

HIL/LHD/ENV/MoEF&CC/408

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

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

**Sub:** Six Monthly EC Compliance Report for Pakhar (35.12 Ha) Bauxite Mining project of M/s Hindalco Industries Limited, Lohardaga Jharkhand for the period from April 2025 to September 2025.

**Ref:** Environmental Clearance Letter No. J-11015/137/2006-IA II (M), dated 05<sup>th</sup> April 2007.

Dear Sir,

With reference to the above, we are submitting herewith the Compliance status report of EC conditions for **Pakhar (35.12 Ha)** Bauxite Mining project of **M/s Hindalco Industries Limited**, Lohardaga Jharkhand for the period from **April 2025 to September 2025** for your kind perusal please.

The lease details are below:

Lease area (ha)	Production Capacity (MT)	Lease Period
35.12	200000	17.04.1975 to 31.03.2030

Hope you will find the same in order.

Thanking You

Yours faithfully,  
For **Hindalco Industries Limited**

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

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

Enclosure: - As Above

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

<b>Name of the Project</b>	<b>: Pakhar Bauxite Mine (35.12 ha) M/s Hindalco Industries Limited</b>
<b>Environment Clearance No. &amp; date</b>	<b>: J-11015/137/2006-IA.II(M), dated 05.04.2007</b>
<b>Period of compliance Report</b>	<b>: From 1<sup>st</sup> April 2025 to 30<sup>th</sup> September 2025</b>

**Specific Conditions: -**

**Condition i: - All the conditions stipulated by SPCB in their NOC shall be effectively implemented.**

**Reply:** Implementation of the stipulated conditions in the NOC was fulfilled, after which consent to operate was obtained from time to time while the mine was operational.

Presently, the mine has not been in operation as the winning of bauxite is closed w.e.f 08.06.2009 due to the exhaustion of mineral reserve. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

**Condition ii: - 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:** - Presently, the mine has not been in operation as the winning of bauxite is closed w.e.f 08.06.2009 due to the exhaustion of mineral reserve. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

The entire land was acquired in accordance with applicable laws while the mine was operational.

**Condition iii: - Environmental clearance is subject to grant of forestry clearance, Necessary forestry clearance under the Forest (Conservation) Act, 1980 for an area of 3.45ha forestland shall be obtained before starting mining operation in that area.**

**Reply:** - Presently, the mine has not been in operation as the winning of bauxite is closed w.e.f 08.06.2009 due to the exhaustion of mineral reserves. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

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

**Reply:** - Presently, the mine has not been in operation as the winning of bauxite is closed w.e.f 08.06.2009 due to the exhaustion of mineral reserves. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

Shallow depth mining was carried out in the past; therefore, groundwater was not intersected during mining operations while the mine was operational.

**Condition v: - The project proponent shall ensure that no natural watercourse shall be obstructed due to any mining operation.**

**Reply:** - No natural water course was obstructed during mining operations in the past. Presently, the mine has not been in operation as the winning of bauxite is closed w.e.f 08.06.2009 due to the exhaustion of mineral reserve. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

**Condition vi: -Top soil shall be stacked properly with proper slope with adequate measures and should be used for reclamation and rehabilitation of mined out areas.**

**Reply:** - The winning of bauxite is closed w.e.f. 08.06.2009 due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

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

**Reply:** - Presently, The mine has not been in operation as the winning of bauxite is closed w.e.f 08.06.2009 due to the exhaustion of mineral reserve. There is no external OB dump in mine lease area.

The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

**Condition viii: - Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from mine working. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted particularly after monsoon and maintained properly. Garland drain (size, gradient and length) shall be constructed for mine pit and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper setting of silt material. Sedimentation pits should be constructed at the corners of the garland drains and desilted at regular intervals.**

**Reply:** - Presently, the mine has not been in operation as the winning of bauxite is closed w.e.f 08.06.2009 due to the exhaustion of mineral reserves. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

**Condition ix: - Plantation shall be raised in an area of 24.83ha including a green belt of adequate width by planting the native species around the ML area, roads, reclaimed area etc. in consultation with the local DFO / Agriculture Department. The density of the trees should be around 1500 plants per ha.**

**Reply:** - Already 32.85 ha has been planted in and around the mine/Plateau area. Presently, the mine has not been in operation as the winning of bauxite is closed w.e.f 08.06.2009 due to the exhaustion of mineral reserve.

The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

**Condition x: - 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:** - Presently, the mine has not been in operation as the winning of bauxite is closed w.e.f 08.06.2009 due to the exhaustion of mineral reserves.

The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

**Condition xi: - 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:** - Presently, the mine has not been in operation as the winning of bauxite is closed w.e.f 08.06.2009 due to the exhaustion of mineral reserves.

The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

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

**Reply:** - Presently, the mine has not been in operation as the winning of bauxite is closed w.e.f 08.06.2009 due to the exhaustion of mineral reserves.

The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

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

**Reply:** - The winning of bauxite is closed w.e.f. 08.06.2009 due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation.

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

**Reply:** - The winning of bauxite is closed w.e.f. 08.06.2009 due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation.

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

**Reply:** - The winning of bauxite is closed w.e.f. 08.06.2009 due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation.

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

**Reply:** - The winning of bauxite is closed w.e.f. 08.06.2009 due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation.

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

**Reply:** - The winning of bauxite is closed w.e.f. 08.06.2009 due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation.

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

**Reply:** - The winning of bauxite is closed w.e.f. 08.06.2009 due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation.

The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

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

**Reply:** - Approval letter of Final Mine closure plan duly approved by Indian Bureau of Mines is hereby attached as **Annexure-1**.

### **General Conditions**

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

**Reply:** - The winning of bauxite is closed w.e.f 08.06.2009 due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation.

The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

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

**Reply:** - The winning of bauxite is closed w.e.f. 08.06.2009 due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation.

The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines. Data of the same are enclosed herewith as **Annexure 4**.

**Condition iii:** - **Four ambient air quality-monitoring station should be established in the core zone as well as in the buffer zone for RPM, SPM, SO<sub>2</sub>, NO<sub>x</sub> monitoring. Location of the stations should be decided based on the metrological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.**

**Reply:** - Monitoring Reports of Pakhar Plateau is enclosed as **Annexure-2**.

**Condition iv:** - **Data on ambient air quality (RPM, SPM, SO<sub>2</sub>, NO<sub>x</sub>) should be regularly submitted to the Ministry including its Regional office located at Bhubneshwar and the State Pollution Control Board / Central pollution Control Board once in six months.**

**Reply:** - Monitoring Reports of Pakhar Plateau is enclosed as **Annexure-2**.

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

**Reply:** - The winning of Bauxite is closed w.e.f. 08.06.2009 due to exhaustion of resources. Therefore, the mine has not been in operation.

The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

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

**Reply:** - The winning of Bauxite is closed w.e.f. 08.06.2009 due to exhaustion of resources. Therefore, the mine has not been in operation.

The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

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

**Reply:** - The winning of bauxite is closed w.e.f. 08.06.2009 due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation.

The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

**Condition viii:** - **Personnel working in dusty areas should wear protective respiratory devices and they should also 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:** - The winning of bauxite is closed w.e.f. 08.06.2009 due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation.

The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

**Condition ix: -A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.**

**Reply:** - The winning of bauxite is closed w.e.f. 08.06.2009 due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines

We have Environment Management Cell for our Pakhar Group of Mines. This cell is looking after Environmental compliance of this Mine also. The copy of the same is attached herewith as **Annexure-3**.

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

**Reply:** - The winning of bauxite is closed w.e.f. 08.06.2009 due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

Approval letter of Final Mine closure plan duly approved by IBM is hereby attached as **Annexure-1**

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

**Reply:** - Statement of budgetary provision and actual expenses for environmental protection measure is enclosed as **Annexure-5**. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines. Now, the Regional Office of MoEF&CC is in Ranchi.

**Condition xii: - The Regional Office of this Ministry located at Bhubneshwar 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:** - Agreed. However, the winning of bauxite is closed w.e.f 08.06.2009 due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation. Now, the Regional Office of MoEF&CC is in Ranchi.

**Condition xiii: - The project proponent shall submit six monthly report on the status of the implementation of the stipulated environmental safeguards to the Ministry of**

**Environment and Forests, its Regional Office, Bhubaneshwar, Central Pollution Control Board and State Pollution Control Board.**

**Reply:** - Being Complied. Six monthly reports on status of compliance of stipulated environmental clearance conditions are being submitted to the MoEF&CC, Zonal office of CPCB and JSPCB Ranchi. Now, the Regional Office of MoEF&CC is in Ranchi.

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

**Reply:** - Already complied. A copy of the clearance letter has already been submitted.

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

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

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

**Reply:** - Already complied. The information on grant of the EC has been published in two local newspapers. The copy of the advertisement has already been submitted to the Regional Office of the MoEF&CC vide our letter no. HIL/GMO(M)/ENV/142 dated 23.05.2007. Now, the Regional office of MoEF&CC is in Ranchi.



**GOVERNMENT OF INDIA  
MINISTRY OF MINES  
INDIAN BUREAU OF MINES  
OFFICE OF THE REGIONAL CONTROLLER OF MINES**

Telephone: (0651) 2242889  
(0651) 2242903  
Fax: (0651) 2242903  
E-mail: ro.ranchi@ibm.gov.in

No.: RAN/LOH/BX/FMCP-02/2014-15.

318-B, Road No.- 3,  
Ashok Nagar,  
Ranchi – 834 002,  
Date: 23/04/2015

**To:** **Shri A. K. Agarwal,**  
✓ Director cum Nominated Owner  
M/s HINDALCO Industries Ltd.,  
Court Road, Lohardaga - 835 302 (Jharkhand).

**Sub:** **Approval of Final Mine Closure Plan in respect of PAKHAR Bauxite Mines of M/s HINDALCO Industries Ltd. over an area of 38.95 hectares in village-Pakhar, Lohardaga district of Jharkhand State submitted under Rule 23C of MCDR, 1988.**

Ref: Your A.G.M. (Geology) letters no. HIL/LHD/BX/IBM/245 Dated 02/08/2014

Your R.Q.P. letter nos. NIL, dated.03/11/2014 & 26/12/2014

This office letter no. रांची/लोहरदगा/बाक्साइट/एफ.एम.सी पी.-02/2014-15, दिनांक: 26/09/2014

Sir,

In exercise of the powers conferred by the sub-rule 2 of Rule 23C of Mineral Conservation & Development Rules, 1988; I hereby **approve** the above said Final Mine Closure Plan in respect of PAKHAR Bauxite mines of M/s HINDALCO Industries Ltd. over an area of 38.95 hectares in village-Pakhar, Lohardaga district of Jharkhand State, submitted under Rule 23C of MCDR, 1988. This approval is subject to the following conditions: -

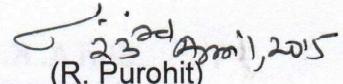
- (i) that the Final Mine Closure Plan is approved without prejudice to any other laws applicable to the mine/lease area from time to time whether made by the Central Government, State Government or any other Authority.
- (ii) that this approval of the Final Mine Closure Plan does not, in any way, imply the approval of the Government in terms of any other provisions of the Mines & Minerals (Development & Regulation) Act, 1957 or the Mineral Concession Rules, 1960 and any other laws including Forest (Conservation) Act, 1980, Environment (Protection) Act, 1986 and the rules made there under.
- (iii) that the Final Mine Closure Plan is approved without prejudice to any order or direction from any court of competent jurisdiction.
- (iv) that the Regional Office, Indian Bureau of Mines, Ranchi shall be informed after completion of activities of final mine closure as per proposal of the Final Mine Closure Plan.
- (v) that the Yearly report as required under Rule 23E(2) of MCDR, 1988 setting forth the extent of protection and rehabilitation works carried out as envisaged in the approved final mine closure plan and if there is any deviations, reasons thereof shall be submitted before 1<sup>st</sup> July of every year to the Regional office, Indian Bureau of Mines, Ranchi.

No.: RAN/LOH/BX/FMCP-02/2014-15.

(iv) The financial assurance submitted for Rs. 2,74,000/- (Two lacs seventy four thousand only) is valid up to 31/03/2016. A new bank guarantee is to be submitted on or before its expiry i.e. 31/03/2016, if the rehabilitation proposal not completed by the time.

Yours faithfully

Encl.: One copy of approved  
Final Mine Closure Plan.

  
(R. Purohit)  
Regional Controller of Mines

Copy forwarded for information to: -

1. **The Director (Mines),**  
Directorate of Mines and Geology,  
Government of Jharkhand,  
Nepal House Area, Doranda,  
Ranchi - 834 002. (Jharkhand), along with a copy of approved Final Mine Closure Plan. It is requested to ensure that the determination of aforesaid lease is not accepted unless and until a certificate issued by the Indian Bureau of Mines under Rule 29A (2) of Mineral Concession Rules, 1960 to the effect that protective, reclamation and rehabilitative works as envisaged in the approved Final Mine Closure Plan are carried out.
2. **The Director of Mines Safety**  
Ranchi Region  
CMPDIL-Campus  
3<sup>rd</sup> Floor, Old Building  
Kanke Road, Ranchi-834008  
along with a copy of approved Final Mine Closure Plan.
3. **Shri P.K. Sen, RQP,**  
Kali Mandir Road,  
Doranda, Ranchi - 834 002.

  
(R. Purohit)  
Regional Controller of Mines



# EPIC LabTech Private Limited

Address-  
C/o - R.R. Tripathi, Indraprastha  
Bank Hall - S. Ranchi,  
Jharkhand - 834025, India

Tel: 6555 444702  
E-mail: [8885784777@gmail.com](mailto:8885784777@gmail.com)  
[5204973388@gmail.com](mailto:5204973388@gmail.com)  
[epiclabtech@gmail.com](mailto:epiclabtech@gmail.com)

CR-014593/H2022/11/0000364  
PAN: AHNCE0310M  
ESTD: 2011/01/01/2012

Accredited by:-  
ISAC, ISO 17025:2017, IAC-2017  
for the scope: P&L Lab Services Pvt.  
Certifying no:-  
100 IR0072015 and 100 IR0072016



TC-12987

Annexure - 2

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000364	Discipline	Chemical
Report Unique ID	RL0136251838	Group	Atmospheric Pollution
Issue date/time	24.04.2025/ 11:10	Sub Group	Ambient Air Quality

### Report Issue to

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

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

### References of Quality Management System (Scope of Equality 2014)

Customer Registration No.	EPIC/OTH/0138	Sample Booking Number	EPIC-251638
Sample(s) Code	251638 (A) (B) (C) (D)	Sample Receipt (D/T)	17.04.2025/ 10:40

### Sampling References

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

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

### Environmental Condition during sampling

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

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

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

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

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

### -Test Result -

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

### -Test result End -

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

Environmental (Protection) Rules-1986, Schedule VII.

Unit was Operational During sampling.

Checked by  
(A.T. BIRLA)  
Technical Head

Verified & Signed by  
(A.T. BIRLA)  
Laboratory Head

Authorized Signatory

Comments 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 referable to the sample tested or prescribed time & time. 4. The test report shall not be reproduced, full or in part & can be used only for the purpose for which it is issued. 5. Test facility of EPIC LabTech Pvt. Ltd. will be subject to inspection/audit only. 6. All samples are subjected to Random Interference and cross-contamination of the laboratory does not exceed the testing and sampling charges. 7. Operator does not supply environmental of the tested product by laboratory. Under no circumstances, laboratory accepts any claim for loss or damage of this report. 8. When the results are from external provider are marked as \* small.



## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0138251638	Group	Atmospheric Pollution
Issue date/time	24.04.2025/ 11:10	Sub Group	Ambient Air Quality

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

## References of Quality Management System (Copy of Transparency Card)

Customer Registration No.	EPIC/OTH/0138	Sample Booking Number	EPIC-251638
Sample(s) Code	251638 (A) (B) (C) (D)	Sample Receipt (D/T)	17.04.2025/ 10:40

## Sampling References

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

## Environmental Condition during sampling

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

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

S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.47" / 84° 36' 00.33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88" / 84° 36' 05.71"
S. Location C	Near Mine Block B, Quarry No - 6	GPS coordinate	23° 32' 51.14" / 84° 36' 58.76"
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 05.36" / 84° 37' 04.76"

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

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

## →Test Result--

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

## →Test Result End--

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

  
Method B issued by  
(I.K. Birla)  
Laboratory Head

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



Checked by  
(I.K. Birla)  
Technical Head





## Analytical Test Certificate

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

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

References of Quality Management System (Steps of Inexibility Cross)	
Customer Registration No.	EPIC/OTH/0138
Sample(s) Code	251639 (A) (B) (C) (D)

Sampling References	
Type of Industry	Bauxite Mines
Sampling method used	IS 5182 and CPCB Air Manual Volume-1 (NAAQM/36/2012-13)
Sampling Start (D/T)	15.04.2025/ 10:29
Mode of Sampling	Conducted by Laboratory
Description/condition of sample	Receipt sample(s) were fit for analysis.

Environmental Condition during sampling	
Weather condition	Clear

Temperature (°C) 26 Humidity % 48 Wind direction 260°-80°

Sampling Location(s) with GPS coordinate(s)	
S. Location A	Near Bunglapur Village
S. Location B	Yatri Shed (Near K-10)
S. Location C	Near Utkarmit Rajkiya Prashiksha Vidyalaya Bunglapur Village
S. Location D	Near Utkarmit Rajkiya Prashiksha Vidyalaya Dumrapur Village

GPS coordinate 23° 32' 42.29" / 84° 36' 04.23"  
GPS coordinate 23° 33' 11.75" / 84° 37' 28.46"  
GPS coordinate 23° 32' 46.59" / 84° 38' 00.39"  
GPS coordinate 23° 33' 38.14" / 84° 37' 30.33"

Detail(s) of performance of the laboratory activities	
Test start date	17.04.2025/ 11:05

Test completion date 23.04.2025/ 17:50

## -Test Result -

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS:5182(P-11) 2006	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12) 2004	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL
3.	Carbon Monoxide (CO)	EPIC/LAB/90/NAPK/01/06	mg/m <sup>3</sup>	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL

## -Test Result End -

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

Analysed by - A.K. SHRI



Checked by  
(S.K. Achar)

Technical Head

Verified by  
(B.K. Das)  
Laboratory Head

Authorised Signatory  
EPIC LabTech Pvt. Ltd.  
Ranipet, Jharkhand



Address:  
C/o - R.K. Tripathi, Bhopal  
Road No. - 3, Ramban  
Jharkhand - 834005, India

Tel: 0651 4646282  
0651 97 35472  
0651 97 73994  
E-mail: [epiclabtech@gmail.com](mailto:epiclabtech@gmail.com)

CIN - U74999MH2022PTC074545  
PAN - KENHESWTP  
GST - 2HANCSWTHMTC

Accredited by -  
NABL, NABL-MLAB, NABL-CLAB  
Issued by - Aditya Birla  
Certified by -  
ISO 9001:2015 and ISO 17025

TC-12887

## Analytical Test Certificate

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

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

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

Customer Registration No.	EPIC/OTH/0138	Sample Booking Number	EPIC-251640
Sample(s) Code	251640	Sample Receipt (D/T)	17.04.2025/ 10:48

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/038
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Sampling Start (D/T)	15.04.2025/ 12:30	Sampling End (D/T)	15.04.2025/ 12:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team

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

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

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

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

## --Test Result--

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

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



## Analytical Test Certificate

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

## Report Issue to

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

Contact Person  
Contact Number  
Email Id  
Order Date  
Order Number

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

16. Copper (as Cu)	APHA 3111 B 2023	mg/l	BDL(MDL-0.2)	0.00	1.5
17. Iron (as Fe)	APHA 3111 B 2023	mg/l	BDL(MDL-0.1)	1.0	No relaxation
18. Lead (as Pb)	APHA 3111 B 2023	mg/l	BDL(MDL-0.01)	0.01	No relaxation
19. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BDL(MDL-0.003)	0.003	No relaxation
20. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	0.05	No relaxation
21. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BDL(MDL-0.02)	0.02	No relaxation
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	0.05
23. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	No relaxation
24. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.09)	0.1	0.3
25. Zinc (as Zn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	5	15

--Test Result End--

Prescribed Limit: IS-10500:2021

Operational Status: Unit was Operational During sampling.

Analyzed by: Pratima Kumar/ Ankit Das



  
Ankit Das  
Technical Head


  
Ankit Das  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical			
Report Unique ID	RL0138251640	Group	Water			
Issue date/time	24.04.2025/ 11:15	Sub Group	Drinking Water			
<b>Report Issue to</b>						
<b>M/s - HINDALCO INDUSTRIES LIMITED</b> VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 <b>MONITORING SITE: PAKHAR 115.13 BAUXITE MINE</b>	Contact Person	Mr. Ankut Das				
	Contact Number	+91 9971034775				
	Email Id	ankut.das@adityabirla.com				
	Order Date	31.03.2025/ 10:10				
	Order Number	13612313868				
<b>Reference of Quality Management System (Steps of Traceability Chain)</b>						
Customer Registration No.	EPIC/OTH/0138	Sample Booking Number	EPIC/251640			
Sample(s) Code	251640	Sample Receipt (D/T)	17.04.2025/ 10:46			
<b>Sampling References</b>						
Type of Industry	Bauxite Mines	Ref. of Sampling Plan:	EPIC/LAB/R/036			
Sampling method used	IS : 3025 (Part-1) 1987, R-2003					
Sampling Start (D/T)	15.04.2025/ 12:30	Sampling End (D/T)	15.04.2025/ 12:40			
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team			
Description/condition of sample	Receipt sample(s) were fit for analysis.					
<b>Environmental Condition during sampling</b>						
Weather condition	Clear	Temperature (°C)	26			
		Humidity %	48			
		Wind direction	260°-80°			
<b>Sampling Location(s) with GPS coordinate(s)</b>						
S. Location A	R.O. Plant	GPS coordinate	23° 32' 24.47" N 84° 36' 30.05" E			
<b>Date(s) of performance of the laboratory activities</b>						
Test start date	17.04.2025/ 11:10	Test completion date	23.04.2025/ 13:00			
<b>-Test Result -</b>						
Sl	Test Parameters	Method used	Unit	Results	Acceptable Limit	Permissible limit
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	BDL(MDL-0.1)	1.0	1.5
<b>Group-Residues and Contaminants in Water</b>						<b>Sub Group-Trace Metals Elements</b>
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
<b>Group-Residues and Contaminants in Water</b>						<b>Sub Group-Pesticides</b>
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	20	No relaxation
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
8.	Diektrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.03	No relaxation
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.005)	0.01	No relaxation
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	125.0	No relaxation
12.	Chlopyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	30.0	No relaxation
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	3.0	No relaxation



## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0138251840	Group	Water
Issue date/time	24.04.2025/ 11:15	Sub Group	Drinking Water

## Report Issue to

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

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

-Test Result End -

Prescribed Limit 10500/2021

Operational Status Unit was Operational During sampling.

Analysed by -Pratik Kumar/ Anuj Kumar

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



## Analytical Test Certificate

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

## Report Issue to

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

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

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

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

## Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/038
Sampling method used	IS : 3025 (Part-1) 1987, R-2009& IS 1622 1981		
Sampling Start (D/T)	15.04.2025/ 12:30	Sampling End (D/T)	15.04.2025/ 12:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample		Receipt sample(s) were fit for analysis.	

## Environmental Condition during sampling

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

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

S. Location A	R.O Plant	GPS coordinate	23° 32' 24.47" N 84° 38' 30.05" E
---------------	-----------	----------------	-----------------------------------

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

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

## -Test Result -

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

## -Test Result End -

Prescribed Limit

Operational Status

Unit was Operational During sampling

Analysed by - Pradeep Kumar/ Akash Kumar

  
 Checked by  
 (P.K. Kumar)  
 Technical Head

  
 Verified & Issued by  
 (Akash Kumar)  
 Laboratory Head


Authorised Signatory  
 EPIC LabTech Pvt. Ltd.  
 Ranchi, Jharkhand



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

09234946302  
9835786677  
9109973904  
info@epiclabtech@gmail.com

CIN - U74999HR2022PLC649444  
Approved by  
ISO 9001:2015  
Certified by  
ISO 9001:2015 and ISO 45001:2018

TC-128867

## Analytical Test Certificate

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

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

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

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

## Sampling References

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

## Environmental Condition during sampling

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

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

5. Location A	Near Utkarsh Rajkanya Pratimik Vidyalaya Dumrapur Village	GPS coordinate	23°33'36.90" / 84°37'27.19"
---------------	---	----------------	-----------------------------

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

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

## -Test Result--

Sl.	Test Parameters	Method used	Unit	Results	Acceptable Limit	Permissible limit
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.78	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.60	1	5
3.	Colour	IS 3025 (P-04) 2021	mm	<5	6	15
4.	Odour	IS 3025 (P-05) 2018	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	276.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	45.33	250	1000
8.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23) 2019	mg/l	130.00	200	900
9.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21) 2009	mg/l	170.00	200	800
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	40.08	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	BDL(MDL-0.4)	0.2	1
12.	Sulphate (as SO <sub>4</sub> )	IS 3025 (P-24/Sec-1) 2022	mg/l	13.10	200	400
13.	Nitrate (as NO <sub>3</sub> )	APHA 4500 B 2023	mg/l	03.49	45	No maximum
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL(MDL-0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3600 Mg E 2023	mg/l	17.01	30	100

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

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





## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0138251842	Group	Water
Issue date/time	24.04.2025/ 11:19	Sub Group	Ground Water

## Report Issue to

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

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

Customer Registration No.	EPIC/DTH/0138	Sample Booking Number	EPIC-251842
Sample(s) Code	251842	Sample Receipt (D/T)	17.04.2025/ 10:51

## Sampling References

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

## Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	45	Wind direction	260°-80°
-------------------	-------	------------------	----	------------	----	----------------	----------

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

S. Location A	Near Utkarsh Rajkoya Prathmik Vidyalaya Dumrapur Village	GPS coordinate	23°33'36.90" / 84°37'27.19"
---------------	--	----------------	-----------------------------

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

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

## -Test Result -

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



## Analytical Test Certificate

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

## Report Issue to:

M/s - HINDALCO INDUSTRIES LIMITED  
VILLAGE-COURT ROAD,  
POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA,  
STATE-JHARKHAND, INDIA 835302  
MONITORING SITE: PAKHAR 115,13 BAUXITE MINES

Contact Person  
Contact Number  
Email Id  
Order Date  
Order Number

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

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

-Test Result End--

Prescribed Limit IS 10500:2021

Operational Status Unit was Operational During sampling.

Analysed by -Pratima Kumar/ Analytical

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



## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL0138251643	Group	Water
Issue date/time	24.04.2025/ 11:22	Sub Group	Ground Water

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

References of Quality Management System (Steps of Traceability Data)			
Customer Registration No.	EPIC/OTH/0138	Sample Booking Number	EPIC-251643
Sample(s) Code	251643	Sample Receipt (D/T)	17.04.2025/ 10:51

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

Environmental Condition during sampling			
Weather condition	Clear	Temperature (°C)	26

Humidity % 48 Wind direction 260°-80°

Sampling Location(s) with GPS coordinate(s)		
S. Location A	Near Utkarsh Rajya Pramukh Vidyayalaya Dumrapur Village	GPS coordinate

23° 33' 36.90" / 84° 37' 27.19"

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

## --Test Result--

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

## --Test Result End--

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

Analysed by - Pratik Kumar / Akash Kumar

  
 Checked by  
(Pratik Kumar)  
Technical Head

  
 Verified by  
(Akash Kumar)  
Laboratory Head

 Authorized Signatory  
 EPIC LabTech Pvt. Ltd.  
 Ranchi, Jharkhand




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

98351 4886202  
98351 88677  
93045 73394  
epiclabtech@gmail.com

CIN - U74999IN2022PTC079823  
RAN - AANCE3611W123  
GST - 204AANCE3611W123

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

TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000503	Discipline	Chemical
Report Unique ID	RL0171252011	Group	Atmospheric Pollution
Issue date/time	19.05.2025/ 10:30	Sub Group	Ambient Air Quality

## Report Issue to

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

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

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

Customer Registration No.	EPIC/OTH/0171	Sample Booking Number	EPIC-252011
Sample(s) Code	252011 (A) (B) (C) (D)	Sample Receipt (D/T)	13.05.2025/ 10:22

## Sampling References

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

## Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	46	Wind direction	260°-80°
-------------------	-------	------------------	----	------------	----	----------------	----------

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

S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42" / 84° 00' 33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88" / 84° 06' 71"
S. Location C	Near Mine Block-B, Quarry No.6	GPS coordinate	23° 32' 51.14" / 84° 36' 58.76"
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 05.36" / 84° 37' 04.76"

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

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

## -Test Results-

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM <sub>2.5</sub> )	IS:5182 (P-23) 2022	µg/m <sup>3</sup>	77.28	84.57	89.38	82.02	100 (4 hr)
2.	Fine Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-34) 2018	µg/m <sup>3</sup>	37.96	42.19	39.18	33.30	60 (34 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	10.50	11.14	12.50	08.58	60 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	23.52	25.95	18.62	21.15	60 (24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	30.74	32.03	37.21	35.92	400 (24 hr)
6.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m <sup>3</sup>	26.38	21.39	24.95	27.09	180 (1 hr)
7.	Lead (Pb)	IS:5182 (P-22) 2019	µg/m <sup>3</sup>	BDL	(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	1.0 (34 hr)
8.	Nickel (Ni)	IS:5182 (P-26) 2020	µg/m <sup>3</sup>	BDL	(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	-
9.	Arsenic (As)	USEPA 40 3.2:1999	µg/m <sup>3</sup>	BDL	(MDL-0.001)	(MDL-0.001)	(MDL-0.001)	(MDL-0.001)

## -Test Results End -

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

Operational Status Unit was Operational During sampling.

Analyzed by - AK Seha



Reviewed by  
AK Kumar  
Technical Head



Issued by  
Mr. Ankit Das  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

Page 3 of 6



# EPIC LabTech Private Limited

Address:  
C/o - A.K. Tripathi, Indrapuri,  
Road No. - 5, Ranchi,  
Jharkhand - 834001, India

GSTIN - 9886633101  
98357 88677  
93049 73594  
epiclabtech@gmail.com

CIN - U74209JH2022PTC00948  
PAN - AAHCES00M  
GST - 20AAHCES3610M124

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

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical					
Report Unique ID	RL0171252011	Group	Atmospheric Pollution					
Issue date/time	19.05.2025/ 10:30	Sub Group	Ambient Air Quality					
<b>Report Issue to</b>								
<b>M/s - HINDALCO INDUSTRIES LIMITED</b> VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 <b>MONITORING SITE : PAKHAR 115.13 BAUXITE MINE</b>	Contact Person Mr. Ankit Das Contact Number +91 9671034775 Email Id ankit.das@adityabirla.com Order Date 31.03.2025/ 10:10 Order Number 13612313868							
<b>References of Quality Management System (Days of Traceability Data)</b>								
Customer Registration No.	EPIC/OTH/0171	Sample Booking Number	EPIC-252011					
Sample(s) Code	252011 (A) (B) (C) (D)	Sample Receipt (D/T)	19.05.2025/ 10:22					
<b>Sampling References</b>								
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036					
Sampling Start (D/T)	19.05.2025/ 11:28	Sampling End (D/T)	19.05.2025/ 06:36					
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team					
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)							
Description/condition of sample	Receipt sample(s) were fit for analysis.							
<b>Environmental Condition during sampling</b>								
Weather condition	Clear	Temperature (°C)	27					
		Humidity %	46					
		Wind direction	260°-80°					
<b>Sampling Location(s) with GPS coordinate(s)</b>								
S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42" / 84° 36' 00.33"					
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88" / 84° 36' 06.71"					
S. Location C	Near Mine Block-B, Quarry No.6	GPS coordinate	23° 32' 51.14" / 84° 36' 58.76"					
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 05.36" / 84° 37' 04.76"					
<b>Data(s) of performance of the laboratory activities</b>								
Test start date	19.05.2025/ 10:45	Test completion date	19.05.2025/ 10:46					
<b>-Test Results-</b>								
Sl	Test Parameters	Method used	Unit	A	B	C	D	Limits
1.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS:5182(P-11) 2006	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12) 2004	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/API/01/00	mg/m <sup>3</sup>	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-
<b>-Test Results End -</b>								

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

Analyzed by - A.K. Singh

Analyzed by  
(A.K. Singh)  
Technical Head





TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000504	Discipline	Chemical					
Report Unique ID	RL0171252012	Group	Atmospheric Pollution					
Issue date/time	19.05.2025/ 10:32	Sub Group	Ambient Air Quality					
<b>Report Issue to</b>								
<b>M/s - HINDALCO INDUSTRIES LIMITED</b> VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST. LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE : PAKHAR 115.13 BAUXITE MINE	Contact Person Mr. Ankit Das	Contact Number +91 99771834775	Email Id ankit.das@adityabirla.com					
	Order Date 31.03.2025/ 10:10	Order Number 13612313868						
<b>References of Quality Management System (Date of Issuability Date)</b>								
Customer Registration No.	EPIC/OTH/0171	Sample Booking Number	EPIC-252012					
Sample(s) Code	252012 (A) (B) (C) (D)	Sample Receipt (D/T)	13.05.2025/ 10:30					
<b>Sampling References</b>								
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036					
Sampling Start (D/T)	13.05.2025/ 12:15	Sampling End (D/T)	13.05.2025/ 06:43					
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team					
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)							
Description/condition of sample	Receipt sample(s) were fit for analysis.							
<b>Environmental Condition during sampling</b>								
Weather condition	Clear	Temperature (°C)	27					
		Humidity %	46					
		Wind direction	260°-80°					
<b>Sampling Location(s) with GPS coordinate(s)</b>								
S. Location A	Near Bunglapur Village	GPS coordinate	23°32'42.29" / 84°36'04.23"					
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23°33'11.75" / 84°37'26.46"					
S. Location C	Near Uttam Rajkiya Prathmik Vidyalaya Bunglapur Village	GPS coordinate	23°32'46.59" / 84°36'00.39"					
S. Location D	Near Uttam Rajkiya Prathmik Vidyalaya Dumrapur Village	GPS coordinate	23°33'38.14" / 84°37'30.33"					
<b>Data(s) of performance of the laboratory activities</b>								
Test start date	13.05.2025/ 10:56	Test completion date	18.05.2025/ 10:50					
<b>-Test Results-</b>								
Sl	Test Parameters	Method used	Unit	A	B	C	D	Limits
1.	Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-23) 2022	µg/m <sup>3</sup>	72.49	79.37	74.64	70.33	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS:5182 (P-24) 2019	µg/m <sup>3</sup>	38.08	36.08	33.99	37.22	80 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	07.45	10.21	12.31	11.07	80 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-08) 2022	µg/m <sup>3</sup>	24.29	21.83	23.22	26.56	80 (24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	37.86	40.45	36.24	35.27	400 (24 hr)
6.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m <sup>3</sup>	25.31	30.56	23.88	22.46	180 (1 hr)
7.	Lead (Pb)	IS:5182 (P-22) 2019	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182 (P-26) 2020	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)
9.	Arsenic (As)	USEPA 10.3.2:1999	ng/m <sup>3</sup>	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)
<b>-Test Results End -</b>								

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



Reviewed by  
(A.K. Kumar)  
Technical Head

Issue by  
Sheetal Das  
Interstate Head  
Authorized Signatory  
EPIC LabTech Pvt. Ltd., Ranchi



## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0171252012	Group	Atmospheric Pollution
Issue date/time	13.05.2025/ 10:32	Sub Group	Ambient Air Quality

## Report Issue to

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

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

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

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

## Sampling References

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

## Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	46	Wind direction	260°-80°
-------------------	-------	------------------	----	------------	----	----------------	----------

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

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29" / 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75" / 84° 37' 26.46"
S. Location C	Near Utkarmit Rajkya Prachinik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.39"
S. Location D	Near Utkarmit Rajkya Prachinik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.39"

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

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

## -Test Results-

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

-Test Results End -

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

Operational Status Unit was Operational During sampling.

Analysed by - AK Seha

  
 Reviewed by  
 (AK Seha)  
 Technical Head

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

**Analytical Test Certificate**

Unique Lab Report No.	TC1288725000000505	Discipline	Chemical
Report Unique ID	R10171252013	Group	Atmospheric Pollution
Issue date/time	19.05.2025/ 10:34	Sub Group	Ambient Noise

**Report Issue to**

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

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

**References of Quality Management System (Steps of Traceability Doc)**

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

**Sampling References**

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	10.05.2025/ 11:28	Sampling End (D/T)	11.05.2025/ 06:38
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 9089:1981 (RA 2020) & CPCB Method S.O. 50 (E) dated 11/01/2010		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

**Environmental Condition during sampling**

Weather condition	Clear	Temperature (°C)	27	Humidity %	46	Wind direction	260°-80°
-------------------	-------	------------------	----	------------	----	----------------	----------

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

S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42" / 84° 36' 00.33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88" / 84° 36' 06.71"
S. Location C	Near Mine Block-B, Quarry No.6	GPS coordinate	23° 32' 51.14" / 84° 36' 58.76"
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 09.36" / 84° 37' 04.76"

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

Test start date	13.05.2025/ 10:40	Test completion date	18.05.2025/ 10:36
-----------------	-------------------	----------------------	-------------------

**-Test Results-**

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

**-Test Results End -**

Prescribed Limit  
Operational Status  
Analysed by -AKS

Reviewed by  
(A.K. Saha)  
Technical Head

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



# EPIC LabTech Private Limited

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

Reg. No.: 0821 4946232  
983517 88477  
91049 72934  
epiclabtech@gmail.com

CIN - U74999JH2022PTC079625  
PAN - AAHC33871M  
GST - 20AANCE001M0225

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



TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000687	Discipline	Chemical
Report Unique ID	RL0204252415	Group	Atmospheric Pollution
Issue date/time	13.06.2025/ 10:10	Sub Group	Ambient Air Quality

**Report Issue to**

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

**References of Quality Management System (Steps of Traceability Doc)**

Customer Registration No.	EPIC/OTH/0204	Sample Booking Number	EPIC-252415
Sample(s) Code	252415 (A) (B) (C) (D)	Sample Receipt (D/T)	10.06.2025/ 11:07

**Sampling References**

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

**Environmental Condition during sampling**

Weather condition	Clear	Temperature (°C)	26	Humidity %	50	Wind direction	300°-110°
-------------------	-------	------------------	----	------------	----	----------------	-----------

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

S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42" / 84° 36' 00.33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88" / 84° 36' 06.71"
S. Location C	Near Mine Block B, Quarry No. - 6	GPS coordinate	23° 32' 51.14" / 84° 36' 58.70"
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 05.36" / 84° 37' 04.76"

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

Test start date	10.06.2025/ 11:30	Test completion date	13.06.2025/ 11:10
-----------------	-------------------	----------------------	-------------------

**-Test Results-**

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

**-Test Results End-**

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

Operational Status Unit was Operational During sampling.

Analysed by - Archana Kumar



Reviewed by  
Archana Kumar  
Technical Head



Issue by  
Archana Kumar  
Authorized Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

Page 1 of 1

**Contractual Notes** | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility, at specific environmental condition, as method required and results relate only to the sample tested as prescribed Date & time | 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law | 4. Any complaint about this report should be communicated in writing within 10 days of its issue | 5. Test facility of EPIC LabTech Pvt. Ltd. will be limited to ambient air only | 6. All samples are subjected to Benthic (bottom) and macrofauna (bottom) of the laboratory does not exceed the testing and sampling charges | 7. Options does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any caused by use or misuse of this report | 8. When the results are from external provider are marked as \* mark | 9. Abbreviation - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), Log (unit of Quantification)



# EPIC LabTech Private Limited

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

Tel: 0657-5466252  
98357 88677  
91049 72364  
epiclabtech@gmail.com

CIN: U74999JH2022PTC036625 Accredited by:  
Joint Venture Accreditation Board  
Certified by:  
ISO 17025:2017 and ISO 9001:2015

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0204252415	Group	Atmospheric Pollution
Issue date/time	13.06.2025/ 16:16	Sub Group	Ambient Air Quality

### Report Issue to

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

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

Customer Registration No.	EPIC/OTH/0204	Sample Booking Number	EPIC-252415
Sample(s) Code	252415 (A) (B) (C) (D)	Sample Receipt (D/T)	10.06.2025/ 11:07

### Sampling References

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

### Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	50	Wind direction	300°-110°
-------------------	-------	------------------	----	------------	----	----------------	-----------

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

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

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

Test start date	10.06.2025/ 11:30	Test completion date	13.06.2025/ 11:10
-----------------	-------------------	----------------------	-------------------

### -Test Results-

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

-Test Results End -

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

Operational Status Unit was Operational During sampling.

Analyzed by - Archana Suman

  
Reviewed by  
(A.K. Suman)  
Technical Head



  
Issued by  
(Archana Suman)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



## EPIC | Analytical Test Certificate

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

### Report issued to

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

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

References of Quality Management System (QMS) of Toyota Diesel

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

#### Sample References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/006
Sampling Start (D/T)	08.06.2025/ 12:25	Sampling End (D/T)	09.06.2025/ 09:32
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume – 1 (NAAQM/36/2012-13)		
Description/conditions of sample	Recent samples/2 were fit for analysis		

#### **Environmental Condition during sampling**

Weather condition: Clear, Temperature: 26°C, Humidity: 50%, Wind direction: 300°-100°

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

S. Location A	Near Bunglapart Village	GPS coordinate	22° 32' 42.29" / 84°
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	22° 33' 11.75" / 84°
S. Location C	Near Utkarmit Rajkiya Prathmik Vidyalaya Bunglapart Village	GPS coordinate	22° 32' 46.59" / 84°
S. Location D	Near Utkarmit Rajkiya Prathmik Vidyalaya Dumrapart Village	GPS coordinate	22° 33' 38.14" / 84°

Units) in performance of the Advisory, including

Test start date 10.08.2020 11:15 Test completion date 13.08.2020 11:20

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-23) 2022	µg/m <sup>3</sup>	63.19	65.70	68.01	66.83	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS:5182 (P-24) 2019	µg/m <sup>3</sup>	28.51	26.96	28.87	31.05	60(24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	07.05	08.22	07.44	08.61	80(24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	19.03	17.97	20.08	21.14	80(24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	43.83	45.13	40.58	39.93	400(24 hr)
6.	Ozone (O <sub>3</sub> )	IS:5182 (P-08) 2019	µg/m <sup>3</sup>	27.10	25.94	28.27	30.20	100(1 hr)
7.	Lead (Pb)	IS:5183(P-22) 2019	µg/m <sup>3</sup>	BOL (MDL-0.1)	BOL (MDL-0.1)	BOL (MDL-0.1)	BOL (MDL-0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m <sup>3</sup>	BOL (MDL-0.1)	BOL (MDL-0.1)	BOL (MDL-0.1)	BOL (MDL-0.1)	
9.	Arsenic (As)	USEPA/40 C.3.2:1999	ng/m <sup>3</sup>	BOL (MDL-0.001)	BOL (MDL-0.001)	BOL (MDL-0.001)	BOL (MDL-0.001)	

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

Archived by - [Archives Gemini](#)

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

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

12  
3/25/13 16/23  
Issued by  
Robert Goss  
Emergency Room

Authorized Signatory  
EPIC LabTech Pvt. Ltd  
S. S. Kulkarni



# EPIC LabTech Private Limited

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

Tel: 0657-4066293  
98357 86677  
91049 72394  
epiclabtech@gmail.com

CIN - U74999JH2022PTC055555 Accredited by -  
Statewise State Pollution Control Board  
Certified by -  
ISO 9001:2015 and ISO 14001:2015

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical					
Report Unique ID	RL0204252416	Group	Atmospheric Pollution					
Issue date/time	13.06.2025/ 10:10	Sub Group	Ambient Air Quality					
<b>Report Issue to</b>								
<b>M/s - HINDALCO INDUSTRIES LIMITED</b> VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 <b>MONITORING SITE: PAKHAR 115.13 BAUXITE MINE</b>	Contact Person Mr. Ankit Das	Contact Number +919971034775	Email Id ankit.das@adityabirla.com					
	Order Date 31.03.2025/ 10:10	Order Number 13612313868						
<b>References of Quality Management System (Days of Issuability Date)</b>								
Customer Registration No.	EPIC/OTH/0204	Sample Booking Number	EPIC-252416					
Sample(s) Code	252416 (A) (B) (C) (D)	Sample Receipt (D/T)	10.06.2025/ 11:10					
<b>Sampling References</b>								
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036					
Sampling Start (D/T)	08.06.2025/ 12:25	Sampling End (D/T)	09.06.2025/ 09:32					
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team					
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)							
Description/condition of sample	Receipt sample(s) were fit for analysis.							
<b>Environmental Condition during sampling</b>								
Weather condition	Clear	Temperature (°C)	26					
		Humidity %	50					
		Wind direction	300°-100°					
<b>Sampling Location(s) with GPS coordinate(s)</b>								
S. Location A	Near Bunglapur Village	GPS coordinate	22°32'42.29" / 84°36'54.23"					
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	22°33'11.75" / 84°37'28.46"					
S. Location C	Near Utkarmit Raksha Prathmik Vidyalaya Bunglapur Village	GPS coordinate	22°32'46.99" / 84°36'00.39"					
S. Location D	Near Utkarmit Raksha Prathmik Vidyalaya Dumrapur Village	GPS coordinate	22°33'38.14" / 84°37'30.33"					
<b>Date(s) of performance of the laboratory activities</b>								
Test start date	10.06.2025/ 11:15	Test completion date	13.06.2025/ 11:20					
<b>-Test Results-</b>								
Sl.	Test Parameters	Method used	Unit	A	B	C	D	Limits
1.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS:5182(P-11) 2006	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12) 2004	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/HAR/01/00	mg/m <sup>3</sup>	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-
<b>-Test Results End -</b>								

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

Operational Status Unit was Operational During sampling.

Analyzed by - AK Seha



  
Reviewed by  
(A.K. Seha)  
Technical Head

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



# EPIC LabTech Private Limited

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

• 0651-4666292  
• 98357 86477  
• 93649 73994  
• [epiclabtech@gmail.com](mailto:epiclabtech@gmail.com)

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

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0204252417	Group	Atmospheric Pollution
Issue date/time	13.06.2025/ 16:21	Sub Group	Work Zone Noise
<b>Report Issue to</b>			
<b>M/s - HINDALCO INDUSTRIES LIMITED</b> VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 <b>MONITORING SITE: PAKHAR 115.13 BAUXITE MINE</b>	<b>Contact Person</b> Mr. Ankit Das <b>Contact Number</b> +91 9971034775 <b>Email Id</b> <a href="mailto:ankit.das@adityabirla.com">ankit.das@adityabirla.com</a> <b>Order Date</b> 31.03.2025/ 10:10 <b>Order Number</b> 13612313668		
<b>References of Quality Management System (Date of Issuability Date)</b>			
Customer Registration No.	EPIC/OTH/0204	Sample Booking Number	EPIC-252417
Sample(s) Code	252417 (A) (B)	Sample Receipt (D/T)	10.06.2025/ 11:11
<b>Sampling References</b>			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D)	07.06.2025	Sampling End (D)	07.06.2025
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 9989:1981 (RA 2020) & CPCB Method S.O.50 (E) dated 11/01/2010		
Description/condition of sample	Receipt sample(s) were fit for analysis.		
<b>Environmental Condition during sampling</b>			
Weather condition	Clear	Temperature (°C)	26
		Humidity %	50
		Wind direction	300°-110°
<b>Sampling Location(s) with GPS coordinate(s)</b>			
S. Location A	Near Quarry No-7	GPS coordinate	23° 33' 06.11" / 84° 37' 06.07"
S. Location B	Near Mine Quarry No-3	GPS coordinate	23° 32' 25.09" / 84° 35' 58.00"
<b>Date(s) of performance of the laboratory activities</b>			
Test start date	10.06.2025/ 11:20	Test completion date	13.06.2025/ 15:25
<b>-Test Results-</b>			
<b>Sl.</b>	<b>Test Parameters</b>	<b>Method used</b>	<b>Results</b>
1.	L <sub>eq</sub>	IS: 9989:1981	dB (A)      A      B      Limits
			74.4      72.3      85
<b>--Test Results End --</b>			
<b>Prescribed Limit</b>			
NOSH - Publication No. 96-128 in 1972, Table 1-1			
Unit was Operational During sampling.			
Analyzed by - AK Das			
			
Reviewed by (AK Das) Technical Head			
			
Issued by (AK Das) Quality Head			
<b>Authorized Signatory</b> <b>EPIC LabTech Pvt. Ltd.</b> Ranchi, Jharkhand			



Page 1 of 1

**Important Notes:** 1. The laboratory accepts responsibility for the content of this report. 2. The report is performed at laboratory's permanent facility of specific environmental conditions at test time and results relate only to the sample tested at prescribed date & time. 3. The Test report shall not be reproduced full or in part & must 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. Testability of EPIC LabTech Pvt. Ltd. will be limited to limited extent only. 6. All results are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges. 7. Options does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any claim by user 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).



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

Tel: 0651 4586232  
98351 94677  
91943 72254  
epiclabtech@gmail.com

CIN - U74999MH2008PTC078885  
PAN - AAHCES87CM  
GST - 25AAHCES87CM123

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

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000540	Discipline	Chemical
Report Unique ID	RL02312528041	Group	Atmospheric Pollution
Issue date/time	14.07.2025/ 12:20	Sub Group	Ambient Air Quality

## Report Issue to

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

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

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

Customer Registration No.	EPIC/OTH/0231	Sample Booking Number	EPIC-2528041
Sample(s) Code	2528041 (A) (B) (C) (D)	Sample Receipt (D/T)	09.07.2025/ 11:36

## Sampling References

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

## Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	60	Wind direction	220°-40°
-------------------	--------	------------------	----	------------	----	----------------	----------

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

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

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

Test start date	09.07.2025/ 12:11	Test completion date	14.07.2025/ 11:10
-----------------	-------------------	----------------------	-------------------

## -Test Results-

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-23) 2022	µg/m <sup>3</sup>	84.19	79.46	82.36	75.47	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS:5182 (P-24) 2019	µg/m <sup>3</sup>	36.36	34.25	35.79	31.97	60 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	08.73	09.07	09.47	10.24	80 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2022	µg/m <sup>3</sup>	22.14	22.04	25.25	23.16	80 (24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	49.30	50.42	46.22	44.26	400 (24 hr)
6.	Ozone (O <sub>3</sub> )	IS:5182 (P-09) 2019	µg/m <sup>3</sup>	37.85	36.26	34.35	31.80	180 (1 hr)
7.	Lead (Pb)	IS:5182 (P-22) 2019	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182 (P-26) 2020	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)
9.	Arsenic (As)	USEPA 10.3.2:2009	ng/m <sup>3</sup>	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)

-Test Results End -

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

Analyzed by - Vishal Kumar



Reviewed by  
(V.K. Kumar)  
Technical Head



Issued by  
(Ankit Das)  
Authorized Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.

Branch: Jaiparganj

Page 1 of 1



## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical					
Report Unique ID	RL02312528041	Group	Atmospheric Pollution					
Issue date/time	14.07.2025/ 12:20	Sub Group	Ambient Air Quality					
<b>Report Issue to</b>								
<b>M/s - HINDALCO INDUSTRIES LIMITED</b> VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST-LOHARDAGA, STATE-JHARKHAND, INDIA-835302 <b>MONITORING SITE : PAKHAR 115.13 BAUXITE MINE</b>	Contact Person Mr. Ankit Das	Contact Number +91 9871034775	Email Id ankit.das@adityabirla.com					
	Order Date 31.03.2025/ 10:10	Order Number 13612313868						
<b>References of Quality Management System (Steps of Traceability Detail)</b>								
Customer Registration No.	EPIC/OTH/0231	Sample Booking Number	EPIC-2528041					
Sample(s) Code	2528041 (A) (B) (C) (D)	Sample Receipt (D/T)	09.07.2025/ 11:38					
<b>Sampling References</b>								
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036					
Sampling Start (D/T)	06.07.2025/ 12:15	Sampling End (D/T)	07.07.2025/ 09:10					
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team					
Sampling method used	IS 5182 and CPCB-Air Manual Volume - 1 (NAAQM/36/2012-13)							
Description/condition of sample	Receipt sample(s) were fit for analysis.							
<b>Environmental Condition during sampling</b>								
Weather condition	Cloudy	Temperature (°C)	25					
		Humidity %	60					
		Wind direction	220°-40°					
<b>Sampling Location(s) with GPS coordinate(s)</b>								
S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42" / 84° 36' 00.33"					
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88" / 84° 36' 06.71"					
S. Location C	Near Mine Block-B, Quarry No. - 6	GPS coordinate	23° 32' 51.14" / 84° 36' 56.76"					
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 05.36" / 84° 37' 04.76"					
<b>Date(s) of performance of the laboratory activities</b>								
Test start date	09.07.2025/ 12:11	Test completion date	14.07.2025/ 14:10					
<b>-Test Results-</b>								
Sl.	Test Parameters	Method used	Unit	A	B	C	D	Limits
1.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS:5182(P-11) 2006	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12) 2004	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AN/01/00	mg/m <sup>3</sup>	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-
<b>-Test Results End -</b>								

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Kumar



  
Reviewed by  
Vishal Kumar  
Technical Test





TC-12887

## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000641	Discipline	Chemical
Report Unique ID	RL02312528942	Group	Atmospheric Pollution
Issue date/time	14.07.2025/ 12:22	Sub Group	Ambient Air Quality

## Report Issue to

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

## References of Quality Management System (Copy of Traceability Document)

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

## Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	09.07.2025/ 11:37	Sampling End (D/T)	09.07.2025/ 11:41
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt: sample(s) were fit for analysis.		

## Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	60	Wind direction	220°-40°
-------------------	--------	------------------	----	------------	----	----------------	----------

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

S. Location A	Near Bunglapur Village	GPS coordinate	23° 32' 42.29" / 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.76" / 84° 37' 26.46"
S. Location C	Near Utkarsh Rajkiya Prashiksha Vidyalaya Bunglapur Village	GPS coordinate	23° 32' 46.89" / 84° 36' 00.39"
S. Location D	Near Utkarsh Rajkiya Prashiksha Vidyalaya Dumrapur Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.33"

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

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

## -Test Results-

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM <sub>10</sub> )	IS:5182 (P-23) 2022	µg/m <sup>3</sup>	62.45	64.38	67.57	65.63	100 (24 hr)
2.	Fine Particulate Matter (PM <sub>2.5</sub> )	IS:5182 (P-24) 2019	µg/m <sup>3</sup>	27.59	29.16	28.07	29.44	60 (24 hr)
3.	Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-02) 2023	µg/m <sup>3</sup>	06.82	07.97	07.20	07.95	80 (24 hr)
4.	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-06) 2023	µg/m <sup>3</sup>	18.95	16.86	20.00	21.02	80 (24 hr)
5.	Ammonia (NH <sub>3</sub> )	IS:5182 (P-25) 2018	µg/m <sup>3</sup>	42.58	44.26	39.78	38.65	400 (24 hr)
6.	Ozone (O <sub>3</sub> )	IS:5182 (P-08) 2019	µg/m <sup>3</sup>	26.08	24.81	27.35	29.58	180 (1 hr)
7.	Lead (Pb)	IS:5182 (P-22) 2019	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0 (24 hr)
8.	Nickel (Ni)	IS:5382 (P-26) 2020	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)
9.	Arsenic (As)	USEPA 10.2.2:1999	ng/m <sup>3</sup>	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)

## -Test Results End -

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mongaraj

  
 Reviewed by  
(E.K. Kumar)  
Technical Head

  
 Issued by  
(Deepak Saini)  
Laboratory Head

Authorized Signatory

EPIC LabTech Private Limited

14.07.2025/ 11:11

Page 2 of 1

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



## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02312528042	Group	Atmospheric Pollution
Issue date/time	14.07.2025/ 12:22	Sub Group	Ambient Air Quality

## Report Issue to

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

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

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

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

## Sampling References

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

## Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	60	Wind direction	220°-40°
-------------------	--------	------------------	----	------------	----	----------------	----------

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

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29" / 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75" / 84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prachinik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prachinik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.30"

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

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

## -Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS:5182(P-11) 2006	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12) 2004	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/5091AP/01/00	mg/m <sup>3</sup>	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-

## -Test Results End -

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Kumar

  
Reviewed by  
(Vishal Kumar)  
Technical Head



  
Issued by  
(Vishal Kumar)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



Address:  
C/o - R.K. Tripathi, minapuri  
Road No. - 3, Ranchi  
Jharkhand - 834005, India

0651 4866292  
98357 89677  
93049 71994  
nileshmaitra@gmail.com

CIN - U74999IN222PTC055885  
PAN - AAHCCE361TM  
SET - 23AAHCCE361TM12X

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

TC-12867

## Sampled Test Certificate

Unique Lab Report No.	TC1286725000000542	Discipline	Chemical
Report Unique ID	RL02312528043	Group	Water
Issue date/time	14.07.2025/ 12:24	Sub Group	Drinking Water

## Report Issue to

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

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

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

## Sampling References

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

## Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	60	Wind direction	220°-40°
-------------------	--------	------------------	----	------------	----	----------------	----------

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

S. Location A	R.O Plant	GPS coordinate	23° 32' 24.47" / 64° 36' 30.05"
---------------	-----------	----------------	---------------------------------

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

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

## --Test Result--

Sl.	Test Parameters	Method used	Unit	Results	Acceptance limit	Permissible limit
1.	pH value at 25.1°C	IS 3025 (P-11) 2022	-	6.61	5.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 2004	NTU	0.62	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	<5	5	15
4.	Odour	IS 3025 (P-05) 2018	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	180.0	500	2000
7.	Chloride (as Cl <sup>-</sup> )	IS 3025 (P-32) 2019	mg/l	37.45	250	1000
8.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23) 2019	mg/l	94.00	300	300
9.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21) 2009	mg/l	146.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	33.27	75	200
11.	Free Residual Chlorine	IS 3025 (P-36) 1998	mg/l	BDL (NDL-0.4)	0.7	1
12.	Sulphate (as SO <sub>4</sub> <sup>2-</sup> )	IS 3025 (P-24/Sec-1) 2022	mg/l	8.00	200	400
13.	Nitrate (as NO <sub>3</sub> <sup>-</sup> )	APHA 4520 B 2023	mg/l	2.03	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL (NDL-0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3520 Mg E 2023	mg/l	14.09	30	100

Page 1 of 2

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



## Analytical Test Certificate

Unique Lab Report No.	TC1288725000000842	Discipline	Chemical
Report Unique ID	RL02312528043	Group	Water
Issue date/time	14.07.2025/ 12:24	Sub Group	Drinking Water

## Report Issue to

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

Contact Person  
Contact Number  
Email Id  
Order Date  
Order Number

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

## Group-Hesidues and Contaminants in Water

				Sub Group- Trace Metals Elements		
16.	Copper (as Cu)	APHA 2111-B 2023	mg/l	BDL(MDL-0.2)	0.05	1.5
17.	Iron (as Fe)	APHA 2111-B 2023	mg/l	BDL(MDL-0.1)	1.0	No relaxation
18.	Lead (as Pb)	APHA 2111-B 2023	mg/l	BDL(MDL-0.01)	0.01	No relaxation
19.	Cadmium (as Cd)	APHA 2111-B 2023	mg/l	BDL(MDL-0.003)	0.003	No relaxation
20.	Total Chromium (as Cr)	APHA 2111-B 2023	mg/l	BDL(MDL-0.05)	0.05	No relaxation
21.	Nickel (as Ni)	APHA 2111-B 2023	mg/l	BDL(MDL-0.02)	0.02	No relaxation
22.	Total Arsenic (as As)	APHA 2114-B 2023	mg/l	BDL(MDL-0.005)	0.01	0.05
23.	Selenium (as Se)	APHA 2114-B 2023	mg/l	BDL(MDL-0.005)	0.01	No relaxation
24.	Manganese (as Mn)	APHA 2111-B 2023	mg/l	BDL(MDL-0.09)	0.1	0.3
25.	Zinc (as Zn)	APHA 2111-B 2023	mg/l	BDL(MDL-0.04)	5	15

--Test result End--

Prescribed Limit

IS 10500:2021

Operational Status

Unit was Operational During sampling.

Analysed by - Vishal Mengraj



Approved by  
(B.K. Kumar)  
Technical Head

Issued by  
(Bimal Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





## Environmental Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02312528043	Group	Water
Issue date/time	14.07.2025/ 12:24	Sub Group	Drinking Water

## Report Issue to

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

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

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

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

## Sampling References

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

## Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	60	Wind direction	220°-40°
-------------------	--------	------------------	----	------------	----	----------------	----------

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

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

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

Test start date	09.07.2025/ 12:20	Test completion date	14.07.2025/ 16:00
-----------------	-------------------	----------------------	-------------------

## -Test Result-

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

## Group-Residues and Contaminants in Water

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

## Group-Residues and Contaminants in Water

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

Contracted Note | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility of specific environmental conditions as method required and results made only to the sample tested is presented Date & time | 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law | 4. Any complaint about this report should be communicated in writing within 10 days of its issue | 5. Test facility of EPIC LabTech Pvt. Ltd. will be limited to limited amount only | 6. All samples are subject to basic jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges | 7. Operator does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any责任 for use or misuse of this report | 8. When the results are from external provider are marked as "extern" | 9. Abbreviations - BDL (Below Detectable Limit), MDL (Detectable Limit), SDQ (Sum of Quantities) | Page 1 of 3



## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02312528043	Group	Water
Issue date/time	14.07.2025/ 12:24	Sub Group	Drinking Water

## Report Issue to

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

Contact Person  
Contact Number  
Email Id  
Order Date  
Order Number

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

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

--Test result End --

Prescribed Limit  
Operational Status  
Analysed by - Vimal Mangaraj

IS 10500:2021  
Unit was Operational During sampling

  
Reviewed by  
(EX. Aman)  
Technical Head

  
Issued by  
(Ankut Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





# EPIC LabTech Private Limited

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

Tel: 0651 4886292  
98357 88677  
93049 72994  
Email: [epiclabtech@gmail.com](mailto:epiclabtech@gmail.com)

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

## Environmental Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL02312528044	Group	Water
Issue date/time	14/07/2025/ 12:26	Sub Group	Drinking Water

### Report Issue to

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

Contact Person  
Mr. Ankit Das  
Contact Number  
+91 9971034775  
Email Id  
[ankit.das@adityabirla.com](mailto:ankit.das@adityabirla.com)  
Order Date  
31/03/2025/ 10:10  
Order Number  
13812313868

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

Customer Registration No.	EPIC/OTH/0231	Sample Booking Number	EPIC-2528044
Sample(s) Code	2528044	Sample Receipt (D/T)	09/07/2025/ 11:38

### Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	07/07/2025/ 14:10	Sampling End (D/T)	07/07/2025/ 14:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	60	Wind direction	220°-40°
-------------------	--------	------------------	----	------------	----	----------------	----------

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

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

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

Test start date	09/07/2025/	Test completion date	14/07/2025/ 10:05
-----------------	-------------	----------------------	-------------------

### --Test Result--

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

### --Test result End --

### Prescribed Limit

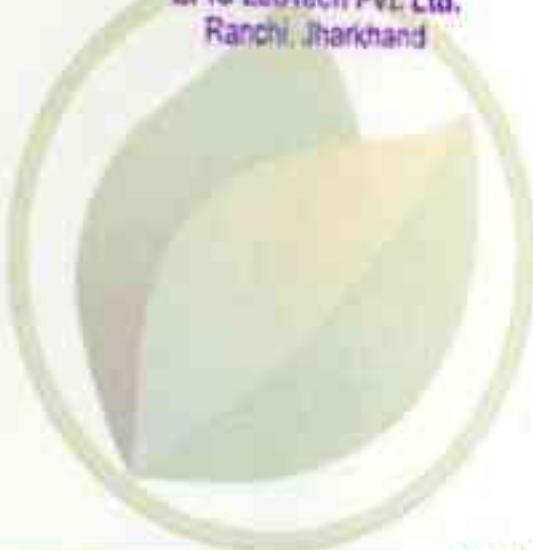
IS 10500:2021  
Unit was Operational During sampling.

Analyzed by -Sujata Kumar

  
Reviewed by  
(SK Kumar)  
Technical Head

  
Reviewed by  
(Vishal Kumar)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand







## Environmental Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical					
Report Unique ID	RL02632534001	Group	Atmospheric Pollution					
Issue date/time	23.08.2025/ 13:00	Sub Group	Ambient Air Quality					
<b>Report Issue to</b>								
<b>M/s - HINDALCO INDUSTRIES LIMITED</b> VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST-LOHARDAGA, STATE-JHARKHAND, INDIA-835302 <b>MONITORING SITE : PAKHAR 115.13 BAUXITE MINE</b>	Contact Person Mr. Ankit Das Contact Number +91 9871034775 Email Id ankit.das@adityabirla.com Order Date 31.03.2025/ 10:10 Order Number 13612313868							
<b>References of Quality Management System (Class of Traceability Data)</b>								
Customer Registration No.	EPIC/OTH/0263	Sample Booking Number	EPIC-2534001					
Sample(s) Code	2534001 (A) (B) (C) (D)	Sample Receipt (D/T)	18.08.2025/ 10:13					
<b>Sampling References</b>								
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036					
Sampling Start (D/T)	15.08.2025/ 12:11	Sampling End (D/T)	16.08.2025/ 09:19					
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team					
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)							
Description/condition of sample	Receipt sample(s) were fit for analysis.							
<b>Environmental Condition during sampling</b>								
Weather condition	Cloudy	Temperature (°C)	27					
		Humidity %	66					
		Wind direction	0°-180°					
<b>Sampling Location(s) with GPS coordinate(s)</b>								
S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42" / 84° 36' 00.33"					
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88" / 84° 36' 06.71"					
S. Location C	Near Mine Block-B, Quarry No -B	GPS coordinate	23° 32' 51.14" / 84° 36' 58.76"					
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 05.36" / 84° 37' 04.76"					
<b>Data(s) of performance of the laboratory activities</b>								
Test start date	18.08.2025/ 10:33	Test completion date	23.08.2025/ 12:00					
<b>-Test Results-</b>								
Sl	Test Parameters	Method used	Unit	A	B	C	D	Limits
1.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS:5182(P-11) 2006	µg/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12) 2004	ng/m <sup>3</sup>	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01/00	mg/m <sup>3</sup>	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-
<b>-Test Results End -</b>								

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangat

Reviewed by  
(EX Kumar)  
Technical Head





## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02632534002	Group	Atmospheric Pollution
Issue date/time	23.08.2025/ 13:00	Sub Group	Ambient Air Quality

## Report Issue to

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

## References of Quality Management System (Copy of Traceability Chart)

Customer Registration No.	EPIC/OTH/0263	Sample Booking Number	EPIC-2534002
Sample(s) Code	2534002 (A) (B) (C) (D)	Sample Receipt (D/T)	18.08.2025/ 10:14

## Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.08.2025/ 12:15	Sampling End (D/T)	17.08.2025/ 09:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

## Environmental Condition during sampling

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

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

S. Location A	Near Bunglapart Village	GPS coordinate	22° 32' 42.29" / 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75" / 84° 37' 26.46"
S. Location C	Near Utkarsh Rajkiya Prachinik Vidyalaya Bunglapart Village	GPS coordinate	22° 32' 46.59" / 84° 36' 00.39"
S. Location D	Near Utkarsh Rajkiya Prachinik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.33"

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

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

## -Test Results-

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

-Test Results End-

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangarji

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

Authorized Signatory

EPIC LabTech Pvt. Ltd.,  
Ranchi, Jharkhand

**Sample Details & Certificate**

Unique Lab Report No.	TC1288725000000997	Discipline	Chemical
Report Unique ID	PL02532534003	Group	Water
Issue date/time	23.08.2025/ 13:06	Sub Group	Ground Water

**Report Issue to**

<b>M/s - HINDALCO INDUSTRIES LIMITED</b> VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST - LOHARDAGA, STATE - JHARKHAND, INDIA 835302 <b>MONITORING SITE : PAKHAR 115.13 BAUXITE MINE</b>	Contact Person	Mr. Ankit Das
	Contact Number	+91 9971034775
	Email Id	<a href="mailto:ankit.das@adityabirla.com">ankit.das@adityabirla.com</a>
	Order Date	31.03.2025/ 10:10
	Order Number	13612313888

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

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

**Sampling References**

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	15.08.2025/ 16:00	Sampling End (D/T)	15.08.2025/ 16:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample			Receipt sample(s) were fit for analysis.

**Environmental Condition during sampling**

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

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

5. Location A	Near Utkarsh Rupiya Prathmik Vidyalaya Dumka part Village	GPS coordinate	23°33'36.90" / 84°37'27.19"
---------------	---	----------------	-----------------------------

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

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

**-Test Result-**

Sl.	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible limit
1.	pH value at 25.6°C	IS 3025 (P-11) 2022	-	6.71	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.82	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	<5	5	15
4.	Odour	IS 3025 (P-05) 2018	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	275.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	45.33	200	1000
8.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23) 2019	mg/l	128.00	200	600
9.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21) 2009	mg/l	168.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	39.28	75	200
11.	Free Residual Chlorine	IS 3025 (P-25) 1986	mg/l	BDL(MDL-0.4)	0.2	1
12.	Sulphate (as SO <sub>4</sub> )	IS 3025 (P-24/Sec-1) 2022	mg/l	13.10	200	400
13.	Nitrate (as NO <sub>3</sub> )	APHA 4500-N 2023	mg/l	03.39	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL(MDL-0.001)	0.001	0.003
15.	Magnesium (as Mg)	APHA 2500-Mg E 2023	mg/l	17.01	30	100



Address:  
C/o - R.K. Tripathi, 104 Apartment,  
Road No. - 5, Ranchi,  
Jharkhand - 834003, India

T. 0651 4888252  
E. 09357 886777  
M. 93849 72934  
O. info@epiclabtech@gmail.com

CIN - U74999JH2002PTC079485  
RAN - AAHC3671M  
GST - 28AAHC3671M12X

Admitted by -  
Ranu, via certificate Number 1C - 12887  
Shrikhandi, State Pollution Control Board  
Certified by -  
MOI - 800012015 and 804 - 4920012015

## An ISO 17025 Certified Lab Certificate

Unique Lab Report No.	TC1288725000000997	Discipline	Chemical
Report Unique ID	RL02632534003	Group	Water
Issue date/time	23.08.2025/ 13:06	Sub Group	Ground Water

## Report Issue to

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

Contact Person  
Contact Number  
Email Id  
Order Date  
Order Number

Mr. Ankit Das  
+91 9971034775  
ankit.das@adityabirla.com  
31.03.2025/ 10:10  
13812313868

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

-Test result End -

Prescribed Limit

Operational Status

Analysed by - Pappu Kumar



IS 10500:2023

(Unit was Operational During sampling.

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

Page 2 of 2

Contracted Notes : 1. The laboratory accept 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 15 days of its issue. 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to limited 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. Operator does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accept any claim by use or misuse of this report. 8. Where the results are from external provider are marked as \* mark. 9. Abbreviation - BDL, Detection Limit; MDL (Minimum Detectable Limit); LoQ (Limit of Quantification).



## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02632534003	Group	Water
Issue date/time	23.08.2025/ 13:06	Sub Group	Ground Water

## Report issue to

<b>M/s - HINDALCO INDUSTRIES LIMITED</b> VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST-LOHARDAGA, STATE-JHARKHAND, INDIA-835302 <b>MONITORING SITE : PAKHAR 115-13 BAUXITE MINE</b>	Contact Person	Mr. Ankit Das
	Contact Number	+91 9971034775
	Email Id	ankit.das@adityabirla.com
	Order Date	31.03.2025/ 10:10
	Order Number	13612313868

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

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

## Sampling References

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

## Environmental Condition during sampling

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

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

5. Location A	Near Utkarsh Raksha Prathmik Vidyalaya Dumrapur Village	GPS coordinate	22°33'36.90" / 84°37'27.19"
---------------	---	----------------	-----------------------------

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

Test start date	18.08.2025/ 10:35	Test completion date	23.08.2025/ 11:15
-----------------	-------------------	----------------------	-------------------

## -Test Result-

Sl	Test Parameters	Method used	Unit	Results		Acceptable Limit	Permissible limit
				Result	SDL/MDL		
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	SDL/MDL-0.1	1.0	1.5	

## Group-Residues and Contaminants in Water

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

## Group-Residues and Contaminants in Water

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



## Environmental Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical		
Report Unique ID	RL02632534003	Group	Water		
Issue date/time	23.08.2025/ 13:06	Sub Group	Ground Water		
<b>Report Issue to</b>					
<b>M/s - HINDALCO INDUSTRIES LIMITED</b> VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST-LOHARDAGA, STATE-JHARKHAND, INDIA-835302		Contact Person	Mr. Ankit Das		
<b>MONITORING SITE : PAKHAR 115.13 BAUXITE MINE</b>		Contact Number	+91 9971034775		
		Email Id	ankit.das@adityabirla.com		
		Order Date	31.03.2025/ 10:10		
		Order Number	13612313868		
15. Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	MDL	BDL(MDL-0.5)	2.0	No relaxation
16. Malathion	EPIC/LAB/SOP/WA/01/00	MDL	BDL(MDL-0.5)	190.0	No relaxation
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	MDL	BDL(MDL-0.2)	0.3	No relaxation
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	MDL	BDL(MDL-0.5)	1.0	No relaxation
19. Phorate	EPIC/LAB/SOP/WA/01/00	MDL	BDL(MDL-0.5)	2.0	No relaxation
20. DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	MDL	BDL(MDL-0.5)	1.0	No relaxation
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	MDL	BDL(MDL-0.05)	0.4	No relaxation

-Test result End -

Prescribed Limit

15.10500/2021

Operational Status

Unit was Operational During sampling.



  
Reviewed by  
(Pappa Kumar)  
Technical Head

  
Issued by  
(Ankit Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



# EPIC LabTech Private Limited

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

• 0651 4886293  
• 98357 88877  
• 93843 72294  
• epiclabtech@gmail.com

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

## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL02632534004	Group	Water
Issue date/time	23.08.2025/ 13:09	Sub Group	Ground Water

### Report Issue to

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

Contact Person  
Mr. Ankit Das  
Contact Number  
+91 9671034775  
Email Id  
ankit.das@adityabirla.com  
Order Date  
31.03.2025/ 10:10  
Order Number  
13612313868

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

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

### Sampling References

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

### Environmental Condition during sampling

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

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

S. Location A	Near Utkarmit Rajkya Prathmik Vidyalaya Dumrasapar Village	GPS coordinate	23°33' 36.90" / 84° 37' 27.19"
---------------	--	----------------	--------------------------------

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

Test start date	18.08.2025/ 10:30	Test completion date	23.08.2025/ 11:15
-----------------	-------------------	----------------------	-------------------

### —Test Result—

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

### —Test result End —

Prescribed Limit  
IS 10500:2021

Operational Status  
Unit was Operational During sampling.

Analyzed by - Sojata Kumar

  
Reported by  
(S. Kumar)  
Technical Head

  
Issued by  
(Ankit Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand





## Environmental Test Certificate

Unique Lab Report No.	TC1288725000000998	Discipline	Chemical
Report Unique ID	RL02632534005	Group	Pollution & Environment
Issue date/time	23.08.2025/ 13:12	Sub Group	Waste Water (Effluent)

## Report Issue to

<b>M/s - HINDALCO INDUSTRIES LIMITED</b> VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 <b>MONITORING SITE : PAKHAR 115.13 BAUXITE MINE</b>	Contact Person Mr. Ankit Das Contact Number +919971034775 Email id ankit.das@adityabirla.com Order Date 31.03.2025/ 10:10 Order Number 13612313868
--	---

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

Customer Registration No.	EPIC/OTH/0263	Sample Booking Number	EPIC-2534005
Sample(s) Code	2534005	Sample Receipt (D/T)	18.08.2025/ 10:16

## Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	15.08.2025/ 15:30	Sampling End (D/T)	15.08.2025/ 16:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

## Environmental Condition during sampling

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

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

S. Location A	Work Shop (Outlet)	GPS coordinate	23° 32' 25.91" E 84° 36' 34.82"
---------------	--------------------	----------------	---------------------------------

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

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

## -Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25.9°C	IS 3025 (P-11) 2022	-	6.61	6.5-8.5
2.	BOD (3 days at 27°C)	IS 3025 (P-44) 2000	mg/l	12.00	-
3.	COD	IS 3025 (P-56) 2006	mg/l	80.00	150.0
4.	Oil & Grease	IS 3025 (P-36) 2021	mg/l	BDL(MDL-04)	10.0
5.	Total Suspended Solid	IS 3025 (P-17) 2022	mg/l	42.00	50.0
6.	Phosphate	IS 3025 (P-31/Sec-1) 2022	mg/l	0.58	-
7.	Zinc	APHA 3111B 2023	mg/l	BDL(MDL-04)	-

## -Test result End -

Prescribed Limit  
Operational Status  
Analyzed by - Pappu Kumar

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

UNIT was Operational During Sampling.

  
Reviewed by  
(S.N. Kumar)  
Technical Head

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





## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02632534005	Group	Pollution & Environment
Issue date/time	23.08.2025/ 13:12	Sub Group	Waste Water (Effluent)

## Report Issue to

<b>M/s - HINDALCO INDUSTRIES LIMITED</b> VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 <b>MONITORING SITE: PAKHAR 115.13 BAUXITE MINE</b>	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/0263	Sample Booking Number	EPIC-2534005
Sample(s) Code	2534005	Sample Receipt (D/T)	18.08.2025/ 10:16

## Sampling References

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

## Environmental Condition during sampling

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

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

S. Location A	Work Shop (Outlet)	GPS coordinate	23° 32' 25.91" N 84° 36' 34.82" E
---------------	--------------------	----------------	-----------------------------------

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

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

## -Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Total Dissolve Solids (TDS)	IS 3025 (P-16) 2023	mg/l	220.00	-
2.	Dissolve Oxygen (DO)	IS 3025 (P-36) 2006	mg/l	0.9	-

## -Test result End -

Prescribed Limit  
Operational Status  
Analyzed by - Pappu Kumar

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

  
Analyzed by  
(Pappu Kumar)  
Technical Head

  
Issued by  
(Ankit Das)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

**Environmental Test Report**

Unique Lab Report No.	TC1288725000001178	Discipline	Chemical
Report Unique ID	R102912537017	Group	Atmospheric Pollution
Issue date/time	13.09.2025/ 17:12	Sub Group	Ambient Air Quality

**Report Issue to**

<b>M/s - HINDALCO INDUSTRIES LIMITED</b> VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA-835302 <b>MONITORING SITE : PAKHAR 115.13 BAUXITE MINE</b>	Contact Person Mr. Ankit Das
	Contact Number +91 9871034775
	Email Id ankit.das@adityasbirla.com
	Order Date 31.03.2025/ 10:10
	Order Number 13612313866

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

Customer Registration No.	EPIC/OTH/0291	Sample Booking Number	EPIC-2537017
Sample(s) Code	2537017 (A) (B) (C) (D)	Sample Receipt (D/T)	13.09.2025/ 11:14

**Sampling References**

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	08.09.2025/ 12:12	Sampling End (D/T)	08.09.2025/ 09:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

**Environmental Condition during sampling**

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

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

S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42" / 84° 00' 00.33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88" / 84° 06' 06.71"
S. Location C	Near Mine Block-B, Quarry No. - 6	GPS coordinate	23° 32' 51.14" / 84° 36' 58.76"
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 05.36" / 84° 37' 04.76"

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

Test start date	11.08.2025/ 11:34	Test completion date	13.09.2025/ 16:00
-----------------	-------------------	----------------------	-------------------

**Test Results**

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

-Test Results End -

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

Analyzed by - Vishal Mangat

  
 Received by  
(S.K. Kumar)  
Technical Head

  
 Issued by  
(S.K. Kumar)  
Laboratory Head

**Authorized Signatory**  
 EPIC LabTech Pvt. Ltd.

Page 1 of 1

Disclaimer Note : 1. The laboratory accepts responsibility for content of this report. 2. Test performed at laboratory's permanent facility at specified time/temperature 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 recovered amount only. 6. All responses are subject to Acceptable and maximum liability of the laboratory does not exceed the testing and consulting charges. 7. Optics does not imply measurement of the tested product by laboratory. Under no circumstances, laboratory accepts any claim by user of issue of this report. 8. When the results are from external provider are marked as \* mark. 9. Abbreviation - BDL (Below Detection Limit), MDL (Detection Limit), LQ (Limit of Quantification).



## Identified Test Category

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RID2912537017	Group	Atmospheric Pollution
Issue date/time	13.09.2025/ 17:12	Sub Group	Ambient Air Quality

## Report Issue to

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

Contact Person: Mr. Ankit Das  
Contact Number: +919971034775  
Email Id: ankit.das@adityabirla.com  
Order Date: 31.03.2025/ 10:10  
Order Number: 13612313868

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

Customer Registration No.	EPIC/OTH/0291	Sample Booking Number	EPIC-2537017
Sample(s) Code	2537017 (A) (B) (C) (D)	Sample Receipt (D/T)	13.09.2025/ 11:14

## Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	08.09.2025/ 12:12	Sampling End (D/T)	09.09.2025/ 09:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

## Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	65	Wind direction	0°-180°
-------------------	--------	------------------	----	------------	----	----------------	---------

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

S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23°32'24.42" / 84°36'00.33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23°32'18.88" / 84°36'06.71"
S. Location C	Near Mine Block B, Quarry No. - 5	GPS coordinate	23°32'51.14" / 84°36'58.76"
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23°33'05.36" / 84°37'04.76"

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

Test start date	11.08.2025/ 11:34	Test completion date	13.09.2025/ 16:00
-----------------	-------------------	----------------------	-------------------

## -Test Results-

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

-Test Results End -

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

Operational Status: Unit was Operational During sampling.

Analysed by: Vishal Mangat

Reviewed by:  
(E.K. Kumar)  
Technical HeadIssued by:  
(Ankit Das)  
Laboratory HeadAuthorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand



## Analytical Test Certificate

Unique Lab Report No.	TC1286725000001179	Discipline	Chemical
Report Unique ID	RL02912537018	Group	Atmospheric Pollution
Issue date/time	13.09.2025/ 17:15	Sub Group	Ambient Air Quality

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

References of Quality Management System (Steps of Transparency Chart)			
Customer Registration No.	EPIC/OTH/0291	Sample Booking Number	EPIC-2537018
Sample(s) Code	2537018 (A) (B) (C) (D)	Sample Receipt (D/T)	11.09.2025/ 11:15

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

Environmental Condition during sampling							
Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	0°-180°

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

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

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

## -Test Results End-

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

Analysed by - Ishita Kargave

  
Reviewed by  
(S.K. Kargave)  
Technical Head

  
Issued by  
(S.K. Kargave)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.



## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical					
Report Unique ID	PL02912537018	Group	Atmospheric Pollution					
Issue date/time	13.09.2025/ 17:15	Sub Group	Ambient Air Quality					
<b>Report Issue to</b>								
<b>M/s - HINDALCO INDUSTRIES LIMITED</b> VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 <b>MONITORING SITE : PAKHAR 115.13 BAUXITE MINE</b>	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						
<b>References of Quality Management System (QMS) / Traceability Data</b>								
Customer Registration No.	EPIC/OTH/0293	Sample Booking Number	EPIC-2537018					
Sample(s) Code	2537018 (A) (B) (C) (D)	Sample Receipt (D/T)	13.09.2025/ 11:15					
<b>Sampling References</b>								
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036					
Sampling Start (D/T)	09.09.2025/ 12:17	Sampling End (D/T)	10.09.2025/ 10:14					
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team					
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)							
Description/condition of sample	Receipt sample(s) were fit for analysis.							
<b>Environmental Condition during sampling</b>								
Weather condition	Cloudy	Temperature (°C)	27					
		Humidity %	66					
		Wind direction	0°-180°					
<b>Sampling Location(s) with GPS coordinate(s)</b>								
S. Location A	Near Bunglapur Village	GPS coordinate	23° 32' 42.29" / 84° 36' 04.23"					
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75" / 84° 37' 26.46"					
S. Location C	Near Utkarmit Rajkiya Prathmik Vidyalaya Bunglapur Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.39"					
S. Location D	Near Utkarmit Rajkiya Prathmik Vidyalaya Dumrapur Village	GPS coordinate	23° 33' 56.14" / 84° 37' 30.30"					
<b>Date(s) of performance of the laboratory activities</b>								
Test start date	11.09.2025/ 11:35	Test completion date	13.09.2025/ 16:00					
<b>Test Results</b>								
Sl.	Test Parameters	Method used	Unit	A	B	C	D	Limits
1.	Benzene (C <sub>6</sub> H <sub>6</sub> )	IS:5182(P-11)2006	µg/m <sup>3</sup>	BDL (MDL-0.2)	BDL (MDL-0.2)	BDL (MDL-0.2)	BDL (MDL-0.2)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12)2004	ng/m <sup>3</sup>	BDL (MDL-0.2)	BDL (MDL-0.2)	BDL (MDL-0.2)	BDL (MDL-0.2)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AF/01/00	mg/m <sup>3</sup>	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-
<b>Test Results End</b>								

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

Operational Status Unit was Operational During sampling.

Analysed by - Vichal Mongaraj

  
 Received by  
(R.K. Karmal)  
Technical Head

  
 Issued by  
(R.K. Karmal)  
Laboratory Head  
  
 Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand




## Analytical Test Certificate

Unique Lab Report No.	TC1298725000001180	Discipline	Chemical
Report Unique ID	RL02912537019	Group	Water
Issue date/time	13.09.2025/ 17:18	Sub Group	Surface Water

## Report Issue to

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

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

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

Customer Registration No.	EPIC/OTH/0291	Sample Booking Number	EPIC-2537019
Sample(s) Code	2537019	Sample Receipt (D/T)	11.09.2025/11:16

## Sampling References

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

## Environmental Condition during sampling

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

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

5. Location A	Near Bunglapur Village	GPS coordinate	22° 32' 39.61" N 84° 36' 07.66" E
---------------	------------------------	----------------	-----------------------------------

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

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

## -Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2023	-	5.93	-
2.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	25.0	-
3.	Calcium (as Ca)	IS 3025 (P-40) 1993	mg/l	6.41	-

## Group - Residues and Contaminants in Water.

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

## -Test result End -

Operational Status

UNIT was Operational During sampling.

Analysed by - Pappu Kumar

  
 Reviewed by  
Pappu Kumar  
Technical Head


Page 1 of 1

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

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



## Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02912537019	Group	Water
Issue date/time	13.09.2025/ 17:18	Sub Group	Surface Water

## Report Issue to

**M/s - HINDALCO INDUSTRIES LIMITED**  
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,  
DIST - LOHARDAGA, STATE - JHARKHAND, INDIA 833302  
**MONITORING SITE : PAKHAR 115.13 BAUXITE MINE**

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

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

Customer Registration No.	EPIC/OTH/0291	Sample Booking Number	EPIC-2537019
Sample(s) Code	2537019	Sample Receipt (D/T)	11.09.2025/11:16

## Sampling References

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

## Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	60	Wind direction	0°-180°
-------------------	--------	------------------	----	------------	----	----------------	---------

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

S. Location A	Near Bungapar Village	GPS coordinate	22° 32' 39.61" E 84° 38' 07.66" N
---------------	-----------------------	----------------	-----------------------------------

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

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

## -Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	Dissolve Oxygen (DO)	IS 3025 (P-30) 1989	mg/l	4.8	-
2.	Temperature	IS 3025 (P-09) 1986	°C	24.3	-
3.	BOD (3days at 27°C)	IS 3025 (P-44) 2000	mg/l	2.1	-
4.	COD	IS 3025 (P-56) 2006	mg/l	44.0	-
5.	Total Suspended Solids (TSS)	IS 3025 (P-17) 2022	mg/l	48	-
6.	Oil & Grease	IS 3029 (P-98) 2021	mg/l	BDL(MDL-04)	-

## Group - Residues and Contaminants in Water,

## Sub Group - Trace Metals Elements

7.	Aluminum (as Al)	IS 3025 (P-55) 2022	BDL (MDL 0.1)
----	------------------	---------------------	---------------

## -Test result End -

Operational Status	Unit was Operational During sampling.
--------------------	---------------------------------------

Analysed by - Pappu Kumar



  
Analysed by  
(Pappu Kumar)  
Technical Head



Page 1 of 1

**Analytical Test Certificate**

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

**Report Issue to**

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

**References of Quality Management System (Cross of Traceability Chart)**

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

**Sampling References**

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

**Environmental Condition during sampling**

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

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

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

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

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

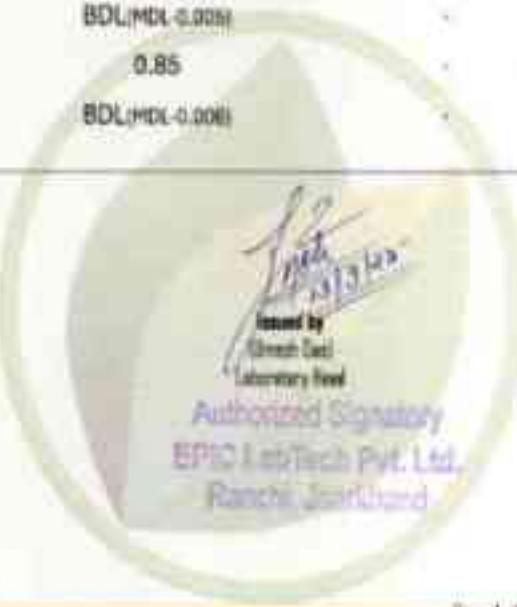
**-Test Result-**

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25.7°C	MAGI 2011	-	6.35	-
2.	Available Phosphorus	MAGI 2011	kg/ha	3.6	-
3.	Available Potassium	MAGI 2011	kg/ha	99.70	-
4.	Organic Carbon	MAGI 2011	%	0.92	-
5.	Electrical Conductivity	MAGI 2011	µmho	77.25	-
6.	Magnesium	MAGI 2011	mg/kg	40.32	-
7.	Nitrogen	MAGI 2011	%	0.082	-
8.	Arsenic (as As)	USEPA 3050 B 1996	mg/kg	BDL/MDL-0.0081	-
9.	Cadmium (as Cd)	USEPA 3050 B 1996	mg/kg	0.85	-
10.	Selenium (as Se)	USEPA 3050 B 1996	mg/kg	BDL/MDL-0.0081	-

**-Test result End -****Operational Status**

Analyzed by - Ishika Singh

Unit was Operational During sampling.

  
Reviewed by  
AKASH KUMAR  
Technical Head



# EPIC LabTech Private Limited

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

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

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

## Sample Test Report

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

### Report Issue to:

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

Contact Person  
Contact Number  
Email Id  
Order Date  
Order Number

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

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

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

### Sampling References

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

### Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	68	Wind direction	0°-180°
-------------------	--------	------------------	----	------------	----	----------------	---------

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

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

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

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

### -Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	Chloride (as Cl)	EPIC/LAB/SOP/PE/01/00	%	0.000	-
2.	Mercury (as Hg)	USEPA3050 B-1996	mg/kg	BDL(MDL-0.005)	-

### -Test result End -

Operational Status:  
Analyzed by - Ishika Singh

Unit was Operational During sampling.

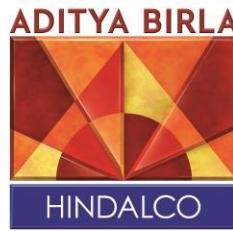
Reviewed by  
(I.S. Singh)  
Technical Head

Issued by  
(Mr. Akash Kumar)  
Laboratory Head

Authorized Signatory  
EPIC LabTech Pvt. Ltd.  
Ranchi, Jharkhand

Page 1 of 1

Contractual Notes : 1. The laboratory accepts responsibility for conduct of this report i.e. that performed at laboratory's permanent facility at specific environmental conditions as method, reagent and results made easy to the sample tested as prescribed Date & time. 2. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law. 3. Any complaint about this report should be communicated in writing within 10 days of its issue. 4. Total liability of EPIC LabTech Pvt. Ltd. will be limited to insured amount only. 5. All reports are subject to Jharkhand jurisdiction and maximum liability of the laboratory does not exceed the testing and recurring charges. 6. Company does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any caused by use or misuse of this report. 7. When the results are from selected provider are marked as \* mark. 8. Alternative - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantification). 9. All the results are in mg/kg.



## Annexure 3

Date – 01.05.2025

### Office Order

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

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

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



Basudev Gangopadhyay  
AVP (Planning, Environment & Compliance)

**Annexure 4**

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

**Annexure 4**

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

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



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

## Annexure-5

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

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

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

\*\*Part of OB removed cost



Basudev Gangopadhyay  
AVP (Planning, Environment & Compliance)