

HIL/LHD/ENV/MoEF&CC/407

Date: 24th November 2025

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

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

Ref: Environmental Clearance Letter No. J-11015/135/2006-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 **April 2025 to September 2025** 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**

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

Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)

Enclosure: - As Above

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

Name of the Project

**: Pakhar Bauxite Mine (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 April 2025 to 30th September 2025

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.

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/बाक्साइट/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: -

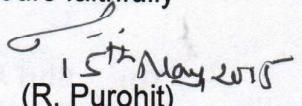
- (i) that the Final Mine Closure Plan is approved without prejudice to any other laws applicable to the mine/lease area from time to time whether made by the Central Government, State Government or any other Authority.
- (ii) that this approval of the Final Mine Closure Plan does not, in any way, imply 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.

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.R. Tripathi, Indraprastha
Bank Hall - S. Ranchi,
Jharkhand - 834025, India

Tel: 0651 444702
E-mail: epiclabtech@gmail.com

CR-014590/H2022/10/00008
PAN: AHNCE010M
ESTD: 2011/01/01

Accredited by -
ISAC, ISO 17025:2017, IACB
for the scope: Risk & Soil Contamination
Certifying no's:
100 R001-2015 and 100-0001-2018



Annexure - 2

Analytical Test Certificate

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

Report Issue to

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

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

References of Quality Management System (Scope of Inspection (Contd))

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

Sampling References

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

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

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	48	Wind direction	260°-80°
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Sampling Location(s) with GPS coordinate(s)

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

Date(s) of performance of the laboratory activities

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

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

-Test result End -

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

Verified & Signed by
A.T. BIRLA
Laboratory Head

Laboratory's Seal

Checked by
(A.T. BIRLA)
Technical Head

Authorized Signatory

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



Analytical Test Certificate

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

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

References of Quality Management System (Steps of Inexibility Cross)
Customer Registration No.
Sample(s) Code

Customer Registration No.	EPIC/OTH/0138	Sample Booking Number	EPIC-251809
Sample(s) Code	251639 (A) (B) (C) (D)	Sample Receipt (D/T)	17.04.2025/ 10:43

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS 5182 and CPCB Air Manual Volume-1 (NAAQM/36/2012-13)		
Sampling Start (D/T)	15.04.2025/ 10:29	Sampling End (D/T)	16.04.2025/ 17:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

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

Sampling Location(s) with GPS coordinate(s)						
S. Location A	Near Bunglapur Village	GPS coordinate	23° 32' 42.29" / 84° 04' 23"			
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75" / 84° 37' 28.46"			
S. Location C	Near Utkarmit Rajkiya Prashiksha Vidyalaya Bunglapur Village	GPS coordinate	23° 32' 46.59" / 84° 38' 00.39"			
S. Location D	Near Utkarmit Rajkiya Prashiksha Vidyalaya Dumrapur Village	GPS coordinate	23° 33' 38.14" / 84° 37' 30.33"			

Date(s) of performance of the laboratory activities						
Test start date	17.04.2025/ 11:05			Test completion date	23.04.2025/ 17:50	

-Test Result -							
Sl	Test Parameters	Method used	Unit	Results			Limits
				A	B	C	
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/901NAPK/1/06	mg/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)

--Test Result End --

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

Analysed by -AK SHRI

Checked by
(S. Kumar)
Technical HeadVerified by
(B. Das)
Laboratory HeadAuthorized Signatory
EPIC LabTech Pvt. Ltd.,
Ranchi, Jharkhand



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

Tel: 0651 4646282
0651 97 35472
0651 97 73994
E-mail: info@epiclabtech@gmail.com

CIN - U74999MH2022PTC074548 - Accredited by -
PAN - AENHESW19
GST - 2HANCSW19HESW

ISO 9001:2015 Certified by - EPIC LabTech Pvt. Ltd.
Issued by - Aditya Birla Group
Certified by - TUV NORD 2015 and ISO 9001:2015

TC-12887

Analytical Test Certificate

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

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

References of Quality Management System (Steps of Traceability Chain)			
Customer Registration No.	EPIC/OTH/0138	Sample Booking Number	EPIC-251640
Sample(s) Code	251640	Sample Receipt (D/T)	17.04.2025/ 10:48

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

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

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

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

--Test Result--

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

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



Analytical Test Certificate

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

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

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

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

--Test Result End--

Prescribed Limit: IS-10500:2021

Operational Status: Unit was Operational During sampling.

Analyzed by: -Pratima Kumar/ Ankit Das




Chaired by
(E.A. Kumar)
Technical Head



Verified & Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical			
Report Unique ID	RL0138251640	Group	Water			
Issue date/time	24.04.2025/ 11:15	Sub Group	Drinking Water			
Report Issue to						
M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE: PAKHAR 115.13 BAUXITE MINE	Contact Person	Mr. Ankut Das				
	Contact Number	+91 9971034775				
	Email Id	ankut.das@adityabirla.com				
	Order Date	31.03.2025/ 10:10				
	Order Number	13612313868				
Reference of Quality Management System (Steps of Traceability Chain)						
Customer Registration No.	EPIC/OTH/0138	Sample Booking Number	EPIC/251640			
Sample(s) Code	251640	Sample Receipt (D/T)	17.04.2025/ 10:46			
Sampling References						
Type of Industry	Bauxite Mines	Ref. of Sampling Plan:	EPIC/LAB/R/036			
Sampling method used	IS : 3025 (Part-1) 1987, R-2003					
Sampling Start (D/T)	15.04.2025/ 12:30	Sampling End (D/T)	15.04.2025/ 12:40			
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team			
Description/condition of sample	Receipt sample(s) were fit for analysis.					
Environmental Condition during sampling						
Weather condition	Clear	Temperature (°C)	26			
		Humidity %	48			
		Wind direction	260°-80°			
Sampling Location(s) with GPS coordinate(s)						
S. Location A	R.O. Plant	GPS coordinate	23° 32' 24.47" N 84° 36' 30.05" E			
Date(s) of performance of the laboratory activities						
Test start date	17.04.2025/ 11:10	Test completion date	23.04.2025/ 13:00			
-Test Result -						
Sl	Test Parameters	Method used	Unit	Results	Acceptable Limit	Permissible limit
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	BDL(MDL-0.1)	1.0	1.5
Group-Residues and Contaminants in Water						Sub Group-Trace Metals Elements
2.	Aluminum	IS 3025 (P-55):2019	mg/l	BDL(MDL-0.1)	0.03	0.2
3.	Boron	IS 3025 (P-57):2021	mg/l	BDL(MDL-0.1)	0.5	1.0
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.5	No relaxation
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.1	No relaxation
Group-Residues and Contaminants in Water						Sub Group-Pesticides
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	20	No relaxation
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation
8.	Diektrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.03	No relaxation
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.005)	0.01	No relaxation
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	125.0	No relaxation
12.	Chlopyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	30.0	No relaxation
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	3.0	No relaxation



Analytical Test Certificate

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

Report Issue to

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

15. Gamma-HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	100/1	BDL(MDL-0.5)	2.0	No relaxation
16. Malathion	EPIC/LAB/SOP/WA/01/00	100/1	BDL(MDL-0.5)	199.0	Non relaxation
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	100/1	BDL(MDL-0.2)	0.3	No relaxation
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	100/1	BDL(MDL-0.5)	1.0	No relaxation
19. Phorate	EPIC/LAB/SOP/WA/01/00	100/1	BDL(MDL-0.5)	2.0	No relaxation
20. DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	100/1	BDL(MDL-0.5)	1.0	No relaxation
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	100/1	BDL(MDL-0.05)	0.4	No relaxation

-Test Result End -

Prescribed Limit: 15.10.2021

Operational Status: Unit was Operational During sampling.

Analysed by -Pratik Kumar/ Ashu Kumar

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



Analytical Test Certificate

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

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Given)

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	48	Wind direction	260°-80°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	R.O Plant	GPS coordinate	23° 32' 24.47" N 84° 38' 30.05" E
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Date(s) of performance of the laboratory activities

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

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

-Test Result End -

Prescribed Limit

Operational Status

Unit was Operational During sampling

Analysed by - Pradeep Kumar/ Akash Kumar




 Checked by
 (P.K. Kumar)
 Technical Head


 Verified & Issued by
 (Bhushan Das)
 Laboratory Head

Authorised Signatory
 EPIC LabTech Pvt. Ltd.
 Ranchi, Jharkhand



Address:
C/o - R.R. Tripathi, Indrapuram,
Road No. - 5, Ranchi,
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CIN - U74999HR2022PLC640444
Approved by
ISO 9001:2015
Certified by
ISO 9001:2015 and ISO 45001:2018

TC-128867

Analytical Test Certificate

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

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

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

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	48	Wind direction	260°-80°
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Sampling Location(s) with GPS coordinate(s)

5. Location A	Near Utkarsh Rajkanya Pratimik Vidyalaya Dumrapur Village	GPS coordinate	23°33'36.90" / 84°37'27.19"
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Date(s) of performance of the laboratory activities

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

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

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

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



Analytical Test Certificate

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

Report Issue to

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

References of Quality Management System (Site of Traceability Data)

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	45	Wind direction	260°-80°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Utkarsh Rajkoya Prathmik Vidyalaya Dumrapur Village	GPS coordinate	23°33'36.90" / 84°37'27.19"
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Data(s) of performance of the laboratory activities

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

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



Analytical Test Certificate

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

Report Issue to:

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

15. Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/L	BDL(HDL-0.5)	2.0	No relaxation
16. Malathion	EPIC/LAB/SOP/WA/01/00	µg/L	BDL(HDL-0.5)	100.0	No relaxation
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/L	BDL(HDL-0.25)	0.3	No relaxation
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/L	BDL(HDL-0.5)	1.0	No relaxation
19. Phorate	EPIC/LAB/SOP/WA/01/00	µg/L	BDL(HDL-0.5)	2.0	No relaxation
20. DDT (o, p and p, p-Isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	µg/L	BDL(HDL-0.5)	1.0	No relaxation
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/L	BDL(HDL-0.05)	0.4	No relaxation

-Test Result End--

Prescribed Limit IS 10500:2021

Operational Status Unit was Operational During sampling.

Analysed by -Pratik Kumar/ Analytical

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



Analytical Test Certificate

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

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

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

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

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

Humidity % 48 Wind direction 260°-80°

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

23° 33' 36.90" / 84° 37' 27.19"

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

--Test Result--

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

--Test Result End--

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

Analysed by - Pratik Kumar / Akash Kumar


 Checked by
(Pratik Kumar)
Technical Head


 Verified by
(Akash Kumar)
Laboratory Head

 Authorized Signatory
 EPIC LabTech Pvt. Ltd.
 Ranchi, Jharkhand




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

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CIN - U74999IN2022PTC079823
RAN - AANCE3611W123
GST - 204AANCE3611W123

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

TC-12887

Analytical Test Certificate

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

Report Issue to

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

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

References of Quality Management System (Days of Traceability Data)

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	46	Wind direction	260°-80°
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Sampling Location(s) with GPS coordinate(s)

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

Date(s) of performance of the laboratory activities

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

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM _{2.5})	IS:5182 (P-23) 2022	µg/m ³	77.28	84.57	89.38	82.02	100 (4 hr)
2.	Fine Particulate Matter (PM ₁₀)	IS:5182 (P-34) 2018	µg/m ³	37.96	42.19	39.18	33.30	60 (34 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	10.50	11.14	12.50	08.58	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	23.52	25.95	18.62	21.15	80 (24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	30.74	32.03	37.21	35.92	400 (24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	26.38	21.39	24.95	27.09	180 (1 hr)
7.	Lead (Pb)	IS:5182 (P-22) 2019	µg/m ³	BDL	(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	1.0 (34 hr)
8.	Nickel (Ni)	IS:5182 (P-26) 2020	µg/m ³	BDL	(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	-
9.	Arsenic (As)	USEPA 40 3.2:1999	µg/m ³	BDL	(MDL-0.001)	(MDL-0.001)	(MDL-0.001)	(MDL-0.001)

-Test Results End -

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

Operational Status Unit was Operational During sampling.

Analyzed by - AK Seha

Reviewed by
AK Seha
Technical Head

Issued by
Mr. Ankit Das
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

Page 3 of 6



EPIC LabTech Private Limited

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93049 73594
epiclabtech@gmail.com

CIN - U74209JH2022PTC00946
PAN - AAHCES00M
GST - 20AAHCES3610M124

Admitted by -
Ranjan Das, Laboratory Head
Certified by -
ISO 9001:2015 and ISO 17025:2018

Analytical Test Certificate

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

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

Analyzed by - A.K. Saha

Analyzed by
(A.K. Saha)
Technical Head





TC-12887

Analytical Test Certificate

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

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



Reviewed by
(A.K. Kumar)
Technical Head

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



Analytical Test Certificate

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

Report Issue to

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

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

References of Quality Management System (Date of Issuability Date)

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	46	Wind direction	260°-80°
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Sampling Location(s) with GPS coordinate(s)

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

Date(s) of performance of the laboratory activities

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

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

-Test Results End -

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

Operational Status Unit was Operational During sampling.

Analysed by - AK Seha


 Reviewed by
(AK Seha)
Technical Head


 Issued by
Ankit Das
Laboratory Head

Authorized Signature
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

**Analytical Test Certificate**

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

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Doc)

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	46	Wind direction	260°-80°
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Sampling Location(s) with GPS coordinate(s)

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

Date(s) of performance of the laboratory activities

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

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

-Test Results End -

Prescribed Limit
Operational Status
Analysed by -AKS

Reviewed by
(A.K. Singh)
Technical Head

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



EPIC LabTech Private Limited

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epiclabtech@gmail.com

CIN - U74999JH2022PTC079625
PAN - AAHC33871M
GST - 20AAHC33871M025

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



TC-12887

Analytical Test Certificate

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

Report Issue to

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

References of Quality Management System (Steps of Traceability Doc)

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	50	Wind direction	300°-110°
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Sampling Location(s) with GPS coordinate(s)

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

Date(s) of performance of the laboratory activities

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

-Test Results-

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	85.71	80.17	83.40	76.01	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	37.91	35.06	36.94	33.15	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	09.79	10.57	10.18	11.35	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	22.20	23.25	26.43	24.31	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	50.32	51.30	47.40	45.45	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	38.72	37.56	35.24	32.91	180(1 hr)
7.	Lead (Pb)	IS:5182 (P-22) 2019	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS:5182 (P-26) 2020	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
9.	Arsenic (As)	USEPA ID 3.2:1989	µg/m ³	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	-

-Test Results End-

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

Operational Status Unit was Operational During sampling.

Analysed by - Archana Kumar



Reviewed by
Archana Kumar
Technical Head



Issued by
Archana Kumar
Authorized Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

Page 1 of 1

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



EPIC LabTech Private Limited

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CIN: U74999JH2022PTC036625 Accredited by:
Joint Venture Accreditation Board
Certified by:
ISO 17025:2017 and ISO 14001:2015

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical					
Report Unique ID	RL0204252415	Group	Atmospheric Pollution					
Issue date/time	13.06.2025/ 16:16	Sub Group	Ambient Air Quality					
Report Issue to								
M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST. LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE: PAKHAR 115.13 BAUXITE MINE	Contact Person Mr. Ankit Das Contact Number +91 9871034775 Email Id ankit.das@adityabirla.com Order Date 31.03.2025/ 10:10 Order Number 13612313868							
References of Quality Management System (Steps of Traceability Chain)								
Customer Registration No.	EPIC/OTH/0204	Sample Booking Number	EPIC-252415					
Sample(s) Code	252415 (A) (B) (C) (D)	Sample Receipt (D/T)	10.06.2025/ 11:07					
Sampling References								
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036					
Sampling Start (D/T)	07.06.2025/ 12:38	Sampling End (D/T)	08.06.2025/ 10:23					
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team					
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)							
Description/condition of sample	Receipt sample(s) were fit for analysis.							
Environmental Condition during sampling								
Weather condition	Clear	Temperature (°C)	26					
		Humidity %	50					
		Wind direction	300°-110°					
Sampling Location(s) with GPS coordinate(s)								
S. Location A	Near Mine Block-B, Quarry No.-3	GPS coordinate	23° 32' 24.42" / 84° 36' 00.33"					
S. Location B	Near Mine Block-B, Quarry No. - 4	GPS coordinate	23° 32' 18.88" / 84° 36' 06.71"					
S. Location C	Near Mine Block B, Quarry No - 6	GPS coordinate	23° 32' 51.14" / 84° 36' 58.76"					
S. Location D	Near Mine Block-B, Quarry No. - 7	GPS coordinate	23° 33' 05.36" / 84° 37' 04.76"					
Date(s) of performance of the laboratory activities								
Test start date	10.06.2025/ 11:30	Test completion date	13.06.2025/ 11:10					
-Test Results-								
Sl.	Test Parameters	Method used	Unit	A	B	C	D	Limits
1.	Benzene (C ₆ H ₆)	IS:5182(P-11)2006	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12)2004	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/APH/01/00	mg/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-
-Test Results End -								

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

Operational Status Unit was Operational During sampling.

Analyzed by - Archana Kumar


Reviewed by
(A.K. Kumar)
Technical Head



Page 1 of 1

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



EPIC | Analytical Test Certificate

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

Report issued to

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

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

References of Quality Management System (QMS) of Toyota Diesel

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

Sample References

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

Environmental Condition during sampling

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

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

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

Units) in performance of the auxiliary services

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

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

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

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

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

12
12/25
12/25
Issue by
Brent Goss

Authorized Signatory
EPIC LabTech Pvt. Ltd



EPIC LabTech Private Limited

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CIN - U74999JH2022PTC055555
PAN - XANCS3510M
GST - 29AAHC3810TAN123

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical					
Report Unique ID	RL0204252416	Group	Atmospheric Pollution					
Issue date/time	13.06.2025/ 10:10	Sub Group	Ambient Air Quality					
Report Issue to								
M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE: PAKHAR 115-13 BAUXITE MINE	Contact Person Mr. Ankit Das	Contact Number +919971034775	Email Id ankit.das@adityabirla.com					
	Order Date 31.03.2025/ 10:10	Order Number 13612313868						
References of Quality Management System (Days of Issuability Date)								
Customer Registration No.	EPIC/OTH/0204	Sample Booking Number	EPIC-252416					
Sample(s) Code	252416 (A) (B) (C) (D)	Sample Receipt (D/T)	10.06.2025/ 11:10					
Sampling References								
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036					
Sampling Start (D/T)	08.06.2025/ 12:25	Sampling End (D/T)	09.06.2025/ 09:32					
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team					
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)							
Description/condition of sample	Receipt sample(s) were fit for analysis.							
Environmental Condition during sampling								
Weather condition	Clear	Temperature (°C)	26					
		Humidity %	50					
		Wind direction	300°-100°					
Sampling Location(s) with GPS coordinate(s)								
S. Location A	Near Bunglapur Village	GPS coordinate	22°32'42.29" / 84°36'54.23"					
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	22°33'11.75" / 84°37'28.46"					
S. Location C	Near Utkarmit Raksha Prathmik Vidyalaya Bunglapur Village	GPS coordinate	22°32'46.99" / 84°36'00.39"					
S. Location D	Near Utkarmit Raksha Prathmik Vidyalaya Dumrapur Village	GPS coordinate	22°33'38.14" / 84°37'30.33"					
Date(s) of performance of the laboratory activities								
Test start date	10.06.2025/ 11:15	Test completion date	13.06.2025/ 11:20					
-Test Results-								
Sl.	Test Parameters	Method used	Unit	A	B	C	D	Limits
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12) 2004	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/HAR/01/00	mg/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-
-Test Results End -								

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

Operational Status Unit was Operational During sampling.

Analyzed by - AK Seha




Reviewed by
(S.K. Kumar)
Technical Head


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



EPIC LabTech Private Limited

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

Analytical Test Certificate

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



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CIN - U74999MH2008PTC078885
PAN - AAHCES87CM
GST - 25AAHCES87CM123

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

Analytical Test Certificate

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

Report Issue to

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

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

References of Quality Management System (Days of Traceability Data)

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	60	Wind direction	220°-40°
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Sampling Location(s) with GPS coordinate(s)

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

Data(s) of performance of the laboratory activities

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

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

-Test Results End -

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

Analyzed by - Vishal Kumar



Reviewed by
(V.K. Kumar)
Technical Head



Issued by
(Ankit Das)
Authorized Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.

Branch: Jaiparganj

Page 1 of 1



Analytical Test Certificate

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

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Kumar




Reviewed by
Vishal Kumar
Technical Test





Analytical Test Certificate

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

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Data)

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	60	Wind direction	220°-40°
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Sampling Location(s) with GPS coordinate(s)

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

Data(s) of performance of the laboratory activities

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

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

-Test Results End -

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

Operational Status Unit was Operational During sampling.

Analyzed by - Vishal Kumar


Reviewed by
(Vishal Kumar)
Technical Head




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



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

0651 4866292
98357 89677
93049 71994
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CIN - U74999IN222PTC05585
PAN - AAHCCE381TM
SET - 23AAHCCE381TM12X

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

TC-12867

Sampled Test Certificate

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

Report Issue to

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

References of Quality Management System (Copy of Traceability Data)

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	60	Wind direction	220°-40°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	R.O Plant	GPS coordinate	23° 32' 24.47" / 64° 36' 30.05"
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Data(s) of performance of the laboratory activities

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

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

Page 1 of 2

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



Analytical Test Certificate

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

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

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

Group-Hesidues and Contaminants in Water

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

--Test result End--

Prescribed Limit

IS 10500:2021

Operational Status

Unit was Operational During sampling.

Analysed by - Vishal Mengraj



Approved by
(B.K. Kumar)
Technical Head

Issued by
(Bimal Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





Environmental Test Certificate

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

Report Issue to

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

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

References of Quality Management System (Step of Traceability Data)

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	60	Wind direction	220°-40°
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Sampling Location(s) with GPS coordinate(s)

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

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

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

Group-Residues and Contaminants in Water

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

Group-Residues and Contaminants in Water

6. Aluminum	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(MDL-0.2)	20	No relaxation
7. Atrazine	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(MDL-0.5)	2.0	No relaxation
8. Dieldrin	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(MDL-0.02)	0.03	No relaxation
9. Alpha HCH	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(MDL-0.005)	0.01	No relaxation
10. Beta HCH	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(MDL-0.02)	0.04	No relaxation
11. Butachlor	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(MDL-0.5)	125.0	No relaxation
12. Chlorynphos	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(MDL-0.5)	30.0	No relaxation
13. Delta HCH	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(MDL-0.02)	0.04	No relaxation
14. Ethion	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(MDL-0.5)	3.0	No relaxation
15. Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	ug/l	BDL(MDL-0.5)	2.0	No relaxation



Analytical Test Certificate

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

Report Issue to

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

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

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

--Test result End --

Prescribed Limit
Operational Status
Analysed by - Vimal Mangaraj

IS 10500:2021
Unit was Operational During sampling


Reviewed by
(EX. Aman)
Technical Head


Issued by
(Ankut Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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

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98357 88677
93049 72994
Email: epiclabtech@gmail.com

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

Environmental Test Certificate

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

Report Issue to

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

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

References of Quality Management System (Date of Issuability Date)

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	60	Wind direction	220°-40°
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Sampling Location(s) with GPS coordinate(s)

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

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

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

--Test result End --

Prescribed Limit

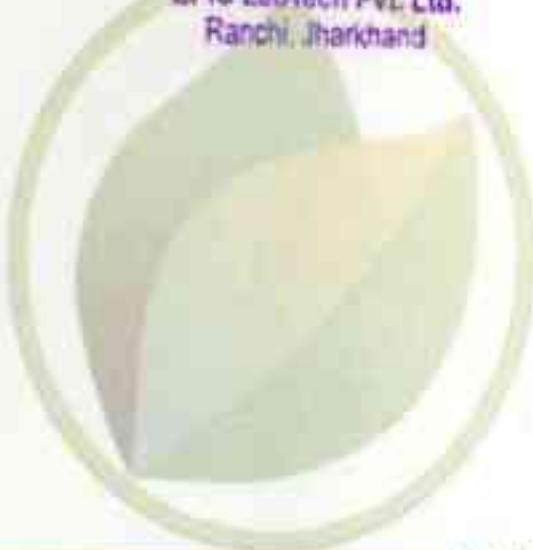
IS 10500:2021
Unit was Operational During sampling.

Analyzed by -Sujata Kumar


Reviewed by
(SK Kumar)
Technical Head


Reviewed by
(Vishal Kumar)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





Environmental Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical					
Report Unique ID	RL02632534001	Group	Atmospheric Pollution					
Issue date/time	23.08.2025/ 13:00	Sub Group	Ambient Air Quality					
Report Issue to								
M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST-LOHARDAGA, STATE-JHARKHAND, INDIA-835302 MONITORING SITE : PAKHAR 115.13 BAUXITE MINE	Contact Person Mr. Ankit Das Contact Number +91 9871034775 Email Id ankit.das@adityabirla.com Order Date 31.03.2025/ 10:10 Order Number 13612313868							
References of Quality Management System (Class of Traceability Data)								
Customer Registration No.	EPIC/OTH/0263	Sample Booking Number	EPIC-2534001					
Sample(s) Code	2534001 (A) (B) (C) (D)	Sample Receipt (D/T)	18.08.2025/ 10:13					
Sampling References								
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036					
Sampling Start (D/T)	15.08.2025/ 12:11	Sampling End (D/T)	16.08.2025/ 09:19					
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team					
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)							
Description/condition of sample	Receipt sample(s) were fit for analysis.							
Environmental Condition during sampling								
Weather condition	Cloudy	Temperature (°C)	27					
		Humidity %	66					
		Wind direction	0°-180°					
Sampling Location(s) with GPS coordinate(s)								
S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42" / 84° 36' 00.33"					
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88" / 84° 36' 06.71"					
S. Location C	Near Mine Block-B, Quarry No -8	GPS coordinate	23° 32' 51.14" / 84° 36' 58.76"					
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 05.36" / 84° 37' 04.76"					
Data(s) of performance of the laboratory activities								
Test start date	18.08.2025/ 10:33	Test completion date	23.08.2025/ 12:00					
-Test Results-								
Sl	Test Parameters	Method used	Unit	A	B	C	D	Limits
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12) 2004	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AP/01/00	mg/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-
-Test Results End -								

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangat

Reviewed by
(EX Kumar)
Technical Head



TC-12887

Sampled Test Certificate

Unique Lab Report No.	TC1286725000000996	Discipline	Chemical
Report Unique ID	RL02632534002	Group	Atmospheric Pollution
Issue date/time	23.08.2025/ 13:03	Sub Group	Ambient Air Quality

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Detail)

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

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	16.08.2025/ 12:16	Sampling End (D/T)	17.08.2025/ 09:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

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

Date(s) of performance of the laboratory activities

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

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	61.44	63.40	66.59	64.63	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	26.61	25.17	27.05	29.51	50 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	06.33	07.44	07.06	07.83	50 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	17.58	15.50	19.61	20.71	80 (24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	42.02	43.70	39.21	38.09	400 (24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	25.76	24.49	27.03	29.26	180 (1 hr)
7.	Lead (Pb)	IS:5182 (P-23) 2019	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182 (P-26) 2020	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0 (24 hr)
9.	Arsenic (As)	USEPA ID 3.2:1999	µg/m ³	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	1.0 (24 hr)

-Test Results End -

Prescribed Limit
 Operational Status

Environmental (Protection) Rules-1986, Schedule VI.

Unit was Operational During sampling.

Analyzed by - Vishal Mangraj


 Reviewed by
 (A.K. Kumar)
 Technical Head


 Issued by
 (A.K. Kumar)
 Laboratory Head

Authorized Signature

EPIC LabTech Private Limited

Page 1 of 2

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



Analytical Test Certificate

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

Report Issue to

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

References of Quality Management System (Copy of Traceability Chart)

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

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

Date(s) of performance of the laboratory activities

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

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

-Test Results End-

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangarji

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

Authorized Signatory

EPIC LabTech Pvt. Ltd.,
Ranchi, Jharkhand

**Sample Details & Certificate**

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

Report Issue to

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

References of Quality Management System (Days of Traceability Date)

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

5. Location A	Near Utkarsh Rupiya Prathmik Vidyalaya Dumka part Village	GPS coordinate	23°33'36.90" / 84°37'27.19"
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Date(s) of performance of the laboratory activities

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

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



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CIN - U74999JH2002PTC079485
RAN - AAHC3671M
GST - 28AAHC3671M12X

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

An ISO 9001:2015 Certified Lab

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

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

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

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

-Test result End -

Prescribed Limit

Operational Status

Analysed by - Pappu Kumar



IS 10500:2023

(Unit was Operational During sampling.

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

Page 2 of 2



Analytical Test Certificate

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

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST-LOHARDAGA, STATE-JHARKHAND, INDIA-835302 MONITORING SITE : PAKHAR 115-13 BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +919971034775 ankit.das@adityabirla.com 31.03.2025/ 10:10 13612313868
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References of Quality Management System (Days of Traceability Data)

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

5. Location A	Near Utkarsh Raksha Prathmik Vidyalaya Dumrapur Village	GPS coordinate	23°33'36.90" / 84°37'27.19"
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Date(s) of performance of the laboratory activities

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

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

Group-Residues and Contaminants in Water

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

Group-Residues and Contaminants in Water

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



Environmental Test Certificate

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

-Test result End -

Prescribed Limit

15.10500/2021

Operational Status

Unit was Operational During sampling.




Reviewed by
(Pappa Kumar)
Technical Head


Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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GST: 20AAXCE361YM129
PAN: AAHCZ3611M

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

Analytical Test Certificate

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

Report Issue to

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

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

References of Quality Management System (Days of Traceability Data)

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

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

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

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

Test result End

Prescribed Limit
IS 10500:2021

Operational Status
Unit was Operational During sampling.

Analyzed by - Sojata Kumar


Reported by
(S. Kumar)
Technical Head


Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Environmental Test Certificate

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

Report Issue to

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

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

References of Quality Management System (Days of Traceability Date)

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

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

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

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

-Test result End -

Prescribed Limit
Operational Status
Analyzed by - Pappu Kumar

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

UNIT was Operational During Sampling.


Reviewed by
(S.N. Kumar)
Technical Head




Issued by
(S. N. Kumar)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Analytical Test Certificate

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

Report Issue to

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

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	66	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

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

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

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

-Test result End -

Prescribed Limit
Environmental (Protection) Rules-1986, Schedule I, Serial No. 114
Operational Status
Unit was Operational During sampling.Reviewed by
(G.N. Kumar)
Technical HeadIssued by
(Ankit Das)
Laboratory HeadAuthorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

**Environmental Test Report**

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

Report Issue to

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

References of Quality Management System (Steps of Traceability Data)

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	68	Wind direction	0°- 180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Block-B, Quarry No.3	GPS coordinate	23° 32' 24.42" / 84° 00' 00.33"
S. Location B	Near Mine Block-B, Quarry No.4	GPS coordinate	23° 32' 18.88" / 84° 00' 06.71"
S. Location C	Near Mine Block-B, Quarry No. - 6	GPS coordinate	23° 32' 51.14" / 84° 00' 58.76"
S. Location D	Near Mine Block-B, Quarry No.7	GPS coordinate	23° 33' 05.36" / 84° 00' 37.04.76"

Detail(s) of performance of the laboratory activities

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

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

-Test Results End -

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

Analyzed by - Vishal Mangat


 Received by
(S.K. Kumar)
Technical Head


 Issued by
(S.K. Kumar)
Laboratory Head

Authorized Signatory
 EPIC LabTech Pvt. Ltd.

Page 1 of 1

Disclaimer Note : 1. The laboratory accepts responsibility for content of this report. 2. Test performed at laboratory's permanent facility at specified time/temperature condition as method required and results relate only to the sample tested in prescribed date & time. 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law. 4. Any complaint about this report should be communicated in writing within 10 days of its issue. 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to recovered amount only. 6. All responses are subject to Acceptable and maximum liability of the laboratory does not exceed the testing and consulting charges. 7. Optics does not imply measurement of the tested product by laboratory. Under no circumstances, laboratory accepts any claim by user of issue of this report. 8. When the results are from external provider are marked as * mark. 9. Abbreviation - BDL (Below Detection Limit), MDL (Detection Limit), LQ (Limit of Quantification).



Identified Test Category

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

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	65	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

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

Date(s) of performance of the laboratory activities

Test start date	11.09.2025/ 11:34	Test completion date	13.09.2025/ 16:00
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-Test Results-

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

-Test Results End -

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

Operational Status: Unit was Operational During sampling.

Analysed by: Vishal Mangat


Reviewed by
(E.K. Kumar)
Technical Head


Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Analytical Test Certificate

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

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

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

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

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

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

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

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

-Test Results End-

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

Analysed by - Ishita Kargave


Reviewed by
(S.K. Kargave)
Technical Head


Issued by
(S.K. Kargave)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.

Page 2 of 3



Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical					
Report Unique ID	PL02912537018	Group	Atmospheric Pollution					
Issue date/time	13.09.2025/ 17:15	Sub Group	Ambient Air Quality					
Report Issue to								
M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE : PAKHAR 115.13 BAUXITE MINE	Contact Person Mr. Ankit Das	Contact Number +91 9971034775	Email Id ankit.das@adityabirla.com					
	Order Date 31.03.2025/ 10:10	Order Number 13612313868						
References of Quality Management System (QMS) / Traceability Data								
Customer Registration No.	EPIC/OTH/0293	Sample Booking Number	EPIC-2537018					
Sample(s) Code	2537018 (A) (B) (C) (D)	Sample Receipt (D/T)	13.09.2025/ 11:15					
Sampling References								
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036					
Sampling Start (D/T)	09.09.2025/ 12:17	Sampling End (D/T)	10.09.2025/ 10:14					
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team					
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)							
Description/condition of sample	Receipt sample(s) were fit for analysis.							
Environmental Condition during sampling								
Weather condition	Cloudy	Temperature (°C)	27					
		Humidity %	66					
		Wind direction	0°-180°					
Sampling Location(s) with GPS coordinate(s)								
S. Location A	Near Bunglapur Village	GPS coordinate	23° 32' 42.29" / 84° 36' 04.23"					
S. Location B	Yatri Shed (Near K-10)	GPS coordinate	23° 33' 11.75" / 84° 37' 26.46"					
S. Location C	Near Utkarmit Rajkiya Prathmik Vidyalaya Bunglapur Village	GPS coordinate	23° 32' 46.59" / 84° 36' 00.39"					
S. Location D	Near Utkarmit Rajkiya Prathmik Vidyalaya Dumrapur Village	GPS coordinate	23° 33' 56.14" / 84° 37' 30.30"					
Date(s) of performance of the laboratory activities								
Test start date	11.09.2025/ 11:35	Test completion date	13.09.2025/ 16:00					
Test Results								
Sl	Test Parameters	Method used	Unit	A	B	C	D	Limits
1.	Benzene (C ₆ H ₆)	IS:5182(P-11)2006	µg/m ³	BDL (MDL-0.2)	BDL (MDL-0.2)	BDL (MDL-0.2)	BDL (MDL-0.2)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12)2004	ng/m ³	BDL (MDL-0.2)	BDL (MDL-0.2)	BDL (MDL-0.2)	BDL (MDL-0.2)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AF/01/00	mg/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-
Test Results End								

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

Operational Status Unit was Operational During sampling.

Analysed by - Vichal Mongaraj


 Received by
(R.K. Karmal)
Technical Head


 Issued by
(R.K. Karmal)
Laboratory Head

 Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Analytical Test Certificate

Unique Lab Report No.	TC1288725000001180	Discipline	Chemical
Report Unique ID	RL02912537019	Group	Water
Issue date/time	13.09.2025/ 17:18	Sub Group	Surface Water

Report Issue to

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

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

References of Quality Management System (Days of Traceability Date)

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	68	Wind direction	0-180°
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Sampling Location(s) with GPS coordinate(s)

5. Location A	Near Bunglapur Village	GPS coordinate	22° 32' 39.61" N 84° 36' 07.66" E
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Date(s) of performance of the laboratory activities

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

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

Group - Residues and Contaminants in Water.

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

-Test result End -

Operational Status

UNIT was Operational During sampling.

Analysed by - Pappu Kumar

Reviewed by
Pappu Kumar
Technical Head



Page 1 of 1

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

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



Analytical Test Certificate

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

Report Issue to

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

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

References of Quality Management System (Date of Issuability Date)

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	60	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bungapar Village	GPS coordinate	22° 32' 39.61" E 84° 38' 07.66" N
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Date(s) of performance of the laboratory activities

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

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

Group - Residues and Contaminants in Water,

7.	Aluminum (as Al)	IS 3025 (P-55) 2002
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Sub Group - Trace Metals Elements

BDL (MDL 0.1)

-Test result End -

Operational Status: UNIT was Operational During sampling.

Analysed by - Pappu Kumar



Reviewed by
(S. Kumar)
Technical Head



**Analytical Test Certificate**

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

Report Issue to

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

References of Quality Management System (Cross of Traceability Chart)

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	68	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Block - B, Quarry No.03	GPS coordinate	23°32'24.31" N 84°38'09.55" E
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Date(s) of performance of the laboratory activities

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

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25.7°C	MAGI 2011	-	6.35	-
2.	Available Phosphorus	MAGI 2011	kg/ha	3.6	-
3.	Available Potassium	MAGI 2011	kg/ha	99.70	-
4.	Organic Carbon	MAGI 2011	%	0.92	-
5.	Electrical Conductivity	MAGI 2011	µmho	77.25	-
6.	Magnesium	MAGI 2011	mg/kg	40.32	-
7.	Nitrogen	MAGI 2011	%	0.082	-
8.	Arsenic (as As)	USEPA 3050 B 1996	mg/kg	BDL/MDL-0.006	-
9.	Cadmium (as Cd)	USEPA 3050 B 1996	mg/kg	0.85	-
10.	Selenium (as Se)	USEPA 3050 B 1996	mg/kg	BDL/MDL-0.006	-

-Test result End -**Operational Status**

Analyzed by - Ishika Singh

Unit was Operational During sampling.


Reviewed by
AKASH KUMAR
Technical HeadAuthorized Signature
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

Page 1 of 1

**Sampled Test Details**

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

Report Issue to:

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

Contact Person
Mr. Ankit Das
Contact Number
+91 9871034775
Email Id
ankit.das@udityabiria.com
Order Date
31.03.2025/ 10:10
Order Number
13612313868

References of Quality Management System (Steps of Traceability Data)

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

Sampling References

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

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	68	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Block - B, Quarry No.03	GPS coordinate	23° 32' 24.31" / 84° 36' 09.95"
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Date(s) of performance of the laboratory activities

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

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

--Test result End --

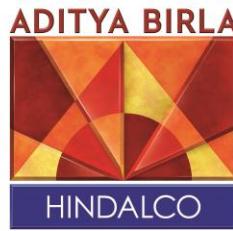
Operational Status:
Analyzed by - Ishika Singh

Unit was Operational During sampling.


Reviewed by
(B.S. Kumar)
Technical Head


Issued by
(Akash Kumar)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Annexure 3

Date – 01.05.2025

Office Order

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

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

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



Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)

Annexure 4

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

Annexure 4

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

*Static information about the mines included in the above table



Basudev Gangopadhyay
AVP (Planning, Environment and Compliance)

Annexure-5

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

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

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

**Part of OB removed cost



Basudev Gangopadhyay
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