



HIL/LHD/ENV/MoEF&CC/628

Date: 26th May 2026

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

Sub: Six Monthly EC Compliance Report for Pakhar (8.09 Ha) Bauxite Mining project of M/s Hindalco Industries Limited, Lohardaga Jharkhand for the period from **October 2025 to March 2026**.

Ref: Environmental Clearance Letter No. J-11015/135/2006-IA II (M), dated 24th January 2007.

Dear Sir,

With reference to the above, we are submitting herewith the Compliance status report of EC conditions for **Pakhar (8.09 Ha) Bauxite Mining project of M/s Hindalco Industries Limited**, Lohardaga Jharkhand for the period from **October 2025 to March 2026** for your kind perusal please.

The lease details are below:

Lease area (ha)	Production Capacity (MT)	Lease Period
8.09	80000	16.05.1973 to 31.03.2030

Hope you will find the same in order.

Thanking You

Yours faithfully,
For **Hindalco Industries Limited**

R R P Ambastha
Head - Compliance

Enclosure: - As Above

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

Hindalco Industries Limited
Mines Division, Court Road, Lohardaga 835302, Jharkhand, India | T: +91 6526 223163
Corporate Office : 6th & 7th Floor, Birla Birla Centurion, Pandurang Budhakar Marg, Worli, Mumbai-400030, India
T: +91 22 66626666/626105555 | F: +91 22 62610400/62610500
Registered Office : 21st Floor, One Unity Center, Senapati Bapat Marg, Prabhadevi, Mumbai - 400013, India
T: +91 22 69477000/69477150 | F: +91 22 69477001/69477090
W: www.hindalco.com | E: hilinvestors@adityabirla.com

Name of the Project : **Pakhar Bauxite Mine (8.09 ha)**
M/s Hindalco Industries Limited

Environment Clearance No. & date : **J-11015/135/2006-IA.II(M), dated 24.01.2007**

Period of Compliance Report : **From 1st October 2025 to 31st March 2026**

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. November 2014 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. November 2014 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: - 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. November 2014 due to the exhaustion of mineral reserve. 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 iv: - 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 past. Presently, the mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

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

Reply: - The mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve.

Condition vi: - **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: - The mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 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 vii: - **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: - The mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 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:- **Plantation shall be raised in an area of 6.35 ha including a green belt of adequate width by planting the native species around the ML area, roads, reclaimed area etc. in consultation with the local DFO / Agriculture Department. The density of the trees should be around 1500 plants per ha.**

Reply: - The mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. All voids are reclaimed and rehabilitated. Water body is also created. Plantation is already done. The entire land is utilized for meaningful purpose. Also, the final mine closure plan has been submitted and approved by Indian Bureau of Mines.

Condition ix: - **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: - The mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. All voids are reclaimed and rehabilitated. Water body is also created. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

Condition x: - **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: - The mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

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

Reply: - Winning of bauxite is closed w.e.f November 2014 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 xii: - **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 mineral. The vehicles should be covered with a tarpaulin and shall not be overloaded.**

Reply: - Winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation.

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

Reply: - Winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation.

Condition xiv: - **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: - Winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation.

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

Reply: - The mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

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

Reply: - The mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

Condition xvii: - **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 mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

Condition xviii: - **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 mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 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: - No change in the calendar plan including excavation, quantum of mineral bauxite and waste should be made.

Reply: - The mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. 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, SO₂, NO_x 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, SO₂, and NO_x) 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 in **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 mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 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: - 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: - Winning of bauxite is closed due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation since Nov 2014. 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 19th May, 1993 and 31st December,1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.

Reply: - Winning of bauxite is closed due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation since Nov 2014. 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: - Winning of bauxite is closed due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation since Nov 2014. 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: - Winning of bauxite is closed due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation since Nov 2014. 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: - Winning of bauxite is closed due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation since Nov 2014. 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 mine has not been in operation as the winning of bauxite is closed w.e.f. November 2014 due to the exhaustion of mineral reserve. Now, the Regional Office of MoEF&CC is in Ranchi.

Condition xiii: - 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 xiv: - 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 same at its Regional office and other government offices.

Condition xv: - 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. Now, the Regional office of MoEF&CC is in Ranchi.

.....xxx.....

Registered Parcel



**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-03/2014-15

318-B, Road No.- 3,
Ashok Nagar,
Ranchi – 834 002,
Date: 15/05/2015

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 8.09 hectares in village-Pakhar, Lohardaga district of Jharkhand State submitted under Rule 23C of MCDR, 1988.

Ref : Your A.G.M. (Geology) letters no.(1)HIL/LHD/BX/IBM/926(I) Dated 25/09/2014
(2)HIL/LHD/BX/IBM/ Dated 06/04/2015

This office letter no. रांची/लोहरदगा/बाक्साइड/एफ.एम.सी पी.-03/2014-15,दिनांक:13/03/2015

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 8.09 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 1st July of every year to the Regional office, Indian Bureau of Mines, Ranchi.

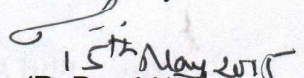
Contd...2

No.: RAN/LOH/BX/FMCP-03/2014-15.

- (iv) The financial assurance submitted for Rs.2,00,000/- (Two lacs only) is valid up to 31/03/2017. A new bank guarantee is to be submitted on or before its expiry i.e. 31/03/2017, if the rehabilitation proposal not completed by the time.

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


Yours faithfully


(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
3rd Floor, Old Building
Kanke Road, Ranchi-834008
along with a copy of approved Final Mine Closure Plan.
3. **Shri B.K.Mahapatra, RQP,**
HINDALCO Industries Ltd.
Court Road
LOHARDAGA - 835 302.


(R. Purohit)

Regional Controller of Mines



EPIC LabTech Private Limited



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

0651 4666392
98357 86677
93049 73994
epiclabtech@gmail.com

CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

Accredited by :-
NABL vide certificate Number TC-12887
Jharkhand State Pollution Control Board
Certified by :-
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000001348	Discipline	Chemical
Report Unique ID	RL03212542007	Group	Atmospheric Pollution
Issue date/time	18.10.2025/ 17:06	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE : PAKHAR 115.13 BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Girija Tamrakar +91 9111006074 girija.tamrakar@adityabirla.com 31.03.2025/ 10:10 13612313868
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References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0321	Sample Booking Number	EPIC-2542007
Sample(s) Code	2542007 (A) (B) (C) (D)	Sample Receipt (D/T)	14.10.2025/ 11:14

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	11.10.2025/ 11:08	Sampling End (D/T)	12.10.2025/ 09:55
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 %	65	Wind direction	60°-240°
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Sampling Location(s) with GPS coordinate(s)

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

Date(s) of performance of the laboratory activities

Test start date	14.10.2025/ 11:34	Test completion date	18.10.2025/ 15:00
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--Test Results--

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	57.21	56.11	58.29	59.20	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	27.15	24.87	28.02	23.08	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	08.68	09.70	09.02	10.73	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	17.36	18.28	16.38	18.27	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	23.47	23.15	22.83	24.10	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	12.24	12.60	12.96	14.04	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	

--Test Results End --

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangraj



Reviewed by
(B.N. Kumar)
Technical Head

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



EPIC LabTech Private Limited

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

☎ 0651 4666392
📞 98357 86677
📞 93049 73994
✉ epiclabtech@gmail.com

CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03212542007	Group	Atmospheric Pollution
Issue date/time	18.10.2025/ 17:06	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE: PAKHAR 115.13 BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Girija Tamrakar +91 9111006074 girija.tamrakar@adityabirla.com 31.03.2025/ 10:10 13612313868
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References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0321	Sample Booking Number	EPIC-2542007
Sample(s) Code	2542007 (A) (B) (C)	Sample Receipt (D/T)	14.10.2025/ 11:14

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	11.10.2025/ 11:08	Sampling End (D/T)	12.10.2025/ 09:55
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)		
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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	14.10.2025/ 11:34	Test completion date	18.10.2025/ 15:00
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--Test Results--

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

--Test Results End --

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangraj



Reviewed by
(B.N. Kumar)
Technical Head





EPIC LabTech Private Limited



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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M12X

Accredited by -
NABL vide certificate Number TC- 12887
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000001349	Discipline	Chemical
Report Unique ID	RL03212542009	Group	Atmospheric Pollution
Issue date/time	18.10.2025/ 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. Girija Tamrakar Contact Number +91 9111006074 Email Id girija.tamrakar@adityabirla.com Order Date 31.03.2025/ 10:10 Order Number 13612313868
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References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0321	Sample Booking Number	EPIC-2542009
Sample(s) Code	2542009 (A) (B) (C) (D)	Sample Receipt (D/T)	14.10.2025/11:17

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	12.10.2025/ 11:22	Sampling End (D/T)	13.10.2025/ 09:55
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 %	65	Wind direction	60°-240°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29" / 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75" / 84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathamik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathamik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.33"

Date(s) of performance of the laboratory activities

Test start date	14.10.2025/ 11:37	Test completion date	18.10.2025/ 15:00
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--Test Results--

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	63.04	64.82	68.13	65.52	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	27.43	26.50	28.25	30.89	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	07.01	07.70	08.04	08.73	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	18.51	16.54	20.40	21.34	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	23.47	23.15	23.79	24.10	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	15.12	15.84	16.20	17.28	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	

--Test Results End --

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

Analysed by - Vishal Mangaraj



Reviewed by
(B.N. Kumar)
Technical Head

Issue by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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



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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M12X

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03212542009	Group	Atmospheric Pollution
Issue date/time	18.10.2025/ 17:12	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE : PAKHAR 115.13 BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Girija Tamrakar +91 9111006074 girija.tamrakar@adityabirla.com 31.03.2025/ 10:10 13612313868
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References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0321	Sample Booking Number	EPIC-2542009
Sample(s) Code	2542009 (A) (B) (C) (D)	Sample Receipt (D/T)	14.10.2025/11:17

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	12.10.2025/ 11:22	Sampling End (D/T)	13.10.2025/ 09:55
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 %	65	Wind direction	60°-240°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29" / 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75" / 84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathmik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathmik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.33"

Date(s) of performance of the laboratory activities

Test start date	14.10.2025/ 11:37	Test completion date	18.10.2025/ 15:00
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--Test Results--

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

--Test Results End --

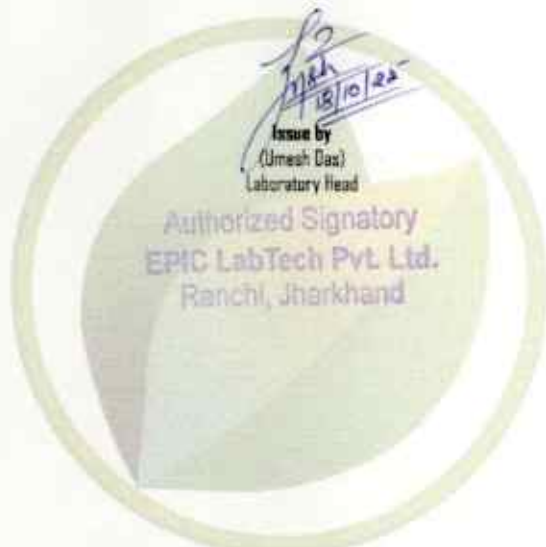
Prescribed Limit Environmental (Protection) Rules-1986, Schedule VII.

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by
(B.N. Kumar)
Technical Head



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



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PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03212542008	Group	Atmospheric Pollution
Issue date/time	18.10.2025/ 17:09	Sub Group	DG Stack

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0321	Sample Booking Number	EPIC-2542008
Sample(s) Code	2542008	Sample Receipt (D/T)	14.10.2025/ 17:05

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	11.10.2025/ 15:25	Sampling End (D/T)	11.10.2025/ 17:05
Mode of Sampling	Conducted by laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS: 11255 & CPCB Guideline (Lats/80/2013-14)		
Description/condition of sample	Receipt sample(s) were fit for analysis		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	65	Wind direction	60°-240°
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Sampling Location(s) with GPS coordinate(s)

S. Location	Stack	GPS coordinate	23° 18' 50.04" / 84° 17' 30.24"
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Field observation by laboratory's personnel

Stack Description (Shape & Material) Circular/ Metal
Emission Source DG
Stack Gas Temperature (k) 415

Data provided by customer

Type of fuel Used HSD
Total production Capacity 30 KVA
Barometric Pressure (P Bar) mmHg 746.0

Date(s) of performance of the laboratory activities

Test start date/time	14.10.2025/ 11:30	Test completion date/time	18.10.2025/ 13:00
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--Test Result--

Sl	Parameters	Test Method	Units	Results	Limits
1.	Stack gas Velocity	IS 11255 (Part 3)2018	m/s	11.43	-
2.	Volumetric Flow Rate	IS 11255 (Part 3)2018	Nm ³ /hr	111.38	-
3.	Particulate Matter (PM)	IS 11255 (Part 1)2019	mg/Nm ³	33.28	-
4.	Sulphur Dioxide (SO ₂)	IS 11255 (Part 2)2019	mg/Nm ³	32.89	-
5.	Oxides of Nitrogen (NO _x)	IS 11255 (Part 7)2022	mg/Nm ³	133.88	-
6.	Carbon Monoxide (CO)	IS 13270 2009	%	BDL (MDL-0.5)	-
7.	Carbon Dioxide (CO ₂)	IS 13270 2009	%	5.8	-

--Test Result End--

Operational Status Unit was Operational during sampling.

Analysed by - Vishal Mangaraj



Reviewed by
(B.N. Kumar)
Technical Head



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

TC-12887

Analytical Test Report

Unique Lab Report No.	TC1288725000001449	Discipline	Chemical
Report Unique ID	RL03612547026	Group	Atmospheric Pollution
Issue date/time	24.11.2025/ 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. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	girija.tamrakar@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/0361	Sample Booking Number	EPIC-2547026
Sample(s) Code	2547026 (A) (B) (C) (D)	Sample Receipt (D/T)	18.11.2025/ 10:43

Sampling References

Type of industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.11.2025/ 10:15	Sampling End (D/T)	16.10.2025/ 08:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	67	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

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

Date(s) of performance of the laboratory activities

Test start date	18.11.2025/ 10:55	Test completion date	22.11.2025/ 18:05
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits <small>Reference: IS</small>
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	58.79	57.87	59.92	59.88	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	28.85	25.76	27.38	23.40	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	09.84	09.70	09.83	11.61	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	18.75	19.63	17.51	18.80	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	13.64	12.94	13.99	14.69	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	24.85	23.95	23.35	24.55	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-

--Test Results End--

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

Analysed by - Rajesh Varma



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

Test Report End

[Signature]
24/11/25
Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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



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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03612547026	Group	Atmospheric Pollution
Issue date/time	24.11.2025/ 10:30	Sub Group	Ambient Air Quality

Report Issue to		Contact Person	Mr. Girija Tamrakar
M/s - HINDALCO INDUSTRIES LIMITED		Contact Number	+91 9111006074
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302		Email Id	girija.tamrakar@adityabirla.com
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE		Order Date	31.03.2025/ 10:10
		Order Number	13612313868

References of Quality Management System (Steps of Traceability Chain)			
Customer Registration No.	EPIC/OTH/0361	Sample Booking Number	EPIC-2547026
Sample(s) Code	2547026 (A) (B) (C) (D)	Sample Receipt (D/T)	18.11.2025/ 10:43

Sampling References			
Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.11.2025/ 10:15	Sampling End (D/T)	16.10.2025/ 08:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling			
Weather condition	Cloudy	Temperature (°C)	24
		Humidity %	67
		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 - 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	18.11.2025/ 10:55	Test completion date	22.11.2025/ 18:05

--Test Results Start--									
Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	Subtle 08
1.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
2.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01	mg/m ³	1.8	BDL	BDL	BDL	BDL	-
--Test Results End --									

Prescribed Limit Environmental (Protection) Rules-1986, Schedule -VII.
Analysed by - Rajesh Varma



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issue by
(Girish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



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CIN:-U74999JH2022PTC019605
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

Accredited by -
NABL wide certificate Number TC - 1387
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Report

Unique Lab Report No.	TC1288725000001450	Discipline	Chemical
Report Unique ID	RL03612547027	Group	Water
Issue date/time	24.11.2025/ 10:33	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. Girija Tamrakar Contact Number +91 9111006074 Email Id girija.tamrakar@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/0361	Sample Booking Number	EPIC-2547027
Sample(s) Code	2547027	Sample Receipt (D/T)	18.11.2025/ 10:44

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.11.2025/ 16:08	Sampling End (D/T)	15.11.2025/ 16:16
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	67	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	R.O Plant	GPS coordinate	23° 32' 24.47"/84° 36' 30.05"
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Date(s) of performance of the laboratory activities

Test start date	18.11.2025/ 11:20	Test completion date	22.11.2025/ 10:50
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits	
						Acceptable Limit	Permissible limit
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	0.7	6.89	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.3	0.89	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	5.0	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	10	225.0	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	5	39.42	250	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	10	90.00	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	10	122.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	10	40.88	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	0.6	BDL	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1)2022	mg/l	0.3	7.90	200	400
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	0.4	2.11	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	0.001	BDL	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	0.3	4.86	30	100



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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611MTZX

Accredited by :-
NABL vide certificate Number TC - 12887
Jharkhand State Pollution Control Board
Certified by :-
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Report

Unique Lab Report No.	TC1288725000001450	Discipline	Chemical
Report Unique ID	RL03612547027	Group	Water
Issue date/time	24.11.2025/ 10:33	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. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

Group - Residues and Contaminants in Water,

Sub Group - Trace Metals Elements

Sl. No.	Parameter	Standard	Unit	Result	Limit	Remarks
16.	Copper (as Cu)	APHA 3111 B 2023	mg/l	0.1	BDL	0.05
17.	Iron (as Fe)	APHA 3111 B 2023	mg/l	0.1	BDL	1.0
18.	Lead (as Pb)	APHA 3111 B 2023	mg/l	0.01	BDL	0.01
19.	Cadmium (as Cd)	APHA 3111 B 2023	mg/l	0.003	BDL	0.003
20.	Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	0.01	BDL	0.05
21.	Nickel (as Ni)	APHA 3111 B 2023	mg/l	0.02	BDL	0.02
22.	Total Arsenic (as As)	APHA 3114 B 2023	mg/l	0.005	BDL	0.01
23.	Selenium (as Se)	APHA 3114 B 2023	mg/l	0.005	BDL	0.01
24.	Manganese (as Mn)	APHA 3111 B 2023	mg/l	0.09	BDL	0.1
25.	Zinc (as Zn)	APHA 3111 B 2023	mg/l	0.04	BDL	5

--Test Result End--

Prescribed Limit IS 10500:2012
Analysed by - Pappu Kumar



(Signature)
Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

(Signature)
Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





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Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03612547027	Group	Water
Issue date/time	24.11.2025/ 10:33	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. Girija Tamrakar

Contact Number

+91 9111006074

Email Id

girija.tamrakar@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/0361	Sample Booking Number	EPIC-2547027
Sample(s) Code	2547027	Sample Receipt (D/T)	18.11.2025/ 10:44

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.11.2025/ 16:08	Sampling End (D/T)	15.11.2025/ 16:16
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	67	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	R.O Plant	GPS coordinate	23° 32' 24.47"/ 84° 36' 30.05"
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Date(s) of performance of the laboratory activities

Test start date	18.11.2025/ 11:20	Test completion date	22.11.2025/ 10:50
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits	
						Acceptable Limit	Permissible limit
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	0.1	BDL	1.0	1.5

Group-Residues and Contaminants in Water

Sub Group-Trace Metals Elements

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

Group-Residues and Contaminants in Water

Sub Group-Pesticides

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



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CIN:-U74999JH2022PTC019683
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GST:-20AAHCE3611M1ZX

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Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03612547027	Group	Water
Issue date/time	24.11.2025/ 10:33	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. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	girija.tamrakar@adityabirla.com
Order Date	31.03.2025/ 10:10
Order Number	13612313868

Sl. No.	Parameter	Method	Unit	Result	Standard	Remarks
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	3.0 No relaxation
15.	Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	2.0 No relaxation
16.	Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	190.0 No relaxation
17.	Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	0.2	BDL	0.3 No relaxation
18.	Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	1.0 No relaxation
19.	Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	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	0.5	BDL	1.0 No relaxation
21.	Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	0.05	BDL	0.4 No relaxation

--Test Result End --

Prescribed Limit IS 10500:2012

Analysed by - Pappu Kumar



B.N. Kumar
Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Umesh Das
Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1Zx

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL03612547028	Group	Water
Issue date/time	24.11.2025/ 10:36	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. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirta.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/0361	Sample Booking Number	EPIC-2547028
Sample(s) Code	2547028	Sample Receipt (D/T)	18.11.2025/ 13:49

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.11.2025/ 16:08	Sampling End (D/T)	15.11.2025/ 16:16
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	67	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	R.O Plant	GPS coordinate	23° 32' 24.47" / 84° 36' 30.05"
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Date(s) of performance of the laboratory activities

Test start date	18.11.2025/ 15:30	Test completion date	23.11.2025/ 11:00
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	Total Coliform	IS 15185 2002	Per 100 ml	1.1	Not Detected	Shall not be detectable in any 100 ml sample
2.	E. Coli	IS 15185 2002	Per 100 ml	1.1	Not Detected	

--Test Result End --

Prescribed Limit IS 10500:2012

Analysed by - Ishika Singh

Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

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

TC-12887

Analytical Test Report

Unique Lab Report No.	TC1288725000001451	Discipline	Chemical
Report Unique ID	RL03612547029	Group	Water
Issue date/time	24.11.2025/ 10:39	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. Girija Tamrakar
	Contact Number	+91 9111006074
	Email Id	girija.tamrakar@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/0361	Sample Booking Number	EPIC-2547029
Sample(s) Code	2547029	Sample Receipt (D/T)	18.11.2025/ 13:50

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.11.2025/ 15:05	Sampling End (D/T)	15.11.2025/ 15:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	67	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Utkarnit Rajkiya Prathmik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 36.90" / 84° 37' 27.19"
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Date(s) of performance of the laboratory activities

Test start date	18.11.2025/ 14:10	Test completion date	22.11.2025/ 11:20
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits	
						Acceptable Limit	Permissible limit
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	0.7	6.76	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.3	0.68	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	5.0	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	10	256.0	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	5.0	38.43	250	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	10	126.0	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	10	172.0	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	10	49.7	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	0.6	BDL	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1)2022	mg/l	0.3	13.1	200	400
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	0.4	4.99	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	0.001	BDL	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	0.3	11.66	30	100



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Accredited by :-
NABL vide certificate Number TC- 12887
Jharkhand State Pollution Control Board
Certified by :-
ISO 9001:2015 and ISO 45001:2018

Analytical Test Report

Unique Lab Report No.	TC1288725000001451	Discipline	Chemical
Report Unique ID	RL03612547029	Group	Water
Issue date/time	24.11.2025/ 10:39	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. Girija Tamrakar
+91 9111006074
girija.tamrakar@adityabirla.com
31.03.2025/ 10:10
13612313868

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

--Test Result End --

Prescribed Limit IS 10500:2012
Analysed by - Peppu Kumar



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M12X

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03612547029	Group	Water
Issue date/time	24.11.2025/ 10:39	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. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

Customer Registration No.	EPIC/OTH/0361	Sample Booking Number	EPIC-2547029
Sample(s) Code	2547029	Sample Receipt (D/T)	18.11.2025/ 13:50

Sampling References

Type of industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.11.2025/ 15:05	Sampling End (D/T)	15.11.2025/ 15:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	67	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Utkarmit Rajkiya Prathmik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 36.90" / 84° 37' 27.19"
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Date(s) of performance of the laboratory activities

Test start date	18.11.2025/ 14:10	Test completion date	22.11.2025/ 11:20
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits	
						Acceptable Limit	Permissible limit
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	0.1	BDL	1.0	1.5

Group-Residues and Contaminants in Water

Sub Group-Trace Metals Elements

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

Group-Residues and Contaminants in Water

Sub Group-Pesticides

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



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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03612547029	Group	Water
Issue date/time	24.11.2025/ 10:39	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. Girija Tamrakar
Contact Number - +91 9111006074
Email Id - girija.tamrakar@adityabirla.com
Order Date - 31.03.2025/ 10:10
Order Number - 13612313868

Sl. No.	Parameter	Method	Unit	Result	Standard	Relaxation
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	3.0 No relaxation
15.	Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	2.0 No relaxation
16.	Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	190.0 No relaxation
17.	Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	0.2	BDL	0.3 No relaxation
18.	Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	1.0 No relaxation
19.	Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	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	0.5	BDL	1.0 No relaxation
21.	Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	0.05	BDL	0.4 No relaxation

--Test Result End --

Prescribed Limit IS 10500:2012
Analysed by - Pappu Kumar



(Signature)
Reviewed by
(B.N. Kumar)
Technical Head
Test Report End

(Signature)
24/11/25
Issued by
(Umesh Das)
Laboratory Head
Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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PAN:-AAHCE3611M
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Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL03612547030	Group	Water
Issue date/time	24.11.2025/ 10:42	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. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@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/0361	Sample Booking Number	EPIC-2547030
Sample(s) Code	2547030	Sample Receipt (D/T)	18.11.2025/ 13:51

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.11.2025/ 15:05	Sampling End (D/T)	15.11.2025/ 15:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	67	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Utकर्mit Rajkiya Prathmik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 36.90" / 84° 37' 27.19"
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Date(s) of performance of the laboratory activities

Test start date	18.11.2025/ 15:07	Test completion date	23.11.2025/ 11:00
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	Total Coliform	IS 15185 2002	Per 100 ml	1.1	Not Detected	Shall not be detectable in any 100 ml sample
2.	E. Coli	IS 15185 2002	Per 100 ml	1.1	Not Detected	

--Test Result End --

Prescribed Limit IS 10500:2012

Analysed by - Ishika Singh



B.N. Kumar
Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Umesh Das
24/11/25
Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited



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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

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

Analytical Test Report

Unique Lab Report No.	TC1288725000001458	Discipline	Chemical
Report Unique ID	RL03612547041	Group	Atmospheric Pollution
Issue date/time	24.11.2025/ 16:15	Sub Group	Ambient Air Quality

Report Issue to

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

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirta.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/0361	Sample Booking Number	EPIC-2547041
Sample(s) Code	2547041 (A) (B) (C) (D)	Sample Receipt (D/T)	19.11.2025/ 15:31

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	16.11.2025/ 10:20	Sampling End (D/T)	17.11.2025/ 08:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	67	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29"/84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75"/84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathamik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59"/84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathamik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14"/84° 37' 30.33"

Date(s) of performance of the laboratory activities

Test start date	19.11.2025/ 15:55	Test completion date	24.11.2025/ 13:10
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits <small>24 hr</small>
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	63.90	65.70	68.57	66.74	300 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	28.82	27.39	29.44	31.50	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	07.49	07.70	08.22	09.09	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	8	19.03	16.93	20.56	22.44	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	23.95	23.65	24.85	23.35	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	15.74	16.79	16.44	17.84	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



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

Test Report End

[Signature]
Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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



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CIN:-U74999JH2022PTC019685
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Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03612547041	Group	Atmospheric Pollution
Issue date/time	24.11.2025/ 16:15	Sub Group	Ambient Air Quality

Report Issue to		Contact Person	Mr. Girija Tamrakar
M/s - HINDALCO INDUSTRIES LIMITED		Contact Number	+91 9111006074
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,		Email Id	girija.tamrakar@adityabirla.com
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302		Order Date	31.03.2025/ 10:10
MONITORING SITE : PAKHAR 115.13 BAUXITE MINE		Order Number	13612313868

References of Quality Management System (Steps of Traceability Chain)			
Customer Registration No.	EPIC/OTH/0361	Sample Booking Number	EPIC-2547041
Sample(s) Code	2547041 (A) (B) (C) (D)	Sample Receipt (D/T)	19.11.2025/ 15:31

Sampling References			
Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	16.11.2025/ 10:20	Sampling End (D/T)	17.11.2025/ 08:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling			
Weather condition	Cloudy	Temperature (°C)	24
		Humidity %	67
		Wind direction	0°-180°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29" / 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75" / 84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathamik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathamik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.33"

Date(s) of performance of the laboratory activities			
Test start date	19.11.2025/ 15:55	Test completion date	24.11.2025/ 13:10

--Test Results Start--									
Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	Substrate (if)
1.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
2.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01	mg/m ³	1.8	BDL	BDL	BDL	BDL	-
--Test Results End--									

Prescribed Limit Environmental (Protection) Rules-1986, Schedule-VII.
Analysed by - Rajesh Varma



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

Test Report End

[Signature]
24/11/25
Issue by
(Limesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



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GST:-20AAHCE3611M1ZK

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

Analytical Test Report

Unique Lab Report No.	TC1288725000001625	Discipline	Chemical
Report Unique ID	RL03992551017	Group	Atmospheric Pollution
Issue date/time	19.12.2025/ 14:09	Sub Group	Ambient Air Quality

Report Issue to

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

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@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/0399	Sample Booking Number	EPIC-2551017
Sample(s) Code	2551017 (A) (B) (C) (D)	Sample Receipt (D/T)	17.12.2025/ 10:58

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	14.12.2025/ 11:20	Sampling End (D/T)	15.12.2025/ 08:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	22	Humidity %	68	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

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

Date(s) of performance of the laboratory activities

Test start date	17.12.2025/ 11:45	Test completion date	19.12.2025/ 12:55
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	59.81	58.86	60.98	61.88	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	29.38	26.62	28.98	24.54	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	09.82	11.12	10.92	11.86	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	20.00	21.01	18.83	19.77	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	15.14	14.14	16.13	16.82	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	25.58	24.97	24.61	26.38	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analyzed by - Rajesh Varma



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issue by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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



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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03992551017	Group	Atmospheric Pollution
Issue date/time	19.12.2025/ 14:09	Sub Group	Ambient Air Quality

Report Issue to

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

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@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/0399	Sample Booking Number	EPIC-2551017
Sample(s) Code	2551017 (A) (B) (C) (D)	Sample Receipt (D/T)	17.12.2025/ 10:58

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	14.12.2025/ 11:20	Sampling End (D/T)	15.12.2025/ 08:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	22	Humidity %	68	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

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

Date(s) of performance of the laboratory activities

Test start date	17.12.2025/ 11:45	Test completion date	19.12.2025/ 12:55
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
2.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01	mg/m ³	1.8	BDL	BDL	BDL	BDL	-

--Test Results End--

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

Analysed by - Rajesh Varma



(Signature)
Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

(Signature)
19/12/25
Issue by
(Ajayesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M12X

Accredited by -
NABL vide certificate Number TC-12887
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

Analytical Test Report

Unique Lab Report No.	TC1288725000001626	Discipline	Chemical
Report Unique ID	RL03992551018	Group	Atmospheric Pollution
Issue date/time	19.12.2025/ 14:12	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. Girija Tamrakar
		Contact Number	+91 9111006074
		Email Id	girija.tamrakar@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/0399	Sample Booking Number	EPIC-2551018
Sample(s) Code	2551018 (A) (B) (C) (D)	Sample Receipt (D/T)	17.12.2025/ 10:59

Sampling References			
Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	15.12.2025/ 11:15	Sampling End (D/T)	16.12.2025/ 08:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling			
Weather condition	Clear	Temperature (°C)	21
		Humidity %	69
		Wind direction	0°-180°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29"/ 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75"/ 84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathmik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59"/ 84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathmik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14"/ 84° 37' 30.33"

Date(s) of performance of the laboratory activities			
Test start date	17.12.2025/ 11:45	Test completion date	19.12.2025/ 12:55

--Test Results Start--									
Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	64.92	66.86	68.88	67.87	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	29.59	28.49	30.42	32.92	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	08.93	09.04	09.95	10.89	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	21.09	18.20	22.96	23.99	60 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	16.15	17.92	17.54	19.08	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	24.78	25.00	25.73	26.06	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2-1999	ng/m ³	2	BDL	BDL	BDL	BDL	-
--Test Results End --									

Prescribed Limit Environmental (Protection) Rules-1986, Schedule -VII.
Analysed by - Rajesh Varma



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

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

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PAN:-AANCE3611M
GST:-20AANCE3611M12X

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03992551018	Group	Atmospheric Pollution
Issue date/time	19.12.2025/ 14:12	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. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@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/0399	Sample Booking Number	EPIC-2551018
Sample(s) Code	2551018 (A) (B) (C) (D)	Sample Receipt (D/T)	17.12.2025/ 10:59

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.12.2025/ 11:15	Sampling End (D/T)	16.12.2025/ 08:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	21	Humidity %	69	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29" / 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75" / 84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathamik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathamik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.33"

Date(s) of performance of the laboratory activities

Test start date	17.12.2025/ 11:45	Test completion date	19.12.2025/ 12:55
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
2.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01	mg/m ³	1.8	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Statement of conformity: The sample(s) collected for analysis was tested in accordance with the requirements of Environmental (Protection) Rules, 1986, SCHEDULE VII. Based on the results obtained, the sample Comply with the specified limits for National Ambient Air Quality Standards, Page 396. This statement of conformity is based on the laboratory's established decision rule documented in EPIC/LAB/SOP/DR/01/01, which takes into account measurement uncertainty where applicable. This conformity assessment applies only to the parameters tested. No conclusion is drawn for the untested parameters.

Analysed by - Rajesh Varma



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issue by
(Ajmesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

Contractual Notes | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility at specific environmental condition as method required and results relate only to the sample tested in prescribed Date & time | 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court | 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 invoiced amount only. | 6. All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges | 7. Opinion does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any caused by use or misuse of this report. | 8. When the results are from external provider are marked as * mark. |
Abbreviation: - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation).



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PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

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

TC-12887

Analytical Test Report

Unique Lab Report No.	TC1288725000001627	Discipline	Chemical
Report Unique ID	RL03992551019	Group	Atmospheric Pollution
Issue date/time	19.12.2025/ 14:15	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. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@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/0399	Sample Booking Number	EPIC-2551019
Sample(s) Code	2551019 (A) (B) (C) (D)	Sample Receipt (D/T)	17.12.2025/ 11:00

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	14.12.2025/ 10:30	Sampling End (D/T)	15.12.2025/ 08:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	22	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° 36' 00.33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88"/84° 36' 06.71"
S. Location C	Near Mine Block B, Quarry No - 6	GPS coordinate	23° 32' 51.14"/84° 36' 58.76"
S. Location D	Near Mine Block-B, Quarry No. 7	GPS coordinate	23° 33' 05.36"/84° 37' 04.76"

Date(s) of performance of the laboratory activities

Test start date	17.12.2025/ 11:45	Test completion date	19.12.2025/ 12:55
-----------------	-------------------	----------------------	-------------------

--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	L _{eq} (Day time)	IS: 9989:1981	dB (A)	30	53.1	56.0	49.6	57.0	75
2.	L _{eq} (Night time)	IS: 9989:1981	dB (A)	30	42.5	37.7	39.4	46.3	70

--Test Results End--

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

Analysed by - Rajesh Varma

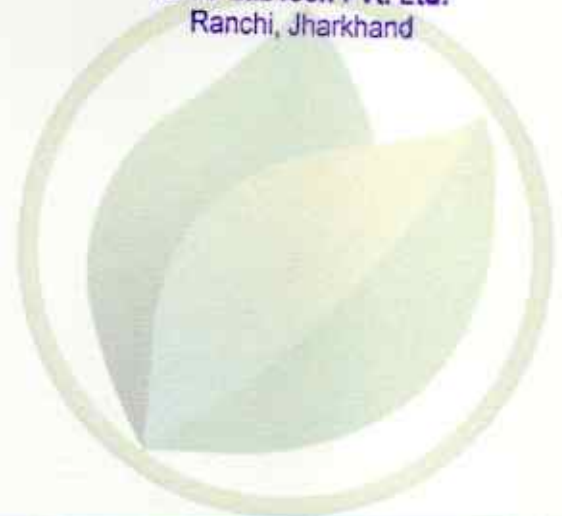


Reviewed by
(S.N. Kumar)
Technical Head

Test Report End

Issue by
(Umish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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Abbreviation - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantization).



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PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03992551020	Group	Atmospheric Pollution
Issue date/time	19.12.2025/14:18	Sub Group	Work Zone Noise

Report Issue to

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

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@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/0399	Sample Booking Number	EPIC-2551020
Sample(s) Code	2551020 (A) (B)	Sample Receipt (D/T)	17.12.2025/11:01

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D)	15.12.2025	Sampling End (D)	15.12.2025
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	22	Humidity %	68	Wind direction	0°-180°
-------------------	-------	------------------	----	------------	----	----------------	---------

Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Quarry No. 7	GPS coordinate	23° 33' 06.11"/84° 37' 06.07"
S. Location B	Near Mine Quarry No-3	GPS coordinate	23° 33' 25.09"/84° 35' 58.00"

Date(s) of performance of the laboratory activities

Test start date	17.12.2025/11:45	Test completion date	19.12.2025/12:55
-----------------	------------------	----------------------	------------------

--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results		Limits
					A	B	
1.	L _{eq} (Day time)	IS: 9989:1991	dB (A)	30	67.2	72.9	85

--Test Results End --

Prescribed Limit NIOSH - Publication No. 99-126 in 1972

Analysed by - Rajesh Varma



Reviewed by
(H.N. Kumar)
Technical Head

Test Report End

Issue by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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Abbreviation: - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation). |



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GST - 20AAHCE3611M12X

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

Test Report



Unique Lab Report No.	TC1288726000000059	Discipline	Chemical
Report Unique ID	RL04282603015	Group	Atmospheric Pollution
Issue date/time	16.01.2026/ 18:00	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. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	girija.tamrakar@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/0428	Sample Booking Number	EPIC-2603015
Sample(s) Code	2603015 (A) (B) (C) (D)	Sample Receipt (D/T)	13.01.2026/ 10:45

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	10.01.2026/ 10:48	Sampling End (D/T)	11.01.2026/ 08:23
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	21	Humidity %	60	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

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

Date(s) of performance of the laboratory activities

Test start date	13.01.2026/ 12:18	Test completion date	16.01.2026/ 10:05
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	60.53	59.39	61.84	62.45	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	30.07	27.10	29.34	25.31	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	10.63	12.23	12.00	12.53	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	8	20.76	22.24	19.38	20.25	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	16.89	16.17	18.33	17.97	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	26.17	25.58	25.29	27.33	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-
10.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



Reviewed by
(B.N. Kumar)
Technical Head

Issue by
(Vimlesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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

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CIN:-UJ74999JHZ022PTC019685 Accredited by :-
Jharkhand State Pollution Control Board
PAN:-AAHCE3611M
GST:-20AAHCE3611M12X
Certified by :-
ISO 9001:2015 and ISO 45001:2018

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04282603015	Group	Atmospheric Pollution
Issue date/time	16.01.2026/18:00	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. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@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/0428	Sample Booking Number	EPIC-2603015
Sample(s) Code	2603015 (A) (B) (C) (D)	Sample Receipt (D/T)	13.01.2026/10:45

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	10.01.2026/10:48	Sampling End (D/T)	11.01.2026/08:23
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	21	Humidity %	60	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

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

Date(s) of performance of the laboratory activities

Test start date	13.01.2026/12:18	Test completion date	16.01.2026/10:05
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01	mg/m ³	1.0	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



Reviewed by
(B.N. Kumar)
Technical Head

Issue by
(Ajmesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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Abbreviations :- BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation). |



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CIN:-U74999/JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

Accredited by :-
NABL, certificate number IC-1287
Jharkhand State Pollution Control Board
Certified by :-
ISO 9001:2015 and ISO 45001:2018

Test Report



Unique Lab Report No.	TC1288726000000060	Discipline	Chemical
Report Unique ID	RL04282603016	Group	Atmospheric Pollution
Issue date/time	16.01.2026/ 18:03	Sub Group	Ambient Air Quality

Report Issue to

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

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@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/0428	Sample Booking Number	EPIC-2603016
Sample(s) Code	2603016 (A) (B) (C) (D)	Sample Receipt (D/T)	13.01.2026/ 10:47

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	11.01.2026/ 11:10	Sampling End (D/T)	12.01.2026/ 09:35
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	21	Humidity %	56	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29" / 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75" / 84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathamik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathamik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.33"

Date(s) of performance of the laboratory activities

Test start date	13.01.2026/ 14:10	Test completion date	16.01.2026/ 10:10
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	65.64	67.55	69.44	68.36	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	30.31	29.28	31.47	33.70	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	09.53	10.53	10.83	11.68	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	22.34	19.03	23.46	24.33	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	17.97	19.77	19.05	20.85	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	25.29	26.17	26.46	27.33	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-
10.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



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

****Test Report End****

[Signature]
Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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Abbreviation: - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation). |

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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04282603016	Group	Atmospheric Pollution
Issue date/time	16.01.2026/ 18:03	Sub Group	Ambient Air Quality

Report Issue to

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

Contact Person	Mr. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	girija.tamrakar@adityabirta.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/0428	Sample Booking Number	EPIC-2603016
Sample(s) Code	2603016 (A) (B) (C) (D)	Sample Receipt (D/T)	13.01.2026/ 10:47

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	11.01.2026/ 11:10	Sampling End (D/T)	12.01.2026/ 09:35
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	21	Humidity %	56	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29" / 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75" / 84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathamik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathamik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.33"

Date(s) of performance of the laboratory activities

Test start date	13.01.2026/ 14:10	Test completion date	16.01.2026/ 10:10
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--Test Results Start--


Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01	mg/m ³	1.8	BDL	BDL	BDL	BDL	-

--Test Results End--

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

Analyzed by - Rajesh Varma




Reviewed by
G.N. Kumar
Technical Head


Issue by
Omesh Das
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3613M
GST:-20AAHCE3611M1ZK

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

Test Report



Unique Lab Report No.	TC1288726000000190	Discipline	Chemical
Report Unique ID	RL04592608017	Group	Atmospheric Pollution
Issue date/time	21.02.2026/ 17:00	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. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	girija.tamrakar@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/0459	Sample Booking Number	EPIC-2608017
Sample(s) Code	2608017 (A) (B) (C) (D)	Sample Receipt (D/T)	18.02.2026/ 11:29

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	15.02.2026/ 12:35	Sampling End (D/T)	16.02.2026/ 10:25
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	51	Wind direction	90°-270°
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Sampling Location(s) with GPS coordinate(s)

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

Date(s) of performance of the laboratory activities

Test start date	18.02.2026/ 14:30	Test completion date	21.02.2026/ 13:55
-----------------	-------------------	----------------------	-------------------

--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	59.71	58.67	60.97	61.82	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	29.73	26.42	28.64	24.15	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	10.87	12.51	06.70	07.53	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	22.34	23.30	20.47	21.34	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	19.41	18.69	21.21	20.13	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	28.20	27.33	26.75	29.07	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-
10.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



[Signature]
Reviewed by
(S.K. Kumar)
Technical Head

[Signature]
Issue by
(Umesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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

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

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CIN:-U74999JH2022PTC019885 Accredited by -
Jharkhand State Pollution Control Board
PAN:-AAHCE36TJM Certified by -
ISO 9001:2015 and ISO 45001:2018
GST:-20AAHCE36T1M12X

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04592608017	Group	Atmospheric Pollution
Issue date/time	21.02.2026/ 17:00	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. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	girija.tamrakar@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/0459	Sample Booking Number	EPIC-2608017
Sample(s) Code	2608017 (A) (B) (C) (D)	Sample Receipt (D/T)	18.02.2026/ 11:29

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.02.2026/ 12:35	Sampling End (D/T)	16.02.2026/ 10:25
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	51	Wind direction	90°-270°
-------------------	-------	------------------	----	------------	----	----------------	----------

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	18.02.2026/ 14:30	Test completion date	21.02.2026/ 13:55
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01	mg/m ³	1.8	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma

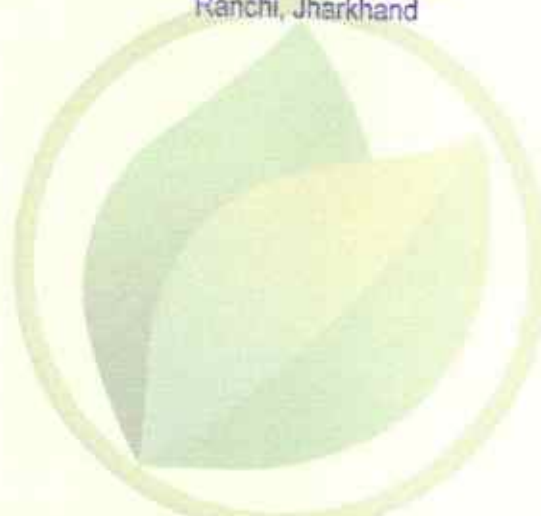


Reviewed by
(R.N. Kumar)
Technical Head

Issue by
(Ajmesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited



Address -
Indrapuri, Road No. - 5,
Ranchi, Jharkhand - 834005,
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CIN: U74999JH2022PTC019685
PAN: AAHCE3611M
GST: 20AAHCE3611MTZX

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

Test Report



Unique Lab Report No.	TC128872600000191	Discipline	Chemical
Report Unique ID	RL04592608018	Group	Atmospheric Pollution
Issue date/time	21.02.2026/ 17:03	Sub Group	Ambient Air Quality

Report Issue to

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

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabiria.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/0459	Sample Booking Number	EPIC-2608018
Sample(s) Code	2608018 (A) (B) (C) (D)	Sample Receipt (D/T)	18.02.2026/ 11:30

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	16.02.2026/ 13:10	Sampling End (D/T)	17.02.2026/ 11:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	24	Humidity %	56	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29"/84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75"/84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathamik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59"/84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathamik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14"/84° 37' 30.33"

Date(s) of performance of the laboratory activities

Test start date	18.02.2026/ 15:10	Test completion date	21.02.2026/ 14:20
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	64.72	66.85	68.66	67.53	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	29.50	28.66	30.42	28.38	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	09.71	10.63	11.12	12.00	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	23.37	20.15	24.10	25.63	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	20.49	22.28	21.93	22.64	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	27.04	28.20	28.78	29.36	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-
10.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



Reviewed by
(B.N. Kumar)
Technical Head

Issue by
(Umash Goo)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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

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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04592608018	Group	Atmospheric Pollution
Issue date/time	21.02.2026/ 17:03	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302

MONITORING SITE : PAKHAR 115.13 BAUXITE MINE

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@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/0459	Sample Booking Number	EPIC-2608018
Sample(s) Code	2608018 (A) (B) (C) (D)	Sample Receipt (D/T)	18.02.2026/ 11:30

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	16.02.2026/ 13:10	Sampling End (D/T)	17.02.2026/ 11:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	24	Humidity %	56	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29"/84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75"/84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathamik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59"/84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathamik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14"/84° 37' 30.33"

Date(s) of performance of the laboratory activities

Test start date	18.02.2026/ 15:10	Test completion date	21.02.2026/ 14:20
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01	mg/m ³	1.8	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



Reviewed by
(B.N. Kumar)
Technical Head

Issued by
(Omesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited



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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

Accredited by -
NABL vide certificate Number TC-12887
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

Test Report



Unique Lab Report No.	TC1288726000000192	Discipline	Chemical
Report Unique ID	RL04592608019	Group	Pollution & Environment
Issue date/time	21.02.2026/ 17:06	Sub Group	Waste Water (Effluent)

Report Issue to

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

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@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/0459	Sample Booking Number	EPIC-2608019
Sample(s) Code	2608019	Sample Receipt (D/T)	18.02.2026/ 11:31

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	16.02.2026/ 15:30	Sampling End (D/T)	16.02.2026/ 15:48
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	51	Wind direction	90°-270°
-------------------	-------	------------------	----	------------	----	----------------	----------

Sampling Location(s) with GPS coordinate(s)

S. Location A	Work Shop Outlet	GPS coordinate	23° 32' 25.91" / 84° 36' 34.82"
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Date(s) of performance of the laboratory activities

Test start date	18.02.2026/ 11:51	Test completion date	21.02.2026/ 15:30
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	pH value at 25.4°C	IS 3025 (P-11) 2022	-	1.5	6.81	6.5-8.5
2.	BOD (3 days at 27°C)	IS 3025 (P-44) 2000	mg/l	0.3	11.5	-
3.	COD	IS 3025 (P-58) 2006	mg/l	8.0	88.00	150.0
4.	Oil & Grease	IS 3025 (P-39) 2021	mg/l	4.0	BDL	10
5.	Total Suspended Solid	IS 3025 (P-17) 2022	mg/l	10.0	38.0	50
6.	Total Dissolve Solids (TDS)	IS 3025 (P-16) 2023	mg/l	10.0	228.0	-
7.	Phosphate (as PO ₄)	IS 3025 (P-31/Sec -1) 2022	mg/l	0.2	0.52	-
8.	Zinc (as Zn)	APHA 3111 B 2023	mg/l	0.04	BDL	5.0

--Test Result End --

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

Analysed by - Pappu Kumar



Reviewed by
(E.N. Kumar)
Technical Head

****Test Report End****

Issued by
(Limesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

EPIC LabTech Private Limited



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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M12X

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04592608019	Group	Pollution & Environment
Issue date/time	21.02.2026/ 17:06	Sub Group	Waste Water (Effluent)

Report Issue to

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

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@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/0459	Sample Booking Number	EPIC-2608019
Sample(s) Code	2608019	Sample Receipt (D/T)	18.02.2026/ 11:31

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	16.02.2026/ 15:30	Sampling End (D/T)	16.02.2026/ 15:48
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition Clear Temperature (°C) 26 Humidity % 51 Wind direction 90°-270°

Sampling Location(s) with GPS coordinate(s)

S. Location A Work Shop Outlet GPS coordinate 23° 32' 25.91" / 84° 36' 34.82"

Date(s) of performance of the laboratory activities

Test start date 18.02.2026/ 11:51 Test completion date 21.02.2026/ 15:30

--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	Dissolve Oxygen (DO)	IS 3025 (P-38) 1986	mg/l	0.2	0.8	-

--Test Result End --

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

Analysed by - Pappu Kumar




Reviewed by
(B.N. Kumar)
Technical Head


Issued by
(Umesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





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PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

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

Test Report



Unique Lab Report No.	TC1288726000000340	Discipline	Chemical
Report Unique ID	RL04982612018	Group	Atmospheric Pollution
Issue date/time	20.03.2026/ 16:43	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. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@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/0498	Sample Booking Number	EPIC-2612018
Sample(s) Code	2612018 (A) (B) (C)	Sample Receipt (D/T)	17.03.2026/ 10:47

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	14.03.2026/ 16:35	Sampling End (D/T)	15.03.2026/ 14:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	22	Humidity %	46	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

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

Date(s) of performance of the laboratory activities

Test start date	17.03.2026/ 12:10	Test completion date	20.03.2026/ 13:45
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	60.93	59.54	61.85	62.79	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	30.89	27.47	29.71	25.21	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	09.49	11.08	11.21	12.10	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	21.90	22.77	19.30	20.80	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	21.93	20.85	23.72	22.64	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	29.65	28.78	27.62	30.82	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-
10.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analyzed by - Rajesh Varma



Reviewed by
(B.H. Kumar)
Technical Head

Issued by
(Umesh Chandra)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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

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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611MTZX

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04982612018	Group	Atmospheric Pollution
Issue date/time	20.03.2026/ 16:43	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. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@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/0498	Sample Booking Number	EPIC-2612018
Sample(s) Code	2612018 (A) (B) (C)	Sample Receipt (D/T)	17.03.2026/ 10:47

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	14.03.2026/ 16:35	Sampling End (D/T)	15.03.2026/ 14:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	22	Humidity %	46	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

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

Date(s) of performance of the laboratory activities

Test start date	17.03.2026/ 12:10	Test completion date	20.03.2026/ 13:45
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01	mg/m ³	1.8	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma


Reviewed by
(B.N. Kumar)
Technical Head


Issue by
(Umesh Das)
Laboratory Head

****Test Report End****



Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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

Abbreviation: - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation). |



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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611MTX

Accredited by -
NABL vide certificate Number TC-12887
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

Test Report



Unique Lab Report No.	TC1288726000000341	Discipline	Chemical
Report Unique ID	RL04982612019	Group	Atmospheric Pollution
Issue date/time	20.03.2026/ 16:46	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. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@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/0498	Sample Booking Number	EPIC-2612019
Sample(s) Code	2612019 (A) (B) (C) (D)	Sample Receipt (D/T)	17.03.2026/ 10:48

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.03.2026/ 17:10	Sampling End (D/T)	16.03.2026/ 15:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	24	Humidity %	52	Wind direction	220°-40°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29"/ 84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75"/ 84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathmik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59"/ 84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathmik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14"/ 84° 37' 30.33"

Date(s) of performance of the laboratory activities

Test start date	17.03.2026/ 13:25	Test completion date	20.03.2026/ 14:10
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	65.95	67.76	69.57	68.86	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	30.65	29.15	31.48	29.59	50 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	08.92	09.74	10.63	11.54	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	22.60	19.25	23.21	24.19	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	22.64	24.80	23.72	24.44	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	28.78	29.65	29.94	30.82	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-
10.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



Reviewed by
(D.N. Kumar)
Technical Head

****Test Report End****

Issue by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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Abbreviation: - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation). |

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CIN:-U74999JH2022PTC019683
PAN:-AAHCE3611M
GST:-20AAHCE3611MTXZ

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04982612019	Group	Atmospheric Pollution
Issue date/time	20.03.2026/ 16:46	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. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirta.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/0498	Sample Booking Number	EPIC-2612019
Sample(s) Code	2612019 (A) (B) (C) (D)	Sample Receipt (D/T)	17.03.2026/ 10:48

Sampling References

Type of industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.03.2026/ 17:10	Sampling End (D/T)	16.03.2026/ 15:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	24	Humidity %	52	Wind direction	220°-40°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bunglapart Village	GPS coordinate	23° 32' 42.29"/84° 36' 04.23"
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75"/84° 37' 28.46"
S. Location C	Near Utkarmit Rajkiya Prathamik Vidyalaya Bunglapart Village	GPS coordinate	23° 32' 46.59"/84° 36' 00.39"
S. Location D	Near Utkarmit Rajkiya Prathamik Vidyalaya Dumrapart Village	GPS coordinate	23° 33' 38.14"/84° 37' 30.33"

Date(s) of performance of the laboratory activities

Test start date	17.03.2026/ 13:25	Test completion date	20.03.2026/ 14:10
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01	mg/m ³	1.6	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



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

****Test Report End****

[Signature]
Issue by
(Rupesh Prajapati)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Contractual Notes | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility at specific environmental condition as method required and results relate only to the sample tested in prescribed Date & time | 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law. | 4. Any complaint about this report should be communicated in writing within 10 days of its issue | 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to invoiced amount only. | 6. All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges | 7. Opinion does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any caused by use or misuse of this report. | 8. When the results are from external provider are marked as * mark. |
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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

Accredited by -
NABL wide certificate Number TC- 12887
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

Test Report



Unique Lab Report No.	TC1288726000000342	Discipline	Chemical
Report Unique ID	RL04982612020	Group	Water
Issue date/time	20.03.2026/ 16:49	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. Girija Tamrakar +91 9111006074 girija.tamrakar@adityabirla.com 31.03.2025/ 10:10 13612313868
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References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0498	Sample Booking Number	EPIC-2612020
Sample(s) Code	2612020	Sample Receipt (D/T)	17.03.2026/10:53

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.03.2026/ 12:40	Sampling End (D/T)	15.03.2026/ 12:56
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	22	Humidity %	46	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	R.O Plant	GPS coordinate	23° 32' 24.47"/ 84° 36' 30.05"
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Date(s) of performance of the laboratory activities

Test start date	17.03.2026/ 11:10	Test completion date	20.03.2026/ 15:00
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits	
						Acceptable Limit	Permissible limit
1.	pH value at 25.5°C	IS 3025 (P-11) 2022	-	1.5	6.72	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.3	0.82	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	5.0	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	10	195.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	5	37.94	250	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	10	100.00	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	10	158.63	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	10	33.67	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	0.6	BDL	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1) 2022	mg/l	0.3	8.30	200	400
13.	Nitrate (as NO ₃ -N)	IS 3025 (P-34/Sec-1) 2023	mg/l	0.4	2.01	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	0.001	BDL	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	0.3	18.13	30	100



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PAN:-AAHCE3611M
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Accredited by -
NABL, vide certificate Number TC - 12887
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

Test Report



Unique Lab Report No.	TC1288726000000342	Discipline	Chemical
Report Unique ID	RL04982612020	Group	Water
Issue date/time	20.03.2026/ 16:49	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. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

16. Fluoride (as F)	APHA 4500 F-D 2023	mg/l	0.1	BDL	1.0	1.5
Group - Residues and Contaminants in Water,				Sub Group - Trace Metals Elements		
17. Copper (as Cu)	APHA 3111 B 2023	mg/l	0.1	BDL	0.05	1.5
18. Iron (as Fe)	APHA 3111 B 2023	mg/l	0.1	BDL	1.0	No relaxation
19. Lead (as Pb)	APHA 3111 B 2023	mg/l	0.01	BDL	0.01	No relaxation
20. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	0.003	BDL	0.003	No relaxation
21. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	0.01	BDL	0.05	No relaxation
22. Nickel (as Ni)	APHA 3111 B 2023	mg/l	0.02	BDL	0.02	No relaxation
23. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	0.005	BDL	0.01	0.05
24. Selenium (as Se)	APHA 3114 B 2023	mg/l	0.005	BDL	0.01	No relaxation
25. Manganese (as Mn)	APHA 3111 B 2023	mg/l	0.09	BDL	0.1	0.3
26. Zinc (as Zn)	APHA 3111 B 2023	mg/l	0.04	BDL	5	15
Group - Residues and Contaminants in Water,				Sub Group - Pesticides		
27. Aldrin	USEPA 8081 B:2007	µg/l	0.03	BDL	0.03	No relaxation
28. dieldrin	USEPA 8081 B:2007	µg/l	0.03	BDL	0.03	No relaxation

--Test Result End--

Prescribed Limit IS 10500:2012

Analysed by - Pappu Kumar



Reviewed by
(B.N. Kumar)
Technical Head

****Test Report End****

Issued By
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

EPIC LabTech Private Limited



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GST:-20AAHCE3611M1ZX

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04982612020	Group	Water
Issue date/time	20.03.2026/ 16:49	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. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@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/DTH/0498	Sample Booking Number	EPIC-2612020
Sample(s) Code	2612020	Sample Receipt (D/T)	17.03.2026/10:53

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.03.2026/ 12:40	Sampling End (D/T)	15.03.2026/ 12:56
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	22	Humidity %	46	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	R.O Plant	GPS coordinate	23° 32' 24.47"/ 84° 36' 30.05"
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Date(s) of performance of the laboratory activities

Test start date	17.03.2026/ 11:10	Test completion date	20.03.2026/ 15:00
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--Test Result Start--

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

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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04982612020	Group	Water
Issue date/time	20.03.2026/ 16:49	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. Girija Tamrakar
+91 9111006074
girija.tamrakar@adityabirla.com
31.03.2025/ 10:10
13612313868

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

--Test Result End --

Prescribed Limit IS 10500:2012

Analysed by - Pappu Kumar




Reviewed by
(B.N. Kumar)
Technical Head


Issued By
(Umesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Page 2 of 2

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

Abbreviation: - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoQ (Limit of Quantitation). |

EPIC LabTech Private Limited



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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

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

Test Report

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL04982612021	Group	Water
Issue date/time	20.03.2026/ 16:52	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. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@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/0498	Sample Booking Number	EPIC-2612021
Sample(s) Code	2612021	Sample Receipt (D/T)	17.03.2026/ 10:57

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	15.03.2026/ 12:40	Sampling End (D/T)	15.03.2026/ 12:56
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition Clear Temperature (°C) 22 Humidity % 46 Wind direction 0°-180°

Sampling Location(s) with GPS coordinate(s)

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

Date(s) of performance of the laboratory activities

Test start date 17.03.2026/ 11:20 Test completion date 20.03.2026/ 15:00

--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	Coliform Bacteria	IS 15185 2016	Per 100 ml	-	Absent	Shall not be detectable in any 100 ml sample
2.	E. Coli	IS 15185 2016	Per 100 ml	-	Absent	

--Test Result End --

Prescribed Limit IS 10500:2012
Analysed by - Ishika Singh

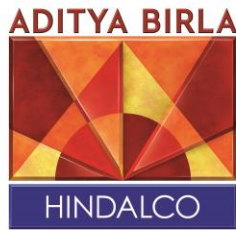



Reviewed by
(B.N. Kumar)
Technical Head

****Test Report End****


Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Annexure 3

Date – 01.05.2025

Office Order

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

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

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

A handwritten signature in blue ink, appearing to read 'Basudev Gangopadhyay', is written over a horizontal line.

Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)

Annexure 4

Production, Mined Out, Back Filled and Over Burden removal from October 2025 to March 2026								
S. No	Name of the Mines	Mining lease area (ha)	Production Capacity (MT)*	Lease Period*	Production (MT)	Mined out area (ha)	Backfilled area (ha)	Over burden (Cu.M)
1	Bagru Bauxite Mine	75.41	85000	22.01.1974 to 31.03.2030	NIL	NIL	NIL	NIL
2	Bhusar Bauxite Mine	65.31	280000	11.07.1981 to 31.03.2030	89066	0.650	0.915	33436.80
3	Hisri (New) Bauxite Mine	14.55	100000	19.07.1981 to 31.03.2030	41184	0.655	0.920	996.270
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	171180	3.820	2.310	271049.97
7	Sherangdag-A Bauxite Mine	155.81	260000	16.10.1974 to 31.03.2030	75150	2.850	1.700	158752.125
8	Serangdag-B Bauxite Mine	77.89	100000	04.10.1978 to 31.03.2030	42330	0.860	0.730	47018.623
9	Jalim & Sanai Bauxite Mine	12.14	50000	16.10.1974 to 31.03.2030	NIL	NIL	NIL	NIL
10	Gurdari Bauxite Mine	584.19	325000	23.03.1985 to 22.03.2035	130240	4.520	4.270	225170.36
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	63685	3.120	4.284	65548.95
13	Amtipani Bauxite Mine	190.95	150000	13.03.2006 to 12.03.2056	55635	4.960	5.050	192519.545

Annexure 4

Minerals & Minerals Limited								
14	Pakhar (109.507) Bauxite Mine	109.507	280000	26.07.2008 to 25.07.2058	178350	1.590	1.950	270329.705
15	Pakhar (15.58) Bauxite Mine	15.58	60000	28.04.1965 to 31.03.2030	46150	0.380	0.038	16378.345
16	Bimarla Bauxite Mine	134.526	300000	18.07.2009 to 17.07.2059	54300	3.871	0.910	114143.750
17	Amtipani Chirodih Bauxite Mine	130.01	450000	11.01.2017 to 10.01.2067	152300	5.600	4.860	299385.013

*Static information about the mines included in the above table



R R P Ambastha
Head - Compliance

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 Oct'25 to Mar'26)	Actual (in Rupees) FY 2025-26 (From Oct'25 to Mar'26)
1	Pollution Control and Environmental Monitoring	1,71,00,000	88,71,710
2	Reclamation/ Back filing & Rehabilitation**	2,04,00,000	34,88,940
3	Green belt, Plantation & Water sprinkling arrangement	1,20,00,000	87,33,877
4	Rural Development	7,92,00,000	7,39,52,956

**Part of OB removed cost



R R P Ambastha
Head - Compliance