

HIL/LHD/ENV/MoEF&CC/411

Date: 24th November 2025

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

Sub: Six Monthly EC Compliance Report for Jalim & Sanai (12.14 Ha) Bauxite Mining project of M/s Hindalco Industries Limited, Gumla Jharkhand for the period from April 2025 to September 2025.

Ref: Environmental Clearance Letter No. J-11015/138/2006-IA II (M), dated 10th April 2007.

Dear Sir,

With reference to the above, we are submitting herewith the Compliance status report of EC conditions for **Jalim & Sanai (12.14 Ha)** Bauxite Mining project of **M/s Hindalco Industries Limited**, Gumla Jharkhand for the period from **April 2025 to September 2025** for your kind perusal please.

The lease details are below:

Lease area (ha)	Production Capacity (MT)	Lease Period
12.14	50000	16.10.1974 to 31.03.2030

Hope you will find the same in order.

Thanking You

Yours faithfully,
For **Hindalco Industries Limited**

Basudev Gangopadhyay
(AVP - Planning, Environment & Compliance)

Enclosure: - As Above

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Name of the Project : **Jalim Sanai Bauxite Mine (12.14 ha)**
M/s Hindalco Industries Limited

Environment Clearance No. & date : **J-11015/138/2006-IA.II (M), dated 10.04.2007**

Period of compliance Report : **From 1st April 2025 to 30th September 2025**

Specific Conditions

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

Reply: - Implementations of the stipulated conditions in NOC are fulfilled after which Consent to Operate (CTO) has been obtained from time to time. The current CTO is valid up to 31/03/2027. Production of bauxites is within limits specified in Consent to Operate.

Condition ii: - The environmental clearance is subject to approval of the state land use Department, Government of Jharkhand for diversion of agricultural land for non-agricultural use.

Reply: - Land acquisition is being done with the permission of the competent authority of State Government i.e. concerned Deputy Commissioner (D.C.) under CNT Act. The land lease agreement is being done with raiyat (Landowner) after permission of State Govt with provision of returning the land as per the norms set by D.C. The compensation and facilities are being provided as per norms set in agreement. Thus, land acquisition has the approval of the State Government.

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

Reply: - Since shallow depth mining is being carried out, hence there is no intersection with the groundwater table. In future also, working zones will be restricted to above ground water table. We undertake that no mining is/was carried out below ground water table and the same status will be maintained in future also.

Moreover, we regularly monitor the groundwater table through the installation of a piezometer. A copy of the water level report is attached herewith as **Annexure-1**.

Condition iv: - The project proponent shall ensure that no natural watercourse shall be obstructed due to any mining operations.

Reply: - There is no natural watercourse and / or water resources within the mining lease area. Shallow depth mining methodology is adopted for mining process. Hence, there is no impact of mining operation on natural water courses.

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

Reply: Topsoil is being stacked properly with proper slope as and when required for its use for

reclamation and rehabilitation. Sequential backfilling and reclamation of the mined-out area are being exercised during mining operation. The mining is being carried out as per the approved mining plan. Monitoring and management of rehabilitated areas is being done through effective supervision. Data pertaining to backfilling is enclosed as **Annexure 4**.



Reclamation of the mined-out

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

Reply: - Overburden and waste rock are being used for concurrent backfilling, and topsoil is being spread on the backfilled area for reclamation. Currently, there is no OB dump present in the mine lease area. Monitoring and management of rehabilitated areas continues until vegetation becomes self-sustaining through supervision. Data pertaining to backfilling is enclosed as **Annexure 4**. Compliance status is being submitted to MoEF&CC on six monthly basis.

Condition vii: - Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from mine working. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted particularly after monsoon and maintained properly.

Garland drain (size, gradient and length) shall be constructed for mine pit and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper setting of silt material. Sedimentation pits should be constructed at the corners of the garland drains and desilted at regular intervals.

Reply: - To collect & manage rainwater during monsoon, part of mined out area is used as a settling tank for the runoff. Rainwater stored is being used for watering the mine area, roads, green belt development and sprinkling as necessary. Catch drains, Garland drains of appropriate size are being constructed in both around the mine pit to prevent runoff of water and flow of sediments directly into the agricultural field and water bodies, if applicable. Sump of adequate capacity is being provided and maintained as required. Photographs of the same is attached below.



Garland drains



De-Siltation Arrangement

Condition viii: - Plantation shall be raised in an area of 10.58 ha including a green belt of adequate width by planting the native species around the ML area, roads, reclaimed area etc. in consultation with the local DFO / Agriculture Department. The density of the trees should be around 1500 plants per ha.

Reply: - Progressive plantation of native species is being carried out in consultation with local forest department within mining lease, reclaimed area etc. During FY 2025-26 till September, a total of 1150 nos. saplings have been planted in mining lease. Cumulative 6.15 ha areas have been planted till date.

Green belt development program is in progress with progress of mining activities in a phased manner.



Plantation at Mines

Condition ix: - The project proponent shall ensure that there shall be no discharge from the mine.

Reply: - Ensured. There is no discharge from mine.

Condition x: - The project proponent shall carry out regular monitoring of spring discharge and its quality near Shrengdag village on long term basis.

Reply: - Spring water quality near Sherengdag village is being monitored. Analysis report is attached as **Annexure 2**.

Condition xi: - 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: - A detailed plan to augment groundwater has been prepared, and suitable measures like the creation of water harvesting ponds, etc., are being taken for the augmentation of groundwater in our adjacent mine at Sherengdag Plateau, in consultation with the Central Ground Water Board.



Rainwater Harvesting Pond

Condition xii: - Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring should be carried out four times in a year – pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to MOEF, Central Ground water Authority and Regional Director Central Ground Water Board.

Reply: We are not using ground water for any mining purpose. Since Shallow depth mining is being carried out, hence there is no intersection of ground water table during the mining operation at present and in future also. A Piezometer has been installed for monitoring of ground water level. Water level and water quality reports are being sent regularly to the regional office of Ministry, CGWA and JSPCB. The same is attached herewith as **Annexure 1 & 2**.



Piezometer

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

Reply: - We are not using any water from natural streams/ ground water for mining operation. Rainwater harvesting ponds with proper fencing have been already constructed in our adjacent mine of Sherengdag Plateau. Rainwater harvested during the rainy season is being used for sprinkling on haul roads and raising plantation.

However, we have obtained NOC for extraction of ground water from CGWA/ CGWB for drinking purpose only. The copy of the same NOC and photographs of Rainwater harvesting ponds are attached below.

भारत सरकार जल शक्ति मंत्रालय जल संवर्धन विभाग केन्द्रीय पृथिवी पानी प्राधिकरण GOVERNMENT OF INDIA MINISTRY OF JAL SHAKTI DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION CENTRAL GROUND WATER AUTHORITY		 सत्यमेव जयते			
भूखल नििकासी हेतु अनापत्ति प्रमाण पत्र NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION					
PROJECT NAME JALIM SANAI BAUXITE MINING PROJECT (12.14 HA)					
PROJECT ADDRESS JALIM SANAI BAUXITE MINING PROJECT VILL - JALIM SANAI TEHSIL - BISHUNPUR				PIN CODE 835302	
STATE JHARKHAND		DISTRICT GUMLA		TOWN/BLOCK BISHUNPUR	
COMMUNICATION ADDRESS MINES DIVISION, COURT ROAD					
ADDRESS OF CGWB REGIONAL OFFICE 6th & 7th Floor, Lok Nayak Jai Prakash Bhawan, Frazer Road, Dak Banglow, Patna-800011, Bihar.					
1. NOC NO. NOC/MIN/JH/2024/228/R-2/2		2. DATE OF ISSUANCE 30/01/2025			
3. APPLICATION NO. MIN/JH/2024/228/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)			

NOC for Ground Water

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

Reply: - To keep vehicular emissions under control, vehicles are periodically checked & repaired. All measures are being taken to control vehicular emission. All vehicles are covered with tarpaulins, and non-overloading guidelines are being followed during transportation of mineral.



Tarpaulin covered Vehicle

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

Reply: - Wet drilling is in practice.



Wet Drilling

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

Reply: - Blasting time is fixed during Lunch Time i.e. 1.00 PM-2.00 PM. We have control blasting permission. Controlled blasting method is in practice. Ground vibration study has been conducted periodically. Efforts and mitigative measures are being taken to reduce the impact of the blast.

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

Reply: - We have already obtained the Consent to Operate for Bauxite Ore as per production capacity mentioned in EC.

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

Reply: - As of now there is no colony within the lease hold. However, Domestic Wastewater generated from mine office area is being collected through an individual Septic Tank and followed by Soak Pit. No wastewater is generated from our mining operation. However, only negligible amounts of effluent is being generated from workshops and Oil & grease trap system is already installed for Sherengdag group of mines to treat this effluent. The treated water is in a closed circuit and being reused for washing of vehicle in the workshop.

Furthermore, the quality of this treated water is being monitored regularly and the monitoring report is attached herewith as **Annexure 2**.



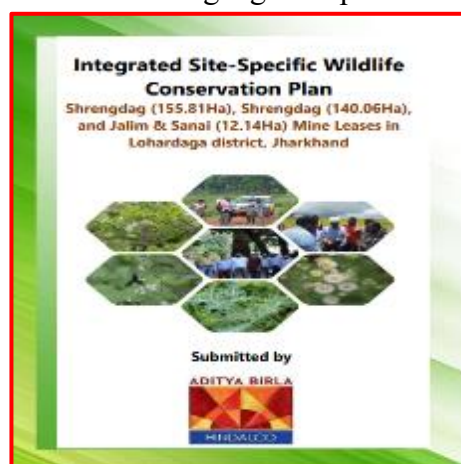
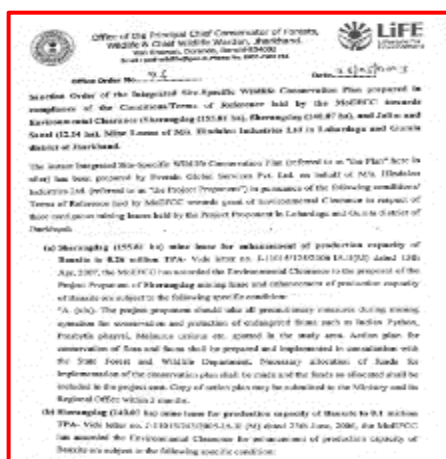
Washing Ramp and Oil and Grease Trap

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

Reply: - Safeguard Measures already implemented and being implemented as suggested by the forest department are as follows:

1. Minimum level of Noise during Mining.
2. Permanent pillars are established within the mine lease area at 7.5m from the forest boundary.
3. Daily water sprinkling on haul road.
4. Transportation is carried out during the daytime only.
5. Maintenance of mineral transportation road is being done regularly.
6. Social activities are being undertaken in nearby areas etc.

We have also prepared Integrated Site-specific Wildlife Conservation in consultation with State Forest Department and obtained approval letter from Principal Chief Conservator of Forest, Wildlife & Chief Wildlife Warden, Jharkhand via Office Order No.26 dated 26.05.2023 for conservation and protection of flora and fauna in the core and buffer zone for Sherengdag Group of Mines.



Integrated Site-specific Wildlife Conservation Plan for Sherengdag Group of Mines

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

Reply: - Mining Plan along with progressive mine closure plan has been approved by Indian Bureau of Mines. Final Mine Closure Plan will be submitted in due time as per applicable guidelines and timelines mentioned in MCDR/IBM guideline who are competent authority to approve the same. Based on present resource estimate and peak rated production capacity mentioned in EC, Mining operation is being carried out.

GENERAL CONDITIONS: -

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

Reply: - Noted.

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

Reply: - Calendar plan including excavation, quantum of mineral bauxite and waste is being done as per IBM approved mining scheme and in scientific manner. Data pertaining to excavation, quantum of mineral bauxite etc. are mentioned in report attached as **Annexure 4**.

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

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

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

Reply: - Being adhered to. Monitoring Reports for the reporting period are attached as **Annexure-2**. Now, the Regional office of MoEF&CC is in Ranchi.

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

Reply: - Mobile water tanker with sprinkling facility has been provided along haul roads, at loading and unloading areas, and at transfer points to control dust emissions.



Water sprinkling through Tanker

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

Reply: - Measures are being taken for control of noise levels below 85 dB (A) in the work environment. Workers engaged in operation of HEMM, etc. has been provided with ear plug / muffs. The noise level monitoring is being conducted at a regular interval. The noise level is within the prescribed norms. Report has been attached as **Annexure 2.**

Condition vii: - Industrial wastewater (workshops 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: - No wastewater is generated from our mining operation. However, only negligible amount of effluent is generated from workshops. Also, Oil & grease trap system is already installed for Sherengdag group of mines to treat this effluent. The treated water is in a closed circuit and being reused for washing of vehicle in the workshop.

Furthermore, the quality of this treated water is being monitored regularly and the monitoring report is attached herewith as **Annexure 2.**



Washing Ramp and Oil & Grease Trap

Condition viii: - Personnel working in dusty areas should wear protective respiratory devices and they should also provided with adequate training and information on safety and health aspects.

Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.

Reply: - All the workers have been provided with PPEs including dust masks and dust respirators. Apart from PPEs distribution to all workers, we are also providing adequate safety training and conducting awareness session on Safety and health aspects on a regular basis. The Periodical Occupational health surveillance program of the workers is being carried out and records maintained as per statute.

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

Reply: - A separate environmental management cell with suitable qualified personnel has been set up under the control of a Senior Executive, who is reporting directly to the Head of the Organization. The same is being attached herewith as **Annexure 3**.

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

Reply: - This is an operating mine and hence the provision related to financial closure is not applicable. Now, the Regional office of MoEF&CC is in Ranchi.

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

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

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

Reply: - Noted and Agreed. Now, the Regional Office of MoEF&CC is in Ranchi.

Condition xiii: - The project proponent shall submit six monthly report on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Lucknow, Central Pollution Control Board and State Pollution Control Board.

Reply: - Six monthly reports on status of implementation of the stipulated environmental safeguards as per EC conditions, including monitoring report are being submitted to the MoEF&CC, Zonal office of CPCB & JSPCB, Ranchi and uploaded on the website of the company. Now, the Regional Office of MoEF&CC is in Ranchi.

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

Reply: - Complied. A copy of clearance letter has already been submitted.

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

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

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

Reply: - Noted and complied. The information on grant of the EC has been published in two local newspapers. The copy of the advertisement has already been submitted to the Regional Office of the MoEF&CC. Now, the Regional office of MoEF&CC is in Ranchi.

Piezometer Monitoring Report

Mine: Jalim & Sanai Bauxite Mine (12.14 Ha)

S No	Month	Ground Water Level (BGL) in meter
1	Apr-25	36.71
2	May-25	36.89
3	Jun-25	36.77
4	Jul-25	36.62
5	Aug-25	36.53
6	Sep-25	36.44



EPIC LabTech Private Limited

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Road No. - 5, Ranchi,
Jharkhand - 834003, India

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93049 73994
epiclabtech@gmail.com

CIN:-U74999JH2022PTC010685
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

Annexure - 2

Unique Lab Report No.	TC1288725000000432	Discipline	Chemical
Report Unique ID	RL0141251767	Group	Atmospheric Pollution
Issue date/time	30.04.2025/ 10:30	Sub Group	Ambient Air Quality

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

References of Quality Management System (Steps of Traceability Chain)			
Customer Registration No.	EPIC/OTH/0141	Sample Booking Number	EPIC-251767
Sample(s) Code	251767 (A), (B), (C), (D)	Sample Receipt (D/T)	25.04.2025/10:54

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Sampling Start (D/T)	23.04.2025/ 10:49	Sampling End (D/T)	24.04.2025/ 07:56
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Clear	Temperature (°C)	30	Humidity %	56	Wind direction	0°-180°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Mine Pit Quarry No 2	GPS coordinate	23° 25' 27.45" / 84° 26' 03.35"
S. Location B	Nava Prathmik Vidyalay (Dhanka Toli)	GPS coordinate	23° 25' 26.85" / 84° 25' 42.69"
S. Location C	Mine Pit Quarry No 3	GPS coordinate	23° 25' 24.41" / 84° 25' 56.29"
S. Location D	Near Colony	GPS coordinate	23° 24' 54.52" / 84° 25' 59.07"

Date(s) of performance of the laboratory activities			
Test start date	25.04.2025/ 11:15	Test completion date	29.04.2025/ 16:50

--Test Result --								
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	83.13	70.11	81.96	68.02	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	39.68	32.53	37.64	29.30	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	08.07	07.02	07.89	07.22	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	31.59	19.59	21.99	19.46	80(24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	28.45	24.57	30.39	22.63	180(1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	46.12	36.01	41.70	34.75	400(24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	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 Result End --

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

Analysed by -A. K. SONHA



Checked by
(B.N. Kumar)
Technical Head

Verified & Issued by
(Umashankar)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.



EPIC LabTech Private Limited

Address:-

C/o - R.K. Tripathi, Indrapuri,
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Jharkhand - 834005, India

☎ 0651 4666302

📞 98357 86677

📞 93049 73894

✉ epiclabtech@gmail.com

CIN:-U74999JH2022PTC019685 Accredited by:-

PAN:-AAHCE3611M

GST:-20AAHCE3611M1ZX

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	RL0141251767	Group	Atmospheric Pollution
Issue date/time	30.04.2025/ 10:30	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED

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

Contact Person

Mr. Ankit Das

Contact Number

+91 9971034775

Email Id

ankit.das@adityabirla.com

Order Date

31.03.2025/ 10:10

Order Number

13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0141	Sample Booking Number	EPIC- 251767
Sample(s) Code	251767 (A),(B),(C),(D)	Sample Receipt (D/T)	25.04.2025/10:54

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Sampling Start (D/T)	23.04.2025/ 10:49	Sampling End (D/T)	24.04.2025/ 07:56
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	30	Humidity %	56	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Pit Quarry No 2	GPS coordinate	23° 25' 27.45" / 84° 26' 03.35"
S. Location B	Nava Prathmik Vidyalay (Dhanka Toli)	GPS coordinate	23° 25' 26.85" / 84° 25' 42.69"
S. Location C	Mine Pit Quarry No 3	GPS coordinate	23° 25' 24.41" / 84° 25' 58.29"
S. Location D	Near Colony	GPS coordinate	23° 24' 54.52" / 84° 25' 59.07"

Date(s) of performance of the laboratory activities

Test start date	25.04.2025/ 11:15	Test completion date	29.04.2025/ 16:50
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--Test Result --

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

--Test result End --

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

Operational Status: Unit was Operational During sampling.

Analysed by -A. K. SINHA



Checked by
(B.N. Kumar)
Technical Head

Verified & Issue by
(Unesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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CIN: U74809JH2022PTC019683
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 Certificate

Unique Lab Report No.	TC1288725000000433	Discipline	Chemical
Report Unique ID	RL0141251768	Group	Water
Issue date/time	30.04.2025/ 10:32	Sub Group	Drinking Water

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

References of Quality Management System (Steps of Traceability Chain)			
Customer Registration No.	EPIC/OTH/0141	Sample Booking Number	EPIC - 251768
Sample(s) Code	251768	Sample Receipt (D/T)	25.04.2025/10:58
Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Sampling Start (D/T)	24.04.2025/ 17:50	Sampling End (D/T)	24.04.2025/ 18:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Clear	Temperature (°C)	30	Humidity %	56	Wind direction	0°-180°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Camp	GPS coordinate	23° 22' 27.52" / 84° 28' 24.22"

Date(s) of performance of the laboratory activities			
Test start date	25.04.2025/ 11:20	Test completion date	29.04.2025/ 13:20

--Test Result --

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible limit
1.	pH value at 24.6°C	IS 3025 (P-11) 2022	-	6.54	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.77	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	< 5	5	15
4.	Odour	IS 3025 (P-05) 2018	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	398.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	21.68	250	1000
8.	Total Alkalinity(as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	64.00	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	186.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	54.51	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	BDL(MDL-0.4)	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1)2022	mg/l	3.00	200	400
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	1.74	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL(MDL-0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	12.15	30	100



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CIN:-U74900JH2022PTC019685
PAN:-AAHCE361TM
GST:-20AAHCE361TM12X

Accredited by:-
NABL, Accreditation Number TC-12887
Jharkhand State Pollution Control Board
Certified by:-
ISO 9001:2015 and ISO 43001:2018



Analytical Test Certificate

Unique Lab Report No.	TC1288725000000433	Discipline	Chemical
Report Unique ID	RL0141251768	Group	Water
Issue date/time	30.04.2025/ 10:32	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: JALIM & SANAI BAUXITE MINES

Contact Person
Contact Number
Email Id
Order Date
Order Number

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

Group - Residues and Contaminants in Water

Sub Group- Trace Metals Elements

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

--Test result End--

Prescribed Limit
Operational Status

IS 10500:2021
Unit was Operational During sampling.

Analysed by -Pratima Kumari/ Anjali Kumari



Checked by
(B.N. Kumar)
Technical Head

Verified & Issue by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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CIN: - U74999JH2022PTC016685 Accredited by -
Jharkhand State Pollution Control Board
PAN: - AAHCE3611M
GSTIN: 20AAHCE3611M12X
Certified by -
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0141251768	Group	Water
Issue date/time	30.04.2025/ 10:32	Sub Group	Drinking Water

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

References of Quality Management System (Steps of Traceability Chain)			
Customer Registration No.	EPIC/OTH/0141	Sample Booking Number	EPIC-251768
Sample(s) Code	251768	Sample Receipt (D/T)	25.04.2025/10:58

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/038
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Sampling Start (D/T)	24.04.2025/ 17:50	Sampling End (D/T)	24.04.2025/ 18:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Clear	Temperature (°C)	30	Humidity %	56	Wind direction	0°-180°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Camp	GPS coordinate	23° 22' 27.52" / 84° 28' 24.22"

Date(s) of performance of the laboratory activities			
Test start date	25.04.2025/ 11:20	Test completion date	29.04.2025/ 13:20

--Test Result --

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



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CIN:-U74999JH2022PTC016685 Accredited by:-
Jharkhand State Pollution Control Board
PAN:-AAHCE3811M
GST:-20AAHCE3811M1ZX
Certified by:-
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0141251768	Group	Water
Issue date/time	30.04.2025/ 10:32	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 : JALIM & SANAI BAUXITE MINES

Contact Person
Contact Number
Email Id
Order Date
Order Number

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

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

--Test result End --

Prescribed Limit
Operational Status

IS 10500:2021
Unit was Operational During sampling.

Analysed by -Pratima Kumari/ Anjali Kumari



Checked by
(S.N. Kumar)
Technical Head

Verified & Issue by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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CIN:-U74999JH2022PTC018685 Accredited by :-
Jharkhand State Pollution Control Board
PAN:-AAHCE3811M
GST:-20AAHCE3811M1ZX
Certified by :-
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL0141251769	Group	Water
Issue date/time	30.04.2025/ 10:34	Sub Group	Drinking Water

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

References of Quality Management System (Steps of Traceability Chain)			
Customer Registration No.	EPIC/OTH/0141	Sample Booking Number	EPIC-251769
Sample(s) Code	251769	Sample Receipt (D/T)	25.04.2025/11:02

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS : 3025 (Part-1) 1987, R-2003& IS 1622 1981		
Sampling Start (D/T)	24.04.2025/ 17:50	Sampling End (D/T)	24.04.2025/ 18:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling			
Weather condition	Clear	Temperature (°C)	30
		Humidity %	56
		Wind direction	0°-180°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Camp	GPS coordinate	23° 22' 27.52"/ 84° 28' 24.22"

Date(s) of performance of the laboratory activities			
Test start date	25.04.2025/ 11:20	Test completion date	29.04.2025/ 13:20

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

Prescribed Limit	IS 10500:2021
Operational Status	Unit was Operational During sampling.
Analysed by -Preetima Kumari/ Anjali Kumari	



Checked by
(E.N. Kumar)
Technical Head

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



Analytical Test Certificate

Unique Lab Report No.	TC1288725000000434	Discipline	Chemical
Report Unique ID	RL0141251770	Group	Water
Issue date/time	30.04.2025/ 10:36	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: JALIM & SANAI BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +91 9971034775 ankit.das@adityabirla.com 31.03.2025/ 10:10 13612313868
--	--	--

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0141	Sample Booking Number	EPIC-261770
Sample(s) Code	251770	Sample Receipt (D/T)	25.04.2025/16:03

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Sampling Start (D/T)	23.04.2025/ 11:30	Sampling End (D/T)	23.04.2025/ 12:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	30	Humidity %	56	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Nava Prathmik Vidyalay (Dhanka Toli)	GPS coordinate	23° 25' 27.18" / 84° 25' 42.77"
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Date(s) of performance of the laboratory activities

Test start date	25.04.2025/ 11:20	Test completion date	29.04.2025/ 13:20
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--Test Result --

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible Limit
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.86	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.93	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	<5	5	15
4.	Odour	IS 3025 (P-05) 2018	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	409.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	25.62	250	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	70.00	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	196.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	56.91	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	BDL(MDL-0.4)	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1)2022	mg/l	04.30	200	400
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	02.04	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL(MDL-0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	13.12	30	100
Group - Residues and Contaminants in Water				Sub Group- Trace Metals Elements		
16.	Copper(as Cu)	APHA 3111 B 2023	mg/l	BDL(MDL-0.2)	0.05	1.5
17.	Iron (as Fe)	APHA 3111 B 2023	mg/l	BDL(MDL-0.1)	1.0	No relaxation



EPIC LabTech Private Limited

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CIN:-U74999JH2022PTC019683
PAN:-AAHCE3611M
GST:-20AAHCE3611M1Z1

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.	TC1288725000000434	Discipline	Chemical
Report Unique ID	RL0141251770	Group	Water
Issue date/time	30.04.2025/ 10:36	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: JALIM & SANAI BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +91 9971034775 ankit.das@adityabirla.com 31.03.2025/ 10:10 13612313868
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18. Lead (as Pb)	APHA 3111 B 2023	mg/l	BDL(MDL-0.01)	0.01	No relaxation
19. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BDL(MDL-0.003)	0.003	No relaxation
20. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	0.05	No relaxation
21. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BDL(MDL-0.02)	0.02	No relaxation
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	0.05
23. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(MDL-0.005)	0.01	No relaxation
24. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.09)	0.1	0.3
25. Zinc(as Zn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	5	15

--Test Result End --

Prescribed Limit IS 10500:2021
Operational Status Unit was Operational During sampling.
Analysed by -Pratima Kumar/ Anjali Kumari



Checked by
(B.N. Kumar)
Technical Head

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



EPIC LabTech Private Limited

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

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CIN:-U74999JH2022PTC018683
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

Accredited by :-
National Bureau of Assurance, Government of India
Certified by :-
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0141251770	Group	Water
Issue date/time	30.04.2025/ 10:36	Sub Group	Ground Water
Report Issue to			
M/s - HINDALCO INDUSTRIES LIMITED		Contact Person	Mr. Ankit Das
VILLAGE-COURT ROAD,		Contact Number	+91 9971034775
POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA,		Email Id	ankit.das@adityabirla.com
STATE-JHARKHAND, INDIA 835302		Order Date	31.03.2025/ 10:10
MONITORING SITE : JALIM & SANAI BAUXITE MINES		Order Number	13612313868
References of Quality Management System (Steps of Traceability Chain)			
Customer Registration No.	EPIC/OTH/0141	Sample Booking Number	EPIC-251770
Sample(s) Code	251770	Sample Receipt (D/T)	25.04.2025/16:03
Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Sampling Start (D/T)	23.04.2025/ 11:30	Sampling End (D/T)	23.04.2025/ 12:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		
Environmental Condition during sampling			
Weather condition	Clear	Temperature (°C)	30
		Humidity %	56
		Wind direction	0°-180°
Sampling Location(s) with GPS coordinate(s)			
S. Location A	Nava Prathmik Vidyalay (Dhanka Toli)	GPS coordinate	23° 25' 27.18" / 84° 25' 42.77"
Date(s) of performance of the laboratory activities			
Test start date	25.04.2025/ 11:20	Test completion date	29.04.2025/ 13:20

--Test Result --

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



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CIN:-U74999JH2022PTC010685 Accredited by:-
Jharkhand State Pollution Control Board
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK
Certified by:-
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0141251770	Group	Water
Issue date/time	30.04.2025/ 10:36	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 : JALIM & SANAI BAUXITE MINES

Contact Person

Mr. Ankit Das

Contact Number

+91 9971034775

Email Id

ankit.das@adityabirla.com

Order Date

31.03.2025/ 10:10

Order Number

13612313868

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

--Test Result End --

Prescribed Limit

IS 10500:2021

Operational Status

Unit was Operational During sampling.

Analysed by - Pratima Kumari/ Anjali Kumari



Checked by
(R.N. Kumar)
Technical Head

Verified & Issue by
(Umesh Das)
Laboratory Head

Authorised Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

Address:-
C/o - R.K. Tripathi, Indrapuri,
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CIN:-U74999JH2022PTC019685 Accredited by:-

PAN:-AAHCE3611M

GST:-20AAHCE3611M12X

Jharkhand State Pollution Control Board

Certified By:-

ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL0141251771	Group	Water
Issue date/time	30.04.2025/ 10:38	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 : JALIM & SANAI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0141	Sample Booking Number	EPIC-251771
Sample(s) Code	251771	Sample Receipt (D/T)	25.04.2025/16:04

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS: 3025 (Part-1) 1987, R-2003& IS 1622 1981		
Sampling Start (D/T)	23.04.2025/ 11:30	Sampling End (D/T)	23.04.2025/ 12:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	30	Humidity %	56	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Nava Prathmik Vidyalay (Dhanka Toli)	GPS coordinate	23° 25' 27.18" / 84° 25' 42.77"
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Date(s) of performance of the laboratory activities

Test start date	25.04.2025/ 11:20	Test completion date	29.04.2025/ 13:20
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--Test Result --

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

--Test Result End --

Prescribed Limit IS 10500:2021
Operational Status Unit was Operational During sampling.
Analysed by -Pratima Kumari/ Anjali Kumari



Checked by
(B.N. Kumar)
Technical Head

Verified & Issued by
(Umash Das)
Laboratory Head

Authorized Laboratory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

Address:-
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CIN:-U74999JH2022PTC019885
PAN:-AANICE3811M
GST:-20AAHCE3811M1ZK

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



TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000612	Discipline	Chemical
Report Unique ID	RL0174252197	Group	Atmospheric Pollution
Issue date/time	26.05.2025/ 13:25	Sub Group	Ambient Air Quality

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0174	Sample Booking Number	EPIC-252197
Sample(s) Code	252197 (A) (B) (C) (D)	Sample Receipt (D/T)	21.05.2025/ 10:49

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	19.05.2025/ 12:21	Sampling End (D/T)	20.05.2025/ 09:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	32	Humidity %	58	Wind direction	240°-60°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Pit Quarry No 2	GPS coordinate	23° 25' 27.45" / 84° 26' 03.35"
S. Location B	Nava Prathmik Vidyalay (Dharika Toli)	GPS coordinate	23° 25' 26.85" / 84° 25' 42.69"
S. Location C	Mine Pit Quarry No 3	GPS coordinate	23° 25' 24.41" / 84° 25' 56.29"
S. Location D	Near Colony	GPS coordinate	23° 24' 54.52" / 84° 25' 59.07"

Date(s) of performance of the laboratory activities

Test start date	21.05.2025/ 11:10	Test completion date	24.05.2025/ 18:00
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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	88.00	65.00	92.05	62.05	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	47.29	29.31	45.47	26.03	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS-5182 (P-02) 2023	µg/m ³	09.15	07.18	08.09	07.21	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS-5182 (P-06) 2022	µg/m ³	28.09	20.23	23.60	17.98	80(24 hr)
5.	Ammonia (NH ₃)	IS-5182 (P-25) 2018	µg/m ³	40.26	34.09	39.29	30.19	400(24 hr)
6.	Ozone (O ₃)	IS-5182 (P-09) 2019	µg/m ³	32.19	22.18	29.33	20.03	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 - A.K Sinha	



Reviewed by
(R.N. Kumar)
Technical Head

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:-

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	RL0174252197	Group	Atmospheric Pollution
Issue date/time	26.05.2025/ 13:25	Sub Group	Ambient Air Quality

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0174	Sample Booking Number	EPIC-252197
Sample(s) Code	252197 (A) (B) (C) (D)	Sample Receipt (D/T)	21.05.2025/ 10:49

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	19.05.2025/ 12:21	Sampling End (D/T)	20.05.2025/ 09:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	32	Humidity %	58	Wind direction	240°-60°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Pit Quarry No 2	GPS coordinate	23° 25' 27.45" / 84° 26' 03.35"
S. Location B	Nava Prathmik Vidyalay (Dhanka Toli)	GPS coordinate	23° 25' 26.85" / 84° 25' 42.69"
S. Location C	Mine Pit Quarry No 3	GPS coordinate	23° 25' 24.41" / 84° 25' 56.29"
S. Location D	Near Colony	GPS coordinate	23° 24' 54.52" / 84° 25' 59.07"

Date(s) of performance of the laboratory activities

Test start date	21.05.2025/ 11:10	Test completion date	24.05.2025/ 18:00
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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 - AK Sinha



Reviewed by
(R.N. Kumar)
Technical Head



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:-20AAHCE3611M1ZK

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

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000613	Discipline	Chemical
Report Unique ID	RL0174252198	Group	Atmospheric Pollution
Issue date/time	26.05.2025/ 13:27	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 : JALIM & SANAI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0174	Sample Booking Number	EPIC-252198
Sample(s) Code	252198 (A) (B) (C) (D)	Sample Receipt (D/T)	21.05.2025/ 10:51

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	19.05.2025/ 12:21	Sampling End (D/T)	20.05.2025/ 09:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 9989:1981 (RA 2020) & CPCB Method S.O.50 (E) dated 11/01/2010		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	32	Humidity %	58	Wind direction	240°-60°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Pit Quarry No 2	GPS coordinate	23° 25' 27.45" / 84° 26' 03.35"
S. Location B	Nava Prathmik Vidyalay (Dhanka Toli)	GPS coordinate	23° 25' 26.85" / 84° 25' 42.69"
S. Location C	Mine Pit Quarry No 3	GPS coordinate	23° 25' 24.41" / 84° 25' 56.29"
S. Location D	Near Colony	GPS coordinate	23° 24' 54.52" / 84° 25' 59.07"

Date(s) of performance of the laboratory activities

Test start date	21.05.2025/ 11:15	Test completion date	24.05.2025/ 18:05
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--Test Results--

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	L _{eq} (Day time)	IS: 9989:1981	dB (A)	50.5	42.0	61.6	45.5	75
2.	L _{eq} (Night time)	IS: 9989:1981	dB (A)	40.3	36.2	47.1	38.2	70

--Test Results End --

Prescribed Limit	Environmental (Protection) Rules-1986, Schedule III.
Operational Status	Unit was Operational During sampling.
Analysed by -AK Sinha	



Reviewed by
(E.N. Kumar)
Technical Head

Issue by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited



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

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✉ epiclabtech@gmail.com

CIN:-U74999JH2022PTC019685
PAN:-AANCE3611M
GST:-20AAHCE3611M12X

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

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000721	Discipline	Chemical
Report Unique ID	RL02072525019	Group	Atmospheric Pollution
Issue date/time	21.06.2025/ 12:49	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: JALIM & SANAI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0207	Sample Booking Number	EPIC-2525019
Sample(s) Code	2525019 (A) (B) (C) (D)	Sample Receipt (D/T)	18.06.2025/ 10:34

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	16.06.2025/ 12:25	Sampling End (D/T)	17.06.2025/ 10:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	29	Humidity %	54	Wind direction	270°-90°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Pit Quarry No 2	GPS coordinate	23° 25' 27.45" / 84° 26' 03.35"
S. Location B	Nava Prathmik Vidyaalay (Dhanka Toll)	GPS coordinate	23° 25' 26.85" / 84° 25' 42.69"
S. Location C	Mine Pit Quarry No 3	GPS coordinate	23° 25' 24.41" / 84° 25' 56.29"
S. Location D	Near Colony	GPS coordinate	23° 24' 54.52" / 84° 25' 59.07"

Date(s) of performance of the laboratory activities

Test start date	18.06.2025/ 10:56	Test completion date	21.06.2025/ 11:54
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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	81.75	68.01	79.50	66.63	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	37.69	30.48	39.90	27.71	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS-5182 (P-02) 2023	µg/m ³	07.44	06.26	06.66	07.05	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS-5182 (P-06) 2022	µg/m ³	29.60	17.97	20.08	17.97	80(24 hr)
5.	Ammonia (NH ₃)	IS-5182 (P-25) 2018	µg/m ³	44.16	34.09	39.29	33.12	400(24 hr)
6.	Ozone (O ₃)	IS-5182 (P-09) 2019	µg/m ³	26.11	22.18	28.26	21.10	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.



Reviewed by
(B.N. Kumar)
Technical Head

Issue by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.

Ranchi, Jharkhand

Page 1 of 1

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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:-U74999JH2022PTC019885
PAN:-AANCE3611M
GST:-20AANCE3611MT2X

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	RL02072525019	Group	Atmospheric Pollution
Issue date/time	21.06.2025/ 12:49	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: JALIM & SANAI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0207	Sample Booking Number	EPIC-2525019
Sample(s) Code	2525019 (A) (B) (C) (D)	Sample Receipt (D/T)	18.06.2025/ 10:34

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	16.06.2025/ 12:25	Sampling End (D/T)	17.06.2025/ 10:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)		Humidity %		Wind direction	240°-90°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Pit Quarry No 2	GPS coordinate	23° 25' 27.45" / 84° 26' 03.35"
S. Location B	Nava Prathmik Vidyalay (Dhanka Toli)	GPS coordinate	23° 25' 26.85" / 84° 25' 42.69"
S. Location C	Mine Pit Quarry No 3	GPS coordinate	23° 25' 24.41" / 84° 25' 56.29"
S. Location D	Near Colony	GPS coordinate	23° 24' 54.52" / 84° 25' 59.07"

Date(s) of performance of the laboratory activities

Test start date	18.06.2025/ 10:56	Test completion date	21.06.2025/ 11:54
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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	ug/m3	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/m3	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/m3	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.



Reviewed by
(B.N. Kumar)
Technical Head





EPIC LabTech Private Limited

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CIN:-UF4999JH2022PTC019685

PAN:-AAHCE3611M

GST:-20AAHCE3611M1ZK

Accredited by:-

Jharkhand State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 43001:2018

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02072525020	Group	Atmospheric Pollution
Issue date/time	21.06.2025/ 12:52	Sub Group	Work Zone Noise

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0207	Sample Booking Number	EPIC-2525020
Sample(s) Code	2525020 (A) (B)	Sample Receipt (D/T)	18.06.2025/ 10:38

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D)	16.06.2025	Sampling End (D)	16.06.2025
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 9989:1981 (RA 2020) & CPCB Method S.O.50 (E) dated 11/01/2010		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	47	Wind direction	270°-90°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Loader	GPS coordinate	23° 25' 24.29" / 84° 25' 56.55"
S. Location B	Mine (12.14 ha)	GPS coordinate	23° 25' 28.31" / 84° 25' 59.37"

Date(s) of performance of the laboratory activities

Test start date	18.06.2025/ 10:56	Test completion date	21.06.2025/ 11:58
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--Test Results--

Sl	Test Parameters	Method used	Unit	Results		Limits
				A	B	
1.	L_{eq}	IS: 9989:1981	dB (A)	73.7	7.12	85

--Test Results End --

Prescribed Limit	NIOSH - Publication No. 98-126 in 1972, Table 1-1
Operational Status	Unit was Operational During sampling.



Reviewed by
(B.N. Kumar)
Technical Head

Issue by
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited



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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1Z1X

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.	TC1288725000000901	Discipline	Chemical
Report Unique ID	RL02342529042	Group	Atmospheric Pollution
Issue date/time	21.07.2025/ 12:15	Sub Group	Ambient Air Quality

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0234	Sample Booking Number	EPIC-2529042
Sample(s) Code	2529042 (A) (B) (C) (D)	Sample Receipt (D/T)	17.07.2025/ 10:13

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	15.07.2025/ 12:40	Sampling End (D/T)	16.07.2025/ 10:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	71	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Pit Quarry No 2	GPS coordinate	23° 25' 27.45" / 84° 26' 03.35"
S. Location B	Nava Prathmik Vidyalay (Dhanka Toll)	GPS coordinate	23° 25' 26.85" / 84° 25' 42.69"
S. Location C	Mine Pit Quarry No 3	GPS coordinate	23° 25' 24.41" / 84° 25' 56.29"
S. Location D	Near Colony	GPS coordinate	23° 24' 54.52" / 84° 25' 59.07"

Date(s) of performance of the laboratory activities

Test start date	17.07.2025/ 11:23	Test completion date	21.07.2025/ 10:30
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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	76.24	63.80	74.64	61.92	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	35.01	26.58	35.71	22.41	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	06.67	05.21	05.22	06.73	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	19.57	13.43	14.51	17.64	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	39.52	29.96	34.10	28.37	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	23.52	19.18	25.69	18.46	180(1 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	
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
(R.K. Kumar)
Technical Head

Issue by
(Dinesh Das)
Laboratory Head

Authorized Signatory

EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

Page 1 of 1

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



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CIN:-U74199JH2022PTC019585 Accredited by:-
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PAN:-AAHCE3611M
GST:-29AAHCE3611M12X
Certified by:-
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02342529042	Group	Atmospheric Pollution
Issue date/time	21.07.2025/ 12:15	Sub Group	Ambient Air Quality

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0234	Sample Booking Number	EPIC-2529042
Sample(s) Code	2529042 (A) (B) (C) (D)	Sample Receipt (D/T)	17.07.2025/ 10:13

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	15.07.2025/ 12:40	Sampling End (D/T)	16.07.2025/ 10:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	71	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Pit Quarry No 2	GPS coordinate	23° 25' 27.45" / 84° 26' 03.35"
S. Location B	Nava Prathmik Vidyalay (Dhanka Toll)	GPS coordinate	23° 25' 26.85" / 84° 25' 42.69"
S. Location C	Mine Pit Quarry No 3	GPS coordinate	23° 25' 24.41" / 84° 25' 56.29"
S. Location D	Near Colony	GPS coordinate	23° 24' 54.52" / 84° 25' 59.07"

Date(s) of performance of the laboratory activities

Test start date	17.07.2025/ 11:23	Test completion date	21.07.2025/ 10:30
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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
(R.K. Kumar)
Technical Head





EPIC LabTech Private Limited



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CIN:-U74999JH2022PTC019485
PAN:-AAHCE36T1M
GST:-20AAHCE36T1MT2X
Accredited by :-
NABL, vide certificate Number TC - 52887
Jharkhand State Pollution Control Board
Certified by :-
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000902	Discipline	Chemical
Report Unique ID	RL02342529043	Group	Water
Issue date/time	21.07.2025/ 12:17	Sub Group	Drinking Water

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0234	Sample Booking Number	EPIC-2529043
Sample(s) Code	2529043	Sample Receipt (D/T)	17.07.2025/ 10:15

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	15.07.2025/ 14:18	Sampling End (D/T)	15.07.2025/ 14:28
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	71	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Camp	GPS coordinate	23° 22' 27.52" / 84° 28' 24.22"
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Date(s) of performance of the laboratory activities

Test start date	17.07.2025/ 10:35	Test completion date	21.07.2025/ 11:00
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--Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible Limit
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.65	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.85	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	<5	5	15
4.	Odour	IS 3025 (P-05) 2018	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	381.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	20.55	250	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	62.00	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	180.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	53.08	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1988	mg/l	BDL (MDL-0.4)	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1) 2022	mg/l	2.87	200	400
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	1.65	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL (MDL-0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	11.74	30	100



EPIC LabTech Private Limited



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

☎ 0651 4666392

☎ 98357 86677

☎ 93049 73994

✉ epiclabtech@gmail.com

CIN:-U74999JH2022PTC019685

PAN:-AAHCE3611M

GST:-20AAHCE3611M1ZX

Accredited by:-

ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000902	Discipline	Chemical
Report Unique ID	RL02342529043	Group	Water
Issue date/time	21.07.2025/ 12:17	Sub Group	Drinking Water

Report Issue to

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

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

Group - Residues and Contaminants in Water

Sub Group - Trace Metals Elements

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

--Test Result End --

Prescribed Limit

IS 10500:2021

Operational Status

Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by
(B.N. Kumar)
Technical Head

Issued by
(Ajmesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

Address:
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CIN:-U74599JH2022PTC019485
PAN:-AAHCE3611M
GST:-20AAHCE3611MT2X

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	RL02342529043	Group	Water
Issue date/time	21.07.2025/ 12:17	Sub Group	Drinking Water

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13612313668

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0234	Sample Booking Number	EPIC-2529043
Sample(s) Code	2529043	Sample Receipt (D/T)	17.07.2025/ 10:15

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	15.07.2025/ 14:18	Sampling End (D/T)	15.07.2025/ 14:28
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS: 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	71	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Camp	GPS coordinate	23° 22' 27.52" / 84° 28' 24.22"
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Date(s) of performance of the laboratory activities

Test start date	17.07.2025/ 10:35	Test completion date	21.07.2025/ 11:00
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--Test Result--

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



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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 Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02342529043	Group	Water
Issue date/time	21.07.2025/ 12:17	Sub Group	Drinking Water

Report Issue to

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

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

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

--Test result End--

Prescribed Limit	IS 10500:2021
Operational Status	Unit was Operational During sampling.
Analyzed by - Vishal Mangarj	



Reviewed by
(B.N. Kumar)
Technical Head

Issued by
(Dinesh Das)
Laboratory Head

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





EPIC LabTech Private Limited

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CIN:-U74999JH2022PTC019685
VAT:-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	Biological
Report Unique ID	RL02342529044	Group	Water
Issue date/time	21.07.2025/ 12:19	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: JALIM & SANAI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0234	Sample Booking Number	EPIC-2529044
Sample(s) Code	2529044	Sample Receipt (D/T)	17.07.2025/ 10:15

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	15.07.2025/ 14:18	Sampling End (D/T)	15.07.2025/ 14:28
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	71	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Camp	GPS coordinate	23° 22' 27.52" / 84° 28' 24.22"
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Date(s) of performance of the laboratory activities

Test start date	17.07.2025/ 11:00	Test completion date	21.07.2025/ 12:00
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Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Total Coliform	IS 15185 2002	Per 100 ml	Not Detected	Shall not be detectable in any 100 ml sample
2.	E.Coli	IS 15185 2002	Per 100 ml	Not Detected	

--Test result End--

Prescribed Limit	IS 10500:2021
Operational Status	Unit was Operational During sampling.
Analysed by - Sujata Kurnari	



Reviewed by
(B.N. Kumar)
Technical Head

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

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000001076	Discipline	Chemical
Report Unique ID	RL02662535058	Group	Atmospheric Pollution
Issue date/time	29.08.2025/ 18:44	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: JALIM & SANAI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0266	Sample Booking Number	EPIC-2535058
Sample(s) Code	2535058 (A) (B) (C) (D)	Sample Receipt (D/T)	28.08.2025/ 10:17

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	24.08.2025/ 12:41	Sampling End (D/T)	25.08.2025/ 10:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	240°-60°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Pit Quarry No 2	GPS coordinate	23° 25' 27.45" / 84° 26' 03.35"
S. Location B	Nava Prathmik Vidyalay (Dhanka Toi)	GPS coordinate	23° 25' 26.85" / 84° 25' 42.69"
S. Location C	Mine Pit Quarry No 3	GPS coordinate	23° 25' 24.41" / 84° 25' 56.29"
S. Location D	Near Colony	GPS coordinate	23° 24' 54.52" / 84° 25' 59.07"

Date(s) of performance of the laboratory activities

Test start date	28.08.2025/ 10:37	Test completion date	29.08.2025/ 17:00
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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	76.00	63.19	74.14	61.32	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	34.06	26.00	34.96	22.17	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	06.41	06.30	06.18	06.65	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	18.54	13.17	13.88	17.14	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	39.20	29.64	33.79	28.05	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	23.16	18.82	25.33	18.09	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
(E.N. Kumar)
Technical Head

Issued by
(Animesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.

Page 1 of 1

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



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CIN:-U74999JH2022PTC019685 Accredited by :-
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PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK
Certified by :-
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02662535058	Group	Atmospheric Pollution
Issue date/time	29.08.2025/ 18:44	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: JALIM & SANAI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0266	Sample Booking Number	EPIC-2535058
Sample(s) Code	2535058 (A) (B) (C) (D)	Sample Receipt (D/T)	26.08.2025/ 10:17

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	24.08.2025/ 12:41	Sampling End (D/T)	25.08.2025/ 10:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	240°-60°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Pit Quarry No 2	GPS coordinate	23° 25' 27.45" / 84° 26' 03.35"
S. Location B	Nava Prathmik Vidyalay (Dhanka Toll)	GPS coordinate	23° 25' 26.85" / 84° 25' 42.69"
S. Location C	Mine Pit Quarry No 3	GPS coordinate	23° 25' 24.41" / 84° 25' 56.29"
S. Location D	Near Colony	GPS coordinate	23° 24' 54.52" / 84° 25' 59.07"

Date(s) of performance of the laboratory activities

Test start date	26.08.2025/ 10:37	Test completion date	29.08.2025/ 17:00
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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
(E.N. Kumar)
Technical Head





EPIC LabTech Private Limited



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

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

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000001077	Discipline	Chemical
Report Unique ID	RL02662535059	Group	Water
Issue date/time	29.08.2025/ 18:46	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 : JALIM & SANAI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0268	Sample Booking Number	EPIC-2535059
Sample(s) Code	2535059	Sample Receipt (D/T)	26.08.2025/ 10:18

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	24.08.2025/ 16:05	Sampling End (D/T)	24.08.2025/16:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	240°-60°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Nava Prathmik Vidyalay (Dhanka Toli)	GPS coordinate	23° 25' 27.18" / 84° 25' 42.77"
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Date(s) of performance of the laboratory activities

Test start date	26.08.2025/ 10:38	Test completion date	29.08.2025/ 16:30
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--Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible limit
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.95	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.99	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	<5	5	15
4.	Odour	IS 3025 (P-05) 2018	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	400	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	24.22	250	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	68.00	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	188.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	54.99	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	BDL(MDL-0.4)	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1)2022	mg/l	4.0	200	400
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	1.96	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL(MDL-0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	11.96	30	100

Page 1 of 2

Contractual Note | 1. The laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility at specific environmental conditions as method required and results relate only to the sample tested in prescribed Date & time | 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law. | 4. Any complaint about this report should be communicated in writing within 30 days of its issue | 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to 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:-U74999JH2022PTC010685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

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

TC-12887

Analytical Test Certificate

Unique Lab Report No. TC1288725000001077
Report Unique ID RL02662535069
Issue date/time 29.08.2025/ 18:46

Discipline Chemical
Group Water
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 : JALIM & SANAI BAUXITE MINE

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

Group - Residues and Contaminants in Water

Sub Group - Trace Metals Elements

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

--Test result End --

Prescribed Limit
Operational Status
Analysed by - Pappu Kumar

IS 10500:2021
Unit was Operational During sampling.



Reviewed by
(E.N. Kumar)
Technical Head

Issued by
(Omesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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✉ epiclabtech@gmail.com

CIN: U74999JH2022PTC019685
PAN: AAHCE3611M
GST: 20AAHCE3611M1Z9

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	RL02662535059	Group	Water
Issue date/time	29.08.2025/ 18:46	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 : JALIM & SANAI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0266	Sample Booking Number	EPIC-2535059
Sample(s) Code	2535059	Sample Receipt (D/T)	26.08.2025/ 10:18

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	24.08.2025/ 16:05	Sampling End (D/T)	24.08.2025/ 16:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	240°-60°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Nava Prathmik Vidyalay (Dhanka Toli)	GPS coordinate	23° 25' 27.18" / 84° 25' 42.77"
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Date(s) of performance of the laboratory activities

Test start date	26.08.2025/ 10:38	Test completion date	29.08.2025/ 16:30
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--Test Result--

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



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CIN:-U74999JH2022PTC019485
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	RL02662535059	Group	Water
Issue date/time	29.08.2025/ 18:46	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 : JALIM & SANAI BAUXITE MINE

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

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

--Test result End --

Prescribed Limit
Operational Status
Analysed by - Pappu Kumar

IS 10500:2021
Unit was Operational During sampling.



Reviewed by
(G.A. Kumar)
Technical Head

Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

Address:- C/o - R.K. Tripathi, Indrapuri, Road No. - 5, Ranchi, Jharkhand - 834005, India	☎ 0651 4646392 📞 98357 86677 📞 93049 73994 ✉ epiclabtech@gmail.com	CIN:-U74999JH2022PTC019685 PAN:-AAHCE3611M GST:-20AAHCE3611M1Z3	Accredited by:- Jharkhand State Pollution Control Board Certified by:- ISO 9001:2015 and ISO 45001:2018
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Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL02662535060	Group	Water
Issue date/time	29.08.2025/ 18:48	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 : JALIM & SANAI BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +91 9971034775 ankit.das@adityabirla.com 31.03.2025/ 10:10 13612313868
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References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0266	Sample Booking Number	EPIC-2535060
Sample(s) Code	2535060	Sample Receipt (D/T)	28.08.2025/ 10:18

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	24.08.2025/ 16:05	Sampling End (D/T)	24.08.2025/ 16:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	240°-60°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Nava Prathmik Vidyalay (Dhanka Toli)	GPS coordinate	23° 25' 27.18" / 84° 25' 42.77"
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Date(s) of performance of the laboratory activities

Test start date	26.08.2025/ 10:38	Test completion date	29.08.2025/ 16:30
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--Test Result--

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

--Test result End --

Prescribed Limit	IS 10500:2021
Operational Status	Unit was Operational During sampling.
Analysed by -Sujata Kumari	




Reviewed by
(R.N. Kumar)
Technical Head


Issued by
(Himesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited



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CIN:- U74999JH2022PTC019645
PAN:- AAHCE3611M
GST:- 20AAHCE3611M1ZK

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

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000001251	Discipline	Chemical
Report Unique ID	RL02942538059	Group	Atmospheric Pollution
Issue date/time	23.09.2025/ 17:00	Sub Group	Ambient Air Quality

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0294	Sample Booking Number	EPIC-2538059
Sample(s) Code	2538059 (A) (B) (C) (D)	Sample Receipt (D/T)	19.09.2025/ 11:18

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	17.09.2025/ 13:05	Sampling End (D/T)	18.09.2025/ 11:09
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 %	67	Wind direction	240°-70°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Pit Quarry No 2	GPS coordinate	23° 25' 27.45" / 84° 26' 03.35"
S. Location B	Nava Prathamik Vidyalay (Dhanka Toli)	GPS coordinate	23° 25' 26.85" / 84° 25' 42.69"
S. Location C	Mine Pit Quarry No 3	GPS coordinate	23° 25' 24.41" / 84° 25' 56.29"
S. Location D	Near Colony	GPS coordinate	23° 24' 54.52" / 84° 25' 59.07"

Date(s) of performance of the laboratory activities

Test start date	19.09.2025/ 11:38	Test completion date	23.09.2025/ 16:00
-----------------	-------------------	----------------------	-------------------

--Test Results--

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS-5182 (P-23) 2022	µg/m ³	57.91	54.10	54.89	62.65	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	25.57	27.42	25.96	23.57	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS-5182 (P-02) 2023	µg/m ³	07.02	06.64	06.99	07.35	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS-5182 (P-06) 2022	µg/m ³	20.52	14.34	15.34	18.38	80(24 hr)
5.	Ammonia (NH ₃)	IS-5182 (P-25) 2018	µg/m ³	28.05	27.73	26.77	28.37	400(24 hr)
6.	Ozone (O ₃)	IS-5182 (P-09) 2019	µg/m ³	20.99	20.27	19.54	19.18	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
(Ajmesh Das)
Laboratory Head

Authorization Signatory
EPIC LabTech Pvt. Ltd.

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:-U74999JH2022PTC018685
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	RL02942538059	Group	Atmospheric Pollution
Issue date/time	23.09.2025/ 17:00	Sub Group	Ambient Air Quality

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0294	Sample Booking Number	EPIC-2538059
Sample(s) Code	2538059 (A) (B) (C) (D)	Sample Receipt (D/T)	19.09.2025/ 11:18

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	17.09.2025/ 13:05	Sampling End (D/T)	18.09.2025/ 11:09
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 %	67	Wind direction	240°-70°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Pit Quarry No 2	GPS coordinate	23° 25' 27.45" / 84° 26' 03.35"
S. Location B	Nava Prathmik Vidyalay (Dhanka Toll)	GPS coordinate	23° 25' 26.85" / 84° 25' 42.69"
S. Location C	Mine Pit Quarry No 3	GPS coordinate	23° 25' 24.41" / 84° 25' 56.29"
S. Location D	Near Colony	GPS coordinate	23° 24' 54.52" / 84° 25' 59.07"

Date(s) of performance of the laboratory activities

Test start date	19.09.2025/ 11:38	Test completion date	23.09.2025/ 16:00
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--Test Results--

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:5182(P-11) 2006	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:5182(P-12) 2004	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/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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PAN: AAHCE3611M
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Accredited by:-
NABL, vide certificate number TC-12887
Jharkhand State Pollution Control Board
Certified by:-
ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000001252	Discipline	Chemical
Report Unique ID	RL02942538060	Group	Pollution & Environment
Issue date/time	23.09.2025/ 17:03	Sub Group	Soil/Sediments
Report Issue to		Contact Person	Mr. Ankit Das
M/s - HINDALCO INDUSTRIES LIMITED		Contact Number	+91 9971034775
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,		Email Id	ankit.das@adityabirfa.com
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302		Order Date	31.03.2025/ 10:10
MONITORING SITE : JALIM & SANAI BAUXITE MINE		Order Number	13612313668

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0294	Sample Booking Number	EPIC-2538060
Sample(s) Code	2538060	Sample Receipt (D/T)	19.09.2025/ 11:23

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	17.09.2025/ 15:55	Sampling End (D/T)	17.09.2025/ 16:06
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/LAB/SOP/PE/01/00		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	67	Wind direction	240°-60°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Pit Quarry No.02	GPS coordinate	23° 25' 26.84" / 84° 26' 05.70"
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Date(s) of performance of the laboratory activities

Test start date	19.09.2025/ 12:30	Test completion date	23.09.2025/ 16:00
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--Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25.7°C	MAGI 2011	-	6.40	-
2.	Available Phosphorus	MAGI 2011	Kg/ha	3.40	-
3.	Available Potassium	MAGI 2011	Kg/ha	125.00	-
4.	Organic Carbon	MAGI 2011	%	0.53	-
5.	Electrical Conductivity	MAGI 2011	µs/cm	83.23	-
6.	Magnesium	MAGI 2011	mg/kg	32.64	-
7.	Nitrogen	MAGI 2011	%	0.048	-
8.	Arsenic (as As)	USEPA 3050 B 1996	mg/kg	BDL(MDL-0.005)	-
9.	Cadmium (as Cd)	USEPA 3050 B 1996	mg/kg	0.68	-
10.	Selenium (as Se)	USEPA 3050 B 1996	mg/kg	BDL(MDL-0.006)	-

--Test result End--

Operational Status Unit was Operational During sampling.

Analysed by - Ishika Singh



Reviewed by
(R.N. Kumar)
Technical Head

Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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

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✉ epiclabtech@gmail.com

CIN:-U74899JH2022PTC019685
FAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

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

Analysed Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02942538060	Group	Pollution & Environment
Issue date/time	23.09.2025/ 17:03	Sub Group	Soil/Sediments
Report Issue to		Contact Person	Mr. Ankit Das
M/s - HINDALCO INDUSTRIES LIMITED		Contact Number	+91 9971034775
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,		Email Id	ankit.das@adityabirta.com
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302		Order Date	31.03.2025/ 10:10
MONITORING SITE : JALIM & SANAI BAUXITE MINE		Order Number	13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0294	Sample Booking Number	EPIC-2538060
Sample(s) Code	2538060	Sample Receipt (D/T)	19.09.2025/ 11:23

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	17.09.2025/ 15:55	Sampling End (D/T)	17.09.2025/ 16:06
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/LAB/SOP/PE/01/00		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	67	Wind direction	240°-60°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Pit Quarry No.02	GPS coordinate	23° 25' 26.84" / 84° 26' 05.70"
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Date(s) of performance of the laboratory activities

Test start date	19.09.2025/ 12:30	Test completion date	23.09.2025/ 16:00
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--Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Chloride (as Cl)	EPIC/LAB/SOP/PE/01/00	%	0.035	-
2.	Mercury (as Hg)	USEPA 3050 B 1996	mg/kg	BDL(MDL-0.005)	-

--Test result End --

Operational Status Unit was Operational During sampling.

Analysed by - Ishika Singh



Reviewed by
(B.N. Kumar)
Technical Head

Issued by
(Umesh Sen)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited



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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZR

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.	TC1288725000001253	Discipline	Chemical
Report Unique ID	RL02942538061	Group	Water
Issue date/time	23.09.2025/ 17:06	Sub Group	Surface Water

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0294	Sample Booking Number	EPIC-2538061
Sample(s) Code	2538061	Sample Receipt (D/T)	19.09.2025/ 11:25

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	17.09.2025/ 16:10	Sampling End (D/T)	17.09.2025/ 16:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	67	Wind direction	240°-60°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Pit Quarry No. 02	GPS coordinate	23° 25' 27.84" / 84° 26' 00.93"
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Date(s) of performance of the laboratory activities

Test start date	19.09.2025/ 11:45	Test completion date	23.09.2025/ 15:45
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--Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.23	-
2.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	132.00	-
3.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	8.01	-
Group - Residues and Contaminants in Water,			Sub Group - Trace Metals Elements		
4.	Iron (as Fe)	APHA 3111 B 2023	-	BDL(MDL0.1)	-

--Test result End --

Operational Status Unit was Operational During sampling.

Analysed By - Pappu Kumar



Reviewed by
(B.N. Kumar)
Technical Head





EPIC LabTech Private Limited

Address:- C/o - R.K. Tripathi, Indrapuri, Road No. - 5, Ranchi, Jharkhand - 834005, India
Phone:- 0651 4666392, 98357 86477, 93049 73994
Email:- epiclabtech@gmail.com
CIN:- U74999JH2022PTC019485
PAN:- AAHCE3611M
GST:- 20AAHCE3611M1ZR
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	RL02942538061	Group	Water
Issue date/time	23.09.2025/ 17:06	Sub Group	Surface Water

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0294	Sample Booking Number	EPIC-2538061
Sample(s) Code	2538061	Sample Receipt (D/T)	19.09.2025/ 11:25

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	17.09.2025/ 16:10	Sampling End (D/T)	17.09.2025/ 16:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	67	Wind direction	240°-60°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Pit Quarry No. 02	GPS coordinate	23° 25' 27.84" / 84° 26' 00.93"
---------------	------------------------	----------------	---------------------------------

Date(s) of performance of the laboratory activities

Test start date	19.09.2025/ 11:45	Test completion date	23.09.2025/ 15:45
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--Test Result--

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Temperature	IS 3025 (P-09) 1986	°C	26.2	-
2.	Dissolve Oxygen (DO)	IS 3025 (P-38) 1989	mg/l	4.1	-
3.	BOD (3days at 27°C)	IS 3025 (P-44) 2000	mg/l	2.3	-
4.	COD	IS 3025 (P-58) 2006	mg/l	34.0	-
5.	Total Suspended Solids (TSS)	IS 3025 (P-17) 2022	mg/l	14.0	-
6.	Oil & Grease	IS 3025 (P39) 2021	mg/l	BDL(MDL-04)	-
7.	Dissolve Oxygen (DO)	IS 3025 (P-38) 1989	mg/l	4.1	-

Group - Residues and Contaminants in Water,

8.	Aluminum (as Al)	IS 3025 (P-55) 2003	-
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Sub Group - Trace Metals Elements

BDL(MDL-0.1)

--Test result End --

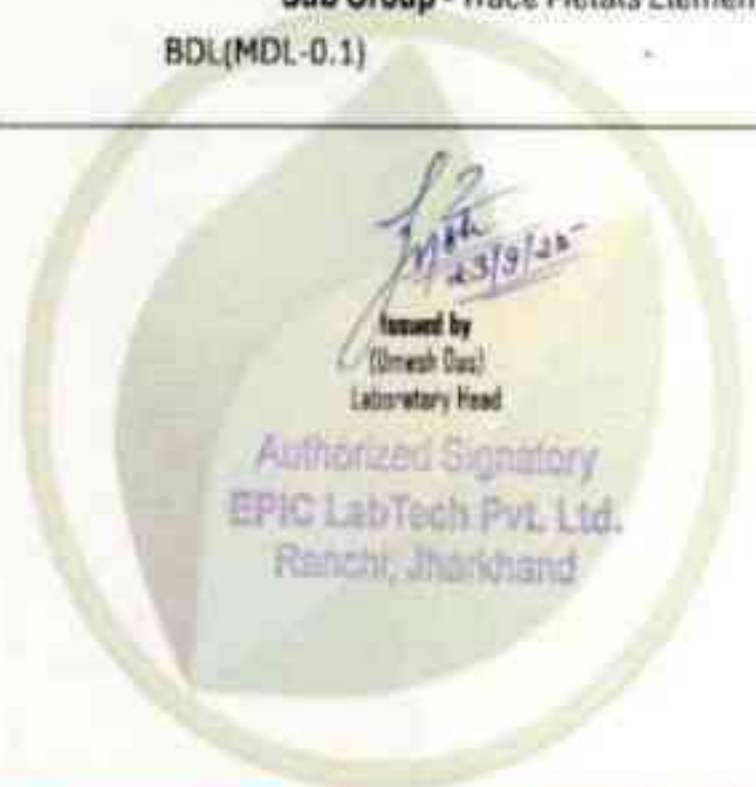
Operational Status

Unit was Operational During sampling.

Analysed by - Pappu Kumar



Reviewed by
(B.N. Kumar)
Technical Head





Annexure 3

Date – 01.05.2025

Office Order

Environmental Cell has been re-constituted for Sherandag Group of Mines (Sherandag-155.81 ha, Serandag-77.89 ha and Jalim - Sanai-12.14 ha Bauxite Mines). This cell consists of the following team members who will ensure compliance with the Environment Acts, Rules & Regulations in respect of the said mines of Hindalco Industries Limited

1. Mr. Akhilesh Sinha (Coordinator)
2. Mr. Sanjay Sharma (Geologist)
3. Mr. Girija Tamrakar (Environment Engineer)
4. Mr. Anand Prakash Tiwari (Environment Engineer)

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

Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)

Annexure 4

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

Annexure 4

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

*Static information about the mines included in the above table



Basudev Gangopadhyay
AVP (Planning, Environment and Compliance)

Annexure-5

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

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

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

**Part of OB removed cost



Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)