08.2025/ 10:38 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result--

| Sl | Test Parameters | Method used | Unit | Results | Limits |
|----|-----------------------------|---------------------|------|---------|--------|
| 1. | Total Dissolve Solids (TDS) | IS 3025 (P-16) 2023 | mg/l | 162.00 | - |
| 2. | Dissolve Oxygen (DO) | IS 3025 (P-38) 1986 | mg/l | 1.0 | - |

--Test result End --

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

Reviewed by
(R.K. Kumar)
Technical Head

Issued by
(Ankit Das)
Laboratory Head

Authorized Signature
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





Address:
C/o - R.K. Tripathi, Indrapuri,
Road No. - 3, Ranchi,
Jharkhand - 834003, India

0651 4866352
98357 86677
91048 73994
epiclabtech@gmail.com

CIN - U74999JH2022PTC019645
PAN - AAHCE3671M
GST - 20AAHCE3671MA12X

Accredited by -
ISO/IEC 17025:2017
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018



TC-12887

Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|-----------------------|
| Unique Lab Report No. | TC1288725000001199 | Discipline | Chemical |
| Report Unique ID | RL02962538004 | Group | Atmospheric Pollution |
| Issue date/time | 18.09.2025/17:09 | Sub Group | Ambient Air Quality |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|-------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0296 | Sample Booking Number | EPIC-2538004 |
| Sample(s) Code | 2538004 (A) (B) (C) (D) | Sample Receipt (D/T) | 18.09.2025/ 10:42 |

Sampling References

| | | | |
|---------------------------------|---|-----------------------|--------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 12.09.2025/ 13:00 | Sampling End (D/T) | 13.09.2025/ 09:10 |
| 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 (NAAQM/36/2012-13) | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|--------|------------------|----|------------|----|----------------|---------|
| Weather condition | Cloudy | Temperature (°C) | 26 | Humidity % | 64 | Wind direction | 0°-180° |
|-------------------|--------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 1F | GPS coordinate | 23° 20' 48.16" / 84° 15' 24.28" |
| S. Location D | Mines Near Quarry - 7C | GPS coordinate | 23° 20' 18.12" / 84° 15' 34.07" |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 18.09.2025/ 11:02 | Test completion date | 18.09.2025/ 16:00 |
|-----------------|-------------------|----------------------|-------------------|

-Test Results-

| Sl. | Test Parameters | Method used | Unit | Results | | | | Limits |
|-----|--|---------------------|-------------------|--------------------|--------------------|--------------------|--------------------|-------------|
| | | | | A | B | C | D | |
| 1. | Particulate Matter (PM ₁₀) | IS:5182 (P-23) 2022 | µg/m ³ | 56.96 | 59.08 | 52.85 | 54.95 | 100 (24 hr) |
| 2. | Fine Particulate Matter (PM _{2.5}) | IS:5182 (P-24) 2019 | µg/m ³ | 22.27 | 25.33 | 26.32 | 29.91 | 60 (24 hr) |
| 3. | Sulphur Dioxide (SO ₂) | IS:5182 (P-02) 2023 | µg/m ³ | 07.27 | 08.87 | 06.84 | 08.85 | 80 (24 hr) |
| 4. | Nitrogen Dioxide (NO ₂) | IS:5182 (P-06) 2022 | µg/m ³ | 16.83 | 17.92 | 16.77 | 18.99 | 80 (24 hr) |
| 5. | Ammonia (NH ₃) | IS:5182 (P-25) 2018 | µg/m ³ | 25.52 | 25.80 | 26.65 | 26.93 | 400 (24 hr) |
| 6. | Ozone (O ₃) | IS:5182 (P-09) 2019 | µg/m ³ | 13.69 | 14.01 | 14.97 | 15.60 | 180 (1 hr) |
| 7. | Lead (Pb) | IS:5182 (P-22) 2019 | µg/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | 1.0 (24 hr) |
| 8. | Nickel (Ni) | IS:5182 (P-26) 2020 | ng/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | - |
| 9. | Arsenic (As) | USEPA 03.2:1999 | ng/m ³ | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | - |

-Test Results End -

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

Operational Status Unit was Operational During sampling.

Analyzed by - Vishal Mengraj



Reviewed by
(S.K. Kumar)
Technical Head



Issue by
(Omash Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.

Report No. TC-12887

Page 1 of 1

Contractual Notes | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility at specific environmental condition as method required and results relate only to the sample tested in prescribed Date & time | 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law | 4. Any complaint about this report should be communicated in writing within 10 days of its issue | 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to uncollected amount only | 6. All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges | 7. Operator does not supply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any claim by user or receiver of this report. | 8. When the results are from external provider we marked as * mark. | 9. Abbreviations - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation). |



Analytical Test Certificate

| | | | |
|-----------------------|------------------|------------|-----------------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02962538004 | Group | Atmospheric Pollution |
| Issue date/time | 18.09.2025/17:09 | Sub Group | Ambient Air Quality |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|-------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0296 | Sample Booking Number | EPIC-2538004 |
| Sample(s) Code | 2538004 (A) (B) (C) (D) | Sample Receipt (D/T) | 15.09.2025/ 10:42 |

Sampling References

| | | | |
|----------------------------------|---|--|------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 19.08.2025/ 13:00 | Sampling End (D/T) | 20.08.2025/ 09:10 |
| 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 (NAAQM/36/2012-13) | | |
| Description/condition of sample: | | Receipt sample(s) were fit for analysis. | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|--------|------------------|----|------------|----|----------------|---------|
| Weather condition | Cloudy | Temperature (°C) | 26 | Humidity % | 64 | Wind direction | 0°-180° |
|-------------------|--------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 1F | GPS coordinate | 23° 20' 48.16" / 84° 15' 24.28" |
| S. Location D | Mines Near Quarry - 7C | GPS coordinate | 23° 20' 18.12" / 84° 15' 34.07" |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 15.09.2025/ 11:02 | Test completion date | 18.09.2025/ 16:00 |
|-----------------|-------------------|----------------------|-------------------|

-Test Results-

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

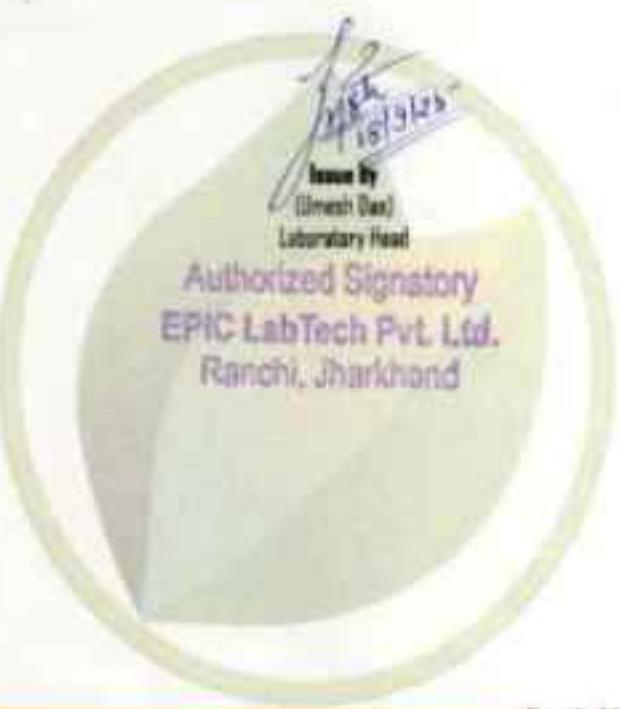
-Test Results End -

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

Operational Status Unit was Operational During sampling.

Analyzed by - Vishal Mangaraj


Reviewed by
(B.N. Kumar)
Technical Head





Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|-------------------------|
| Unique Lab Report No. | TC1288725000001200 | Discipline | Chemical |
| Report Unique ID | RL02962538005 | Group | Pollution & Environment |
| Issue date/time | 18-09-2025/17:12 | 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 : AMTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chart)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0296 | Sample Booking Number | EPIC-2538005 |
| Sample(s) Code | 2538005 | Sample Receipt (D/T) | 15.09.2025/ 10:43 |

Sampling References

| | | | |
|---------------------------------|-------------------------|--|------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 12.09.2025/ 16:10 | Sampling End (D/T) | 12.09.2025/ 16:20 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Pawan Deep Bhagat & Team |
| Sampling method used | EPIC/LAB/SOP/PE/01/00 | | |
| Description/condition of sample | | Receipt sample(s) were fit for analysis. | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|--------|------------------|----|------------|----|----------------|---------|
| Weather condition | Cloudy | Temperature (°C) | 26 | Humidity % | 64 | Wind direction | 0°-180° |
|-------------------|--------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mines Near Quarry - IF | GPS coordinate | 23° 20' 48.80" / 84° 15' 23.50" |
|---------------|------------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 15.09.2025/ 11:35 | Test completion date | 18.09.2025/ 15:45 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result--

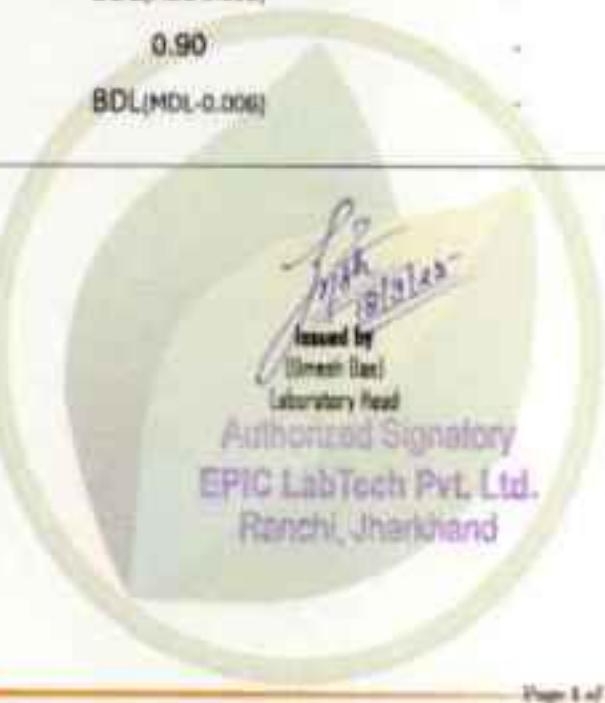
| Sl. | Test Parameters | Method used | Unit | Results | Limits |
|-----|-------------------------|-------------------|-------|----------------|--------|
| 1. | pH value at 25.7°C | MAGI 2011 | - | 6.02 | - |
| 2. | Available Phosphorus | MAGI 2011 | Kg/ha | 11.00 | - |
| 3. | Available Potassium | MAGI 2011 | Kg/ha | 130.00 | - |
| 4. | Organic Carbon | MAGI 2011 | % | 1.66 | - |
| 5. | Electrical Conductivity | MAGI 2011 | µs/cm | 121.0 | - |
| 6. | Magnesium | MAGI 2011 | mg/kg | 62.06 | - |
| 7. | Nitrogen | MAGI 2011 | % | 0.14 | - |
| 8. | Arsenic (as As) | USEPA 3050 B 1996 | mg/kg | BDL(MDL-0.005) | - |
| 9. | Cadmium (as Cd) | USEPA 3050 B 1996 | mg/kg | 0.90 | - |
| 10. | Selenium (as Se) | USEPA 3050 B 1996 | mg/kg | BDL(MDL-0.006) | - |

--Test result End --

Operational Status: Unit was Operational During sampling.

Analyzed by - Ishika Singh


Reviewed by
(E.A. Kumar)
Technical Head





Analytical Test Certificate

| | | | |
|-----------------------|------------------|------------|-------------------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02962538005 | Group | Pollution & Environment |
| Issue date/time | 18-09-2025/17:12 | 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: AMTIPANI BAUXITE MINE

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

References of Quality Management System (Code of Traceability Date)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0296 | Sample Booking Number | EPIC-2538005 |
| Sample(s) Code | 2538005 | Sample Receipt (D/T) | 15.09.2025/ 10:43 |

Sampling References

| | | | |
|---------------------------------|-------------------------|--|------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 12.09.2025/ 16:10 | Sampling End (D/T) | 12.09.2025/ 16:20 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Pawan Deep Bhagat & Team |
| Sampling method used | EPIC/LAB/SOP/PE/01/00 | | |
| Description/condition of sample | | Receipt sample(s) were fit for analysis. | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|--------|------------------|----|------------|----|----------------|---------|
| Weather condition | Cloudy | Temperature (°C) | 26 | Humidity % | 64 | Wind direction | 0°-180° |
|-------------------|--------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mines Near Quarry - IF | GPS coordinate | 23° 20' 48.80" / 84° 15' 23.50" |
|---------------|------------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 15.09.2025/ 11:35 | Test completion date | 18.09.2025/ 15:45 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result--

| Sl. | Test Parameters | Method used | Unit | Results | Limits |
|-----|------------------|-----------------------|-------|----------------|--------|
| 1. | Chloride (as Cl) | EPIC/LAB/SOP/PE/01/00 | mg/kg | 0.062 | - |
| 2. | Mercury (as Hg) | USEPA 3050 B 1996 | mg/kg | BDL(MDL-0.005) | - |

--Test result End --

Operational Status
Unit was Operational During sampling.

Analyzed by - Ishika Singh


Reviewed by
(Ishika Singh)
Technical Head


Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|---------------|
| Unique Lab Report No. | TC1288725000001201 | Discipline | Chemical |
| Report Unique ID | RL02962538006 | Group | Water |
| Issue date/time | 18-09-2025/17:15 | 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: ANTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Data)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0296 | Sample Booking Number | EPIC-2538006 |
| Sample(s) Code | 2538006 | Sample Receipt (D/T) | 15.09.2025/ 10:43 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 12.09.2025/ 15:25 | Sampling End (D/T) | 12.09.2025/ 15:35 |
| 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) | 26 | Humidity % | 64 | Wind direction | 0°-180° |
|-------------------|--------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mines Near Quarry - 76 | GPS coordinate | 23° 20' 12.28" / 84° 15' 33.32" |
|---------------|------------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 15.09.2025/ 11:03 | Test completion date | 18.09.2025/ 15:10 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result--

| Sl. | Test Parameters | Method used | Unit | Results | Limits |
|-----|------------------------------|---------------------|------|--------------|--------|
| 1. | pH value at 25°C | IS 3025 (P-11) 2022 | -- | 6.21 | - |
| 2. | Total Dissolved Solids (TDS) | IS 3025 (P-16) 2023 | mg/l | 4270.00 | |
| 3. | Calcium (as Ca) | IS 3025 (P-40) 1991 | mg/l | 28.00 | |
| 4. | Iron (as Fe) | APHA 3111 B 2023 | mg/l | BDL(MDL-0.1) | - |

--Test result End --

Operational Status
Unit was Operational During sampling.

Analyzed by - Peppu Kumar


Reviewed by
(P.K. Kumar)
Technical Head


Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Analytical Test Certificate

| | | | |
|-----------------------|------------------|------------|---------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02962538006 | Group | Water |
| Issue date/time | 18-09-2025/17:15 | 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: AMTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chart)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0296 | Sample Booking Number | EPIC-2538006 |
| Sample(s) Code | 2538006 | Sample Receipt (D/T) | 15.09.2025/ 10:43 |

Sampling References

| | | | |
|---------------------------------|---------------------------------|--|------------------------------|
| Type of industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 12.09.2025/ 15:25 | Sampling End (D/T) | 12.09.2025/ 15:35 |
| 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) | 26 | Humidity % | 64 | Wind direction | 0°-180° |
|-------------------|--------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mines Near Quarry - 76 | GPS coordinate | 23° 20' 12.28" / 84° 15' 33.32" |
|---------------|------------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 15.09.2025/ 11:03 | Test completion date | 18.09.2025/ 15:10 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result--

| Sl. | Test Parameters | Method used | Unit | Results | Limits |
|-----|------------------------------|---------------------|------|-------------|--------|
| 1. | Dissolve Oxygen (DO) | IS 3025 (P-36) 1989 | mg/l | 2.0 | - |
| 2. | Temperature | IS 3025 (P-90) 1986 | °C | 26.1 | - |
| 3. | BOD (3days at 27°C) | IS 3025 (P-44) 2000 | mg/l | 8.4 | - |
| 4. | COD | IS 3025 (P-56) 2006 | mg/l | 34.0 | - |
| 5. | Total Suspended Solids (TSS) | IS 3025 (P-17) 2022 | mg/l | 22.00 | - |
| 6. | Oil & Grease | IS 3025 (P-39) 2021 | mg/l | BDL(MDL-04) | - |

Group - Residues and Contaminants in Water,

| | | | | | |
|----|-------------------|---------------------|------|--------------|-----------------------------------|
| 7. | Aluminium (as Al) | IS 3025 (P-55) 2003 | mg/l | BDL(MDL-0.1) | Sub Group - Trace Metals Elements |
|----|-------------------|---------------------|------|--------------|-----------------------------------|

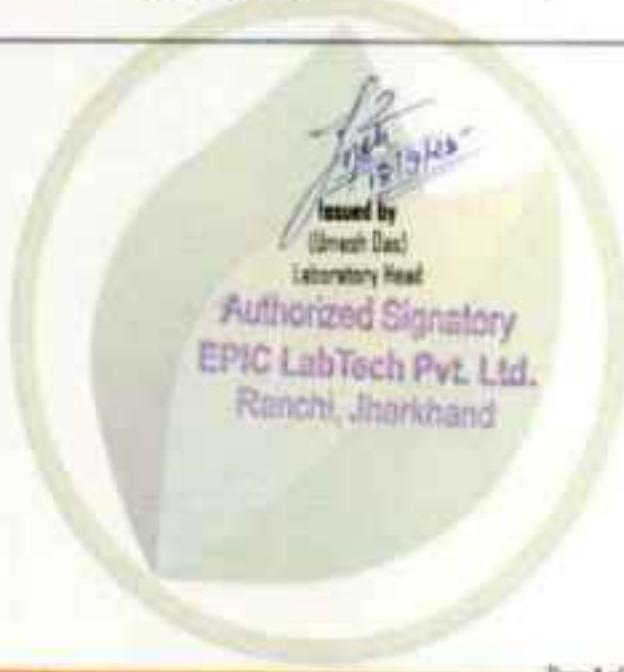
--Test result End --

Operational Status

Analysed by - Pappu Kumar

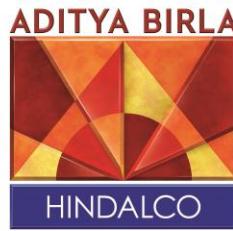
Unit was Operational During sampling.


Reviewed by
(P.K. Kumar)
Technical Head



Page 1 of 1

Contractual Notes: 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility, at specific environmental conditions as method required and results relate only to the sample tested at prescribed Date & time | 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law | 4. Any complaint about this report should be communicated in writing within 10 days of its issue | 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to insured amount only | 6. All disputes are subject to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges | 7. Optima does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any cause by use or misuse of this report. | 8. When the results are from external provider are marked as * mark. | 9. Abbreviations - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation). |



Annexure 3

Date – 01.11.2025

Office Order

Environmental Cell has been re-constituted for Amtipani Bauxite Mine (Area 190.95 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. Yogendra Lilhare (Coordinator)
2. Mr. Susovan Samanta (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

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

Annexure 4

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

*Static information about the mines included in the above table



Basudev Gangopadhyay
AVP (Planning, Environment and Compliance)

Annexure-5

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

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

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

**Part of OB removed cost



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