



HIL/LHD/ENV/MoEF&CC/623

Date: 26th May 2026

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

Sub: Six Monthly EC Compliance Report for Bhusar (65.31 Ha) Bauxite Mining Project of M/s Hindalco Industries Limited, Lohardaga Jharkhand for the period from **October 2025 to March 2026**.

Ref: Environmental Clearance Letter No. J-11015/184/2011-IA II (M), dated 17th June 2013.

Dear Sir,

With reference to the above, we are submitting herewith the Compliance status report of EC conditions for **Bhusar (65.31 Ha) Bauxite Mining Project of M/s Hindalco Industries Limited**, Lohardaga Jharkhand for the period from **October 2025 to March 2026** for your kind perusal please.

The lease details are below:

Lease area (ha)	Production Capacity (MT)	Lease Period
65.31	280000	11.07.1981 to 31.03.2030

Hope you will find the same in order.

Thanking You

Yours faithfully,
For **Hindalco Industries Limited**

R R P Ambastha
Head - Compliance

Enclosure: - As Above

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Name of the Project : **Bhusar Bauxite Mine (65.31 ha)**
M/s Hindalco Industries Limited

Environment Clearance No & date : **J-11015/184/2011-IA. II (M), dated 17.06.2013**

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

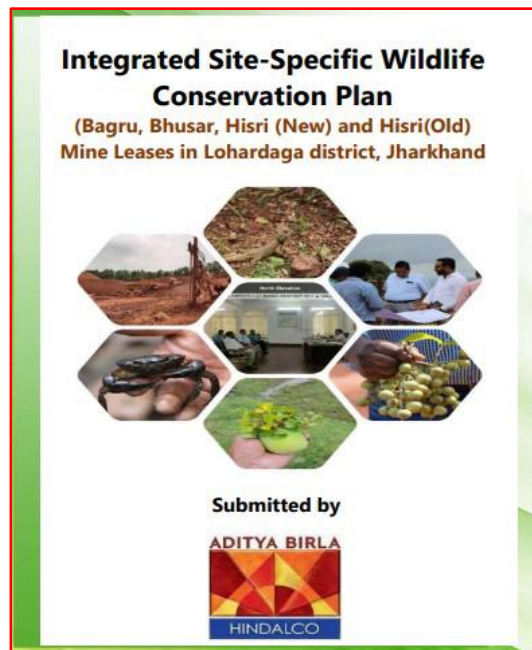
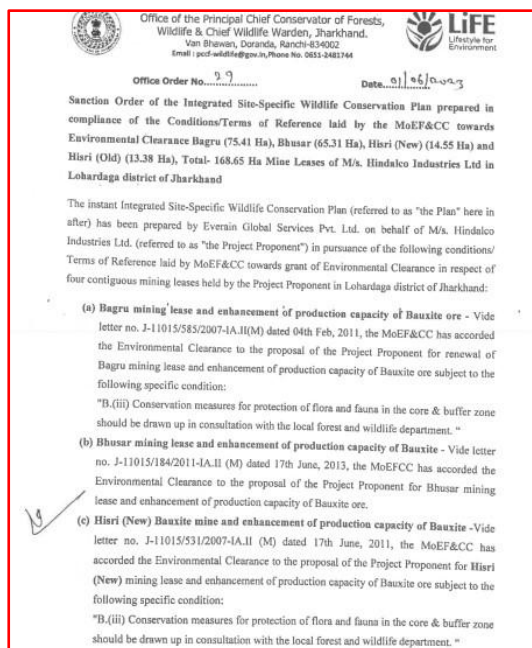
Specific Conditions: -

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

Reply: - Implementations of stipulated conditions in NOC are fulfilled post which consent to operate has been obtained from time to time. Existing consent to operate is valid up to 30.09.2027.

Condition ii: - Environmental clearance is subject to obtaining clearance under the wildlife (Protection) Act, 1972 from the competent authority, as may be applicable to this project.

Reply: - This is not applicable for this mine as this mine is located tentatively 20 kms away from nearest Eco sensitive zone. However, we have prepared Integrated Site-specific Wildlife Conservation Plan and obtained approval via obtained approval from by PCCF, Wildlife, Ranchi vide Office Order No.29 dated 01.06.2023. A copy of same is enclosed below:



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

Reply: - Shallow depth mining is being done and does not intersect the ground water. In future also, working zone will be restricted to above ground water table. We assure that no mining is/was carried out below groundwater table and the same status will be maintained in future also.

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 watercourse.

Condition v: - Topsoil should be stacked with proper slope at earmarked site(s) only with adequate measures and should be used for reclamation and rehabilitation of mined out areas.

Reply: - Topsoil is being stacked temporarily with proper slope as and when required. Concurrent backfilling and reclamation of mined out area are being exercised for which topsoil is being spread on backfilled area for reclamation. No OB dump is present in mines. The mining is being carried out as per the approved mining plan. Monitoring and management of rehabilitated areas is being done through effective supervision.



Reclaimed area

Condition vi: - The entire waste generated shall be backfilled and there shall be no external over burden dump left at the end of the mine life. The entire backfilled area shall be reclaimed by plantation. The back filling should be carried out in such a manner that it is restored to the normal ground level. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment as Forests and its Regional Office, Bhubaneswar on six monthly basis.

Reply: - Backfilling and reclamation are being done concurrently by overburden. No OB dump is present in mines. The mining is being carried out as per the approved mining plan. Data pertaining to backfilling is enclosed as **Annexure 4**. Monitoring and management of rehabilitated areas is being done through effective supervision. Compliance status is being submitted to MoEF&CC on six monthly bases. Now, the Regional office of MoEF&CC is in Ranchi.

Condition vii: - Catch drains and siltation ponds of appropriate size should be constructed for the working pit, temporary OB dumps, if any and mineral dumps to arrest flow of silt and sediment. 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 of appropriate size, gradient and length shall be constructed for both mine pit and temporary dumps 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 settling 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 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. No active external dump exists in mine.



Garland drain

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

Reply: - There are no temporary dumps within the mining lease area. However, the dimensions of the retaining wall of temporary OB dumps will be maintained based on average rain fall, if required.

Condition ix: - Plantation shall be raised in an area of 52.50 ha including a 7.5m wide green belt in the safety zone around the mining lease by planting the native species around ML area, backfilled and reclaimed area, around water body, roads etc. in consultation with the local DFO/Agriculture Department at the end of life of mine. The density of the trees should be around 2500 plants per ha.

Reply: - It is already in practice. Phase wise plantation of native species in consultation with forest department has been carried out within safety zone and mined out/reclaimed pits. During FY 2025-26, a total of 2600 nos. saplings have been planted within the mining lease. Cumulative 46.77 ha areas have been planted till date. In addition to this, agricultural activity is going on reclaimed land as per the consent from landowners. Greenbelt development programme is in progress with progress of mining activities. Photographs enclosed below:



Plantation at mine

Condition x: - Regular water sprinkling should be carried out in critical areas prone to air pollution and having high levels of SPM and RSPM such as haul road, loading and unloading point and transfer points. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.

Reply: - Mobile water tankers have been provided for sprinkling of water in critical areas to suppress dust. Additionally, we have also installed a Mist Fog Cannon to suppress the dust at the transfer point. AAQ parameters are monitored on regular basis in the mine. Monitoring Report is attached as **Annexure 2**.



Dust suppression through water tanker



Mist Fog Cannon

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 rainwater harvesting plan to augment ground water has been prepared and suitable measures like water harvesting pond etc. are created for the augmentation of ground water in the area (Bagru Plateau) in consultation with the Central Ground Water Board.

Condition xii: - Regular monitoring of ground water level and quality should be carried out in and around the mine lease 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 i.e. January, April-May, August, November and the data thus collected may be sent regularly to Ministry of Environment and Forests, its Regional Office, Bhubaneswar; Central Ground Water Authority and Central Ground Water Board.

Reply: - 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. Regular monitoring of groundwater level and quality of the area is being carried out by establishing a network of existing wells/Piezometers. Reports are being sent regularly to the regional office of Ministry, CGWA and JSPCB. The Ground water level from October 2025 to March 2026 and quality Monitoring report of Post-Monsoon and Winter season are attached as **Annexure 1 & 2**. Now, Regional office of MoEF&CC is in Ranchi.



Piezometer

Condition xiii: - The project authorities should obtain prior approval of the competent authority for drawl of groundwater if any, required for the project.

Reply:- We are not using any ground water for mining purposes. Suitable arrangement has been made for collection and storage of rainwater in harvesting pond. Water drawn from rainwater harvesting pond is being used for sprinkling on haul roads and for raising plantation. However, No Objection Certificate (NOC) for ground water abstraction has been obtained from CGWA/CGWB for drinking purposes only. The copy of the NOC CGWA is attached below:



 भारत सरकार
 जन गण मन
 माय दायम
 Government of India
 Ministry of Jal Shakti
 Department of Water Resources,
 River Development & Ganga Rejuvenation
 Central Ground Water Authority

(भूजल निष्कर्षण हेतु अनुरोध प्रमाण पत्र)
NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION

Project Name:	Bhusar Bauxite Mining Lease (65.31 Ha)		
Project Address:	Bagru Hill Bauxite Mine, VIII - Bhusar, P.o - Lohardaga		
Village:	Bhusar	Block:	Kisko
District:	Lohardaga	State:	Jharkhand
Pin Code:			
Communication Address:	Hindalco Industries Ltd, Hindalco Complex, Court Road, Lohardaga, P.o - Lohardaga, Kisko, Lohardaga, Jharkhand - 835302		
Address of CGWB Regional Office:	Central Ground Water Board Mid Eastern Region, 6th & 7th Floor, Lok Nayak Jai Prakash Bhawan, Fraser Road Dak Banglow, Patna, Bihar - 800011		
1. NOC No.:	CGWA/NOC/MN/REV/2024/8900	2. Date of Issuance:	01/09/2024
3. Application No.:	21-41464/JH/MIN/2019	4. Category:	Safe (GWRE, 2023)
5. Project Status:	Existing Ground Water	6. NOC Type:	Renewal
7. Valid from:	11/09/2024	8. Valid up to:	10/09/2026
9. Ground Water Abstraction Permitted:			
Fresh Water		Saline Water	
m ³ /day	m ³ /year	m ³ /day	m ³ /year
9.50	3467.50		
10. Details of ground water abstraction /Dewatering structures			

NOC for Groundwater



Rainwater Harvesting Pond

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 in transportation of mineral. The vehicles should be covered with a tarpaulin and shall not be overloaded.

Reply: - Bauxite is transported through ropeway from mine to Lohardaga siding. However, Regular maintenance of HEMM/vehicles and all measures are being taken to control vehicular emission.



Ropeway transportation- eco-friendly

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

Reply:- Blasting time is fixed during 1.00 PM - 2.00 PM. Controlled blasting method is in practice. Ground vibration study has been conducted periodically. All efforts are being taken to mitigate impact of blasting.

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

Reply: - Wet drilling is in practice.

Condition xvii: - Consent to operate should be obtained from SPCB before starting/enhanced production from the mine.

Reply: - We have already obtained the Consent to Operate from JSPCB for Bauxite as per the production capacity mentioned in EC. Existing CTO is valid up to 30.09.2027.

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

Reply: - Progressive mine closure plan along with mining scheme has been approved by IBM. Final mine closure plan will be prepared in due time. 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 and Forests.

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. The report is attached as **Annexure-4**.

Condition iii: - Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for PM10, SO2 as NOx monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.

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

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

Reply: - Suitable water spraying system is already available. To arrest fugitive dust proper water sprinkling is being carried out on haul roads, loading and unloading and at transfer points. Mist cannon is also installed. Photographs attached above.

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

Reply: - Noise monitoring is being done regularly. Workers engaged in operation of HEMMs, etc. has also been provided with PPEs such as ear plugs and earmuffs. Monitoring of noise level is being conducted at various locations of the work zone area. Report is attached as **Annexure 2**.

Condition vi: -Industrial wastewater (workshop and wastewater from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated 19th May 1993 and 31st December 03 or as amended from time to time. Oil and grease trap should be installed before discharge of effluents from workshop.

Reply: - There is no industrial wastewater generation from mining operation. We are not discharging any wastewater outside the mine lease area. However, negligible amount of wastewater is generated in workshop from washing of vehicles and Effluent treatment plant (ETP) has been installed for this effluent. The treated water is in close circuit and being reused for washing of vehicles in the workshop.



Effluent Treatment Plant (ETP)

Furthermore, the quality of this treated water is being monitored regularly, and all water parameters are within permissible limits. The monitoring report is attached herewith as **Annexure 2**.

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

Reply: - All the workers have been provided with PPEs including dust mask 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 regular basis.

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

Reply: - 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 funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purposes. Year-wise expenditure should be reported to the Ministry and its Regional Office located at Bhubaneswar.

Reply: - Every year budget is earmarked for environmental protection measures being prepared for purpose 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 xi:- The Regional Office of this Ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The Project authorities should extend full cooperation to the officer(s) of the Regional Office by furnishing requisite data/information/monitoring reports.

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

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

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

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

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

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

Reply: - It is an operational mine. Hence provisions related to financial closure is not applicable.

Condition xv: - State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's/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 shall be in the vernacular language of the locality concerned, within 7 days of the issue of the Clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment and Forests at <http://envfor.nic.in> and a copy of the same should be forwarded to the Regional Office of this Ministry located at Bhubaneswar.

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: Bhusar Bauxite Mine (65.31 Ha)

S No	Month	Ground Water Level (BGL) in meter
1	Oct-25	34.15
2	Nov-25	34.24
3	Dec-25	34.41
4	Jan-26	34.68
5	Feb-26	34.81
6	Mar-26	35.04



EPIC LabTech Private Limited



Address-
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Road No. - 5, Ranchi,
Jharkhand - 834005, India

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98357 86677
93049 73994
epiclabtech@gmail.com

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

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

Analytical Test Certificate

Unique Lab Report No.	TC1288725000001368	Discipline	Chemical
Report Unique ID	RL03192542034	Group	Atmospheric Pollution
Issue date/time	22.10.2025/ 17:39	Sub Group	Ambient Air Quality

Report Issue to

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

Customer Registration No.	EPIC/OTH/0319	Sample Booking Number	EPIC-2542034
Sample(s) Code	2542034 (A) (B) (C) (D)	Sample Receipt (D/T)	17.10.2025/ 11:13

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	15.10.2025/ 11:08	Sampling End (D/T)	16.10.2025/ 09:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	58	Wind direction	315°-135°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near View Point 1 (Bhusar Mine Pit I)	GPS coordinate	23° 29' 13.64"/ 84° 35' 50.55"
S. Location B	Near View Point 2 (Bhusar Mine Pit II)	GPS coordinate	23° 29' 20.67"/ 84° 35' 48.66"
S. Location C	Near Rest Shelter	GPS coordinate	23° 29' 11.69"/ 84° 35' 45.82"
S. Location D	Near GTS Point	GPS coordinate	23° 29' 11.17"/ 84° 35' 43.41"

Date(s) of performance of the laboratory activities

Test start date	17.10.2025/ 11:33	Test completion date	22.10.2025/ 16:00
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--Test Results--

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	55.93	56.84	52.03	59.10	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	24.13	24.61	25.00	27.17	60(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	06.67	07.33	07.66	06.60	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	18.39	19.38	19.34	19.30	80(24 hr)
5.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	24.97	25.60	23.39	25.29	400(24 hr)
6.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	17.23	16.87	17.94	17.59	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



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

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



EPIC LabTech Private Limited

Address:-
C/o - R.K. Tripathi, Indrapuri,
Road No. - 5, Ranchi,
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98357 86677
93049 73994
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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	RL03192542034	Group	Atmospheric Pollution
Issue date/time	22.10.2025/ 17:39	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE : BHUSAR 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/0319	Sample Booking Number	EPIC-2542034
Sample(s) Code	2542034 (A) (B) (C) (D)	Sample Receipt (D/T)	17.10.2025/ 11:13

Sampling References

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Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	58	Wind direction	315°-135°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near View Point 1 (Bhusar Mine Pit I)	GPS coordinate	23° 29' 13.64" / 84° 35' 50.55"
S. Location B	Near View Point 2 (Bhusar Mine Pit II)	GPS coordinate	23° 29' 20.67" / 84° 35' 48.66"
S. Location C	Near Rest Shelter	GPS coordinate	23° 29' 11.69" / 84° 35' 45.82"
S. Location D	Near GTS Point	GPS coordinate	23° 29' 11.17" / 84° 35' 43.41"

Date(s) of performance of the laboratory activities

Test start date	17.10.2025/ 11:33	Test completion date	22.10.2025/ 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



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





EPIC LabTech Private Limited

Address:-
C/o - R.K. Tripathi, Indrapuri,
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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	RL03192542035	Group	Atmospheric Pollution
Issue date/time	22.10.2025/ 17:42	Sub Group	DG Stack

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0319	Sample Booking Number	EPIC-2542035
Sample(s) Code	2542035	Sample Receipt (D/T)	17.10.2025/ 11:14

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	17.10.2025/ 11:45	Sampling End (D/T)	17.10.2025/ 16:00
Mode of Sampling	Conducted by laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS: 11255 & CPCB Guideline (Lats/80/2013-14)		
Description/condition of sample	Receipt sample(s) were fit for analysis		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	58	Wind direction	315°-135°
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Sampling Location(s) with GPS coordinate(s)

S. Location	Stack	GPS coordinate	23° 29' 13.58" / 84° 35' 50.49"
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Field observation by laboratory's personnel

Stack Description (Shape & Material)	Circular/ Metal
Emission Source	DG
Stack Gas Temperature (K)	410

Data provided by customer

Type of fuel Used	HSD
Total production Capacity	250 KVA
Barometric Pressure (P Bar) mmHg	746.00

Date(s) of performance of the laboratory activities

Test start date/time	17.10.2025/ 11:45	Test completion date/time	22.10.2025/ 16:00
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--Test Result--

Sl	Parameters	Test Method	Units	Results	Limits
1.	Stack gas Velocity	IS 11255 (Part 3)2018	m/s	11.51	-
2.	Volumetric Flow Rate	IS 11255 (Part 3)2018	Nm ³ /hr	113.51	-
3.	Particulate Matter (PM)	IS 11255 (Part 1)2019	mg/Nm ³	28.81	-
4.	Sulphur Dioxide (SO ₂)	IS 11255 (Part 2)2019	mg/Nm ³	37.38	-
5.	Oxides of Nitrogen (NO _x)	IS 11255 (Part 7)2022	mg/Nm ³	123.97	-
6.	Carbon Monoxide (CO)	IS 13270 2009	%	BDL (MDL 0.5)	-
7.	Carbon Dioxide (CO ₂)	IS 13270 2009	%	5.7	-

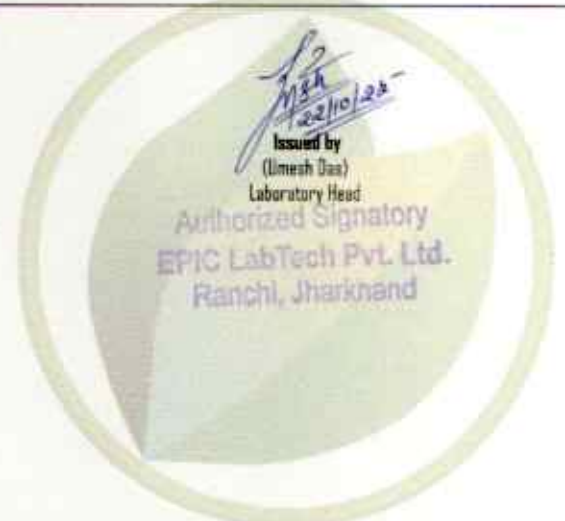
--Test Result End --

Operational Status Unit was Operational during sampling.

Analysed by - Vishal Mangaraj




Reviewed by
(B.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:-AAHCE36T1M
GST:-20AAHCE36T1M12X

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

TC-12887

Analytical Test Report

Unique Lab Report No.	TC1288725000001481	Discipline	Chemical
Report Unique ID	RL03592547077	Group	Atmospheric Pollution
Issue date/time	28.11.2025/ 16:30	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 : BHUSAR BAUXITE MINE

Contact Person

Mr. Girija Tamrakar

Contact Number

+91 9111006074

Email Id

girija.tamrakar@adityabirla.com

Order Date

31.03.2025/ 10:10

Order Number

13612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0359	Sample Booking Number	EPIC-2547077
Sample(s) Code	2547077 (A) (B) (C) (D)	Sample Receipt (D/T)	22.11.2025/ 11:11

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	20.11.2025/ 11:05	Sampling End (D/T)	21.11.2025/ 09:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	66	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near View Point 1 (Bhusar Mine Pit I)	GPS coordinate	23° 29' 13.64"/84° 35' 50.55"
S. Location B	Near View Point 2 (Bhusar Mine Pit II)	GPS coordinate	23° 29' 20.67"/84° 35' 48.66"
S. Location C	Near Rest Shelter	GPS coordinate	23° 29' 11.69"/84° 35' 45.82"
S. Location D	Near GTS Point	GPS coordinate	23° 29' 11.17"/84° 35' 43.41"

Date(s) of performance of the laboratory activities

Test start date	22.11.2025/ 11:25	Test completion date	28.11.2025/ 14:10
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits <small>(24 hr)</small>
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	56.97	57.81	53.76	60.56	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	25.26	25.43	26.85	28.56	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	07.88	08.85	08.72	07.54	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	19.70	20.66	20.94	20.56	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	18.19	17.14	18.54	18.19	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	25.75	26.65	24.85	26.35	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma




Reviewed by
(B.N. Kumar)
Technical Head

Test Report End


Issue by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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

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PAN:-AAHCE3611M
GST:-20AAHCE3611M12X

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03592547077	Group	Atmospheric Pollution
Issue date/time	28.11.2025/ 16:30	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 : BHUSAR BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0359	Sample Booking Number	EPIC-2547077
Sample(s) Code	2547077	Sample Receipt (D/T)	22.11.2025/ 11:11

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	20.11.2025/ 11:05	Sampling End (D/T)	21.11.2025/ 09:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	66	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near View Point 1 (Bhusar Mine Pit I)	GPS coordinate	23° 29' 13.64"/ 84° 35' 50.55"
S. Location B	Near View Point 2 (Bhusar Mine Pit II)	GPS coordinate	23° 29' 20.67"/ 84° 35' 48.66"
S. Location C	Near Rest Shelter	GPS coordinate	23° 29' 11.69"/ 84° 35' 45.82"
S. Location D	Near GTS Point	GPS coordinate	23° 29' 11.17"/ 84° 35' 43.41"

Date(s) of performance of the laboratory activities

Test start date	22.11.2025/ 11:25	Test completion date	28.11.2025/ 14:10
-----------------	-------------------	----------------------	-------------------

--Test Results Start--

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

--Test Results End--

Prescribed Limit

Analysed by - Rajesh Varma

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



Reviewed by
(R.N. Kumar)
Technical Head

Test Report End

Issue by
(Binmesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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GST:-20AAHCE3611MTZX

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

TC-12887

Analytical Test Report

Unique Lab Report No.	TC1288725000001482	Discipline	Chemical
Report Unique ID	RL03592547078	Group	Water
Issue date/time	28.11.2025/ 16:33	Sub Group	Drinking Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED

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

MONITORING SITE: BHUSAR BAUXITE MINE

Contact Person: Mr. Girija Tamrakar
 Contact Number: +91 9111006074
 Email Id: girija.tamrakar@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/0359	Sample Booking Number	EPIC-2547078
Sample(s) Code	2547078	Sample Receipt (D/T)	22.11.2025/ 11:12

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	20.11.2025/ 15:15	Sampling End (D/T)	20.11.2025/ 15:25
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	66	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Canteen	GPS coordinate	23° 29' 10.25" / 84° 35' 21.17"
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Date(s) of performance of the laboratory activities

Test start date	22.11.2025/ 11:33	Test completion date	28.11.2025/ 15:00
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits	
						Acceptable Limit	Permissible limit
1.	pH value at 25.4°C	IS 3025 (P-11) 2022	-	0.7	6.78	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.3	0.55	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	5.0	5	5	15
4.	Odour	IS 3025 (P-05) 2018	-	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	10	205.0	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	5	28.57	250	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	10	92.00	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	10	104.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	10	32.06	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	0.6	BDL	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1) 2022	mg/l	0.3	1.29	200	400
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	0.4	1.91	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	0.001	BDL	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	0.3	5.83	30	100

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GST:-20AAHCE3611M1ZK

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

Analytical Test Report

Unique Lab Report No.	TC1288725000001482	Discipline	Chemical
Report Unique ID	RL03592547078	Group	Water
Issue date/time	28.11.2025/ 16:33	Sub Group	Drinking Water

Report Issue to

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

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

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

--Test Result End--

Prescribed Limit IS 10500:2012

Analysed by - Pappu Kumar

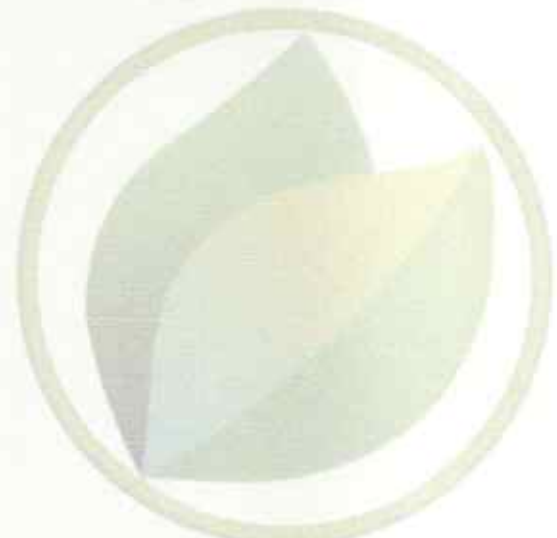


Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03592547078	Group	Water
Issue date/time	28.11.2025/ 16:33	Sub Group	Drinking Water

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0359	Sample Booking Number	EPIC-2547078
Sample(s) Code	2547078	Sample Receipt (D/T)	22.11.2025/ 11:12

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	20.11.2025/ 15:15	Sampling End (D/T)	20.11.2025/ 15:25
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	66	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Canteen	GPS coordinate	23° 29' 10.25" / 84° 35' 21.17"
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Date(s) of performance of the laboratory activities

Test start date	22.11.2025/ 11:33	Test completion date	28.11.2025/ 15:00
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--Test Result Start--

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

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:-U74999JH2023PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03592547078	Group	Water
Issue date/time	28.11.2025/ 16:33	Sub Group	Drinking Water

Report Issue to

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

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

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

--Test Result End--

Prescribed Limit IS 10500:2012

Analysed by - Pappu Kumar



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

Test Report End

[Signature]
Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL03592547079	Group	Water
Issue date/time	28.11.2025/ 16:36	Sub Group	Drinking Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0359	Sample Booking Number	EPIC-2547079
Sample(s) Code	2547079	Sample Receipt (D/T)	22.11.2025/ 11:12

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	20.11.2025/ 15:15	Sampling End (D/T)	20.11.2025/ 15:25
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	66	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Canteen	GPS coordinate	23° 29' 10.25" / 84° 35' 21.17"
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Date(s) of performance of the laboratory activities

Test start date	22.11.2025/ 12:05	Test completion date	28.11.2025/ 14:50
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--Test Result Start--

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

--Test Result End--

Prescribed Limit IS 10500:2012

Analysed by - Ishika Singh



(Signature)

Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

(Signature)
28/11/25

Issued by
(Limesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited



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

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

TC-12887

Analytical Test Report

Unique Lab Report No.	TC1288725000001483	Discipline	Chemical
Report Unique ID	RL03592547080	Group	Water
Issue date/time	28.11.2025/ 16:39	Sub Group	Ground Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED

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

MONITORING SITE: BHUSAR BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0359	Sample Booking Number	EPIC-2547080
Sample(s) Code	2547080	Sample Receipt (D/T)	22.11.2025/ 11:13

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	20.11.2025/ 16:05	Sampling End (D/T)	20.11.2025/ 16:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	66	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Shiv Mandir	GPS coordinate	23° 29' 09.50" / 84° 35' 51.64"
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Date(s) of performance of the laboratory activities

Test start date	22.11.2025/ 11:33	Test completion date	28.11.2025/ 15:00
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits	
						Acceptable Limit	Permissible limit
1.	pH value at 24.9°C	IS 3025 (P-11) 2022	-	0.7	7.0	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.3	0.68	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	5.0	5	5	15
4.	Odour	IS 3025 (P-05) 2018	-	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	10	245.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	5	37.44	250	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	10	124.00	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	10	168.67	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	10	56.11	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	0.6	BDL	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1) 2022	mg/l	0.3	2.95	200	400
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	0.4	2.91	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	0.001	BDL	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	0.3	6.96	30	100



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

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

Analytical Test Report

Unique Lab Report No.	TC1288725000001483	Discipline	Chemical
Report Unique ID	RL03592547080	Group	Water
Issue date/time	28.11.2025/ 16:39	Sub Group	Ground Water

Report Issue to

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

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

Group - Residues and Contaminants in Water,

Sub Group - Trace Metals Elements

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

--Test Result End--

Prescribed Limit IS 10500:2012
Analysed by - Pappu Kumar

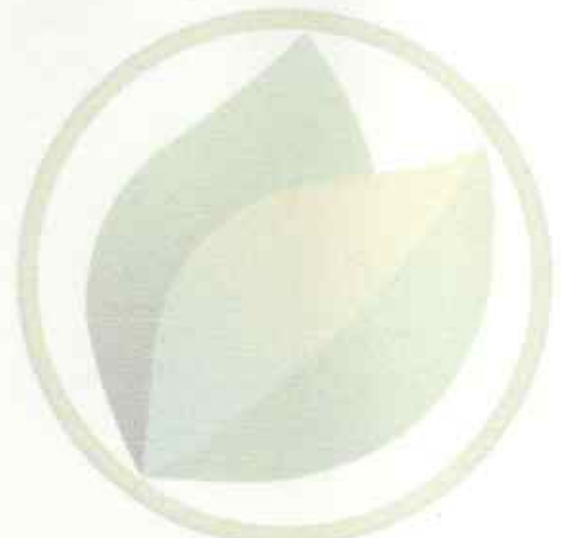


(Signature)
Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

(Signature)
Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03592547080	Group	Water
Issue date/time	28.11.2025/ 16:39	Sub Group	Ground Water

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0359	Sample Booking Number	EPIC-2547080
Sample(s) Code	2547080	Sample Receipt (D/T)	22.11.2025/ 11:13

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	20.11.2025/ 16:05	Sampling End (D/T)	20.11.2025/ 16:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	66	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Shiv Mandir	GPS coordinate	23° 29' 09.50" / 84° 35' 51.64"
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Date(s) of performance of the laboratory activities

Test start date	22.11.2025/ 11:33	Test completion date	28.11.2025/ 15:00
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--Test Result Start--

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



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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03592547080	Group	Water
Issue date/time	28.11.2025/ 16:39	Sub Group	Ground Water

Report Issue to

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

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

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

--Test Result End --

Prescribed Limit IS 10500:2012

Analysed by - Pappu Kumar



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

Test Report End

Umesh Das
28/11/25
Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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CIN:-U74999JH2022PTC019685
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GST:-20AAHCE3611M1ZX

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL03592547081	Group	Water
Issue date/time	28.11.2025/16:42	Sub Group	Ground Water

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0359	Sample Booking Number	EPIC-2547081
Sample(s) Code	2547081	Sample Receipt (D/T)	22.11.2025/11:13

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	20.11.2025/16:05	Sampling End (D/T)	20.11.2025/16:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	24	Humidity %	66	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Shiv Mandir	GPS coordinate	23° 29' 09.50" / 84° 35' 51.64"
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Date(s) of performance of the laboratory activities

Test start date	22.11.2025/13:20	Test completion date	28.11.2025/15:45
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--Test Result Start--

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

--Test Result End--

Prescribed Limit IS 10500:2012

Analysed by - Ishika Singh



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited



Address-
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Road No. - 5, Ranchi,
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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

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

Analytical Test Report

Unique Lab Report No.	TC128872500001651	Discipline	Chemical
Report Unique ID	RL03972551049	Group	Atmospheric Pollution
Issue date/time	23.12.2025/ 17:15	Sub Group	Ambient Air Quality

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0397	Sample Booking Number	EPIC-2551049
Sample(s) Code	2551049 (A) (B) (C) (D)	Sample Receipt (D/T)	20.12.2025/ 11:25

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	18.12.2025/ 10:30	Sampling End (D/T)	19.12.2025/ 08:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

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

S. Location A	Near View Point 1 (Bhusar Mine Pit I)	GPS coordinate	23° 29' 13.64"/ 84° 35' 50.55"
S. Location B	Near View Point 2 (Bhusar Mine Pit II)	GPS coordinate	23° 29' 20.67"/ 84° 35' 48.66"
S. Location C	Near Rest Shelter	GPS coordinate	23° 29' 11.69"/ 84° 35' 45.82"
S. Location D	Near GTS Point	GPS coordinate	23° 29' 11.17"/ 84° 35' 43.41"

Date(s) of performance of the laboratory activities

Test start date	20.12.2025/ 11:50	Test completion date	23.12.2025/ 10:15
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	58.04	59.24	55.13	62.21	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	27.35	27.39	28.43	30.31	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	09.24	10.16	10.39	09.59	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	21.33	22.18	22.51	22.27	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	20.13	19.41	20.49	20.85	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	28.20	29.36	27.04	29.65	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



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

Test Report End

[Signature]
Issue by
(Gimesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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



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PAN:-AAHCE3611M
GST:-20AAHCE3611M12X

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03972551049	Group	Atmospheric Pollution
Issue date/time	23.12.2025/ 17:15	Sub Group	Ambient Air Quality

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0397	Sample Booking Number	EPIC-2551049
Sample(s) Code	2551049 (A) (B) (C) (D)	Sample Receipt (D/T)	20.12.2025/ 11:25

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	18.12.2025/ 10:30	Sampling End (D/T)	19.12.2025/ 08:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

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

S. Location A	Near View Point 1 (Bhusar Mine Pit I)	GPS coordinate	23° 29' 13.64"/ 84° 35' 50.55"
S. Location B	Near View Point 2 (Bhusar Mine Pit II)	GPS coordinate	23° 29' 20.67"/ 84° 35' 48.66"
S. Location C	Near Rest Shelter	GPS coordinate	23° 29' 11.69"/ 84° 35' 45.82"
S. Location D	Near GTS Point	GPS coordinate	23° 29' 11.17"/ 84° 35' 43.41"

Date(s) of performance of the laboratory activities

Test start date	20.12.2025/ 11:50	Test completion date	23.12.2025/ 10:15
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--Test Results Start--

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

--Test Results End--

Prescribed Limit

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

Analysed by - Rajesh Varma



Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issue by
(Rajesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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



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PAN:-AAHCE3611M
GST:-20AAHCE3611M12X

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

Analytical Test Report

Unique Lab Report No.	TC1288725000001652	Discipline	Chemical
Report Unique ID	RL03972551050	Group	Atmospheric Pollution
Issue date/time	23.12.2025/ 17:18	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 : BHUSAR BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Girija Tamrakar +91 9111006074 girija.tamrakar@adityabirla.com 31.03.2025/ 10:10 13612313868
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References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0397	Sample Booking Number	EPIC-2551050
Sample(s) Code	2551050 (A) (B) (C) (D)	Sample Receipt (D/T)	20.12.2025/ 11:27

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	18.12.2025/ 10:30	Sampling End (D/T)	19.12.2025/ 08:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

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

S. Location A	Near View Point 1 (Bhusar Mine Pit I)	GPS coordinate	23° 29' 13.64"/84° 35' 50.55"
S. Location B	Near View Point 2 (Bhusar Mine Pit II)	GPS coordinate	23° 29' 20.67"/84° 35' 48.66"
S. Location C	Near Rest Shelter	GPS coordinate	23° 29' 11.69"/84° 35' 45.82"
S. Location D	Near GTS Point	GPS coordinate	23° 29' 11.17"/84° 35' 43.41"

Date(s) of performance of the laboratory activities

Test start date	20.12.2025/ 11:50	Test completion date	23.12.2025/ 10:15
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	L _{eq} (Day time)	IS: 9989:1981	dB (A)	30	46.6	52.9	56.5	46.8	75
2.	L _{eq} (Night time)	IS: 9989:1981	dB (A)	30	39.2	41.8	48.1	42.5	70

--Test Results End --

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

Analysed by - Rajesh Varma

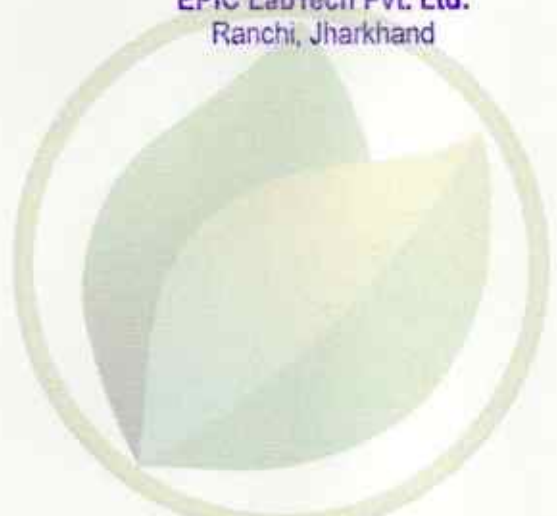


Reviewed by
(B.N. Kumar)
Technical Head

Test Report End

Issue by
(Ajay Singh)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



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PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

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

Analytical Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL03972551051	Group	Atmospheric Pollution
Issue date/time	23.12.2025/ 17:21	Sub Group	Work Zone Noise

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

References of Quality Management System (Steps of Traceability Chain)			
Customer Registration No.	EPIC/OTH/0397	Sample Booking Number	EPIC-2551051
Sample(s) Code	2551051 (A) (B)	Sample Receipt (D/T)	20.12.2025/ 11:28

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

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

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Bhusar Mines Pit II	GPS coordinate	23° 29' 35.01" / 84° 35' 30.09"
S. Location B	Bhusar Bauxite Mines (65.31hr)	GPS coordinate	23° 29' 42.01" / 84° 35' 26.07"

Date(s) of performance of the laboratory activities			
Test start date	20.12.2025/ 11:50	Test completion date	23.12.2025/ 10:15

--Test Results Start--								
Sl	Tested Parameters	Method used	Unit	LoQ	Results		Limits	
					A	B		
1.	L _{eq} (Day time)	IS: 9969:1961	dB (A)	30	75.7	68.4		85
--Test Results End --								

Prescribed Limit NIOSH - Publication No. 99-126 in 1972
Analysed by - Rajesh Varma



Reviewed by
(B.R. Kumar)
Technical Head

Test Report End

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



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



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PAN:-AAHCE3611M
GST:-20AAHCE3611M12X

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

Test Report



Unique Lab Report No.	TC1288726000000097	Discipline	Chemical
Report Unique ID	RL04262604017	Group	Atmospheric Pollution
Issue date/time	24.01.2026/ 17:00	Sub Group	Ambient Air Quality

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0426	Sample Booking Number	EPIC-2604017
Sample(s) Code	2604017 (A) (B) (C) (D)	Sample Receipt (D/T)	22.01.2026/ 11:57

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	20.01.2026/ 10:50	Sampling End (D/T)	21.01.2026/ 08:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

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

S. Location A	Near View Point 1 (Bhusar Mine Pit I)	GPS coordinate	23° 29' 13.64"/84° 35' 50.55"
S. Location B	Near View Point 2 (Bhusar Mine Pit II)	GPS coordinate	23° 29' 20.67"/84° 35' 48.66"
S. Location C	Near Rest Shelter	GPS coordinate	23° 29' 11.69"/84° 35' 45.82"
S. Location D	Near GTS Point	GPS coordinate	23° 29' 11.17"/84° 35' 43.41"

Date(s) of performance of the laboratory activities

Test start date	22.01.2026/ 13:20	Test completion date	24.01.2026/ 14:10
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	59.15	60.47	56.51	63.65	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	28.33	28.66	29.47	31.75	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	10.14	11.36	11.12	10.50	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	22.34	23.21	23.48	23.13	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	21.93	19.41	22.28	22.64	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	29.36	30.53	28.49	30.24	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	ng/m ³	2	BDL	BDL	BDL	BDL	-
10.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



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

****Test Report End****

J.P.
24/01/26
Issue by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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

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

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04262604017	Group	Atmospheric Pollution
Issue date/time	24.01.2026/ 17:00	Sub Group	Ambient Air Quality

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0426	Sample Booking Number	EPIC-2604017
Sample(s) Code	2604017 (A) (B) (C) (D)	Sample Receipt (D/T)	22.01.2026/ 11:57

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	20.01.2026/ 10:50	Sampling End (D/T)	21.01.2026/ 08:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

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

S. Location A	Near View Point 1 (Bhusar Mine Pit I)	GPS coordinate	23° 29' 13.64" / 84° 35' 50.55"
S. Location B	Near View Point 2 (Bhusar Mine Pit II)	GPS coordinate	23° 29' 20.67" / 84° 35' 48.66"
S. Location C	Near Rest Shelter	GPS coordinate	23° 29' 11.69" / 84° 35' 45.82"
S. Location D	Near GTS Point	GPS coordinate	23° 29' 11.17" / 84° 35' 43.41"

Date(s) of performance of the laboratory activities

Test start date	22.01.2026/ 13:20	Test completion date	24.01.2026/ 14:10
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--Test Results Start--

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

--Test Results End--

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

Analysed by - Rajesh Varma



Reviewed by
(B.N. Kumar)
Technical Head

Issue By
(Umesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



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GST:-20AAHCE3611M12X

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

Test Report



Unique Lab Report No.	TC1288726000000153	Discipline	Chemical
Report Unique ID	RL04572607005	Group	Atmospheric Pollution
Issue date/time	14.02.2026/ 16:06	Sub Group	Ambient Air Quality

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0457	Sample Booking Number	EPIC-2607005
Sample(s) Code	2607005 (A) (B) (C) (D)	Sample Receipt (D/T)	11.02.2026/ 11:02

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	09.02.2026/ 10:30	Sampling End (D/T)	10.02.2026/ 08:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	54	Wind direction	90°-270°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near View Point 1 (Bhusar Mine Pit I)	GPS coordinate	23° 29' 13.64" / 84° 35' 50.55"
S. Location B	Near View Point 2 (Bhusar Mine Pit II)	GPS coordinate	23° 29' 20.67" / 84° 35' 48.66"
S. Location C	Near Rest Shelter	GPS coordinate	23° 29' 11.69" / 84° 35' 45.82"
S. Location D	Near GTS Point	GPS coordinate	23° 29' 11.17" / 84° 35' 43.41"

Date(s) of performance of the laboratory activities

Test start date	11.02.2026/ 12:15	Test completion date	14.02.2026/ 12:55
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	58.47	59.70	55.91	62.86	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	27.80	28.12	28.41	30.91	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	10.31	11.50	11.45	10.92	60 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	24.29	25.16	26.47	26.36	60 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	24.80	22.64	25.52	25.16	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	31.40	32.56	30.82	32.27	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2-1999	ng/m ³	2	BDL	BDL	BDL	BDL	-
10.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-

--Test Results End--

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

Analysed by - Rajesh Varma



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

[Signature]
14/2/26
Issue by
(Umesh Des)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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

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GST:-20AAHCE3611MTZX

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04572607005	Group	Atmospheric Pollution
Issue date/time	14.02.2026/ 16:06	Sub Group	Ambient Air Quality

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0457	Sample Booking Number	EPIC-2607005
Sample(s) Code	2607005 (A) (B) (C) (D)	Sample Receipt (D/T)	11.02.2026/ 11:02

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	09.02.2026/ 10:30	Sampling End (D/T)	10.02.2026/ 08:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rajesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	27	Humidity %	54	Wind direction	90°-270°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near View Point 1 (Bhusar Mine Pit I)	GPS coordinate	23° 29' 13.64"/ 84° 35' 50.55"
S. Location B	Near View Point 2 (Bhusar Mine Pit II)	GPS coordinate	23° 29' 20.67"/ 84° 35' 48.66"
S. Location C	Near Rest Shelter	GPS coordinate	23° 29' 11.69"/ 84° 35' 45.82"
S. Location D	Near GTS Point	GPS coordinate	23° 29' 11.17"/ 84° 35' 43.41"

Date(s) of performance of the laboratory activities

Test start date	11.02.2026/ 12:15	Test completion date	14.02.2026/ 12:55
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--Test Results Start--

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

--Test Results End --

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

Analysed by - Rajesh Varma

Reviewed by
(B.N. Kumar)
Technical Head

Issue by
(Rajesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



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GST:-20AAHCE3611M12X

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

Test Report



Unique Lab Report No.	TC1288726000000371	Discipline	Chemical
Report Unique ID	RL04962612057	Group	Atmospheric Pollution
Issue date/time	25.03.2026/ 16:48	Sub Group	Ambient Air Quality

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0496	Sample Booking Number	EPIC-2612057
Sample(s) Code	2612057 (A) (B) (C) (D)	Sample Receipt (D/T)	21.03.2026/ 11:37

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	19.03.2026/ 16:15	Sampling End (D/T)	20.03.2026/ 13:35
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	25	Humidity %	52	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near View Point 1 (Bhusar Mine Pit I)	GPS coordinate	23° 29' 13.64"/ 84° 35' 50.55"
S. Location B	Near View Point 2 (Bhusar Mine Pit II)	GPS coordinate	23° 29' 20.67"/ 84° 35' 48.66"
S. Location C	Near Rest Shelter	GPS coordinate	23° 29' 11.69"/ 84° 35' 45.82"
S. Location D	Near GTS Point	GPS coordinate	23° 29' 11.17"/ 84° 35' 43.41"

Date(s) of performance of the laboratory activities

Test start date	21.03.2026/ 12:40	Test completion date	25.03.2026/ 13:55
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--Test Results Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results				Limits
					A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	10	59.32	60.55	56.63	63.44	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	8	28.52	29.34	29.71	32.00	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	5	09.64	10.13	09.72	10.59	60 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	6	23.48	24.38	25.53	25.21	60 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	10	25.88	24.44	27.68	27.32	180 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	10	32.27	33.72	31.40	33.14	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	0.1	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	ng/m ³	5	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2-1999	ng/m ³	2	BDL	BDL	BDL	BDL	-
10.	Benzene (as C ₆ H ₆)	IS 5182 (P-11): 2006	µg/m ³	1	BDL	BDL	BDL	BDL	-
11.	Benzo(a) Pyrene (BaP) <small>Particulate Phase</small>	IS 5182 (P-12): 2004	ng/m ³	0.5	BDL	BDL	BDL	BDL	-

--Test Results End --

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

Analysed by - Rajesh Varma



Reviewed by
(B.N. Kumar)
Technical Head

****Test Report End****

Issue by
(Umesh Gaud)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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

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GST:-20AAHCE3611M1ZX

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04962612057	Group	Atmospheric Pollution
Issue date/time	25.03.2026/ 16:48	Sub Group	Ambient Air Quality

Report issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0496	Sample Booking Number	EPIC-2612057
Sample(s) Code	2612057 (A) (B) (C) (D)	Sample Receipt (D/T)	21.03.2026/ 11:37

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	19.03.2026/ 16:15	Sampling End (D/T)	20.03.2026/ 13:35
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	25	Humidity %	52	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near View Point 1 (Bhusar Mine Pit I)	GPS coordinate	23° 29' 13.64"/ 84° 35' 50.55"
S. Location B	Near View Point 2 (Bhusar Mine Pit II)	GPS coordinate	23° 29' 20.67"/ 84° 35' 48.66"
S. Location C	Near Rest Shelter	GPS coordinate	23° 29' 11.69"/ 84° 35' 45.82"
S. Location D	Near GTS Point	GPS coordinate	23° 29' 11.17"/ 84° 35' 43.41"

Date(s) of performance of the laboratory activities

Test start date	21.03.2026/ 12:40	Test completion date	25.03.2026/ 13:55
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--Test Results Start--

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

--Test Results End --

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

Analyzed by - Rajesh Verma



Reviewed by
(S.N. Kumar)
Technical Head

****Test Report End****

Issue by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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



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PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZX

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

Test Report



Unique Lab Report No.	TC1288726000000372	Discipline	Chemical
Report Unique ID	RL04962612058	Group	Water
Issue date/time	25.03.2026/ 16:51	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 : **BHUSAR BAUXITE MINE**

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0496	Sample Booking Number	EPIC-2612058
Sample(s) Code	2612058	Sample Receipt (D/T)	21.03.2026/ 11:40

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	19.03.2026/ 13:41	Sampling End (D/T)	19.03.2026/ 13:52
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	25	Humidity %	52	Wind direction	0°-180°
-------------------	-------	------------------	----	------------	----	----------------	---------

Sampling Location(s) with GPS coordinate(s)

S. Location A	Canteen	GPS coordinate	23° 29' 10.25" / 84° 35' 21.17"
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Date(s) of performance of the laboratory activities

Test start date	21.03.2026/ 12:00	Test completion date	25.03.2026/ 15:00
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--Test Result Start--

Sl	Tested Parameters	Method used	Unit	LoQ	Results	Limits	
						Acceptable Limit	Permissible limit
1.	pH value at 25.5°C	IS 3025 (P-11) 2022	-	1.5	6.82	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.3	0.65	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	5.0	5	5	15
4.	Odour	IS 3025 (P-05) 2018	-	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	10	216.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	5	29.56	250	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	10	94.00	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	10	110.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	10	33.67	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	0.6	BDL	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1) 2022	mg/l	0.3	1.40	200	400
13.	Nitrate (as NO ₃ -N)	IS 3025 (P-34/Sec-1) 2023	mg/l	0.4	1.99	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	0.001	BDL	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	0.3	6.31	30	100



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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

Test Report



Unique Lab Report No.	TC1288726000000372	Discipline	Chemical
Report Unique ID	RL04962612058	Group	Water
Issue date/time	25.03.2026/ 16:51	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 : **BHUSAR BAUXITE MINE**

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

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

--Test Result End --

Prescribed Limit IS 10500:2012
Analysed by - Pappu Kumar



Reviewed by
(B.N. Kumar)
Technical Head

****Test Report End****

Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

EPIC LabTech Private Limited



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Indrapuri, Road No. - 5,
Ranchi, Jharkhand - 834005,
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PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04962612058	Group	Water
Issue date/time	25.03.2026/ 16:51	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 : BHUSAR BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0496	Sample Booking Number	EPIC-2612058
Sample(s) Code	2612058	Sample Receipt (D/T)	21.03.2026/ 11:40

Sampling References

Type of Industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input type="checkbox"/>
Sampling Start (D/T)	19.03.2026/ 13:41	Sampling End (D/T)	19.03.2026/ 13:52
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	25	Humidity %	52	Wind direction	0°-180°
-------------------	-------	------------------	----	------------	----	----------------	---------

Sampling Location(s) with GPS coordinate(s)

S. Location A	Canteen	GPS coordinate	23° 29' 10.25"/84° 35' 21.17"
---------------	---------	----------------	-------------------------------

Date(s) of performance of the laboratory activities

Test start date	21.03.2026/ 12:00	Test completion date	25.03.2026/ 15:00
-----------------	-------------------	----------------------	-------------------

--Test Result Start--

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

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

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

Test Report

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL04962612058	Group	Water
Issue date/time	25.03.2026/ 16:51	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 : BHUSAR BAUXITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number

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

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

--Test Result End --

Prescribed Limit IS 10500:2012
Analysed by - Pappu Kumar

Reviewed by
(E.N. Kumar)
Technical Head

Issued by
(Umesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Page 2 of 2

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

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Certified by -
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Test Report

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL04962612059	Group	Water
Issue date/time	25.03.2026/ 16:54	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 : BHUSAR BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0496	Sample Booking Number	EPIC-2612059
Sample(s) Code	2612059	Sample Receipt (D/T)	21.03.2026/ 11:43

Sampling References

Type of industry	Bauxite Mines	Status while Sampling	Operational <input checked="" type="checkbox"/> Non-Operational <input checked="" type="checkbox"/>
Sampling Start (D/T)	19.03.2026/ 13:41	Sampling End (D/T)	19.03.2026/ 13:52
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rupesh Prajapati & Team
Sampling method used	EPIC/SOP/SM/01/00	Ref. of Sampling Plan	EPIC/LAB/R/036
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition Clear Temperature (°C) 25 Humidity % 52 Wind direction 0°-180°

Sampling Location(s) with GPS coordinate(s)

S. Location A Canteen GPS coordinate 23° 29' 10.25" / 84° 35' 21.17"

Date(s) of performance of the laboratory activities

Test start date 21.03.2026/ 12:10 Test completion date 25.03.2026/ 15:00

--Test Result Start--

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

--Test Result End --

Prescribed Limit IS 10500:2012
Analysed by - Ishika Singh




Reviewed by
(B.N. Kumar)
Technical Head


Issued by
(Umesh Das)
Laboratory Head

****Test Report End****

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Annexure 3

Date – 01.11.2025

Office Order

Environmental Cell has been re-constituted for Bagru Group of Mines (Bagru Bauxite Mine, Bhusar Bauxite Mine and Hisri New Bauxite Mine). This cell consists of the following team members who will ensure compliance with the Environment Acts, Rules & Regulations in respect of the said mines of Hindalco Industries Limited.

1. Mr. Shambhu Vashistha (Coordinator)
2. Mr. Malaya Prusty (Geologist)
3. Mr. Girija Tamrakar (Environment Engineer)
4. Mr. Anand Prakash Tiwari (Environment Engineer)

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

Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)

Annexure 4

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

Annexure 4

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

*Static information about the mines included in the above table



R R P Ambastha
Head - Compliance

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

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

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

**Part of OB removed cost



R R P Ambastha
Head - Compliance