



HIL/LHD/ENV/MoEF&CC/622

Date: 26th May 2026

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

Sub: Six Monthly EC Compliance Report for Bagru (75.41 Ha) Bauxite Mining Project of M/s Hindalco Industries Limited, Lohardaga Jharkhand for the period from **October 2025 to March 2026**.

Ref: Environmental Clearance Letter No. J-11015/585/2007-IA II (M), dated 4th February 2011.

Dear Sir,

With reference to the above, we are submitting herewith the Compliance status report of EC conditions for **Bagru (75.41 Ha) Bauxite Mining Project of M/s Hindalco Industries Limited**, Lohardaga Jharkhand for the period from **October 2025 to March 2026** for your kind perusal please.

The lease details are below:

Lease area (ha)	Production Capacity (MT)	Lease Period
75.41	85000	22.01.1974 to 31.03.2030

Hope you will find the same in order.

Thanking You

Yours faithfully,
For **Hindalco Industries Limited**

R R P Ambastha
Head - Compliance

Enclosure: - As Above

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Name of the Project : **Bagru Bauxite Mine (75.41 ha)**
M/s Hindalco Industries Limited

Environment Clearance No & date : **J – 11015/585/2007-IA.II (M), dated 04.02.2011**

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

CONDITIONS: -

Specific Conditions: -

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

Reply: - Implementations of stipulated conditions in NOC are fulfilled post which consent to operate have been obtained from time to time when mine was operational. However, mine has been non-operational since November 2013.

Condition ii: - The environmental clearance is subject to grant of forestry clearance for diversion of 19.56 ha forestland.

Reply: - Compensatory land for forest diversion has been identified and NOC from DFO, DC and Registrar has already been obtained. Registration and Mutation in favor of State Forest Department for CA land have been completed. Obtaining forest clearance is under process. The FC proposal has been recommended by the DFO, CF, PCCF (Nodal), and the Secretary, Forest Department, Government of Jharkhand. It has been forwarded to IRO–MoEF&CC for further needful action. Presently, Mine is not in operation since November 2013.

Condition iii: - The mining operation shall be restricted to above ground water table and it should not intersect groundwater table. In case of working below ground water table, prior approval of the Ministry of Environment & Forest and Central Ground Water Authority shall be obtained for which a detailed hydro-geological study shall be carried out.

Reply: - No mining operation has been carried out during the above period. Mine has been non-operational since November 2013.

Condition iv: - The project proponent shall ensure that no natural water course and/or water resources shall be obstructed due to any mining operations.

Reply: - No mining operation was carried out during the above period. Mine has not been in operation since November 2013. No natural water course /water resource was obstructed /will be obstructed due to mining operation.

Condition v: - Topsoil should be temporarily stacked with proper slope at earmarked site(s) only with adequate measures and it should not be kept unutilized for a period of more than 3 years. The topsoil shall be used for land reclamation and rehabilitation of mined out areas.

Reply: - Sequential backfilling and reclamation of mined out area were exercised when mine was operational. No mining operation was carried out during the above period and as on date. Mine has been non-operational since November 2013.

Condition vi: - The entire waste generated shall be backfilled and there shall be no external overburden dump left at the end of the mine life. The entire backfilled area shall be reclaimed by plantation. The backfilling should be carried out in such a manner that it is restored to the normal ground level. 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 and its Regional Office, Bhubaneswar on six monthly basis.

Reply: - No mining operation was carried out during the above period and as on date. Cumulative 32.05 ha areas have been planted till date. Monitoring and management of rehabilitated areas is in progress through supervision. Old dumps are stabilized. There is no active external dump as Mine has not been in operation since November 2013. Currently, the MoEF&CC regional office is located at Ranchi.

Condition vii: - The void left unfilled in an area of 1.76 ha shall be converted into water body. The higher benches of excavated void/mining pit shall be traced and plantation done to stabilize the slopes. The slopes of higher benches shall be made gentler for easy accessibility by local people to use the water body. Peripheral fencing shall be carried out along the excavated area.

Reply: - The earlier mined out area converted into water body which still exist. No mining operation has been carried out during the above period and as on date. Mine has been non-operational since November 2013.

Condition viii :- Catch drains and siltation ponds of appropriate size shall be constructed around the working pit, sub-grade dump, and mineral dumps to arrest flow of silt and sediment directly into Chanpi Nallah, Sukri Nadi and others water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted, particularly after monsoon, and maintained properly. Garland drains settling tanks and check dams of appropriate size, gradient and length shall be constructed for both around the mine pit and sub-grade dump to prevent run off of water and flow sediments directly into Chanpi Nallah, Sukri Nadi and other water bodies and sump capacity should be designed keeping 50% safety margin over and above

peak sudden rainfall (based on 50 years date) and maximum discharge in the area adjoin the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits should be constructed at the corners of the garland drains and desilted at regular intervals.

Reply: - Mine has been non-operational since November 2013. No mining operation was carried out during the above period and as on date. To collect and manage rainwater during monsoon rains, pit sumps were made, part of mined out area were used as settling tank. Settled water was used for sprinkling quarry, roads, green belt development, etc. Compliance with this provision will further continue post resumption of the mining operation. Water harvesting structure of adequate capacity exists in lease area to harvest rainwater.



Rainwater Harvesting Structure

Condition ix: - Dimension of the retaining wall at the toe of sub grade dump and OB benches within the mine to check run-off and siltation should be based on the rain fall data.

Reply: - The dimensions of retaining wall of OB dumps are based on average rain fall. The dump is stabilized. The compliance with this provision was being practiced when mine was in operation and same will continue post resumption of mining operation. Mine has been non-operational since November 2013. No active external dump exists in the mine lease area.

Condition x: - Plantation shall be raised in an area of 50.11 ha including a 7.5m wide green belt in the safety zone around the mining lease by planting the native species around ML area, backfilled and reclaimed area, around water body, roads etc. in consultation with the local DFO/Agriculture Department. At least 1500 trees per year shall be planted with a tree density of 1000 trees per hectare.

Reply: - Plantation on Bagru plateau was carried out progressively. Till now 32.05 Ha areas are already planted.



Plantation at Mine

Bio-diversity Park - A classic bio park (Birsa Upvan) has been created to validate that all species can grow. We have also developed a tea garden, strawberry garden, spice garden, medicinal garden, Nakshatra Van, VR-DOME & butterfly garden to build a unique Bio-diversity Park.



Biodiversity Park at Bagru in reclaimed area

Condition xi:- Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as around crushing and screening plant, loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the AAQ parameters conform to the norms prescribed by the central Pollution Control Board in this regard.

Reply: - Mine has been non-operational since November 2013. No mining operation was carried out during the above period and as on date.



Mobile Water Tanker with Sprinkling Facility

Condition xii:- 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: - System is in place and same will continue in future post resumption of mining activity. Mine has not been in operation since November 2013. Rainwater harvesting pond and sump is already in place as water conservation measures.

Condition xiii:- 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, its Regional Office, Bhubaneshwar; Central Ground Water Authority and Central Ground Water Board.

Reply: - Mine has been non-operational since November 2013. However, Regular monitoring of groundwater level and quality of the area is being carried out by establishing a network of existing wells/Piezometers. Reports are being sent regularly to the regional office of Ministry, CGWA and JSPCB. The Ground water level from October 2025 to March 2026 and quality Monitoring report of Post-Monsoon and Winter season are attached as **Annexure 1 & 2**.

Condition xiv: -The project authority shall obtain necessary prior approval of the competent authority for drawl of requisite quantity of water (surface water and ground water) for the project.

Reply: - Harvested rainwater during rainy season is being used for sprinkling on haul roads and raising plantation. No surface water from natural resource was/is being/will be used for mining operation. Mine is not in operation since November 2013. However, we have obtained NOC for ground water abstraction from CGWA/CGWB for drinking purposes only. A copy of NOC is attached below:

भारत सरकार जल संवर्धन विभाग केन्द्रीय भूमि जल प्राधिकरण GOVERNMENT OF INDIA MINISTRY OF JAL SHAKTI DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION CENTRAL GROUND WATER AUTHORITY		 सत्यमेव जयते			
भूजल निकासी हेतु अनापत्ति प्रमाण पत्र NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION					
PROJECT NAME BAGRU BAUXITE MINING PROJECT (75.41 HA)					
PROJECT ADDRESS BAGRU BAUXITE MINING PROJECT VILLAGE - BAGRU, BHUSAR AND HISRI TEHSIL - KISKO				PIN CODE 835302	
STATE JHARKHAND		DISTRICT LOHARDAGA		TOWN/BLOCK KISKO	
COMMUNICATION ADDRESS MINES DIVISION, COURT ROAD					
ADDRESS OF CGWB REGIONAL OFFICE 6th & 7th Floor, Lok Nayak Jai Prakash Bhawan, Frazier Road, Dak Banglow, Patna- 800011, Bihar.					
1. NOC NO. NOC/MIN/JH/2024/105/R-2/2		2. DATE OF ISSUANCE 28/02/2025			
3. APPLICATION NO. MIN/JH/2024/105/R-2		4. APPLICATION TYPE Mining			
5. PROJECT STATUS Existing Project		6. NOC TYPE Renew			
7. VALID FROM 16/02/2025		8. VALID UP TO 15/02/2027			
9. WATER QUALITY TYPE Fresh Water		10. AREA TYPE CATEGORY Safe (GWRE-2024)			

Ground Water NOC

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

Reply: - Mine has been non-operational since November 2013. No mining operation was carried out during the above period and as on date.

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

Reply: - Mine has been non-operational since November 2013. No mining operation was carried out during the above period and as on date, it remains non-operational. However, the blasting time is fixed during 1.00 PM - 2.00 PM (whenever, will be done post resumption of mining operation). The controlled blasting method will be practiced once mine becomes operational. All efforts will be taken to mitigate the impact of blasting post resumption of mining activities.

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

Reply: - Mine has been non-operational since November 2013. No mining operation was carried out during the above period and as on date.

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

Reply: - The sewage water from domestic use is collected and treated in a Sewage Treatment Plant. No effluent is generated as Mine is not in operation since November 2013. However, Effluent treatment plant (ETP) has been installed in plateau for the entire Bagru group of Mines. The photographs of STP and ETP are enclosed below:



Sewage Treatment Plant (STP)



Effluent treatment plant (ETP)

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

Reply: - Mine has been non-operational since November 2013. No mining operation was carried out during the above period and as on date. Mine will be operative post obtaining renewed consent to operate and other clearances as applicable.

Condition xx:- Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

Reply: - We believe that the wellbeing of all the labours working within the site should be taken care of on a priority basis, so that they can work in a stress-free environment. Therefore, all the necessary infrastructure and basic facilities mentioned above are being taken care of.

Condition xxi:- The critical parameters such as RSPM (Particulate matter with size less than 10micron (i.e., PM10, PM2.5) and NOX in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closed shall be monitored periodically. Further, quantity of discharged water shall also be monitored [TDS, DO, PH and TSS}. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The Circular No. J-20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment and Forest, which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its compliance.

Reply: - Regular Monitoring of AAQ and water quality is being carried out through an NABL accredited laboratory. Monitored data is being uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The Monitoring report for the period from October 2025 to March 2026 is attached as **Annexure 2**.

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

Reply: - Progressive mine closure plan along with mining scheme has been approved by IBM. FMCP (part area) has also been approved by IBM. Final mine closure plan (FMCP) for total lease area will be prepared in due time as per applicable guidelines and timelines mentioned in MCDR/IBM guideline who are competent authority to approve the same. Based on present resource estimate and peak rated production capacity, mining operations will be done post resumption of mining operations. Currently, Mine is not in operation since November 2013.

General Conditions: -

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

Reply: - Noted. Mine has been non-operational since November 2013.

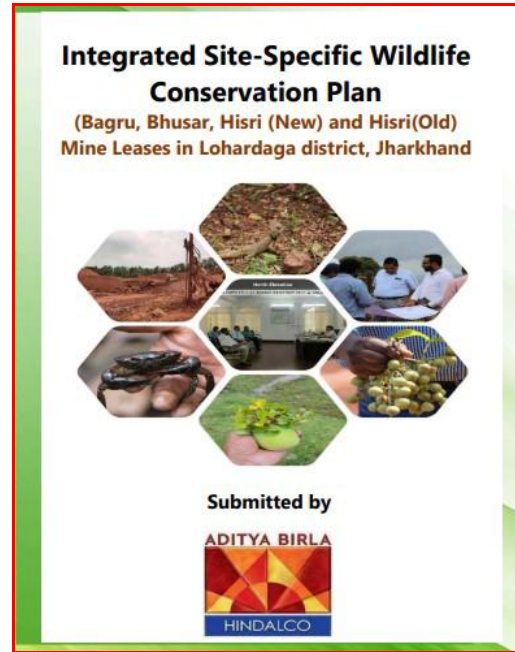
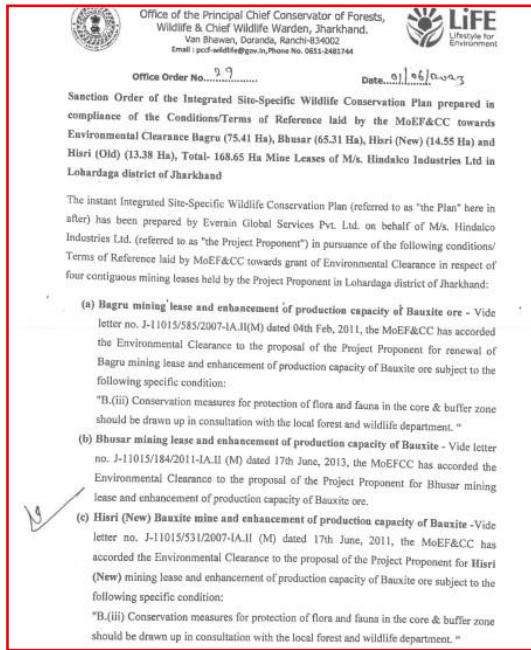
Condition ii: - **No change in the calendar plan including excavation, quantum of mineral bauxite and waste should be made.**

Reply: - The Mine is not in operation since November 2013. No mining operation was carried out during the above period and as on date. Data pertaining to excavation, quantum of mineral bauxite etc. are attached as **Annexure 4**. We agree to comply with the provision stipulated herein post resumption of mining operations.

Condition iii: - **Conservation measures for protection of flora and fauna in the core and buffer zone should be drawn up in consultation with the local forest and wildlife department.**

Reply: - Mine has been non-operational since November 2013. Suitable conservation measures were undertaken in the past when mine was operational as per plan submitted and is being done continuously.

Also, we have been granted letter of approval for the Integrated Site-specific Wildlife Conservation Plan via Office Order No.29 dated 01.06.2023 by PCCF, Wildlife, Ranchi. The same is enclosed below:



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

Reply: - Four ambient air quality monitoring stations in Core Zone as well as Buffer Zone have been established and regular monitoring is being carried out. Reports are being periodically furnished to SPCB/MoEF&CC. Monitoring reports are attached as above.

Condition v: - 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: - Being Complied. Monitoring reports are attached as **Annexure-2**. Currently, the MOEF&CC Regional Office is located at Ranchi.

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

Reply: - The Mine is not in operation since November 2013. No mining operation was carried out during the above period and as on date. We agree to comply with the provision stipulated herein post resumption of mining operations.

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

Reply: - The Mine is not in operation since November 2013. No mining operation was carried out during the above period and as on date.

We agree to comply with the provision stipulated herein post resumption of mining operation as complied in past.

Condition viii: - Industrial wastewater (workshop and wastewater 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: - The Mine is not in operation since November 2013. No mining operation was carried out during the above period and as on date.

However, Effluent treatment plant (ETP) has been installed for workshop effluent in plateau for entire Bagru group of Mines. Photograph of ETP is already attached as above.

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

Reply: - The Mine is not in operation since November 2013. No mining operation was carried out during the above period and as on date.

We agree to comply with the provision stipulated herein post resumption of mining operation as complied in past.

Condition x:- 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: - Adhering to our environmental policies and in order to create more awareness at mines site regarding environment, separate Environmental Management Cell (EMC) has been constituted and is functioning effectively. Copy of the same is attached as **Annexure-3**.

Condition xi: - The project authorities should inform to the Regional Office located at Bhubaneswar 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: - Mining Plan along with Progressive mine Closure Plan has been approved by IBM, Ranchi. This was an operating Mine, hence provision related to Financial closure is not applicable. Currently, the MOEF&CC Regional Office is located at Ranchi.

Condition xii: - 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 Bhubaneshwar.

Reply: - The funds earmarked for environmental protection measures is being budgeted. Annual expenditure is being reported to the Ministry as attached as **Annexure 5**.

Condition xiii: - The Regional Office of this Ministry located at Bhubaneshwar shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.

Reply: - Being complied with. Currently, the MOEF&CC Regional Office is located at Ranchi.

Condition xiv: -The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions including results of monitored data (both in hard copies as well as by e-mail to the Ministry of Environment and Forests, its Regional office Bhubaneshwar, the respective Zonal office of Central Pollution Control Board the State Pollution Control Board. The proponent shall upload the status of compliance of the environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the Ministry of Environment and Forest, Bhubaneshwar, the respective zonal office of Central Pollution Control Board and the State Pollution Control Board.

Reply: - Six monthly reports on the status of compliance of the stipulated environmental clearance conditions including results of monitored data are being submitted by e-mail to the Ministry of Environment and Forests, its Regional office Ranchi, the respective Zonal office of Central Pollution Control Board the State Pollution Control Board and uploaded in company's website.

Condition xv: -A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad / Municipal corporation, urban local body and the local NGO, if any, from whom and suggestions / representations if any were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.

Reply: - A copy of clearance letter has been sent to concerned Panchayat, Zila Parishad / Municipal corporation, urban local body and the local NGO.

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

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

Condition xvii: - The environment statement for each financial year ending 31st March in Form V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the Regional Office of the Ministry of Environment and Forests, Bhubaneswar by e-mail.

Reply: - Environment statement is being submitted regularly to Member Secretary, JSPCB. Also, the status of compliance of EC is uploaded on the website of the company and sent to regional office of MoEF&CC and JSPCB, Ranchi on regular basis. Currently, the MoEF&CC Regional Office is located at Ranchi.

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

Reply: - Noted and already complied.

.....XXX.....

Piezometer Monitoring Report

Mine: Bagru Bauxite Mine (75.41 Ha)

S No	Month	Ground Water Level (BGL) in meter
1	Oct-25	34.59
2	Nov-25	34.67
3	Dec-25	34.85
4	Jan-26	35.02
5	Feb-26	35.15
6	Mar-26	35.21



EPIC LabTech Private Limited



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

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

Analytical Test Certificate

Unique Lab Report No.	TC1288725000001355	Discipline	Chemical
Report Unique ID	RL03182542016	Group	Atmospheric Pollution
Issue date/time	22.10.2025/ 16:48	Sub Group	Ambient Air Quality

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

References of Quality Management System (Steps of Traceability Chain)			
Customer Registration No.	EPIC/OTH/0318	Sample Booking Number	EPIC-2542016
Sample(s) Code	2542016 (A) (B) (C) (D)	Sample Receipt (D/T)	16.10.2025/ 10:49

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	13.10.2025/ 10:40	Sampling End (D/T)	14.10.2025/ 08:55
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling			
Weather condition	Cloudy	Temperature (°C)	27
		Humidity %	60
		Wind direction	20°-200°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Entrance Gate (Ropeway Loading Station)	GPS coordinate	23° 28' 30.86"/ 84° 36' 03.85"
S. Location B	Administrative Office	GPS coordinate	23° 29' 04.73"/ 84° 35' 46.81"
S. Location C	Near Shiv Temple Compound	GPS coordinate	23° 29' 08.75"/ 84° 35' 44.11"
S. Location D	Near Weigh Bridge	GPS coordinate	23° 29' 59.39"/ 84° 35' 47.84"

Date(s) of performance of the laboratory activities			
Test start date	16.10.2025/ 11:09	Test completion date	22.10.2025/ 15:00

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	55.89	56.87	55.67	57.81	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	21.88	26.91	26.87	25.01	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	07.82	06.76	07.46	08.51	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	16.79	15.81	18.75	17.73	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	24.03	24.74	24.42	25.05	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	15.08	15.84	16.20	18.00	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	-

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



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

(Signature)
Issue by
 (Umesh Das)
 Laboratory Head

Authorized Signatory
 EPIC LabTech Pvt. Ltd.
 Ranchi, Jharkhand

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



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✉ epiclabtech@gmail.com

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

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03182542016	Group	Atmospheric Pollution
Issue date/time	22.10.2025/ 16:48	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 : BAGRU BAUXITE MINE

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirta.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0318	Sample Booking Number	EPIC-2542016
Sample(s) Code	2542016 (A) (B) (C) (D)	Sample Receipt (D/T)	16.10.2025/ 10:49

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	13.10.2025/ 10:40	Sampling End (D/T)	14.10.2025/ 08:55
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	60	Wind direction	20°-200°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Entrance Gate (Ropeway Loading Station)	GPS coordinate	23° 28' 30.86"/ 84° 36' 03.85"
S. Location B	Administrative Office	GPS coordinate	23° 29' 04.73"/ 84° 35' 46.81"
S. Location C	Near Shiv Temple Compound	GPS coordinate	23° 29' 08.75"/ 84° 35' 44.11"
S. Location D	Near Weigh Bridge	GPS coordinate	23° 29' 59.39"/ 84° 35' 47.84"

Date(s) of performance of the laboratory activities

Test start date	16.10.2025/ 11:09	Test completion date	22.10.2025/ 15:00
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--Test Results--

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

--Test Results End --

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by
(B.N. Kumar)
Technical Head





EPIC LabTech Private Limited



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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZXX

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

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000001356	Discipline	Chemical
Report Unique ID	RL03182542017	Group	Atmospheric Pollution
Issue date/time	22.10.2025/ 16:51	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 : BAGRU BAUXITE MINE	Contact Person Mr. Girija Tamrakar Contact Number +91 9111006074 Email Id girija.tamrakar@adityabirla.com Order Date 31.03.2025/ 10:10 Order Number 13612313868
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References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0318	Sample Booking Number	EPIC-2542017
Sample(s) Code	2542017 (A) (B) (C) (D)	Sample Receipt (D/T)	16.10.2025/ 10:50

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	14.10.2025/ 10:35	Sampling End (D/T)	15.10.2025/ 09:05
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 %	60	Wind direction	330°-150°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Daidaliya Village	GPS coordinate	23° 28' 55.33" / 84° 35' 36.10"
S. Location B	Aditya School Gangupara	GPS coordinate	23° 27' 47.47" / 84° 38' 06.31"
S. Location C	Ropeway unloading station	GPS coordinate	23° 26' 41.42" / 82° 41' 26.98"
S. Location D	Ropeway Angle Station	GPS coordinate	23° 27' 55.65" / 84° 37' 18.31"

Date(s) of performance of the laboratory activities

Test start date	16.10.2025/ 11:10	Test completion date	22.10.2025/ 15:00
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--Test Results--

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	61.43	57.00	54.14	58.23	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	27.49	28.44	24.85	25.79	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	07.03	07.74	08.81	06.70	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	17.58	18.58	20.55	16.66	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	24.10	23.47	23.15	23.79	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	16.92	16.20	15.48	15.84	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	-

--Test Results End --

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by
(B.N. Kumar)
Technical Head

Issue by
(Himesh Oza)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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



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CIN:-U74999JH2022PTC0196B5
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

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

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03182542017	Group	Atmospheric Pollution
Issue date/time	22.10.2025/ 16:51	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 : BAGRU BAUXITE MINE

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0318	Sample Booking Number	EPIC-2542017
Sample(s) Code	2542017 (A) (B) (C) (D)	Sample Receipt (D/T)	16.10.2025/ 10:50

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	14.10.2025/ 10:35	Sampling End (D/T)	15.10.2025/ 09:05
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 %	60	Wind direction	330°-150°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Daldaliya Village	GPS coordinate	23° 28' 55.33" / 84° 35' 36.10"
S. Location B	Aditya School Gangupara	GPS coordinate	23° 27' 47.47" / 84° 38' 06.31"
S. Location C	Ropeway unloading station	GPS coordinate	23° 26' 41.42" / 82° 41' 26.98"
S. Location D	Ropeway Angle Station	GPS coordinate	23° 27' 55.65" / 84° 37' 18.31"

Date(s) of performance of the laboratory activities

Test start date	16.10.2025/ 11:10	Test completion date	22.10.2025/ 15:00
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--Test Results--

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

--Test Results End --

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

Operational Status Unit was Operational During sampling.

Analysed by - - Vishal Mangaraj



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





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PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

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

Analytical Test Report

Unique Lab Report No.	TC1288725000001459	Discipline	Chemical
Report Unique ID	RL03582547042	Group	Atmospheric Pollution
Issue date/time	24.11.2025/ 16:18	Sub Group	Ambient Air Quality

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

References of Quality Management System (Steps of Traceability Chain)			
Customer Registration No.	EPIC/OTH/0358	Sample Booking Number	EPIC-2547042
Sample(s) Code	2547042 (A) (B) (C) (D)	Sample Receipt (D/T)	20.11.2025/ 10:40

Sampling References			
Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	17.11.2025/ 10:35	Sampling End (D/T)	18.11.2025/ 08:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling			
Weather condition	Cloudy	Temperature (°C)	21
		Humidity %	52
		Wind direction	0°-180°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Entrance Gate (Ropeway Loading Station)	GPS coordinate	23° 28' 30.86" / 84° 36' 03.85"
S. Location B	Administrative Office	GPS coordinate	23° 29' 04.73" / 84° 35' 46.81"
S. Location C	Near Shiv Temple Compound	GPS coordinate	23° 29' 08.75" / 84° 35' 44.11"
S. Location D	Near Weigh Bridge	GPS coordinate	23° 28' 59.39" / 84° 35' 47.84"

Date(s) of performance of the laboratory activities			
Test start date	20.11.2025/ 11:05	Test completion date	24.11.2025/ 11:30

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits <small>Schedule VI</small>
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	56.76	57.80	56.65	58.87	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	22.88	27.19	27.34	25.89	90 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	08.56	07.65	08.60	09.42	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	17.24	16.80	19.49	18.51	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	16.79	16.44	17.14	19.59	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	25.75	25.45	25.15	26.94	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-

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



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

Test Report End



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

Accredited by :-
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Certified by :-
ISO 9001:2015 and ISO 45001:2018

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03582547042	Group	Atmospheric Pollution
Issue date/time	24.11.2025/ 16:18	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 : BAGRU BAUXITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Girija Tamrakar
+91 9111006074
girija.tamrakar@adityabirla.com
31.03.2025/ 10:10
13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0358	Sample Booking Number	EPIC-2547042
Sample(s) Code	2547042 (A) (B) (C) (D)	Sample Receipt (D/T)	20.11.2025/ 10:40

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	17.11.2025/ 10:35	Sampling End (D/T)	18.11.2025/ 08:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	21	Humidity %	52	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Entrance Gate (Ropeway Loading Station)	GPS coordinate	23° 28' 30.86" / 84° 36' 03.85"
S. Location B	Administrative Office	GPS coordinate	23° 29' 04.73" / 84° 35' 46.81"
S. Location C	Near Shiv Temple Compound	GPS coordinate	23° 29' 06.75" / 84° 35' 44.11"
S. Location D	Near Weigh Bridge	GPS coordinate	23° 28' 59.39" / 84° 35' 47.84"

Date(s) of performance of the laboratory activities

Test start date	20.11.2025/ 11:05	Test completion date	24.11.2025/ 11:30
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--Test Results Start--

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

--Test Results End --

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

Analysed by - Rajesh Varma



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issue by
(Jinesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

Contractual Notes | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility at specific environmental condition as method required and results relate only to the sample tested in prescribed Date & time | 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law. | 4. Any complaint about this report should be communicated in writing within 10 days of its issue | 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to invoiced amount only. | 6. All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges | 7. Opinion does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any caused by use or misuse of this report. | 8. When the results are from external provider are marked as * mark. |
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PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

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

TC-12887

Analytical Test Report

Unique Lab Report No.	TC1288725000001460	Discipline	Chemical
Report Unique ID	RL03582547043	Group	Atmospheric Pollution
Issue date/time	24.11.2025/ 16:21	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE : BAGRU BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Girija Tamrakar +91 9111006074 girija.tamrakar@adityabirla.com 31.03.2025/ 10:10 13612313968
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References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0358	Sample Booking Number	EPIC-2547043
Sample(s) Code	2547043 (A) (B) (C) (D)	Sample Receipt (D/T)	20.11.2025/ 10:41

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	18.11.2025/ 10:30	Sampling End (D/T)	19.11.2025/ 09:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	21	Humidity %	52	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Datoliya Village	GPS coordinate	23° 28' 55.33" / 84° 35' 36.10"
S. Location B	Aditya School Gangupara	GPS coordinate	23° 27' 47.47" / 84° 38' 06.31"
S. Location C	Ropeway unloading station	GPS coordinate	23° 26' 41.42" / 82° 41' 26.96"
S. Location D	Ropeway Angle Station	GPS coordinate	23° 27' 55.65" / 84° 37' 18.31"

Date(s) of performance of the laboratory activities

Test start date	20.11.2025/ 11:05	Test completion date	24.11.2025/ 11:30
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits <small>(24 hr)</small>
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	62.84	58.70	55.45	59.31	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	8	28.19	29.65	25.64	26.47	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	08.72	08.28	09.83	07.66	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	18.61	19.56	21.47	17.76	60 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	17.84	17.49	16.79	16.44	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	25.75	24.85	24.55	24.25	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2-1999	ng/m ³	2	BDL	BDL	BDL	BDL	-

--Test Results End--

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

Analysed by - Rajesh Varma



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

Test Report End

(Signature)
Issue by
(Omesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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



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

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03582547043	Group	Atmospheric Pollution
Issue date/time	24.11.2025/ 16:21	Sub Group	Ambient Air Quality

Report issue to

M/s - HINDALCO INDUSTRIES LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : BAGRU BAUXITE MINE

Contact Person

Contact Number

Email Id

Order Date

Order Number

Mr. Girija Tamrakar

+91 9111006074

girija.tamrakar@adityabirla.com

31.03.2025/ 10:10

13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0358	Sample Booking Number	EPIC-2547043
Sample(s) Code	2547043 (A) (B) (C) (D)	Sample Receipt (D/T)	20.11.2025/ 10:41

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	18.11.2025/ 10:30	Sampling End (D/T)	19.11.2025/ 09:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	21	Humidity %	52	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Daldaliya Village	GPS coordinate	23° 28' 55.33"/84° 35' 36.10"
S. Location B	Aditya School Gangupara	GPS coordinate	23° 27' 47.47"/84° 38' 06.31"
S. Location C	Ropeway unloading station	GPS coordinate	23° 26' 41.42"/82° 41' 26.98"
S. Location D	Ropeway Angle Station	GPS coordinate	23° 27' 55.65"/84° 37' 18.31"

Date(s) of performance of the laboratory activities

Test start date	20.11.2025/ 11:05	Test completion date	24.11.2025/ 11:30
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--Test Results Start--

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

--Test Results End --

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

Analysed by - Rajesh Varma



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issue by
(Limesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



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

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

TC-12887

Analytical Test Report

Unique Lab Report No.	TC1288725000001461	Discipline	Chemical
Report Unique ID	RL03582547044	Group	Water
Issue date/time	24.11.2025/ 16:24	Sub Group	Ground Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : BAGRU BAUXITE MINE

Contact Person	Mr. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	girija.tamrakar@adityabirla.com
Order Date	31.03.2025/ 10:10
Order Number	13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0358	Sample Booking Number	EPIC-2547044
Sample(s) Code	2547044	Sample Receipt (D/T)	20.11.2025/ 11:00

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	18.11.2025/ 14:05	Sampling End (D/T)	18.11.2025/ 14:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	21	Humidity %	52	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Shiv Temple Compound	GPS coordinate	23° 29' 09.85" / 84° 35' 44.86"
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Date(s) of performance of the laboratory activities

Test start date	20.11.2025/ 11:20	Test completion date	24.11.2025/ 12:40
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits	
						Acceptable Limit	Permissible limit
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	0.7	6.85	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.3	0.55	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	5.0	5	5	15
4.	Odour	IS 3025 (P-05) 2018	-	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	10	235.0	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	5	39.42	250	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	10	120.0	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	10	168.67	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	10	44.89	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	0.6	BDL	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1) 2022	mg/l	0.3	97.0	200	400
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	0.4	3.50	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	0.001	BDL	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	0.3	13.77	30	100



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Certified by :-
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Analytical Test Report

Unique Lab Report No.	TC1288725000001461	Discipline	Chemical
Report Unique ID	RL03582547044	Group	Water
Issue date/time	24.11.2025/ 16:24	Sub Group	Ground Water

Report Issue to

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

Contact Person : Mr. Girija Tamrakar
Contact Number : +91 9111006074
Email Id : girija.tamrakar@adityabirla.com
Order Date : 31.03.2025/ 10:10
Order Number : 13612313868

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

--Test Result End --

Prescribed Limit : IS 10500:2012
Analysed by - Pappu Kumar



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

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



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

Accredited by -
Jharkhand State Pollution Control Board
Certified by -
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Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03582547044	Group	Water
Issue date/time	24.11.2025/ 16:24	Sub Group	Ground Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED

VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : BAGRU BAUXITE MINE

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0358	Sample Booking Number	EPIC-2547044
Sample(s) Code	2547044	Sample Receipt (D/T)	20.11.2025/ 11:00

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	18.11.2025/ 14:05	Sampling End (D/T)	18.11.2025/ 14:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	21	Humidity %	52	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Shiv Temple Compound	GPS coordinate	23° 29' 09.85" / 84° 35' 44.86"
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Date(s) of performance of the laboratory activities

Test start date	20.11.2025/ 11:20	Test completion date	24.11.2025/ 12:40
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--Test Result Start--

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



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Certified by -
ISO 9001:2015 and ISO 45001:2018

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03582547044	Group	Water
Issue date/time	24.11.2025/ 16:24	Sub Group	Ground Water

Report Issue to

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

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313968

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

--Test Result End --

Prescribed Limit IS 10500:2012

Analysed by - Pappu Kumar

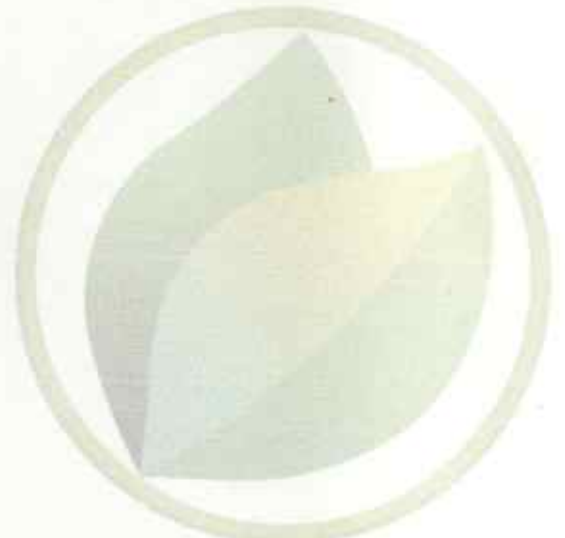


Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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CIN:-U74999JH2022PTC019685
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Accredited by -
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL03582547045	Group	Water
Issue date/time	24.11.2025/ 16:24	Sub Group	Ground Water

Report Issue to

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

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0358	Sample Booking Number	EPIC-2547045
Sample(s) Code	2547045	Sample Receipt (D/T)	20.11.2025/ 11:01

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	18.11.2025/ 14:05	Sampling End (D/T)	18.11.2025/ 14:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition Cloudy Temperature (°C) 21 Humidity % 52 Wind direction 0°-180°

Sampling Location(s) with GPS coordinate(s)

S. Location A Near Shiv Temple Compound GPS coordinate 23° 29' 09.85" / 84° 35' 44.86"

Date(s) of performance of the laboratory activities

Test start date 20.11.2025/ 12:25 Test completion date 24.11.2025/ 13:00

--Test Result Start--

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

--Test Result End --

Prescribed Limit IS 10500:2012

Analysed by - Ishika Singh



B. N. Kumar

Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Umesh Das
24/11/25

Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited



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

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

Analytical Test Report

Unique Lab Report No.	TC1288725000001462	Discipline	Chemical
Report Unique ID	RL03582547046	Group	Water
Issue date/time	24.11.2025/ 16:30	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: BAGRU BAUXITE MINE

Contact Person - Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0358	Sample Booking Number	EPIC-2547046
Sample(s) Code	2547046	Sample Receipt (D/T)	20.11.2025/ 11:02

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	18.11.2025/ 13:10	Sampling End (D/T)	18.11.2025/ 13:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	21	Humidity %	52	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Canteen	GPS coordinate	23° 29' 09.25" / 84° 35' 43.31"
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Date(s) of performance of the laboratory activities

Test start date	20.11.2025/ 11:22	Test completion date	24.11.2025/ 12:40
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits	
						Acceptable Limit	Permissible limit
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	0.7	6.84	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.3	0.5	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	5.0	5	5	15
4.	Odour	IS 3025 (P-05) 2018	-	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	10	211.0	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	5	36.46	250	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	10	96.00	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	10	148.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	10	39.28	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	0.6	BDL	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1)2022	mg/l	0.3	8.90	200	400
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	0.4	2.09	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	0.001	BDL	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	0.3	12.15	30	100



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

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

Analytical Test Report

Unique Lab Report No.	TC1288725000001462	Discipline	Chemical
Report Unique ID	RL03582547046	Group	Water
Issue date/time	24.11.2025/ 16:30	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 : BAGRU BAUXITE MINE

Contact Person : Mr. Girija Tamrakar
Contact Number : +91 9111006074
Email Id : girija.tamrakar@adityabirla.com
Order Date : 31.03.2025/ 10:10
Order Number : 13612313868

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

--Test Result End--

Prescribed Limit IS 10500:2012

Analysed by - Pappu Kumar



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

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



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



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GST:-20AAHCE3611M1ZK

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03582547046	Group	Water
Issue date/time	24.11.2025/16:30	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: BAGRU BAUXITE MINE

Contact Person - Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirta.com
Order Date 31.03.2025/10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0358	Sample Booking Number	EPIC-2547046
Sample(s) Code	2547046	Sample Receipt (D/T)	20.11.2025/11:02

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	18.11.2025/13:10	Sampling End (D/T)	18.11.2025/13:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	21	Humidity %	52	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Canteen	GPS coordinate	23° 29' 09.25" / 84° 35' 43.31"
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Date(s) of performance of the laboratory activities

Test start date	20.11.2025/11:22	Test completion date	24.11.2025/12:40
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--Test Result Start--

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



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PAN:-AAHCE3611M
GST:-20AAHCE3611M12X

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Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03582547046	Group	Water
Issue date/time	24.11.2025/ 16:30	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: BAGRU BAUXITE MINE

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirta.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	3.0	No relaxation
15.	Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	2.0	No relaxation
16.	Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	190.0	No relaxation
17.	Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	0.2	BDL	0.3	No relaxation
18.	Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	1.0	No relaxation
19.	Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	2.0	No relaxation
20.	DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	µg/l	0.5	BDL	1.0	No relaxation
21.	Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	0.05	BDL	0.4	No relaxation

--Test Result End--

Prescribed Limit IS 10500:2012

Analysed by - Pappu Kumar



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

Test Report End

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

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Page 2 of 2

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



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GST:-20AAHCE3611M1ZK

Accredited by :-
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Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL03582547047	Group	Water
Issue date/time	24.11.2025/ 16:33	Sub Group	Drinking Water

Report Issue to

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

Contact Person : Mr. Girija Tamrakar
Contact Number : +91 9111006074
Email Id : girija.tamrakar@adityabirla.com
Order Date : 31.03.2025/ 10:10
Order Number : 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0358	Sample Booking Number	EPIC-2547047
Sample(s) Code	2547047	Sample Receipt (D/T)	20.11.2025/ 11:03

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	18.11.2025/ 13:10	Sampling End (D/T)	18.11.2025/ 13:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	21	Humidity %	52	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Canteen	GPS coordinate	23° 29' 09.25" / 84° 35' 44.31"
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Date(s) of performance of the laboratory activities

Test start date	20.11.2025/ 12:25	Test completion date	24.11.2025/ 13:00
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--Test Result Start--

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

--Test Result End --

Prescribed Limit IS 10500:2012

Analysed by - Ishika Singh



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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Certified by :-
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Analytical Test Report

Unique Lab Report No.	TC1288725000001463	Discipline	Chemical
Report Unique ID	RL03582547048	Group	Water
Issue date/time	24.11.2025/ 16:36	Sub Group	Waste Water (Sewerage)

Report Issue to

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

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0358	Sample Booking Number	EPIC-2547048
Sample(s) Code	2547048	Sample Receipt (D/T)	20.11.2025/ 11:05

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	18.11.2025/ 11:30	Sampling End (D/T)	18.11.2025/ 11:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition Cloudy Temperature (°C) 21 Humidity % 52 Wind direction 0°-180°

Sampling Location(s) with GPS coordinate(s)

S. Location A STP Outlet GPS coordinate 23° 29' 07.85" / 84° 35' 47.58"

Date(s) of performance of the laboratory activities

Test start date 20.11.2025/ 11:25 Test completion date 24.11.2025/ 12:40

--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	pH value at 25.7°C	IS 3025 (P-11) 2022	-	0.7	6.42	6.5-9.0
2.	BOD (3 days at 27°C)	IS 3025 (P-44) 2000	mg/l	0.3	12.5	30.0
3.	COD	IS 3025 (P-58) 2006	mg/l	8.0	64.00	-
4.	Oil & Grease	IS 3025 (P-39) 2021	mg/l	4.0	BDL	10.0
5.	Total Suspended Solid	IS 3025 (P-17) 2022	mg/l	10.0	36.00	-
6.	Iron	APHA 3111 B 2023	mg/l	0.1	BDL	-

Prescribed Limit Environmental (Protection) Rules-1986, Schedule -I, Serial No.105.

Analysed by - Pappu Kumar



Reviewed by
(E.N. Kumar)
Technical Head

Test Report End

Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03582547048	Group	Water
Issue date/time	24.11.2025/ 16:36	Sub Group	Waste Water (Sewerage)

Report Issue to

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

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0358	Sample Booking Number	EPIC-2547048
Sample(s) Code	2547048	Sample Receipt (D/T)	20.11.2025/ 11:05

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	18.11.2025/ 11:30	Sampling End (D/T)	18.11.2025/ 11:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	21	Humidity %	52	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	STP Outlet	GPS coordinate	23° 29' 07.85" / 84° 35' 47.58"
---------------	------------	----------------	---------------------------------

Date(s) of performance of the laboratory activities

Test start date	20.11.2025/ 11:25	Test completion date	24.11.2025/ 12:40
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	Calcium	IS 3025 (P-40) 1991	mg/l	10.0	31.26	-
2.	Aluminum (as Al)	IS 3025 (P-55) 2003	mg/l	0.1	BDL	-

--Test Result End--

Prescribed Limit Environmental (Protection) Rules-1986, Schedule -I, Serial No.105.

Analysed by - Pappu Kumar



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

Address:-
C/o - R.K. Tripathi, Indrapuri,
Road No. - 5, Ranchi,
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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL03582547049	Group	Water
Issue date/time	24.11.2025/ 16:39	Sub Group	Waste Water (Sewerage)

Report Issue to

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

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0358	Sample Booking Number	EPIC-2547049
Sample(s) Code	2547049	Sample Receipt (D/T)	20.11.2025/ 11:53

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	18.11.2025/ 11:30	Sampling End (D/T)	18.11.2025/ 11:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishat Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	21	Humidity %	52	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	STP Outlet	GPS coordinate	23° 29' 07.85" / 84° 35' 47.58"
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Date(s) of performance of the laboratory activities

Test start date	20.11.2025/ 11:25	Test completion date	24.11.2025/ 12:40
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	Fecal Coliform	APHA 9221 E 2023	MPN/100ml	-	420	1000

--Test Result End --

Prescribed Limit Environmental (Protection) Rules-1986, Schedule -I, Serial No.105.

Analysed by - Ishika Singh



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited



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

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

Analytical Test Report

Unique Lab Report No.	TC1288725000001464	Discipline	Chemical
Report Unique ID	RL03582547050	Group	Water
Issue date/time	24.11.2025/ 16:42	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 : BAGRU BAUXITE MINE

Contact Person : Mr. Girija Tamrakar
Contact Number : +91 9111006074
Email Id : girija.tamrakar@adityabirla.com
Order Date : 31.03.2025/ 10:10
Order Number : 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0358	Sample Booking Number	EPIC-2547050
Sample(s) Code	2547050	Sample Receipt (D/T)	20.11.2025/ 11:04

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	18.11.2025/ 12:15	Sampling End (D/T)	18.11.2025/ 12:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	21	Humidity %	52	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Work shop Outlet	GPS coordinate	23° 28' 31.53"/84° 36' 03.19"
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Date(s) of performance of the laboratory activities

Test start date	20.11.2025/ 11:24	Test completion date	24.11.2025/ 12:40
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	pH value at 25.9°C	IS 3025 (P-11) 2022	-	0.7	6.32	6.5-8.5
2.	BOD (3 days at 27°C)	IS 3025 (P-44) 2000	mg/l	0.3	10.0	-
3.	COD	IS 3025 (P-58) 2006	mg/l	8.0	60.00	150.0
4.	Oil & Grease	IS 3025 (P-39) 2021	mg/l	4.0	BDL	10.0
5.	Total Suspended Solid	IS 3025 (P-17) 2022	mg/l	10.0	35.00	50.0
6.	Phosphate	IS 3025 (P-31/Sec-1) 2022	mg/l	0.2	0.66	-
7.	Zinc (as Zn)	APHA 3111 B 2023	mg/l	0.04	BDL	-

--Test Result End--

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

Analysed by - Pappu Kumar



(Signature)

Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

(Signature)
24/11/25

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



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GST:-20AAHCE3611M1ZK

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Jharkhand State Pollution Control Board
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ISO 9001:2015 and ISO 45001:2018

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03582547050	Group	Water
Issue date/time	24.11.2025/ 16:42	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 : BAGRU BAUXITE MINE

Contact Person - Mr. Girija Tamrakar
Contact Number - +91 9111006074
Email Id - girija.tamrakar@adityabirla.com
Order Date - 31.03.2025/ 10:10
Order Number - 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0358	Sample Booking Number	EPIC-2547050
Sample(s) Code	2547050	Sample Receipt (D/T)	20.11.2025/ 11:04

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	18.11.2025/ 12:15	Sampling End (D/T)	18.11.2025/ 12:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	21	Humidity %	52	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Work shop Outlet	GPS coordinate	23° 28' 31.53"/ 84° 36' 03.19"
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Date(s) of performance of the laboratory activities

Test start date	20.11.2025/ 11:24	Test completion date	24.11.2025/ 12:40
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	Total Dissolve Solids (TDS)	IS 3025 (P-16) 2023	mg/l	10	260.0	-
2.	Dissolve Oxygen (DO)	IS 3025 (P-38) 1986	mg/l	0.2	1.4	-

--Test Result End--

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

Analysed by - Pappu Kumar



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited



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

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

Analytical Test Report

Unique Lab Report No.	TC1288725000001642	Discipline	Chemical
Report Unique ID	RL03962551037	Group	Atmospheric Pollution
Issue date/time	22.12.2025/ 16:39	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 : BAGRU BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Girija Tamrakar +91 9111006074 girija.tamrakar@adityabirla.com 31.03.2025/ 10:10 13612313868
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References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0396	Sample Booking Number	EPIC-2551037
Sample(s) Code	2551037 (A) (B) (C) (D)	Sample Receipt (D/T)	19.12.2025/11:01

Sampling References

Type of industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	16.12.2025/ 11:50	Sampling End (D/T)	17.12.2025/ 08:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	20	Humidity %	68	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Entrance Gate (Ropeway Loading Station)	GPS coordinate	23° 28' 30.86" / 84° 36' 03.85"
S. Location B	Administrative Office	GPS coordinate	23° 29' 04.73" / 84° 35' 46.81"
S. Location C	Near Shiv Temple Compound	GPS coordinate	23° 29' 08.75" / 84° 35' 44.11"
S. Location D	Near Weigh Bridge	GPS coordinate	23° 28' 59.39" / 84° 35' 47.84"

Date(s) of performance of the laboratory activities

Test start date	19.12.2025/ 11:50	Test completion date	22.12.2025/ 15:10
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	58.90	59.85	58.86	60.87	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	23.69	24.72	25.31	26.43	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	10.87	08.90	09.49	10.50	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	18.11	19.15	20.88	22.04	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	14.66	13.60	16.13	17.95	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	26.31	26.64	26.67	27.58	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2-1999	ng/m ³	2	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

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

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



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PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03962551037	Group	Atmospheric Pollution
Issue date/time	22.12.2025/ 16:39	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 : BAGRU BAUXITE MINE

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0396	Sample Booking Number	EPIC-2551037
Sample(s) Code	2551037 (A) (B) (C) (D)	Sample Receipt (D/T)	19.12.2025/11:01

Sampling References

Type of industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	16.12.2025/ 11:50	Sampling End (D/T)	17.12.2025/ 08:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	20	Humidity %	68	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Entrance Gate (Ropeway Loading Station)	GPS coordinate	23° 28' 30.86"/ 84° 36' 03.85"
S. Location B	Administrative Office	GPS coordinate	23° 29' 04.73"/ 84° 35' 46.81"
S. Location C	Near Shiv Temple Compound	GPS coordinate	23° 29' 08.75"/ 84° 35' 44.11"
S. Location D	Near Weigh Bridge	GPS coordinate	23° 28' 59.39"/ 84° 35' 47.84"

Date(s) of performance of the laboratory activities

Test start date	19.12.2025/ 11:50	Test completion date	22.12.2025/ 15:10
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--Test Results Start--

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

--Test Results End--

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

Analysed by - Rajesh Varma



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issue by
(Limesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



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PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

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

TC-12887

Analytical Test Report

Unique Lab Report No.	TC1288725000001643	Discipline	Chemical
Report Unique ID	RL03962551038	Group	Atmospheric Pollution
Issue date/time	22.12.2025/ 16:42	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 : BAGRU BAUXITE MINE	Contact Person Mr. Girija Tamrakar Contact Number +91 9111006074 Email Id girija.tamrakar@adityabirla.com Order Date 31.03.2025/ 10:10 Order Number 13612313868
---	---

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0396	Sample Booking Number	EPIC-2551038
Sample(s) Code	2551038 (A) (B) (C) (D)	Sample Receipt (D/T)	19.12.2025/11:02

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	17.12.2025/ 10:55	Sampling End (D/T)	18.12.2025/ 08:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	20	Humidity %	68	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Daldaliya Village	GPS coordinate	23° 28' 55.33"/ 84° 35' 36.10"
S. Location B	Aditya School Gangupara	GPS coordinate	23° 27' 47.47"/ 84° 38' 06.31"
S. Location C	Ropeway unloading station	GPS coordinate	23° 26' 41.42"/ 82° 41' 26.98"
S. Location D	Ropeway Angle Station	GPS coordinate	23° 27' 55.65"/ 84° 37' 18.31"

Date(s) of performance of the laboratory activities

Test start date	19.12.2025/ 11:50	Test completion date	22.12.2025/ 15:10
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	63.94	59.85	56.94	60.90	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	6	28.16	30.06	26.71	27.66	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	09.68	09.83	10.80	08.63	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	19.85	20.80	23.15	18.95	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	17.56	16.17	15.12	14.64	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	23.77	22.68	26.78	25.70	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analyzed by - Rajesh Varma



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issue by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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✉ epiclabtech@gmail.com

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

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03962551038	Group	Atmospheric Pollution
Issue date/time	22.12.2025/16:42	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 : BAGRU BAUXITE MINE

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0396	Sample Booking Number	EPIC-2551038
Sample(s) Code	2551038 (A) (B) (C) (D)	Sample Receipt (D/T)	19.12.2025/11:02

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	17.12.2025/10:55	Sampling End (D/T)	18.12.2025/08:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	20	Humidity %	68	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Daldaliya Village	GPS coordinate	23° 28' 55.33" / 84° 35' 36.10"
S. Location B	Aditya School Gangupara	GPS coordinate	23° 27' 47.47" / 84° 38' 06.31"
S. Location C	Ropeway unloading station	GPS coordinate	23° 26' 41.42" / 82° 41' 26.98"
S. Location D	Ropeway Angle Station	GPS coordinate	23° 27' 55.65" / 84° 37' 18.31"

Date(s) of performance of the laboratory activities

Test start date	19.12.2025/11:50	Test completion date	22.12.2025/15:10
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--Test Results Start--

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

--Test Results End--

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

Analysed by - Rajesh Varma



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issue by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



EPIC LabTech Private Limited



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

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

Analytical Test Report

Unique Lab Report No.	TC1288725000001644	Discipline	Chemical
Report Unique ID	RL03962551039	Group	Atmospheric Pollution
Issue date/time	22.12.2025/ 16:45	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 : BAGRU BAUXITE MINE

Contact Person	Mr. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	girija.tamrakar@adityabirta.com
Order Date	31.03.2025/ 10:10
Order Number	13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0396	Sample Booking Number	EPIC-2551039
Sample(s) Code	2551039 (A) (B) (C) (D)	Sample Receipt (D/T)	19.12.2025/11:03

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	16.12.2025/ 11:50	Sampling End (D/T)	17.12.2025/ 08:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	20	Humidity %	68	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Entrance Gate (Ropeway Loading Station)	GPS coordinate	23° 28' 30.86" / 84° 36' 03.85"
S. Location B	Administrative Office	GPS coordinate	23° 29' 04.73" / 84° 35' 46.81"
S. Location C	Near Shiv Temple Compound	GPS coordinate	23° 29' 08.75" / 84° 35' 44.11"
S. Location D	Near Weigh Bridge	GPS coordinate	23° 28' 59.39" / 84° 35' 47.84"

Date(s) of performance of the laboratory activities

Test start date	19.12.2025/ 11:50	Test completion date	22.12.2025/ 15:10
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-Test Results Start-

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	L _{eq} (Day time)	IS: 9989:1981	dB (A)	30	61.9	45.7	52.9	48.3	75
2.	L _{eq} (Night time)	IS: 9989:1981	dB (A)	30	47.4	40.5	45.7	43.4	70

--Test Results End --

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

Analysed by - Rajesh Varma



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issue by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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



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PAN:-AAHCE3611M
Certified by -
ISO 9001:2015 and ISO 45001:2018
GST:-20AAHCE3611M1ZX

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03962551040	Group	Atmospheric Pollution
Issue date/time	22.12.2025/ 16:48	Sub Group	Work Zone Noise

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

References of Quality Management System (Steps of Traceability Chain)			
Customer Registration No.	EPIC/OTH/0396	Sample Booking Number	EPIC-2551040
Sample(s) Code	2551040 (A) (B)	Sample Receipt (D/T)	19.12.2025/ 11:04

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

Environmental Condition during sampling							
Weather condition	Clear	Temperature (°C)	20	Humidity %	68	Wind direction	0°-180°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Bagru Crusher Site	GPS coordinate	23° 28' 32.01" / 84° 36' 03.01"
S. Location B	Bagru Bauxite Mine	GPS coordinate	23° 29' 16.03" / 84° 35' 51.03"

Date(s) of performance of the laboratory activities			
Test start date	19.12.2025/ 11:50	Test completion date	22.12.2025/ 15:10

--Test Results Start--							
Sl	Tested Parameters	Method used	Unit	LoQ	Results		Limits
					A	B	
1.	L _{eq} (Day time)	IS: 9989:1981	dB (A)	30	73.4	71.9	85
--Test Results End--							

Prescribed Limit NIOSH - Publication No.99-126 in 1972
Analyzed by - Ranish Verma



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issue by
(Ajmesh Dixi)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



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CIN:-U74999JH2022PTC019683
PAN:-AAHCE3611M
GST:-20AAHCE3611M12X

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

Test Report



Unique Lab Report No.	TC1288726000000095	Discipline	Chemical
Report Unique ID	RL04252604015	Group	Atmospheric Pollution
Issue date/time	23.01.2026/ 17:24	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 : BAGRU BAUXITE MINE

Contact Person	Mr. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	girija.tamrakar@adityabirla.com
Order Date	31.03.2025/ 10:10
Order Number	13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0425	Sample Booking Number	EPIC-2604015
Sample(s) Code	2604015 (A) (B) (C) (D)	Sample Receipt (D/T)	21.01.2026/ 11:33

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	18.01.2026/ 10:40	Sampling End (D/T)	19.01.2026/ 08:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	23	Humidity %	54	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Entrance Gate (Ropeway Loading Area)	GPS coordinate	23° 28' 30.86"/ 84° 36' 03.85"
S. Location B	Administrative Office	GPS coordinate	23° 29' 04.73"/ 84° 35' 46.81"
S. Location C	Near Shiv Temple Compound	GPS coordinate	23° 29' 08.75"/ 84° 35' 44.11"
S. Location D	Near Weigh Bridge	GPS coordinate	23° 28' 59.39"/ 84° 35' 47.84"

Date(s) of performance of the laboratory activities

Test start date	21.01.2026/ 12:00	Test completion date	23.01.2026/ 10:20
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	59.55	60.61	59.13	61.72	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	24.25	25.45	26.11	27.36	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	11.06	09.38	10.18	11.77	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	19.03	20.45	21.21	23.30	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	15.46	14.38	17.25	18.69	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	27.91	27.33	27.62	28.49	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-
10.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



Rajesh Varma
Reviewed by
(R.N. Kumar)
Technical Head

****Test Report End****

Girija Tamrakar
Issue by
(Girija Tamrakar)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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

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PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RLD4252604015	Group	Atmospheric Pollution
Issue date/time	23.01.2026/17:24	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 : BAGRU BAUXITE MINE

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0425	Sample Booking Number	EPIC-2604015
Sample(s) Code	2604015 (A) (B) (C) (D)	Sample Receipt (D/T)	21.01.2026/11:33

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	18.01.2026/10:40	Sampling End (D/T)	19.01.2026/08:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	23	Humidity %	54	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Entrance Gate (Ropeway Loading Station)	GPS coordinate	23° 28' 30.86"/84° 36' 03.85"
S. Location B	Administrative Office	GPS coordinate	23° 29' 04.73"/84° 35' 46.81"
S. Location C	Near Shiv Temple Compound	GPS coordinate	23° 29' 08.75"/84° 35' 44.11"
S. Location D	Near Weigh Bridge	GPS coordinate	23° 28' 59.39"/84° 35' 47.84"

Date(s) of performance of the laboratory activities

Test start date	21.01.2026/12:00	Test completion date	23.01.2026/10:20
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--Test Results Start--

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

--Test Results End--

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

Analysed by - Rajesh Varma




Reviewed by
(B.N. Kumar)
Technical Head


Issue By
(Omesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



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Jharkhand State Pollution Control Board
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK
Certified by :-
ISO 9001:2015 and ISO 45001:2018

Test Report



Unique Lab Report No.	TC1288726000000096	Discipline	Chemical
Report Unique ID	RL04252604016	Group	Atmospheric Pollution
Issue date/time	23.01.2026/ 17:27	Sub Group	Ambient Air Quality

Report Issue to

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

Contact Person	Mr. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	girija.tamrakar@adityabirla.com
Order Date	31.03.2025/ 10:10
Order Number	13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0425	Sample Booking Number	EPIC-2604016
Sample(s) Code	2604016 (A) (B) (C) (D)	Sample Receipt (D/T)	21.01.2026/11:36

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	19.01.2026/ 10:35	Sampling End (D/T)	20.01.2026/ 08:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	24	Humidity %	54	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Daldaliya Village	GPS coordinate	23° 28' 55.33" / 84° 35' 36.10"
S. Location B	Aditya School Gangupara	GPS coordinate	23° 27' 47.47" / 84° 36' 06.31"
S. Location C	Ropeway unloading Area	GPS coordinate	23° 26' 41.42" / 82° 41' 26.98"
S. Location D	Ropeway Angle Station	GPS coordinate	23° 27' 55.65" / 84° 37' 18.31"

Date(s) of performance of the laboratory activities

Test start date	21.01.2026/ 12:40	Test completion date	23.01.2026/ 10:30
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	64.48	61.80	57.97	62.13	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	29.28	31.35	27.41	28.55	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	10.35	10.43	11.59	09.13	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	20.22	21.57	24.15	19.47	90 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	18.69	17.25	16.53	15.81	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	24.71	23.84	27.62	26.46	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-
10.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



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

****Test Report End****

[Signature]
Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

EPIC LabTech Private Limited



Address:-
Indrapuri, Road No. - 5,
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CIN:-U74999JH2022PTC019683
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04252604016	Group	Atmospheric Pollution
Issue date/time	23.01.2026/ 17:27	Sub Group	Ambient Air Quality

Report Issue to

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

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0425	Sample Booking Number	EPIC-2604016
Sample(s) Code	2604016 (A) (B) (C) (D)	Sample Receipt (D/T)	21.01.2026/11:36

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	19.01.2026/ 10:35	Sampling End (D/T)	20.01.2026/ 08:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	24	Humidity %	54	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Daldaiya Village	GPS coordinate	23° 28' 55.33" / 84° 35' 36.10"
S. Location B	Aditya School Gangupara	GPS coordinate	23° 27' 47.47" / 84° 36' 06.31"
S. Location C	Ropeway unloading station	GPS coordinate	23° 26' 41.42" / 82° 41' 26.98"
S. Location D	Ropeway Angle Station	GPS coordinate	23° 27' 55.65" / 84° 37' 18.31"

Date(s) of performance of the laboratory activities

Test start date	21.01.2026/ 12:40	Test completion date	23.01.2026/ 10:30
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--Test Results Start--

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

--Test Results End--

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

Analysed by - Rajesh Varma

Reviewed by
(R.N. Kumar)
Technical Head

Issue by
(Ajmesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



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

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

Test Report



Unique Lab Report No.	TC1288726000000164	Discipline	Chemical
Report Unique ID	RL04562607018	Group	Atmospheric Pollution
Issue date/time	16.02.2026/ 11:48	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 : BAGRU BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	<i>Mr. Girija Tamrakar</i> +91 9111006074 <i>girija.tamrakar@adityabirla.com</i> 31.03.2025/ 10:10 13612313868
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References of Quality Management System (Stages of Traceability Chain)

Customer Registration No.	EPIC/OTH/0456	Sample Booking Number	EPIC-2607018
Sample(s) Code	2607018 (A) (B) (C) (D)	Sample Receipt (D/T)	13.02.2026/ 11:22

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	10.02.2026/ 11:25	Sampling End (D/T)	11.02.2026/ 09:35
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	53	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Entrance Gate (Ropeway Loading Area)	GPS coordinate	23° 28' 30.86"/84° 36' 03.85"
S. Location B	Administrative Office	GPS coordinate	23° 29' 04.73"/84° 35' 46.81"
S. Location C	Near Shiv Temple Compound	GPS coordinate	23° 29' 08.75"/84° 35' 44.11"
S. Location D	Near Weigh Bridge	GPS coordinate	23° 28' 59.39"/84° 35' 47.84"

Date(s) of performance of the laboratory activities

Test start date	13.02.2026/ 13:25	Test completion date	16.02.2026/ 10:15
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	58.88	59.67	58.45	60.95	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	23.33	24.52	25.37	26.83	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	11.77	10.10	10.99	12.33	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	20.81	21.65	23.21	24.91	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	17.97	16.89	20.13	21.21	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	29.36	28.78	29.07	30.24	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2-1999	ng/m ³	2	BDL	BDL	BDL	BDL	-
10.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-

--Test Results End--

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

Analysed by - Rajesh Varma



Reviewed by
(J. K. Kumar)
Technical Head

Issue by
(Jimesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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

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PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04562607018	Group	Atmospheric Pollution
Issue date/time	16.02.2026/ 11:48	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 : BAGRU BAUXITE MINE

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirta.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0456	Sample Booking Number	EPIC-2607018
Sample(s) Code	2607018 (A) (B) (C) (D)	Sample Receipt (D/T)	13.02.2026/ 11:22

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	10.02.2026/ 11:25	Sampling End (D/T)	11.02.2026/ 09:35
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	53	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Entrance Gate (Ropeway Loading Station)	GPS coordinate	23° 28' 30.86" / 84° 36' 03.85"
S. Location B	Administrative Office	GPS coordinate	23° 29' 04.73" / 84° 35' 46.81"
S. Location C	Near Shiv Temple Compound	GPS coordinate	23° 29' 08.75" / 84° 35' 44.11"
S. Location D	Near Weigh Bridge	GPS coordinate	23° 28' 59.39" / 84° 35' 47.84"

Date(s) of performance of the laboratory activities

Test start date	13.02.2026/ 13:25	Test completion date	16.02.2026/ 10:15
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--Test Results Start--


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

--Test Results End --

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

Analysed by - Rajesh Verma




Reviewed by
(B.N. Kumar)
Technical Head


Issue by
(Animesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



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CIN:-U74999JH2022PTC019683
PAN:-AAHCE3611M
GST:-20AAHCE3611MTZX

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

Test Report



Unique Lab Report No.	TC1288726000000165	Discipline	Chemical
Report Unique ID	RL04562607019	Group	Atmospheric Pollution
Issue date/time	16.02.2026/ 11:51	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 : BAGRU BAUXITE MINE

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0456	Sample Booking Number	EPIC-2607019
Sample(s) Code	2607019 (A) (B) (C) (D)	Sample Receipt (D/T)	13.02.2026/ 11:23

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	11.02.2026/ 12:05	Sampling End (D/T)	12.02.2026/ 09:55
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	56	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Daldaliya Village	GPS coordinate	23° 28' 55.33"/84° 35' 36.10"
S. Location B	Aditya School Gangupara	GPS coordinate	23° 27' 47.47"/84° 38' 06.31"
S. Location C	Ropeway unloading station	GPS coordinate	23° 26' 41.42"/82° 41' 26.98"
S. Location D	Ropeway Angle Station	GPS coordinate	23° 27' 55.65"/84° 37' 18.31"

Date(s) of performance of the laboratory activities

Test start date	13.02.2026/ 14:10	Test completion date	16.02.2026/ 10:05
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	63.96	61.04	57.25	61.43	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	28.33	30.54	26.73	28.01	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	10.51	11.36	12.28	09.79	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	21.73	22.60	26.05	21.34	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	21.21	20.13	19.41	18.33	190 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	26.17	25.29	29.65	28.20	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-
10.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



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

****Test Report End****

Rajesh Varma
Issue by
(Rajesh Varma)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

EPIC LabTech Private Limited



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

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04562607019	Group	Atmospheric Pollution
Issue date/time	16.02.2026/ 11:51	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 : BAGRU BAUXITE MINE

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0456	Sample Booking Number	EPIC-2607019
Sample(s) Code	2607019 (A) (B) (C) (D)	Sample Receipt (D/T)	13.02.2026/ 11:23

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	11.02.2026/ 12:05	Sampling End (D/T)	12.02.2026/ 09:55
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	56	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Daldaliya Village	GPS coordinate	23° 28' 55.33"/84° 35' 36.10"
S. Location B	Aditya School Gangupara	GPS coordinate	23° 27' 47.47"/84° 38' 06.31"
S. Location C	Ropeway unloading station	GPS coordinate	23° 26' 41.42"/82° 41' 26.98"
S. Location D	Ropeway Angle Station	GPS coordinate	23° 27' 55.65"/84° 37' 18.31"

Date(s) of performance of the laboratory activities

Test start date	13.02.2026/ 14:10	Test completion date	16.02.2026/ 10:05
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--Test Results Start--

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

--Test Results End --

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

Analysed by - Rajesh Varma

Reviewed by
(S.N. Kumar)
Technical Head

Issue by
(Umesh Das)
Laboratory Head



****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



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Certified by :-
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Test Report



Unique Lab Report No.	TC1288726000000166	Discipline	Chemical
Report Unique ID	RL04562607020	Group	Pollution & Environment
Issue date/time	16.02.2026/ 11:54	Sub Group	Waste Water (Sewage)

Report Issue to

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

Contact Person	Mr. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	girija.tamrakar@adityabirla.com
Order Date	31.03.2025/ 10:10
Order Number	13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0456	Sample Booking Number	EPIC-2607020
Sample(s) Code	2607020	Sample Receipt (D/T)	13.02.2026/ 11:24

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	10.02.2026/ 15:40	Sampling End (D/T)	10.02.2026/ 15:58
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	53	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	STP Outlet	GPS coordinate	23° 29' 07.85" / 84° 35' 47.58"
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Date(s) of performance of the laboratory activities

Test start date	13.02.2026/ 11:44	Test completion date	16.02.2026/ 10:55
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	pH value at 25.3°C	IS 3025 (P-11) 2022	-	1.5	6.52	6.5-9.0
2.	BOD (3 days at 27°C)	IS 3025 (P-44) 2000	mg/l	0.3	13.00	30.0
3.	COD	IS 3025 (P-58) 2006	mg/l	8.0	68.00	-
4.	Oil & Grease	IS 3025 (P-39) 2021	mg/l	4.0	4.3	-
5.	Total Suspended Solid	IS 3025 (P-17) 2022	mg/l	10.0	38.00	100
6.	Calcium	IS 3025 (P-40) 1991	mg/l	10.0	32.06	-
7.	Iron	APHA 3111 B 2023	mg/l	0.1	BDL	-

Prescribed Limit

Environmental (Protection) Rules-1986, Schedule -I, Serial No.105.

Analysed by - Pappu Kumar



(Signature)

Reviewed by
(B.N. Kumar)
Technical Head

*****Test Report End*****

(Signature)
16/2/26

Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

EPIC LabTech Private Limited



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

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04562607020	Group	Pollution & Environment
Issue date/time	16.02.2026/ 11:54	Sub Group	Waste Water (Sewage)

Report Issue to

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

Contact Person	Mr. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	girija.tamrakar@adityabirta.com
Order Date	31.03.2025/ 10:10
Order Number	13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0456	Sample Booking Number	EPIC-2607020
Sample(s) Code	2607020	Sample Receipt (D/T)	13.02.2026/ 11:24

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	10.02.2026/ 15:40	Sampling End (D/T)	10.02.2026/ 15:58
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	53	Wind direction	0°-180°
-------------------	-------	------------------	----	------------	----	----------------	---------

Sampling Location(s) with GPS coordinate(s)

S. Location A	STP Outlet	GPS coordinate	23° 29' 07.85" / 84° 35' 47.58"
---------------	------------	----------------	---------------------------------

Date(s) of performance of the laboratory activities

Test start date	13.02.2026/ 11:44	Test completion date	16.02.2026/ 10:55
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	Aluminium (as Al)	IS 3025 (P-55) 2003	mg/l	0.1	BDL	-

--Test Result End --

Prescribed Limit Environmental (Protection) Rules-1986, Schedule -I, Serial No.105.

Analysed by - Pappu Kumar

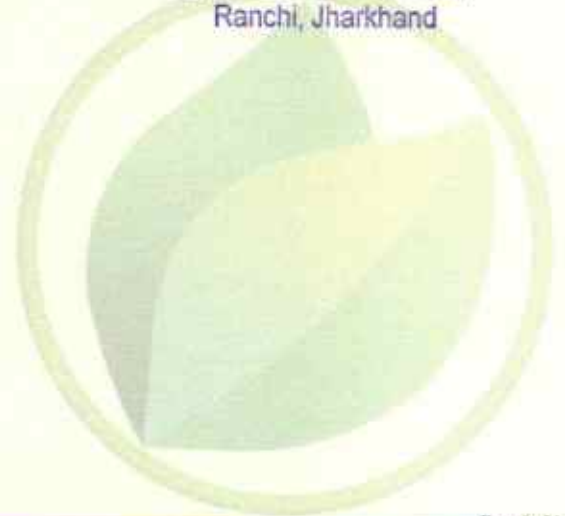



Reviewed by
(B.N. Kumar)
Technical Head


Issued by
(Jimesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited



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Indrapuri, Road No. - 5,
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CIN:-U74999JH2022PTC019683
PAN:-AAHCE3611M
GST:-20AAHCE3611M1Z

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

Test Report

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL04562607021	Group	Pollution & Environment
Issue date/time	16.02.2026/ 11:57	Sub Group	Waste Water (Sewage)

Report Issue to

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

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0456	Sample Booking Number	EPIC-2607021
Sample(s) Code	2607021	Sample Receipt (D/T)	13.02.2026/ 11:25

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	10.02.2026/ 15:40	Sampling End (D/T)	10.02.2026/ 15:58
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition Clear Temperature (°C) 27 Humidity % 53 Wind direction 0°-180°

Sampling Location(s) with GPS coordinate(s)

S. Location A STP Outlet GPS coordinate 23° 29' 07.85" / 84° 35' 47.58"

Date(s) of performance of the laboratory activities

Test start date 13.02.2026/ 11:55 Test completion date 16.02.2026/ 10:40

--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	Fecal Coliform	APHA 9221 E 2023	MPN/100ml	-	450	1000

--Test Result End --

Prescribed Limit Environmental (Protection) Rules-1986, Schedule -I, Serial No.105.

Analysed by - Ishika Singh




Reviewed by
(R.N. Kumar)
Technical Head


Issued by
(Himesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited



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Ranchi, Jharkhand - 834005,
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CIN:-U74999JH2022PTC0196B5
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

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

Test Report



Unique Lab Report No.	TC1288726000000167	Discipline	Chemical
Report Unique ID	RL04562607022	Group	Pollution & Environment
Issue date/time	16.02.2026/ 12:00	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 : BAGRU BAUXITE MINE

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0456	Sample Booking Number	EPIC-2607022
Sample(s) Code	2607022	Sample Receipt (D/T)	13.02.2026/ 11:26

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	10.02.2026/ 16:10	Sampling End (D/T)	10.02.2026/ 16:23
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	53	Wind direction	0°-180°
-------------------	-------	------------------	----	------------	----	----------------	---------

Sampling Location(s) with GPS coordinate(s)

S. Location A	Work shop Outlet	GPS coordinate	23° 28' 31.53"/ 84° 36' 03.19"
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Date(s) of performance of the laboratory activities

Test start date	13.02.2026/ 11:46	Test completion date	16.02.2026/ 10:55
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	1.5	6.85	6.5-8.5
2.	BOD (3 days at 27°C)	IS 3025 (P-44) 2000	mg/l	0.3	11.0	-
3.	COD	IS 3025 (P-58) 2006	mg/l	8.0	64.0	150.0
4.	Oil & Grease	IS 3025 (P-39) 2021	mg/l	4.0	4.4	10.0
5.	Total Suspended Solid	IS 3025 (P-17) 2022	mg/l	10.0	36.0	50.0
6.	Phosphate	IS 3025 (P-31/Sec-1) 2022	mg/l	0.2	0.67	-
7.	Total Dissolve Solids (TDS)	IS 3025 (P-16) 2023	mg/l	10	262.0	-
8.	Zinc (as Zn)	APHA 3111 B 2023	mg/l	0.04	BDL	5.0

--Test Result End --

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

Analysed by - Pappu Kumar



Reviewed by
(B.N. Kumar)
Technical Head

****Test Report End****

Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

EPIC LabTech Private Limited



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

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04562607022	Group	Pollution & Environment
Issue date/time	16.02.2026/ 12:00	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 : BAGRU BAUXITE MINE

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0456	Sample Booking Number	EPIC-2607022
Sample(s) Code	2607022	Sample Receipt (D/T)	13.02.2026/ 11:26

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	10.02.2026/ 16:10	Sampling End (D/T)	10.02.2026/ 16:23
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition Clear Temperature (°C) 27 Humidity % 53 Wind direction 0°-180°

Sampling Location(s) with GPS coordinate(s)

S. Location A Work shop Outlet GPS coordinate 23° 28' 31.53"/84° 36' 03.19"

Date(s) of performance of the laboratory activities

Test start date 13.02.2026/ 11:46 Test completion date 16.02.2026/ 10:55

--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits
1.	Dissolve Oxygen (DO)	IS 3025 (P-38) 1986	mg/l	0.2	1.5	

--Test Result End --

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

Analysed by - Pappu Kumar

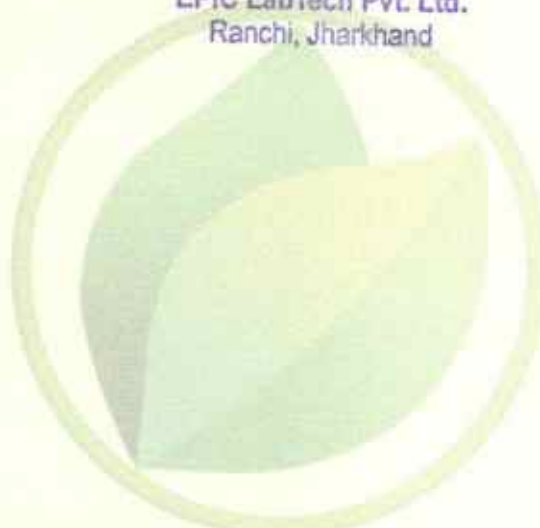



Reviewed by
(B.N. Kumar)
Technical Head

****Test Report End****


Issued by
(Himesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited



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PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

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

Test Report



Unique Lab Report No.	TC1288726000000351	Discipline	Chemical
Report Unique ID	RL04952612032	Group	Atmospheric Pollution
Issue date/time	23.03.2026/ 12:33	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 : BAGRU BAUXITE MINE

Contact Person	Mr. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	girija.tamrakar@adityabirla.com
Order Date	31.03.2025/ 10:10
Order Number	13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0495	Sample Booking Number	EPIC-2612032
Sample(s) Code	2612032 (A) (B) (C) (D)	Sample Receipt (D/T)	19.03.2026/ 10:35

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	16.03.2026/ 17:20	Sampling End (D/T)	17.03.2026/ 14:35
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	23	Humidity %	54	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Entrance Gate (Ropeway Loading Area)	GPS coordinate	23° 28' 30.86"/ 84° 36' 03.85"
S. Location B	Administrative Office	GPS coordinate	23° 29' 04.73"/ 84° 35' 46.81"
S. Location C	Near Shiv Temple Compound	GPS coordinate	23° 29' 08.75"/ 84° 35' 44.11"
S. Location D	Near Welgh Bridge	GPS coordinate	23° 28' 59.39"/ 84° 35' 47.84"

Date(s) of performance of the laboratory activities

Test start date	19.03.2026/ 11:35	Test completion date	23.03.2026/ 10:20
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	59.69	60.56	59.63	61.72	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	24.34	25.10	26.42	27.31	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	11.17	09.60	10.67	11.58	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	19.23	20.31	22.68	24.29	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	19.77	18.33	22.64	23.36	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	30.82	29.65	30.53	31.69	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1989	ng/m ³	2	BDL	BDL	BDL	BDL	-
10.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



Reviewed by
(J.N. Kumar)
Technical Head

****Test Report End****

Issue by
(Jitendra Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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

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CIN:-U74999JH2022PTC010685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04952612032	Group	Atmospheric Pollution
Issue date/time	23.03.2026/ 12:33	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 : BAGRU BAUXITE MINE

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0495	Sample Booking Number	EPIC-2612032
Sample(s) Code	2612032 (A) (B) (C) (D)	Sample Receipt (D/T)	19.03.2026/ 10:35

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	16.03.2026/ 17:20	Sampling End (D/T)	17.03.2026/ 14:35
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	23	Humidity %	54	Wind direction	0°-180°
-------------------	-------	------------------	----	------------	----	----------------	---------

Sampling Location(s) with GPS coordinate(s)

S. Location A	Entrance Gate (Ropeway Loading Station)	GPS coordinate	23° 28' 30.86"/84° 36' 03.85"
S. Location B	Administrative Office	GPS coordinate	23° 29' 04.73"/84° 35' 46.81"
S. Location C	Near Shiv Temple Compound	GPS coordinate	23° 29' 08.75"/84° 35' 44.11"
S. Location D	Near Weigh Bridge	GPS coordinate	23° 28' 59.39"/84° 35' 47.84"

Date(s) of performance of the laboratory activities

Test start date	19.03.2026/ 11:35	Test completion date	23.03.2026/ 10:20
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--Test Results Start--

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

--Test Results End --

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

Analysed by - Rajesh Varma



Reviewed by
(S.N. Kumar)
Technical Head

****Test Report End****

Issue by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



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

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

Test Report



Unique Lab Report No.	TC1288726000000352	Discipline	Chemical
Report Unique ID	RL04952612033	Group	Atmospheric Pollution
Issue date/time	23.03.2026/ 12:36	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 : BAGRU BAUXITE MINE

Contact Person	Mr. Girija Tamrakar
Contact Number	+91 9111006074
Email Id	girija.tamrakar@adityabirla.com
Order Date	31.03.2025/ 10:10
Order Number	13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0495	Sample Booking Number	EPIC-2612033
Sample(s) Code	2612033 (A) (B) (C) (D)	Sample Receipt (D/T)	19.03.2026/ 10:37

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	17.03.2026/ 16:45	Sampling End (D/T)	18.03.2026/ 14:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	25	Humidity %	50	Wind direction	320°-140°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Daldaliya Village	GPS coordinate	23° 28' 55.33" / 84° 35' 36.10"
S. Location B	Aditya School Gangupara	GPS coordinate	23° 27' 47.47" / 84° 38' 06.31"
S. Location C	Ropeway unloading station	GPS coordinate	23° 26' 41.42" / 82° 41' 26.98"
S. Location D	Ropeway Angle Station	GPS coordinate	23° 27' 55.65" / 84° 37' 18.31"

Date(s) of performance of the laboratory activities

Test start date	19.03.2026/ 12:50	Test completion date	23.03.2026/ 10:35
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	65.46	62.70	58.56	62.61	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	29.60	31.02	27.10	29.34	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	09.16	10.79	11.49	08.63	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	20.15	21.09	25.33	20.63	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	23.72	22.28	21.57	20.13	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	27.62	26.75	30.82	29.36	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-
10.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-

--Test Results End--

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

Analysed by - Rajesh Varma



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

****Test Report End****

Rupesh Prajapati
23/03/26
Issue by
(Rupesh Prajapati)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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CIN: -U74999JH2022PTC019685
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GST: -20AAHCE3611M1ZK

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04952612033	Group	Atmospheric Pollution
Issue date/time	23.03.2026/ 12:36	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 : BAGRU BAUXITE MINE

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0495	Sample Booking Number	EPIC-2612033
Sample(s) Code	2612033 (A) (B) (C) (D)	Sample Receipt (D/T)	19.03.2026/ 10:37

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	17.03.2026/ 16:45	Sampling End (D/T)	18.03.2026/ 14:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	25	Humidity %	50	Wind direction	320°-140°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Daldaliya Village	GPS coordinate	23° 28' 55.33"/ 84° 35' 36.10"
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S. Location D	Ropeway Angle Station	GPS coordinate	23° 27' 55.65"/ 84° 37' 18.31"

Date(s) of performance of the laboratory activities

Test start date	19.03.2026/ 12:50	Test completion date	23.03.2026/ 10:35
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--Test Results Start--

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

--Test Results End --

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

Analysed by - Rajesh Varma

Reviewed by
(B.K. Kumar)
Technical Head

Issue by
(Rupesh Prajapati)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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

Test Report



Unique Lab Report No.	TC1288726000000353	Discipline	Chemical
Report Unique ID	RL04952612034	Group	Water
Issue date/time	23.03.2026/ 12:39	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 : BAGRU BAUXITE MINE

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0495	Sample Booking Number	EPIC-2612034
Sample(s) Code	2612034	Sample Receipt (D/T)	19.03.2026/ 10:40

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	17.03.2026/ 14:38	Sampling End (D/T)	17.03.2026/ 14:52
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	23	Humidity %	54	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Canteen	GPS coordinate	23° 29' 09.25" / 84° 35' 43.31"
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Date(s) of performance of the laboratory activities

Test start date	19.03.2026/ 11:10	Test completion date	23.03.2026/ 10:55
-----------------	-------------------	----------------------	-------------------

--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits	
						Acceptable Limit	Permissible limit
1.	pH value at 25.2°C	IS 3025 (P-11) 2022	-	1.5	6.92	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.3	0.62	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	5.0	5	5	15
4.	Odour	IS 3025 (P-05) 2018	-	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	10	225.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	5	37.44	250	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	10	98.00	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	10	150.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	10	40.08	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	0.6	BDL	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1) 2022	mg/l	0.3	9.50	200	400
13.	Nitrate (as NO ₃ -N)	IS 3025 (P-34/Sec-1) 2023	mg/l	0.4	2.13	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	0.001	BDL	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	0.3	12.15	30	100



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

Test Report



Unique Lab Report No.	TC1288726000000353	Discipline	Chemical
Report Unique ID	RL04952612034	Group	Water
Issue date/time	23.03.2026/ 12:39	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 : BAGRU BAUXITE MINE

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

Sl. No.	Parameter	Method	Unit	Result	Relaxation	Sub Group	
16.	Fluoride (as F)	APHA 4500 F-D2023	mg/l	0.1	BDL	1.0	1.5
Group - Residues and Contaminants in Water,						Sub Group - Trace Metals Elements	
17.	Copper (as Cu)	APHA 3111 B 2023	mg/l	0.1	BDL	0.05	1.5
18.	Iron (as Fe)	APHA 3111 B 2023	mg/l	0.1	BDL	1.0	No relaxation
19.	Lead (as Pb)	APHA 3111 B 2023	mg/l	0.01	BDL	0.01	No relaxation
20.	Cadmium (as Cd)	APHA 3111 B 2023	mg/l	0.003	BDL	0.003	No relaxation
21.	Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	0.01	BDL	0.05	No relaxation
22.	Nickel (as Ni)	APHA 3111 B 2023	mg/l	0.02	BDL	0.02	No relaxation
23.	Total Arsenic (as As)	APHA 3114 B 2023	mg/l	0.005	BDL	0.01	0.05
24.	Selenium (as Se)	APHA 3114 B 2023	mg/l	0.005	BDL	0.01	No relaxation
25.	Manganese (as Mn)	APHA 3111 B 2023	mg/l	0.09	BDL	0.1	0.3
26.	Zinc (as Zn)	APHA 3111 B 2023	mg/l	0.04	BDL	5	15
Group - Residues and Contaminants in Water,						Sub Group - Pesticides	
27.	Aldrin	USEPA 8081 B:2007	µg/l	0.03	BDL	0.03	No relaxation
28.	dieldrin	USEPA 8081 B:2007	µg/l	0.03	BDL	0.03	No relaxation

--Test Result End --

Prescribed Limit IS 10500:2012
Analysed by - Pappu Kumar

Reviewed by
(B.N. Kumar)
Technical Head

Issued by
(Umesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited



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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04952612034	Group	Water
Issue date/time	23.03.2026/ 12:39	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: BAGRU BAUXITE MINE

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirta.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0495	Sample Booking Number	EPIC-2612034
Sample(s) Code	2612034	Sample Receipt (D/T)	19.03.2026/ 10:40

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	17.03.2026/ 14:38	Sampling End (D/T)	17.03.2026/ 14:52
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	23	Humidity %	54	Wind direction	0°-180°
-------------------	-------	------------------	----	------------	----	----------------	---------

Sampling Location(s) with GPS coordinate(s)

S. Location A	Canteen	GPS coordinate	23° 29' 09.25" / 84° 35' 43.31"
---------------	---------	----------------	---------------------------------

Date(s) of performance of the laboratory activities

Test start date	19.03.2026/ 11:10	Test completion date	23.03.2026/ 10:55
-----------------	-------------------	----------------------	-------------------

--Test Result Start--

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

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GST:-20AAHCE3611M12X

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04952612034	Group	Water
Issue date/time	23.03.2026/ 12:39	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 : BAGRU BAUXITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Girija Tamrakar
+91 9111006074
girija.tamrakar@adityabirla.com
31.03.2025/10:10
13612313868

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

--Test Result End --

Prescribed Limit IS 10500:2012
Analysed by - Pappu Kumar




Reviewed by
(B.N. Kumar)
Technical Head

****Test Report End****


Issued By
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Page 2 of 2

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

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✉ epiclabtech@gmail.com

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

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

Test Report

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL04952612035	Group	Water
Issue date/time	23.03.2026/ 12:42	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: BAGRU BAUXITE MINE

Contact Person Mr. Girija Tamrakar
Contact Number +91 9111006074
Email Id girija.tamrakar@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0495	Sample Booking Number	EPIC-2612035
Sample(s) Code	2612035	Sample Receipt (D/T)	19.03.2026/ 10:41

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	17.03.2026/ 14:38	Sampling End (D/T)	17.03.2026/ 14:52
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition Clear Temperature (°C) 23 Humidity % 54 Wind direction 0°-180°

Sampling Location(s) with GPS coordinate(s)

S. Location A Canteen GPS coordinate 23° 29' 09.25" / 84° 35' 43.31"

Date(s) of performance of the laboratory activities

Test start date 19.03.2026/ 11:00 Test completion date 23.03.2026/ 10:55

--Test Result Start--

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

--Test Result End--

Prescribed Limit IS 10500:2012

Analysed by - Ishika Singh




Reviewed by
(B.N. Kumar)
Technical Head

*****Test Report End*****


Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Annexure 3

Date – 01.11.2025

Office Order

Environmental Cell has been re-constituted for Bagru Group of Mines (Bagru Bauxite Mine, Bhusar Bauxite Mine and Hisri New Bauxite Mine). 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. Shambhu Vashistha (Coordinator)
2. Mr. Malaya Prusty (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 October 2025 to March 2026								
S. No	Name of the Mines	Mining lease area (ha)	Production Capacity (MT)*	Lease Period*	Production (MT)	Mined out area (ha)	Backfilled area (ha)	Over burden (Cu.M)
1	Bagru Bauxite Mine	75.41	85000	22.01.1974 to 31.03.2030	NIL	NIL	NIL	NIL
2	Bhusar Bauxite Mine	65.31	280000	11.07.1981 to 31.03.2030	89066	0.650	0.915	33436.80
3	Hisri (New) Bauxite Mine	14.55	100000	19.07.1981 to 31.03.2030	41184	0.655	0.920	996.270
4	Pakhar (8.09) Bauxite Mine	8.09	80000	16.05.1973 to 31.03.2030	NIL	NIL	NIL	NIL
5	Pakhar (35.12) Bauxite Mine	35.12	200000	17.04.1975 to 31.03.2030	NIL	NIL	NIL	NIL
6	Pakhar (115.13) Bauxite Mine	115.13	300000	19.07.1996 to 31.03.2030	171180	3.820	2.310	271049.97
7	Sherangdag-A Bauxite Mine	155.81	260000	16.10.1974 to 31.03.2030	75150	2.850	1.700	158752.125
8	Serangdag-B Bauxite Mine	77.89	100000	04.10.1978 to 31.03.2030	42330	0.860	0.730	47018.623
9	Jalim & Sanai Bauxite Mine	12.14	50000	16.10.1974 to 31.03.2030	NIL	NIL	NIL	NIL
10	Gurdari Bauxite Mine	584.19	325000	23.03.1985 to 22.03.2035	130240	4.520	4.270	225170.36
11	Kujam - I Bauxite Mine	80.87	150000	13.03.2006 to 12.03.2056	NIL	NIL	NIL	NIL
12	Kujam - II Bauxite Mine	157.38	300000	24.03.2006 to 23.03.2056	63685	3.120	4.284	65548.95
13	Amtipani Bauxite Mine	190.95	150000	13.03.2006 to 12.03.2056	55635	4.960	5.050	192519.545

Annexure 4

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

*Static information about the mines included in the above table



R R P Ambastha
Head - Compliance

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

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

S. No	Description	Budget (in Rupees) FY 2025-26 (From Oct'25 to Mar'26)	Actual (in Rupees) FY 2025-26 (From Oct'25 to Mar'26)
1	Pollution Control and Environmental Monitoring	1,71,00,000	88,71,710
2	Reclamation/ Back filing & Rehabilitation**	2,04,00,000	34,88,940
3	Green belt, Plantation & Water sprinkling arrangement	1,20,00,000	87,33,877
4	Rural Development	7,92,00,000	7,39,52,956

**Part of OB removed cost



R R P Ambastha
Head - Compliance