



HIL/LHD/ENV/MoEF&CC/409

Date: 24th November 2025

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

Sub: Six Monthly EC Compliance Report for Sherangdag (155.81 Ha) Bauxite Mining project of M/s Hindalco Industries Limited, Gumla Jharkhand for the period from April 2025 to September 2025.

Ref: Environmental Clearance letter no J-11015/125/2006-IA II (M) dated 13th April 2007.

Dear Sir,

With reference to the above, we are submitting herewith the Compliance status report of EC conditions for **Sherangdag (155.81 Ha)** Bauxite Mining project of **M/s Hindalco Industries Limited**, Gumla Jharkhand for the period from **April 2025 to September 2025** for your kind perusal please.

The lease details are below:

Lease area (ha)	Production Capacity (MT)	Lease Period
155.81	260000	16.10.1974 to 31.03.2030

Hope you will find the same in order.

Thanking You

Yours faithfully,
For **Hindalco Industries Limited**

Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)

Enclosure: - As Above

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

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W: www.hindalco.com | E: hilinvestors@adityabirla.com

Name of the Project : **Sherangdag Bauxite Mine (155.81 ha)**
M/s Hindalco Industries Limited

Environment Clearance No. & date : **J-11015/125/2006-IA.II (M), dated 13.04.2007**

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

Specific Conditions: -

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

Reply: - Implementations of the stipulated conditions in NOC are fulfilled after which Consent to Operate (CTO) has been obtained from time to time. The current CTO is valid up to 31.12.2026. Production of bauxites is within limits specified in Consent to Operate.

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

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

Condition iii: - The exploration shall be completed within 2.5 years and thereafter the proponent shall come up with a firm proposal for mining, based on the estimated reserves. The reclamation plan, post mine land use and progressive greenbelt development plan shall also be prepared and submitted with the revised proposal.

Reply: - Required exploration has already been done. Mining plan/ Mining Scheme based on current reserves/resource estimate is duly approved by IBM. The reclamation plan, post mine land use and progressive greenbelt development plan have been covered in Mining Plan/Mining scheme which is approved by IBM.

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

Reply: - Mining is being done at shallow depth. Thus, there is no chance to intersect ground water table during mining operation. Working zone restricted to above ground water table. We undertake that no mining is/was carried out below ground water table and the same status will be maintained in future also.

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

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

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

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

Reply: - Topsoil is being stacked properly with proper slope as and when required for its use for reclamation and rehabilitation. Sequential backfilling and reclamation of the mined-out area are being exercised during mining operation. The mining is being carried out as per the approved mining plan. Monitoring and management of rehabilitated areas is being done through effective supervision. Data pertaining to backfilling is enclosed as **Annexure-4**.



Reclaimed area

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

Reply: - Overburden and waste rock from the mining pit are being used for back filling. Backfilling and plantation detail provided in **Annexure 4**. No external OB dump is in the project area. Monitoring and management of rehabilitated areas is continuous through supervision.

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

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

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



Garland drain



De-siltation Arrangement

Condition ix: - Plantation shall be raised in an area of 70.68 ha including a green belt of adequate width by planting the native species around the ML area, roads, reclaimed area etc. in consultation with the local DFO / Agriculture Department. The density of the trees should be around 1500 plants per ha.

Reply: - Progressive plantation of native species is being carried in and out around mining lease, reclaimed areas etc. in consultation with the local forest department. During FY 2025-26 till September, a total of 2160 nos. saplings have been planted within the mining lease. Cumulative 28.94 ha areas have been planted till date.

In addition to this agricultural activity is going on reclaimed land as per the consent of landowners. Green belt development program is in progress with the progress of mining activities in a phased manner.



Plantation at Mines

Condition x: - The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.

Reply: - A detailed plan to augment groundwater has been prepared, and suitable measures like the creation of water harvesting ponds, etc., are being taken for the augmentation of groundwater in the area, in consultation with the Central Ground Water Board.



Rainwater Harvesting Ponds

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

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




Piezometer

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

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

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

 नदी निकासी हेतु अनापत्ति प्रमाण पत्र NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION																																					
Project Name: Sherangdag Bauxite Mining Project (155.81 Ha) Project Address: Hindalco Industries Ltd, Court Road, Lohardaga, Dist - Lohardaga Village: Sherangdag Block: Ghaghra District: Gumla State: Jharkhand Pin Code: Communication Address: Hindalco Industries Ltd, Hindalco Complex, Court Road, Lohardaga, P.O - Lohardaga, 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.: CGWANOC/MIN/REN/2/2023/8367	2. Date of Issuance: 11/10/2023																																				
3. Application No.: 21-4/486/JH/MIN/2019	4. Category: Safe (GWRE 2022)																																				
5. Project Status: Existing Ground Water	6. NOC Type: Renewal																																				
7. Valid from: 12/12/2023	8. Valid up to: 11/12/2025																																				
9. Ground Water Abstraction Permitted:																																					
Fresh Water	Saline Water																																				
m ³ /day	m ³ /year																																				
9.50	3467.50																																				
10. Details of ground water abstraction /Dewatering structures																																					
<table border="1"> <thead> <tr> <th colspan="6">Total Existing No.-1</th> <th colspan="6">Total Proposed No.-0</th> </tr> <tr> <th>DW</th> <th>DCB</th> <th>BW</th> <th>TW</th> <th>MP</th> <th>MPu</th> <th>DW</th> <th>DCB</th> <th>BW</th> <th>TW</th> <th>MP</th> <th>MPu</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>1</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> </tbody> </table>		Total Existing No.-1						Total Proposed No.-0						DW	DCB	BW	TW	MP	MPu	DW	DCB	BW	TW	MP	MPu	0	0	1	0	0	0	0	0	0	0	0	0
Total Existing No.-1						Total Proposed No.-0																															
DW	DCB	BW	TW	MP	MPu	DW	DCB	BW	TW	MP	MPu																										
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Abstraction Structure*																																					
*DW: Day Well; DCB: dug cum bore well; BW: bore well; TW: tube well; MP: Mine PUMP; MPu: Mine Pumps																																					
11. Ground Water Abstraction/Restoration Charges paid (Rs.): 6936.00																																					
12. Environment Compensation (if applicable) paid (Rs.): 0.00																																					

NOC for Ground Water

Condition xiii: - Water monitoring both for quality and quantity shall be carried out at four locations namely one spring and three streams. Six monthly report should be submitted to the Ministry of Environment and Forest and its Regional Office located at Bhubneshwar.

Reply: - Water quality of the Spring and streams is being monitored. Analysis report is attached as **Annexure 2**. Six monthly reports are being submitted regularly. Now, the Regional office of MoEF&CC is located in Ranchi.

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

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



Tarpaulin covered Truck

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

Reply: - Wet drilling is in practice.



Wet drilling

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

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

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

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

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

Reply: - The sewage water from domestic uses is being collected through individual Septic Tank and followed by Soak Pit.

No wastewater is generated from our mining operation. However, only negligible amount of effluent is being generated from workshop and Oil & grease trap system is already installed to treat this effluent. The treated water is in close circuit and being reused for washing of vehicle in the workshop.

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



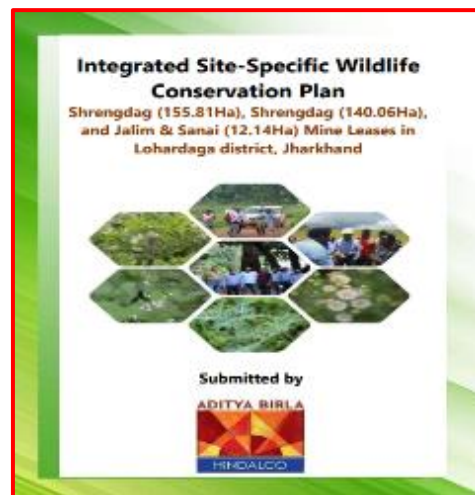
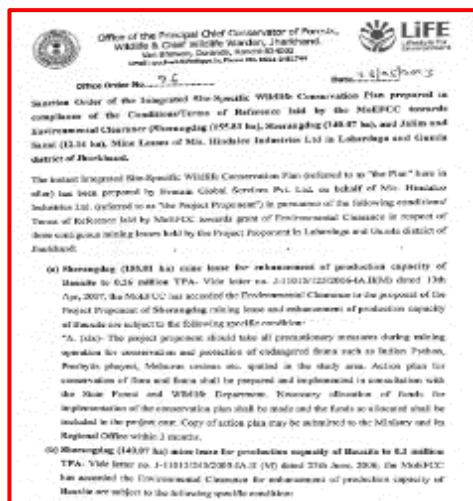
Washing Ramp and Oil and Grease Trap

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

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

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

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



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

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

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

General Conditions: -

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

Reply: - Noted.

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

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

Condition iii: - Four ambient air quality-monitoring station should be established in the core zone as well as in the buffer zone for RPM, SPM, SO₂, NOX monitoring. Location of the stations should be decided based on the metrological data, topographical features and

environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.

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

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

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

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

Reply: - Water tankers have been provided for sprinkling of water on haul roads, at loading and unloading areas, and at transfer points to control fugitive dust emissions. Water spraying at loading, unloading, and transfer points is being done.



Water sprinkling through tanker.

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

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

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

Reply: - No wastewater is generated from our mining operation. However, only negligible amounts of effluent is being generated from workshop and Oil & grease trap system is already installed to treat this effluent. The treated water is in a closed circuit and being reused for washing of vehicle in the workshop. We are not discharging any wastewater outside mine lease area.

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



Washing Ramp and Oil and Grease Trap

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Piezometer Monitoring Report**Mine: Sherangdag Bauxite Mine (155.81 Ha)**

S No	Month	Ground Water Level (BGL) in meter
1	Apr-25	36.56
2	May-25	36.72
3	Jun-25	36.53
4	Jul-25	36.22
5	Aug-25	36.04
6	Sep-25	35.98

Analytical Test Certificate

Annexure - 2

Uniqac Lab Report No.	TC1288725000000409	Discipline	Chemical
Report Uniqac ID	RL0139251733	Group	Atmospheric Pollution
Report date/time	28.04.2025/ 10:45	Sub Group	Ambient Air Quality

Report Issue to	Contact Person	Mr. Ankit Das
M/s - HINDALCO INDUSTRIES LIMITED	Contact Number	+91 9971034775
VILLAGE-COURT ROAD,	Email Id	ankit.das@adityabirla.com
POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA,	Order Date	21.03.2025/10:10
STATE-JHARKHAND, INDIA 835302	Order Number	13612313868
MONITORING SITE: SHRENDAGA BALUKITE MINE		

References of Quality Measurement Systems (Some of (randomly Chose))

Customer Registration No.	EPC/OTM/0119	EPC-251700
Sample(s) Code	251733 (A) (B) (C) (D)	Sample Record (D/T)
		23.04.2025/11:30

Summative References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPCLAB/1/2025
Sampling method used	IS 5182 and C/PCB Air Manual Volume – 1 (NAAQM/35/2012-13)		
Sampling Start (D/T)	20.04.2025/ 10:52	Sampling End (D/T)	21.04.2025/ 7:04
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Abesh Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature [°C]	29	Humidity %	45	Wind direction	20°-100°
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Sampling Location (s) with GPS coordinates(s)

A. Location A	Near Weigh Bridge	GPS coordinate	23° 22' 26.59" N 84° 28' 34.78" W
B. Location B	GBK Quarry	GPS coordinate	23° 22' 52.64" N 84° 28' 20.63" W
C. Location C	Mine Pit Quarry No. 2A	GPS coordinate	23° 23' 00.83" N 84° 28' 13.94" W
D. Location D	Mine Pit Quarry No. 2B	GPS coordinate	23° 22' 37.08" N 84° 28' 13.00" W

Date(s) of performance of the laboratory activities

Test start date	23.04.2025/ 12:15	Test completion date	27.04.2025/ 16:50
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→ Test Result ←

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5182 (P-23) 2022	µg/m ³	83.75	78.03	76.87	76.92	300 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	40.13	35.33	34.57	33.64	50 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	8.99	7.92	10.86	8.09	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-05) 2022	µg/m ³	26.80	23.91	25.75	23.47	80 (24 hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	36.82	32.00	31.69	32.60	160 (1 hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	51.81	46.12	43.00	44.86	400 (24 hr)
7.	Lead (Pb)	IS:5182(P-22) 2019	µg/m ³	BDL	BDL	BDL	BDL	1.0 (24 hr)
8.	Nickel (Ni)	IS:5182(P-26) 2020	µg/m ³	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2:1999	µg/m ³	BDL	BDL	BDL	BDL	-

--Next Month End--

Prescribed Unit Operational Status	Environmental (Protection) Rules-1986, Schedule VI, Unhazardous Operations, Containing	10
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Analyzed by: A. B. Smith

Handwritten signature: *[Signature]*

Directed by
(E.A. Green)
Lynwood Hall

Verdient to know by

Northland is known for
 its scenic beauty
 and its friendly people.

AuthorLand Simulator

EPIC LabTech Private Limited

Ciu = 8.4 (Inggris) (Indonesia)
 Road No. = 5, Barito
 Distrik = Kutai, Kalimantan

- 00117 20077
- 011-46 13394
- 011-46 13394

EMBL: U00096 (Genome of *Escherichia coli*)
 RefSeq: AA047331 (Genome of *Escherichia coli*)
 JGI: J05491 (Genome of *Escherichia coli*)

Analytical Test Certificate

Uniquaa Lab Report No.	N/A	Discipline	Chemical
Report Uniquaa ID	RL0139251733	Group	Atmospheric Pollution
Issue date/time	28.04.2025/ 10:45	Sub Group	Ambient Air Quality

Report leave to

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

Contact Person	Mr. Ankit Das
Contact Number	+91 9971034775
Email Id	ankit.das@oddyabarta.com
Order Date	31.03.2025/ 10:10
Order Number	13512313865

References of Quality Management Systems (Cases of Toyota's Case)

Customer Registration No.	EPICVOTU0139	Sample Booking Number	EPIC-251733
Sample(s) Code	251733 (A) (B) (C) (D)	Sample Receiver (D/T)	23.04.2015 11:32

Selected Future work

Type of Industry	Basalt Mines	Ref. of Sampling Plan	EPIC/LAB/R006
Sampling method used	IS 5182 and CPCBA Manual Volume – 1 (HAAQH/36/2012-13)		
Sampling Start (D/T)	20.04.2025/ 10:52	Sampling End (D/T)	21.04.2025/ 7:34
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/condition of sample	Recent sample(s) were fit for analysis.		

Environmental Conditions during assessment

Weather condition	Clear	Temperature (°C)	29	Humidity %	45	Wind direction	NW-100%
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Sampling Locations with GPS coordinate (x)

S. Location A	Near Weigh Bridge	GPS coordinate	23° 22' 38.58" / 84° 28' 34.74"
S. Location B	BRE Quarry	GPS coordinate	23° 22' 52.64" / 84° 28' 26.53"
S. Location C	Mine Pit Quarry No. 2A	GPS coordinate	23° 23' 00.53" / 84° 28' 13.54"
S. Location D	Mine Pit Quarry No. 2B	GPS coordinate	23° 22' 57.00" / 84° 28' 13.58"

Details of performance of the laboratory activities

Test start date	23.04.2025/ 12:15	Test completion date	27.04.2025/ 16:50
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—Thank, Heaven!—

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	EU/ISO/IEC 12/2006	µg/m ³	NDL (MDL-3.1)	NDL (MDL-3.1)	NDL (MDL-0.1)	NDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	EU/ISO/IEC 12/2006	µg/m ³	NDL (MDL-0.1)	NDL (MDL-0.1)	NDL (MDL-0.1)	NDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPH/CAS/ISO/IEC 11/16	mg/m ³	NDL (MDL-1.8)	NDL (MDL-1.8)	NDL (MDL-1.8)	NDL (MDL-1.8)	-

-Test Result End-

Prescribed Limit	Environmental Protection Rules-1986, Schedule VI.
Operational Status	Unit was Operational during summer.

Reviewed by: A. L. M.



Checked by
(J.F. Lauer)
Technical Staff

Verified & Issued by
 (Signed) _____
 Laboratory Head



EPIC LabTech Private Limited

Address:
C/o - K.K. Agrawal, Manager,
Naili Mo. - D. Ramak,
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📞 94949 72894
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Lab No: LAB/2022/1017549
Lab: GACH/230119
CST: 23AAAC230119122

Accredited by -
Lab Accredited by: Central Board
Certified by -
ISO 9001:2015 and ISO 17025:2005

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0139251734	Group	Water
Issue date/time	28.04.2025/ 10:47	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 : SHRENDAG A SAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +91 9971034775 ankit.das@edityabnla.com 31.03.2025/ 10:10 13612315668
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15. Gammax-HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	100%	BDL(MOL-4.5)	2.0	No relaxation
16. Malathion	EPIC/LAB/SOP/WA/01/00	100%	BDL(MOL-4.5)	100.0	No relaxation
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	100%	BDL(MOL-0.3)	0.3	No relaxation
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	100%	BDL(MOL-0.5)	1.0	No relaxation
19. Phorate	EPIC/LAB/SOP/WA/01/00	100%	BDL(MOL-0.5)	2.0	No relaxation
20. DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	100%	BDL(MOL-0.3)	1.0	No relaxation
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	100%	BDL(MOL-0.10)	0.4	No relaxation

- Test Result End -

Prescribed Limit	IS 10909:2001
Operational Status	Unit was Operational During sampling
Issued by - Pratik Kumar / Ankit Kumar	



Control by
(S.K. Kumar)
Technical Head

Pratik Kumar
(Ankit Kumar)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Patna, Jharkhand

229. K. K. Tripathi, *Indraprastha*
 State Univ. - 2, Kharoli,
 Meerut - 224001, India

1. 9001 4494282
 2. 855P 88677
 3. 855M 71944
 4. 855P 88677

Cite: [W450MH10329](#) / [C30000](#)
 FILE: [AAR120100](#)
 URL: [http://www.irs.gov/efile](#)

Received 2002 July 17
 Accepted 2002 September 10
 Published online 2002 November 14

15138

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000411
Report Unique ID	RL0139251736
Issued at/office	28.04.2025/10:52

Discipline	Chemical
Group	Water
Sub Group	Ground Water

Report Issues to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD,
POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA,
STATE-JHARKHAND, INDIA 835302
MONITORING SITE - SHRENDAG & BAUKITE HINDALCO

Contact Person	Mr. Ankit Das
Contact Number	+91 9971034775
Email Id	ankit.das@cityofbira.com
Order Date	31.03.2025 / 10:10
Online Number	13612313888

Group - Residues and Contaminants in Water

Sub Group: Trace Metals Elements

16. Copper (as Cu)	APHA 3111 B-2023	mg/l	BOL(MDL-0.2)	0.05	2.5
17. Iron (as Fe)	APHA 3111 B-2023	mg/l	BOL(MDL-0.1)	1.0	No relaxation
18. Lead (as Pb)	APHA 3111 B-2023	mg/l	BOL(MDL-0.01)	0.01	No relaxation
19. Cadmium (as Cd)	APHA 3111 B-2023	mg/l	BOL(MDL-0.005)	0.005	No relaxation
20. Total Chromium (as Cr)	APHA 3111 B-2023	mg/l	BOL(MDL-0.05)	0.05	No relaxation
21. Nickel (as Ni)	APHA 3111 B-2023	mg/l	BOL(MDL-0.02)	0.02	No relaxation
22. Total Arsenic (as As)	APHA 3114 B-2023	mg/l	BOL(MDL-0.006)	0.01	0.05
23. Selenium (as Se)	APHA 3114 B-2023	mg/l	BOL(MDL-0.006)	0.01	No relaxation
24. Manganese (as Mn)	APHA 3111 B-2023	mg/l	BOL(MDL-0.05)	5.1	5.3
25. Zinc (as Zn)	APHA 3111 B-2023	mg/l	BOL(MDL-0.04)	5	10

—Yeast: Monocultured Seed—

Prescribed Limit	IS 10500:2021
Operational Status	Unit was Operational During sampling
Attended by - <i>(Name/Signature/Grade)</i>	

Checked by
(J.A. Lemaire)
Technical Review


 Verified & Issued by
 J. B. Smith
 Laboratory Head
 EFG Lab Pte. Ltd.
 (Incorporated in Singapore)

EPIC LabTech Private Limited

Corr.: R.K. Tyagi, *Indian Institute of Space Science and Technology, Thiruvananthapuram, India*

2025-06-04 10:00
 2025-06-04 10:00
 2025-06-04 10:00
 2025-06-04 10:00

[Crisis Management: How to Plan for the Worst](#)
[How to Build a Crisis Management Plan](#)
[How to Handle a Crisis](#)

Attendance by =
 Auditor's Name, Title, Address, City, State, Zip
 Cost Paid by =
 Name, Address, City, State, Zip

Analysis Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0130251738	Group	Atmospheric Pollution
Issue date/time	28.04.2025 / 10:56	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 : SHRENDAG A BALUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +91 9971034775 ankit.das@adityabirla.com 31.03.2026/ 10:10 13612313868
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References of Quality Management System (Type of Accredited Client)			
Customer Registration No.	EPIC/OTH/0138	Sample Booking Number	EPIC-251730
Sample(s) Code	251730 (A) (B) (C) (D)	Sample Receipt (V/T)	23.04.2025/1142

Sampling Information			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LABR/006
Sampling method used	IS 5382 and CPCB Air Manual Volume – 1 (NAAQS/96/2012-13)		
Sampling Start (D/T)	21.04.2025/11:20	Sampling End (D/T)	22.04.2025/08:34
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Description/Condition of sample	Received sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Clear	Temperature (°C)	26	Humidity (%)	45	Wind direction	280°-100°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Near Banjar Village	GPS coordinate	23°22'40.58"S/84°30'11.81"E
S. Location B	Near Pant Village	GPS coordinate	23°20'10.90"/84°25'59.00"E
S. Location C	Near Harup Village	GPS coordinate	23°24'20.73"/84°24'59.71"E
S. Location D	Near Pant Village	GPS coordinate	23°36'16.98"/84°20'10.70"E

Data(s) of performance of the laboratory activities	
Test start date	23.04.2025 / 12:20
Test completion date	27.04.2025 / 18:30

—Test Results—

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:1502(P-11):2008	μg/m ³	NDL (NDL-0.1)	NDL (NDL-0.1)	NDL (NDL-0.1)	NDL (NDL-0.1)	-
2.	Benz(a) Pyrene (Bap)- Particulate phase only	IS:1502(P-12):2004	μg/m ³	NDL (NDL-0.1)	NDL (NDL-0.1)	NDL (NDL-0.1)	NDL (NDL-0.1)	-
3.	Carbon Monoxide (CO)	IS:1502(P-13):2004	mg/m ³	NDL (NDL-1.0)	NDL (NDL-1.0)	NDL (NDL-1.0)	NDL (NDL-1.0)	-

—Test Result End—

Prescribed Unit Operational Dates Analyzed by - SLSH	Environmental (Protection) Rules- 1986, Schedule VII Unit was Operational During sampling.	 Checked by (H. Kumar) Technical Head	 28/9/25 Verified & Issue by (J. Singh) Laboratory Head
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Created by:
(B.N. Kumar)
Reviewed by:


 Approved & Signed by
 Frank A.
 Laboratory Head

City - K. S. Sripur, Indragiri
Road No. - 5, Raychi,
Mushid - 814005, India

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 Fax: +84 91 231176
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Approved by:
Date: 20/07/2014 per number 11. 12801
Approved State Tribunal Control Board

TC-13002

Analytical Test Certificate

Unique Lab Report No.	TC1258725000000615	Discipline	Chemical
Report Unique ID	RL0172252176	Group	Atmospheric Pollution
Issue date/time	27.06.2025/ 10:15	Sub Group	Ambient Air Quality

Report Issue to	Contact Person	Mr. Ankit Das
M/s - HINDALCO INDUSTRIES LIMITED	Contact Number	+91 9971034775
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,	Email Id	ankit.das@adityabirla.com
DIST. LOHARDAGA, STATE-JHARKHAND, INDIA 825302	Order Date	31.03.2020/ 10:10
MONITORING SITE : SHRENDAG A BAUXITE MINE	Order Number	13612313868

References of Quality Management System (Type of Issuance: Civil)

Customer Registration No.	EPIC/ODN/172	Sample Booking Number	EPIC-252176
Sample(s) Code	252176(A) (B) (C) (D)	Sample Recast (DrT)	19.05.2025/17:32

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	16.06.2023/ 11:30	Sampling End (D/T)	17.06.2023/ 08:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume – 1 (HAAQM/36/2012-13)		
Description/condition of sample	Receivd sample(s) were fit for analysis		

Description/condition of sample Recipient sample(s) were fit for analysis

Environmental Condition during unweeding

Weather condition	Clear	Temperature (°C)	31	Humidity %	49	Wind direction	20°-200°
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Sampling Location(s) with GPS coordinate(s)

2. Location A	Near Weigh Bridge	GPS coordinate	22° 22' 26.59" N 84° 28' 34.74" W
3. Location B	B&B Quarry	GPS coordinate	22° 22' 52.84" N 84° 28' 20.63" W
5. Location C	Mine Pit Quarry No.2A	GPS coordinate	22° 22' 06.82" N 84° 28' 13.94" W
6. Location D	Mine Pit Quarry No.2B	GPS coordinate	22° 22' 37.00" N 84° 28' 13.00" W

Date(s) of performance of the laboratory activities

Test start date	19.09.2025/ 17:18	Test completion date	20.09.2025/ 11:30
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—Test Results—

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS 5102 (P-25) 2022	µg/m³	84.82	76.56	78.56	82.40	180 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5102 (P-24) 2019	µg/m³	42.97	37.87	35.47	40.09	80 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS 5102 (P-02) 2023	µg/m³	09.58	07.75	08.70	08.71	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS 5102 (P-06) 2023	µg/m³	21.02	21.05	19.93	19.96	80 (24 hr)
5.	Ammonia (NH ₃)	IS 5102 (P-35) 2018	µg/m³	56.82	54.54	51.62	50.97	400 (24 hr)
6.	Ozone (O ₃)	IS 5102 (P-09) 2019	µg/m³	39.34	35.77	41.13	35.76	100 (1 hr)
7.	Lead (Pb)	IS 5102 (P-22) 2019	µg/m³	BOL (MDL-0.1)	BOL (MDL-0.1)	BOL (MDL-0.1)	BOL (MDL-0.1)	1,000 (1 hr)
8.	Nickel (Ni)	IS 5102 (P-28) 2020	ng/m³	BOL (MDL-0.1)	BOL (MDL-0.1)	BOL (MDL-0.1)	BOL (MDL-0.1)	-
9.	Arsenic (As)	USEPA IO 3.2 (1989)	ng/m³	BOL (MDL-0.001)	BOL (MDL-0.001)	BOL (MDL-0.001)	BOL (MDL-0.001)	-

—Test Results End—

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

Developed by - AC Sivas



Developed by
G. H. Kumar
Technical Staff

known by
Glenview Child
Laboratory, Inc.

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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Consent to publish 1. The laboratory accepts responsibility for content of this report. 2. The performance of laboratory's personnel facility or specific performance standards is not required and results relate only to the sample tested is guaranteed (see 4. and 5). 3. The test report shall not be reproduced fully in part & may be used as part of the court of law. 4. Any complaint about this report should be communicated in writing within 30 days of its issue. 5. Time liability of LPTC (after 30.01.2017) will be limited by written agreement only. 6. All findings are subjected to final technical and human control of the laboratory. Issues are covered the testing and re-testing charges. 7. Specimens have one study, measurement of the test result by laboratory. Order is comprehensive. Laboratory brought any caused by use or misuse of this report. 8. When the results are not available possible are marked as "such".

EPIC LabTech Private Limited

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DOI: 10.1002/anie.201207108

Submitted by:
 Submitted Date: 11/11/2019 11:11:11 AM
 Certified by:
 Date: 11/11/2019 11:11:11 AM

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0172252176	Group	Atmospheric Pollution
Issue date/time	27.06.2024/ 10:15	Sub Group	Ambient Air Quality

Support issues to

M/s - HINDALCO INDUSTRIES LIMITED	Contact Person	Mr. Ankit Das
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,	Contact Number	+91 9671054779
DIST. -LOHARDAGA, STATE-JHARKHAND, INDIA-835300	Email Id	ankit.das@atityabika.com
MONITORING SITE : SHRENDAG A SAUNTI MINE	Order Date	31.03.2025/ 10:10
	Order Number	13612313668

References of Quality Management System (Case of Incasatella Chivil)

Customer Registration No.	EPIC/GTH/0172	Sample Booking Number	EPIC-052176
Sampler(s) Code	252176 (A) (B) (C) (D)	Sample Receipt (D/T)	19-06-2025/17:02

Sampling References

Type of Industry	Balotte Mines	Ref. of Sampling Plan	EPICLAB/R006
Sampling Start (D/T)	16.06.2025/ 11:30	Sampling End (D/T)	17.06.2025/ 08:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS-5182 and CPCB Air Manual Volume – 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	31	Humidity %	49	Wind direction	20°-200°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Weigh Bridge	GPS coordinate	23° 22' 26.59" / 94° 28' 34.74"
S. Location B	IES Quarry	GPS coordinate	23° 22' 52.64" / 94° 28' 20.63"
S. Location C	Mike P's Quarry No. 2A	GPS coordinate	23° 22' 00.82" / 94° 25' 11.94"
S. Location D	Mike P's Quarry No. 2B	GPS coordinate	23° 22' 37.00" / 94° 25' 13.00"

Date(s) of performance of the laboratory activities

Test start date: 18.05.2025/ 17:58 Test completion date: 20.05.2025/ 11:30

Test Thoughts

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	US EPA 821-F-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	US EPA 821-F-12-2004	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPRI/ASD-SOFT/01/00	mg/m ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

—Sent Results First—

Prescribed Unit	Environmental Protection Rules 1986, Schedule VI
Operational Status	Unit was Operational During sampling

Analysed by – A.C. Silva



Reviewed by
G. N. Kumar
Technical Editor

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



EPIC LabTech Private Limited

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Accredited by -
Tech. Lab. (CPL) Number: TC-12867
Facilities: State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018



Analytical Test Certificate

Unique Lab Report No.	TC1286725050000016	Discipline	Chemical
Report Unique ID	RL017252177	Group	Atmospheric Pollution
Issue date/time	27.05.2025/ 10:17	Sub Group	Ambient Air Quality

Report Issued to		Contact Person	Mr. Arish Das
M/s - HINDALCO INDUSTRIES LIMITED		Contact Number	981 0971034775
VILLAGE - COURT ROAD, POST OFFICE - LOHARDAGA,		Email Id	arish.das@adityabirla.com
DIST - LOHARDAGA, STATE - JHARKHAND, INDIA 835302		Order Date	31.03.2025/ 10:10
MONITORING SITE - SHRENDAG A BAUXITE MINE		Order Number	13612313666

Reference of Quality Management System (Base of Traceability Chain)			
Customer Registration No.	EPIC/OTM/0172	Sample Booking Number	EPIC-252177
Sample(s) Code	252177 (A) (B) (C) (D)	Sample Receipt (D/T)	19.05.2025/ 17:35

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	17.05.2025/ 12:21	Sampling End (D/T)	18.05.2025/ 08:48
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/36/2013-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling							
Weather condition	Clear	Temperature (°C)	31	Humidity %	49	Wind direction	20°-200°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Near Bantari Village	GPS coordinate	23° 22' 40.68" / 84° 30' 11.61"
S. Location B	Near Pauri Village	GPS coordinate	23° 20' 10.96" / 84° 25' 50.00"
S. Location C	Near Harup Village	GPS coordinate	23° 24' 20.73" / 84° 24' 59.71"
S. Location D	Near Paintoli Village	GPS coordinate	23° 28' 16.08" / 84° 28' 10.78"

Date(s) of performance of the laboratory activities			
Test start date	19.05.2025/ 17:58	Test completion date	26.05.2025/ 11:30

-Test Results-								
Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS 5182 (P-20) 2022	µg/m ³	66.13	62.87	69.19	71.94	180 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2018	µg/m ³	30.95	29.07	25.98	34.42	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS 5182 (P-02) 2022	µg/m ³	08.09	07.50	07.48	08.31	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS 5182 (P-06) 2022	µg/m ³	22.32	22.39	17.65	18.09	80 (24 hr)
5.	Ammonia (NH ₃)	IS 5182 (P-25) 2018	µg/m ³	43.83	40.58	42.21	38.96	450 (24 hr)
6.	Ozone (O ₃)	IS 5182 (P-08) 2018	µg/m ³	26.11	23.96	27.54	29.68	180 (1 hr)
7.	Lead (Pb)	IS 5182 (P-22) 2024	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0 (24 hr)
8.	Nickel (Ni)	IS 5182 (P-26) 2020	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
9.	Arsenic (As)	USEPA IO 3.2-2006	µg/m ³	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	-

Prescribed Limit	Environmental Protection Rules-1986, Schedule VI
Operational Status	Unit was Operational During sampling.
Analysed by -	AK Sieba



Reviewed by
(B.K. Suman)
Technical Head

Issued by
(Shreshth Goyal)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

EPIC LabTech Private Limited

Corp. - K. K. Selapatt, Managing Director
 Rajat Nagar - S. Narayan
 Mumbai - 400002, India

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CMC-47499-232277C27963
 PAN-447C30079
 037-33AANCE347M123

Accredited by:
Transcript Case Evaluation Council
Classified by:
NCA 2000-2001 and NCA 2002-2003

Amplified Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0172250177	Group	Atmospheric Pollution
Issue date/time	27.05.2024/ 10:17	Sub Group	Ambient Air Quality

Report Issued to M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835307 MONITORING SITE : SHRENDAG A BALUITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +91 9871034775 ankit.das@aditya.co.in 31.03.2025/ 10:10 13813313868
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Customer Registration No.	EPIC/DTH/0172	Sample Booking Number	EPIC-252177
Sample(s) Code	252177 (A) (B) (C) (D)	Sample Receipt (D/T)	18.05.2025/ 17:35

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/AB/R/036
Sampling Start (D/T)	17.06.2025/12:21	Sampling End (D/T)	18.06.2025/08:48
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume – 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling			
Weather condition	Clear	Temperature (°C)	31
		Humidity %	49
		Wind direction	20°-200°

Sampling location(s) with GPS coordinate(s)		
1. Location A	Near Banjar Village	GPS coordinate 2° 22' 48.58" / 84° 30' 11.81"
2. Location B	Near Pauri Village	GPS coordinate 2° 20' 10.96" / 84° 25' 59.00"
3. Location C	Near Hamp Village	GPS coordinate 2° 24' 29.73" / 84° 24' 59.71"
4. Location D	Near Pomboti Village	GPS coordinate 2° 26' 16.08" / 84° 28' 10.76"

Date(s) of performance of the laboratory activities			
Test start date	18.05.2025/ 17:58	Test completion date	20.05.2025/ 11:30

Sl	Test Parameters	Method used	-Test Results-				Limits	
			Unit	A	B	C		D
1.	Benzene (C ₆ H ₆)	IS 5102(P-11) 2000	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 5102(P-12) 2004	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	SPCLAB/SORAMYS/00	mg/m ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

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



Designed by
(S. K. Kumar)
Technical Staff

Issue by
Cristina Gao
Executive Vice

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

Cup = C.A. Torgersen, Cambridge,
 Road No. 1, Waco, TX
 Workshop = E&E, Inc.

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 GEF—Guanine Exchange Factor

Accredited by:
 ATEC user certificate number 16, 1/2017
 Southern High School (attests to)
 Certified by:
 ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

Unique Lab Report No.	TC1268720090000617	Discipline	Chemical
Report Unique ID	RL0172252178	Group	Atmospheric Pollution
Issue date/time	27.05.2025/ 10:19	Sub Group	Ambient Noise

Report issue to

M/s - HINDALCO INDUSTRIES LIMITED	Contact Person	Mr. Anil Das
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,	Contact Number	+91 9671034776
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302	Email Id	ankit.das@edityabinfo.com
MONITORING SITE : SHRENDAG A BAUXITE MINE	Order Date	31.03.2025/ 10:10
	Order Number	1361231366

References of Quality Management Systems (State of Tennessee, David)

Customer Registration No.	EPIC/OTH/0372	Sample Booking Number	EPIC-252178
Sample(s) Code	252178 (A) (B) (C) (D)	Sample Receipt (D/T)	19.05.2025/ 17:26

Saving References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	16.05.2025/ 11:30	Sampling End (D/T)	17.05.2025/ 08:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 9090:1981 (RA 2020) & CPCB Method S.O. 56 (E) dated 11/01/2019		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	31	Humidity %	49	Wind direction	20°-200°
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Sampling Location(s) with GPS coordinate(s)

3. Location A	Teal Wreigh Bridge	GPS coordinate	23° 22' 26.59" / 84° 28' 34.74"
3. Location B	B&B Quarry	GPS coordinate	23° 22' 52.64" / 84° 28' 30.03"
3. Location C	Mine Pit Quarry No.2A	GPS coordinate	23° 23' 00.83" / 84° 28' 13.94"
3. Location D	Mine Pit Quarry No.2B	GPS coordinate	23° 22' 37.09" / 84° 28' 13.00"

Notes(s) of performance of the laboratory activities

Test start date	19.05.2025/ 17:30	Test completion date	26.06.2025/ 11:36
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Fast Facts:

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	L_{50} (Day time)	IS: 9080:1981	dB (A)	53.6	46.7	43.5	46.0	75
2.	L_{50} (Night time)	IS: 9080:1981	dB (A)	41.0	37.9	39.7	36.3	70

—Test Results End—

Prescribed Limit	Environmental Protection Rules - 1986, Schedule II
Operational Status	Unit was Operational During sampling
Analysis by - J.S. Sethi	11/12



Reviewed by
(Dr. K. K. K. K.)
Technical Head

Issued By
Chandni Dhill
Laboratory Head
Authorized Signatory
EPIC LabTech Pvt. Ltd.
Pune, Maharashtra



EPIC LabTech Private Limited

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Accredited by -
NABL (ISO 9001:2015) Number: IC-1201
NABL (ISO 17025:2017) Number: 1201
NABL (ISO 14001:2015) Number: 1201
NABL (ISO 45001:2018) Number: 1201



Analytical Test Certificate

Unique Lab Report No.	TC1266725000000018	Discipline	Chemical
Report Unique ID	RL0372252179	Group	Pollution & Environment
Issue date/time	27.05.2025/ 10:21	Sub Group	Waste Water (Effluent)

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9971034775
ankit.das@adhyatma.com
21.03.2025/ 10:10
13612313698

References of Quality Management System (Copy of Issuance Chart)

Customer Registration No.	EPIC/01H/0173	Sample Booking Number	EPIC-252179
Sample(s) Code	252179	Sample Receipt (D/T)	19.05.2025/ 17:46

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/030
Sampling Start (D/T)	17.05.2025/ 15:30	Sampling End (D/T)	17.05.2025/ 15:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	33	Humidity %	49	Wind direction	20°-200°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Work Shop (Outlet)	GPS coordinate	23° 22' 27.39" N 84° 28' 33.24" E
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Data(s) of performance of the laboratory activities

Test start date	20.05.2025/ 11:00	Test completion date	24.05.2025/ 12:30
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-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25.0°C	IS 3025 (P-11) 2002	-	6.56	6.5-8.5
2.	BOD (3 days at 27°C)	IS 3025 (P-44) 2000	mg/l	12.00	-
3.	COO	IS 3025 (P-38) 2000	mg/l	80.00	150.0
4.	Oil & Grease	IS 3025 (P-30) 2021	mg/l	BOLMCL-04	10.0
5.	Total Suspended Solid	IS 3025 (P-17) 2022	mg/l	33.00	50.0
6.	Phosphate	IS 3025 (P-35/Sec-1) 2022	mg/l	0.76	-
7.	Zinc (as Zn)	APHA 3111 B 2003	mg/l	BOLMCL-04	-

-Test result End-

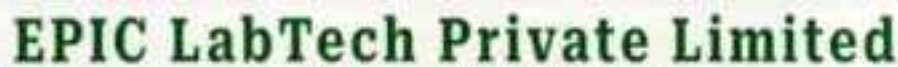
Prescribed Limit
Operational Status
Environmental (Protection) Rules 1986, Schedule I, Serial No. 124.
Unit was Operational During sampling.

Analysed by - Akash Kumar



Reviewed by
G.R. Kumar
Technical Head

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



Certified by:
[Signature]

Supplemental Notes 7 & The laboratory weights responsibility for content of this report. 1. That performed at laboratory's permanent facility, at specific environmental conditions as method required and results relate only to the sample tested in specified limits & time. 2. The report shall not be reproduced but if it is not it may be used as proof in the court of law. 3. Any comments about this report should be communicated to us using either of steps of item 7. Your identity or NPL/Landfill PVI 2022 will be treated as confidential amount only. 4. All findings are evaluated in forensic jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges. 5. Cytotoxic tests are highly measurement of the natural product by laboratory. Due to complexity, laboratory accepts any result for use as evidence of this report. 6. When the results are then internal procedure are enacted as a result.



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GST: 22AAACD3678612X

Accredited by -
Lab. no: 001636 Number (C, ISO)
Jharkhand State Pollution Control Board
Certified for -
ISO 9001:2015 and ISO 45001:2018



Analytical Test Certificate

Unique Lab Report No.	TC128672500000710	Discipline	Chemical
Report Unique ID	RL02502529006	Group	Atmospheric Pollution
Issue date/time	20.06.2025/ 10:23	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: SHREDDAG A BAUXITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9671034775
ankit.das@himalyaipriva.com
31.03.2025/ 10:10
13612313868

References of Quality Management System (Case of Inaccessibility Client)

Customer Registration No.	EPIC/OTH/0205	Sample Booking Number	EPIC-2525006
Sample(s) Code	2525006 (A) (B) (C) (D)	Sample Receipt (D/T)	10.06.2025/ 11:01

Sampling References

Type of industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	13.06.2025/ 12:25	Sampling End (D/T)	14.06.2025/ 09:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5162 and CPCB Air Manual Volume - 1 (NAAQM/06/2012-13)		

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

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	29	Humidity %	57	Wind direction	90°-270°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Weigh Bridge	GPS coordinate	23° 22' 20.89" / 84° 28' 34.74"
S. Location B	B&B Quarry	GPS coordinate	23° 22' 52.64" / 84° 28' 20.83"
S. Location C	Mine Pit Quarry No.2A	GPS coordinate	23° 20' 00.83" / 84° 28' 13.94"
S. Location D	Mine Pit Quarry No.2B	GPS coordinate	23° 22' 37.00" / 84° 28' 13.00"

Date(s) of performance of the laboratory activities

Test start date	10.06.2025/ 11:15	Test completion date	19.06.2025/ 15:13
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-Test Results-

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS 5162 (P-25) 2002	µg/m ³	82.67	75.21	76.20	80.17	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5162 (P-34) 2019	µg/m ³	40.48	36.58	34.36	38.24	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS 5162 (P-02) 2002	µg/m ³	08.22	06.26	07.05	07.44	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS 5162 (P-06) 2002	µg/m ³	20.09	19.03	17.97	16.91	80 (24 hr)
5.	Ammonia (NH ₃)	IS 5162 (P-25) 2019	µg/m ³	54.22	50.00	49.03	48.05	400 (24 hr)
6.	Ozone (O ₃)	IS 5162 (P-09) 2019	µg/m ³	37.20	39.34	38.99	34.34	180 (1 hr)
7.	Lead (Pb)	IS 5162 (P-22) 2019	µg/m ³	BDL	BDL	BDL	BDL	1.0 (24 hr)
				(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	
8.	Nickel (Ni)	IS 5162 (P-26) 2020	ng/m ³	BDL	BDL	BDL	BDL	-
				(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	
9.	Arsenic (As)	USEPA 10.3.2.1999	ng/m ³	BDL	BDL	BDL	BDL	-
				(MDL-0.001)	(MDL-0.001)	(MDL-0.001)	(MDL-0.001)	

-Test Results End-

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

Analyzed by - Archana Gargan



Reviewed by
(E.K. Kumar)
Technical Head

Tested by
(Shree Satish)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

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TC-12002

Analytical Test Certificate

Unique Lab Report No.	TC1268725000000711	Discipline	Chemical
Report Unique ID	RL02502525007	Group	Atmospheric Pollution
Issue date/time	20-06-2025/ 10:28	Sub Group	Ambient Air Quality

Request Image for

M/s - HINDALCO INDUSTRIES LIMITED	Contact Person	Mr. Ankit Das
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,	Contact Number	+91 9671034776
DIST.-CHHARDAGA, STATE-BHARHAT, INDIA 826302	Email Id	ankit.das@himalyabirla.com
MONITORING SITE: SHRENDAG A BAUNITE MINE	Order Date	21.03.2025/ 10:10
	Order Number	13612312668

References of Quality Management Systems (Stages of Treadability Chart)

Customer Registration No.	EPIC/CTH/0205	Sample Booking Number	EPIC-2525007
Sample(s) Code	2525007 (A) (B) (C) (D)	Sample Receipt (D/T)	18-06-2025/ 11:03

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPCLAB/R/006
Sampling Start (D/T)	14.06.2025/ 11:50	Sampling End (D/T)	15.06.2025/ 09:10
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 samples were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	29	Humidity %	57	Wind direction	SE-NE
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Sampling Location(s) with GPS coordinate(s)

B. Location A	Near Sanjunt Village	GPS coordinate	23° 22' 40.58" N 104° 30' 11.81" E
C. Location B	Near Paurs Village	GPS coordinate	23° 26' 10.96" N 104° 25' 59.00" E
D. Location C	Near Hang Village	GPS coordinate	23° 24' 26.73" N 104° 24' 59.71" E
E. Location D	Near Pointot Village	GPS coordinate	23° 26' 16.06" N 104° 28' 10.78" E

Date(s) of performance of the laboratory activities

Test start date	18.06.2025/ 11:20	Test completion date	19.06.2025/ 16:13
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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) 2023	µg/m³	64.38	60.35	67.29	70.52	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m³	28.28	27.71	23.28	33.81	80(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS 5182 (P-62) 2023	µg/m³	07.83	06.96	07.83	07.44	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS 5182 (P-60) 2022	µg/m³	20.08	19.03	16.91	17.97	80(24 hr)
5.	Ammonia (NH ₃)	IS 5182 (P-26) 2018	µg/m³	41.23	38.31	41.23	36.36	400(24 hr)
6.	Ozone (O ₃)	IS 5182 (P-68) 2019	µg/m³	25.04	22.18	26.11	27.18	180(1 hr)
7.	Lead (Pb)	IS 5182(P-25) 2018	µg/m³	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/m³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
9.	Arsenic (As)	USEPA IO 3.2-1998	ng/m³	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	BDL (MDL-0.001)	-

—Test Number End—

Prescribed Limit Environmental Protection Rule-1986, Schedule VI,
Operational Status Unit was Operational During sampling.
Analyzed by - Archana Gaurin



Reviewed by
(S. K. Kumar)
Technical Head

12
12/21/05
Issued By
Gerrard East
Laboratory Board

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26



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CIN: U74900JH2018PT000001 Accredited by -
RIN: AACH220116
GST: 20AA-HCC879H12X

Jharkhand State Pollution Control Board
Certified to -
ISO 9001:2015 and ISO 14001:2015

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02902525007	Group	Atmospheric Pollution
Issue date/time	20.06.2025/ 10:25	Sub Group	Ambient Air Quality

Report Issue to

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

Contact Person Mr. Ankit Das
Contact Number +91 9871034779
Email Id ankit.das@adhyabirva.com
Order Date 21.03.2025/ 10:10
Order Number 13612313868

References of Quality Management System (Gloss of Traceability Check)

Customer Registration No.	EPIC/OTH/0265	Sample Booking Number	EPIC-2525007
Sample(s) Code	2525007 (A) (B) (C) (D)	Sample Receipt (D/T)	10.06.2025/ 11:03

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	14.06.2025/ 11:50	Sampling End (D/T)	15.06.2025/ 09:10
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/06/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	29	Humidity %	57	Wind Direction	90°-270°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Barjan Village	GPS coordinate	23° 22' 40.58" N 84° 30' 11.81" E
S. Location B	Near Pouri Village	GPS coordinate	23° 20' 10.98" N 84° 25' 39.00" E
S. Location C	Near Harup Village	GPS coordinate	23° 24' 20.73" N 84° 34' 59.71" E
S. Location D	Near Painton Village	GPS coordinate	23° 26' 10.08" N 84° 28' 10.78" E

Data(s) of performance of the laboratory activities

Test start date	18.06.2025/ 11:20	Test completion date	19.06.2025/ 15:13
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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	BOL (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	BOL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/4P/01/06	mg/m ³	BOL (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 VI.
Operational Status: Unit was Operational During sampling.

Analysed by - Archana Saran



Reviewed by
S.K. Kumar
Technical Head





EPIC LabTech Private Limited

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CIN - U74900IN2022PT01009081
PAN - AAKC23611M
GST - 20AAHCE3361M1Z4
Authorized by -
Head Office - Ranchi
Ranchi - 834001, India
Ranchi - 834001, India

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02502525008	Group	Atmospheric Pollution
Issue date/time	20.06.2025/ 10:27	Sub Group	Work Zone Noise

Report Issue to	Mr. Ankit Das
M/s - HINDALCO INDUSTRIES LIMITED	Contact Number
VILLAGE - COURT ROAD, POST OFFICE - LOHARDAGA,	+91 9971034775
DIST. - LOHARDAGA, STATE - JHARKHAND, INDIA 835302	Email id
MONITORING SITE: SHRENDAG A BAUXITE MINE	ankit.das@edityabris.com
	Order Date
	31.03.2025/ 10:10
	Order Number
	13812313868

References of Quality Management System (Steps of Traceability Chain)	
Customer Registration No.	EPIC/OTM/0208
Sample(s) Code	2525008 (A) (B)
Sample Booking Number	EPIC-2525008
Sample Receipt (D/T)	16.06.2025/ 11:07

Sampling References	
Type of Industry	Bauxite Mines
Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D)	13.06.2025
Sampling End (D)	13.06.2025
Mode of Sampling	Conducted by Laboratory
Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 9589:1981 (RA 2020) & CPCB Method S.O.50 (E) dated 11/01/2010
Description/condition of sample	Receipt sample(s) were fit for analysis.

Environmental Condition during sampling	
Weather condition	Clear
Temperature (°C)	29
Humidity %	57
Wind direction	90°-270°

Sampling Location(s) with GPS coordinate(s)	
S. Location A	Near Perclain
GPS coordinate	23° 22' 51.46" / 84° 28' 17.93"
S. Location B	Shrendag A Bauxite Mines (150.81 Ha)
GPS coordinate	23° 22' 36.23" / 84° 28' 13.84"

Date(s) of performance of the laboratory activities	
Test start date	16.06.2025/ 11:20
Test completion date	19.06.2025/ 13:10

-Test Results-					
Sl	Test Parameters	Method used	Unit	Results	Limits
1.	L _{eq}	IS: 9589:1981	dB (A)	71.1	73.4

-Test Results End -					
Prescribed Limit	NIOSH - Publication No. 95-138 in 2012, Table 1-1				
Operational Status	Unit was Operational During sampling.				

Analysed by - Anand Garia



Reviewed by
(S.A. Garia)
Technical Head

Headed by
(Anand Garia)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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CIN = W400046202752VYV001	Reviewed by -
FAN = 646CZ36106	Paul, vice president, Corporate VC, C&D
EST = 204414E36106129	Full-time State Politics Liaison, Corporate VC
	Carried by -
	Pat, vice president, vice president, C&D

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Unique Lab Report No.	IC1288725000000057	Discipline	Chemical
Report Unique ID	RL03322529018	Group	Atmospheric Pollution
Issue date/time	19.07.2025/ 17:00	Sub Group	Ambient Air Quality

Report Issues to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST -LOHARDAGA, STATE-JHARKHAND, INDIA-835002
MONITORING SITE: SHRENDAG A BAUXITE MINE

Contact Person	Mr. Anil Das
Contact Number	+91 9671034776
Email Id	anil.das@edhyatra.com
Order Date	31.03.2025/ 10:10
Order Number	13612313888

References of Quality Management System (Based on ISO 9000:2000)

Customer Registration No.	EPIC/OT/0232	Sample Booking Number	EPIC-2529018
Sample(s) Code	2529018 (A) (B) (C) (D)	Sample Receipt (D/T)	15.07.2020/ 11:17

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPCLAB/038
Sampling Start (D/T)	12.07.2025/ 12:30	Sampling End (D/T)	13.07.2025/ 08:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/06/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	25	Humidity %	72	Wind direction	90°-270°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Weigh Bridge	GPS coordinate	23° 22' 26.58" / 84° 28' 34.74"
S. Location B	BAB Quarry	GPS coordinate	23° 22' 52.64" / 84° 28' 20.63"
S. Location C	Mine Pit Quarry No.2A	GPS coordinate	23° 23' 00.53" / 84° 28' 13.94"
S. Location D	Mine Pit Quarry No. 2B	GPS coordinate	23° 22' 37.00" / 84° 28' 13.00"

Order(s) of performance of the laboratory activities

Test start date	15.07.2025/ 11:37	Test completion date	15.07.2025/ 15:00
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Fast Facts

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS 5182 (P-23) 2022	µg/m³	78.09	71.36	72.06	76.92	330 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m³	36.69	32.69	30.71	34.32	90 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS 5182 (P-10) 2020	µg/m³	07.48	06.12	07.12	06.33	90 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS 5182 (P-06) 2022	µg/m³	18.60	17.52	15.34	14.28	80 (24 hr)
5.	Ammonia (NH ₃)	IS 5182 (P-25) 2018	µg/m³	50.66	46.22	44.94	44.3	400 (24 hr)
6.	Ozone (O ₃)	IS 5182 (P-08) 2019	µg/m³	33.29	39.10	34.79	30.4	1800 (hr)
7.	Lead (Pb)	IS 5182(P-22) 2019	µg/m³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.0004 (hr)
8.	Nickel (Ni)	IS 5182(P-26) 2020	ng/m³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
9.	Arsenic (As)	USEPA 823.2-1999	ng/m³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

—Sept. Number End—

Prescribed Use	Environmental Protection Rules-1986, Schedule VI
Operational Status	Unit was Operational During sampling

Analysed by: Vishal Mangaraj



Reviewed by
(S.N. Kumar)
Technical Head

Authorized Signatory
EPIC LabTech Pvt. Ltd

South America

Page 4 of 5

[illegible]

Keywords: EFL; Foreign Language Learning; WFL; Strategic Competence; L2 Proficiency



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Jharkhand State Pollution Control Board
PIN - 834012 INDIA
GST - 22AAACE3478A12X Certified by -
ISO 9001:2015 and ISO 14001:2015

Environmental Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02322629018	Group	Atmospheric Pollution
Issue Date/Time	19.07.2025/ 17:00	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE - COURT ROAD, POST OFFICE - LOHARDAGA,
DIST - LOHARDAGA, STATE - JHARKHAND, INDIA 836302
MONITORING SITE: SHRENDAG A BAUXITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number
Mr. Arjit Das
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arjit.das@quiditybites.com
31.03.2025/ 10:10
13612313868

References of Quality Management System (State of Jharkhand Govt)

Customer Registration No.	EPIC/OTH/0232	Sample Booking Number	EPIC-2529018
Sample(s) Code	2529018 (A) (B) (C) (D)	Sample Receipt (D/T)	15.07.2025/ 11:17

Sampling References

Type of industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	12.07.2025/ 12:30	Sampling End (D/T)	13.07.2025/ 08:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/06/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	25	Humidity %	72	Wind direction	90°-270°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Weigh Bridge	GPS coordinate	23° 22' 26.59" / 84° 28' 34.74"
S. Location B	BKB Quarry	GPS coordinate	23° 22' 52.64" / 84° 28' 20.63"
S. Location C	Mine Pit Quarry No.2A	GPS coordinate	23° 22' 00.03" / 84° 28' 13.94"
S. Location D	Mine Pit Quarry No.2B	GPS coordinate	23° 22' 37.00" / 84° 28' 13.00"

Data(s) of performance of the laboratory activities

Test start date	15.07.2025/ 11:37	Test completion date	19.07.2025/ 15:00
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS 5182(P-13) 2006	µgm ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benz(a) Pyrene (Bap)- Particulate phase only	IS 5182(P-12) 2004	ngm ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SC/PAH/0100	mgm ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

-Test Results End-

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

Analysed by - Vishal Mangaraj



Reviewed by
B.K. Kumar
Technical Head





EPIC LabTech Private Limited

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FBN:-AAPCE34114
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NABL, ISO 15189:2013 Number: 15109
Hazardous Waste License Number:
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ISO 9001:2015 and ISO 45001:2018



Chemical and Environmental Analysis

Unique Lab Report No.	TC128672500000658	Discipline	Chemical
Report Unique ID	RL02322529019	Group	Atmospheric Pollution
Issue date/time	19.07.2025/ 17:02	Sub Group	Ambient Air Quality

Report Issue to

PNs - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 836302
MONITORING SITE: SHRENDAG A BAUXITE MINE

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email id ankit.das@quiditybirla.com
Order Date 31.03.2025/ 10:10
Order Number 1361231366

References of Quality Management System (Steps of Feasibility Study)

Customer Registration No.	EPIC/OTN/0232	Sample Booking Number	EPIC-2529019
Sample(s) Code	2529019 (A) (B) (C) (D)	Sample Receipt (D/T)	15.07.2025/ 11:21

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	13.07.2025/ 12:21	Sampling End (D/T)	14.07.2025/ 08:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	72	Wind direction	90°-270°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Bangari Village	GPS coordinate	23° 22' 40.58" N 84° 30' 11.81" E
S. Location B	Near Pauri Village	GPS coordinate	23° 20' 10.96" N 84° 25' 59.00" E
S. Location C	Near Harup Village	GPS coordinate	23° 24' 20.73" N 84° 24' 59.71" E
S. Location D	Near Pauri Village	GPS coordinate	23° 26' 16.08" N 84° 28' 10.78" E

Date(s) of performance of the laboratory activities

Test start date	15.07.2025/ 11:38	Test completion date	19.07.2025/ 15:00
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-Test Results-

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS 5182 (P-23) 2022	µg/m ³	60.74	56.30	63.52	66.45	200 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2018	µg/m ³	24.63	23.64	19.18	29.29	80 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS 5182 (P-02) 2022	µg/m ³	06.89	05.52	06.72	06.33	-
4.	Nitrogen Dioxide (NO ₂)	IS 5182 (P-06) 2022	µg/m ³	18.60	17.52	15.38	15.39	-
5.	Ammonia (NH ₃)	IS 5182 (P-25) 2018	µg/m ³	37.81	34.74	36.97	32.19	400 (24 hr)
6.	Ozone (O ₃)	IS 5182 (P-09) 2019	µg/m ³	18.82	18.62	22.07	23.52	180 (1 hr)
7.	Lead (Pb)	IS 5182 (P-20) 2018	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-28) 2020	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
9.	Arsenic (As)	USEPA 10.3.2-1990	ng/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 VI.
Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by
(S. Kumar)
Technical Head

Analysed by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.

Page 2 of 2

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ISO 9001:2015 and ISO 15189:2013

Amplified Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL00322529019	Group	Atmospheric Pollution
Issue date/time	19.07.2025/ 17:03	Sub Group	Ambient Air Quality

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

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

References of Quality Management System (Cases of Integrity Chain)

Customer Registration No.	EPIC/OTH/0232	Sample Booking Number	EPIC-2529019
Sample(s) Code	2529019 (A) (B) (C) (D)	Sample Receipt (D/T)	15.07.2025/ 11:21

Sampling References

Type of industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/6/036
Sampling Start (D/T)	13.07.2025/ 12:21	Sampling End (D/T)	14.07.2025/ 09:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	72	Wind direction	90°-270°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Banjan Village	GPS coordinate	23° 22' 40.58" N 84° 30' 11.81" E
S. Location B	Near Pauri Village	GPS coordinate	23° 20' 10.96" N 84° 25' 59.00" E
S. Location C	Near Harup Village	GPS coordinate	23° 24' 20.73" N 84° 24' 58.71" E
S. Location D	Near Paintis Village	GPS coordinate	23° 26' 16.08" N 84° 28' 10.78" E

Data(s) of performance of the laboratory activities

Test start date	15.07.2025/ 11:38	Test completion date	19.07.2025/ 15:00
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-Test Results-

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS 5182 (P-13) 2006	µg/m ³	BOL (MDL 0.1)	BOL (MDL 0.1)	BOL (MDL 0.1)	BOL (MDL 0.1)	-
2.	Benz (a) Pyrene (Bap)- Perisolate phase only	IS 5182 (P-13) 2004	µg/m ³	BOL (MDL 0.1)	BOL (MDL 0.1)	BOL (MDL 0.1)	BOL (MDL 0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/APP/01/05	µg/m ³	BOL (MDL 1.8)	BOL (MDL 1.8)	BOL (MDL 1.8)	BOL (MDL 1.8)	-

Prescribed Limit: Environmental (Protection) Rules-2006, Schedule VI.
Operational Status: Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by
S.E. Kumar
Technical Head





EPIC LabTech Private Limited

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PAN: AAKCT2011M
GST: 22AAHCE2019A12X

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(Tested State Private Control System)
Certified for -
ISO 9001:2015 and ISO 45001:2018



Accredited for Compliance

Unique Lab Report No.	TC1288725000000889	Discipline	Chemical
Report Unique ID	RL03322529020	Group	Water
Issue date/time	19.07.2025/ 17:04	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: SHRENDAG A BAUXITE MINE

Contact Person
Contact Number
Email id
Order Date
Order Number

Mr. Ankit Das
+91 9871094775
ankit.das@odhyabira.com
31.05.2025/ 10:10
13812313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTM/0232	Sample Booking Number	EPIC-2529020
Sample(s) Code	2529020	Sample Receipt (D/T)	16.07.2025/ 11:22

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	12.07.2025/ 14:30	Sampling End (D/T)	12.07.2025/ 14:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, B-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	72	Wind direction	90°/270°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mines Office	GPS coordinate	23° 22' 26.03" / 84° 28' 24.02"
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Detail(s) of performance of the laboratory activities

Test start date	15.07.2025/ 11:42	Test completion date	19.07.2025/ 16:00
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-Test Result-

Sl.	Test Parameters	Method used	UNIT	Results	Limits	
					Acceptable Limit	Permissible limit
1.	pH value at 25.1°C	IS 3025 (P-11) 2002	-	6.71	6.5-8.5	No restriction
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.78	1	5
3.	Colour	IS 3025 (P-04) 2002	Pazen	<5	5	15
4.	Odour	IS 3025 (P-03) 2018	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2003	mg/l	149.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	12.74	250	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	87.00	300	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	96.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1981	mg/l	12.62	75	200
11.	Free Residual Chlorine	IS 3025 (P-36) 1989	mg/l	BDL(MOL/L)	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-34/Sec-1) 2002	mg/l	1.20	200	400
13.	Nitrate (as NO ₃)	APHA 4500 N-2023	mg/l	0.95	46	No restriction
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2002	mg/l	BDL(MOL/L)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2003	mg/l	14.65	30	100

Page 1 of 3

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PAN: AAFCT3407M
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TC-12867

Amplified Test Certificate

Unique Lab Report No.	TC1286723000000689	Discipline	Chemical
Report Unique ID	RL00322529029	Group	Water
Issue date/time	19.07.2023/ 17:04	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: SHRENDAG A BAUSOTE MINE

Contact Person: Mr. Ankit Das
Contact Number: +91 9871034775
Email id: ankit.das@quidfybns.com
Order Date: 31.03.2023/ 10:10
Order Number: 19812313868

Group - Residues and Contaminants in Water

Sub Group - Trace Metals Elements

16. Copper (as Cu)	APHA 3113 B 2023	mg/l	BDL(MDL 0.2)	0.03	1.3
17. Iron (as Fe)	APHA 3113 B 2023	mg/l	BDL(MDL 0.1)	1.2	No relaxation
18. Lead (as Pb)	APHA 3113 B 2023	mg/l	BDL(MDL 0.01)	0.01	No relaxation
19. Cadmium (as Cd)	APHA 3113 B 2023	mg/l	BDL(MDL 0.003)	0.003	No relaxation
20. Total Chromium (as Cr)	APHA 3113 B 2023	mg/l	BDL(MDL 0.05)	0.05	No relaxation
21. Nickel (as Ni)	APHA 3113 B 2023	mg/l	BDL(MDL 0.02)	0.02	No relaxation
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(MDL 0.005)	0.01	0.05
23. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(MDL 0.005)	0.01	No relaxation
24. Manganese (as Mn)	APHA 3113 B 2023	mg/l	BDL(MDL 0.05)	0.1	0.3
25. Zinc (as Zn)	APHA 3113 B 2023	mg/l	BDL(MDL 0.04)	0	15

-Test result End-

Prescribed Limit

IS 18900:2021

Operational Status

Unit was Operational During sampling.

Analysed by - Vishal Mangarkar



Reviewed by
(R. Kumar)
Technical Head

19/7/23
Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Page 2 of 2



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Recognized by -
Department of Environment & Forest,
Government of India
Certified by -
ISO 9001:2015 and ISO 14001:2015

Analysis Report Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02322529020	Group	Water
Issue date/time	19.07.2025/ 17:04	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: SHRENDAGA BAUXITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Anil Das
+91 9871034775
anil.das@editybirla.com
31.03.2025/ 10:10
13612313868

References of Quality Management System (Case of Traceability Chain)

Customer Registration No.	EPIC/OTH/0232	Sample Booking Number	EPIC-2529020
Sample(s) Code	2529020	Sample Receipt (D/T)	15.07.2025/ 11:22

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	12.07.2025/ 14:30	Sampling End (D/T)	12.07.2025/ 14:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS: 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	72	Wind direction	90°-270°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mines Office	GPS coordinate	23° 22' 29.03" / 84° 28' 24.02"
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Date(s) of performance of the laboratory activities

Test start date	15.07.2025/ 11:42	Test completion date	19.07.2025/ 16:00
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-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible test
1.	Fluoride (as F)	APHA 4500 F-C 2005	mg/l	BDL(MDL-0.1)	1.0	1.5
Group-Residues and Contaminants in Water					Sub Group-Trace Metals Elements	
2.	Aluminum	IS 3025 (P-55) 2018	mg/l	BDL(MDL-0.1)	0.03	0.2
3.	Boron	IS 3025 (P-57) 2021	mg/l	BDL(MDL-0.1)	0.8	1.8
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	0.5	No relaxation
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	0.1	No relaxation
Group-Residues and Contaminants in Water					Sub Group-Pesticides	
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.3)	20	No relaxation
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	3.0	No relaxation
8.	Diiodrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.02	No relaxation
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.005)	0.01	No relaxation
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.3)	125.0	No relaxation
12.	Chlorpyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.3)	30.0	No relaxation
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.3)	3.0	No relaxation

Page 3 of 3

Important Note: 1. The laboratory accepts responsibility for accuracy of this report. 2. Test performed at laboratory's permanent facility. 3. All specific environmental conditions as method required and results relate only to the sample tested in prescribed Date & Time. 4. The final report shall not be reprinted/fall or re-print is not to be used as proof in the court of law. 5. Any complaint about this report should be communicated to writing within 30 days of the issue. 6. Total liability of EPIC LabTech Pvt. Ltd. will be limited to financial amount only. 7. All disputes are subjected to Ranchi Jurisdiction and exclusive liability of the laboratory shall not extend for testing and sampling charges. 8. Signature from our duly authorized representative of the method product by laboratory. Under no circumstances, laboratory accepts any responsibility for use or misuse of this report. 9. Where the results are being released prior to the official report, it is stated. 10. Abbreviation: BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), µg/l (Gram of Grams/Liter).



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Analysis of Soil Contaminants

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL0322529021	Group	Water
Issue date/time	18.07.2025/ 17:08	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- SHRENDAG A BAUXITE MINE

Contact Person
Contact Number
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Order Date
Order Number

Mr. Ankit Das
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ankit.das@adnyabirla.com
31.03.2025/ 10:10
13612313868

Reference of Quality Management System (Step of Traceability Chain)

Customer Registration No.	EPIC/OTH/0232	Sample Booking Number	EPIC-2529021
Sample(s) Code	2529021	Sample Receipt (D/T)	15.07.2025/ 11:22

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/030
Sampling Start (D/T)	12.07.2025/ 14:30	Sampling End (D/T)	12.07.2025/ 14:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS: 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	28	Humidity %	72	Wind direction	90°/270°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mines Office	GPS coordinate	23° 22' 26.03" N 84° 28' 24.02" E
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Date(s) of performance of the laboratory activities

Test start date	15.07.2025/ 12:00	Test completion date	18.07.2025/ 15:40
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-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	Total Coliform	IS 18186:2002	Per 100 ml	Not Detected	Shall not be detectable in any 100 ml sample
2.	E.Coli	IS 18186:2002	Per 100 ml	Not Detected	

-Test result End -

Prescribed Limit
Operational Status

IS 10300:2021
Unit was Operational During sampling

Analysed by - Jyoti Kumar

Reviewed by
(SR Kumar)
Technical Head

Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory

EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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Unique Lab Report No.	TC1288721000001955	Discipline	Chemical
Report Unique ID	RL02942519622	Group	Atmospheric Pollution
Issue date/time	20.08.2025: 17:00	Sub Group	Ambient Air Quality

Report Issues to

M/s - HINDALCO INDUSTRIES LIMITED	Contact Person	Mr. Ankit Dutt
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,	Contact Number	+91 9971034775
DIST. LOHARDAGA, STATE: JHARKHAND, INDIA 815312	Email Id	ankit.dutt@adityabirla.com
MONITORING SITE : SHRENDAG A BAUXITE MINE	Order Date	31.03.2025/ 10:10
	Order Number	13612313868

References of Quality Management Systems (Class of Transcellin O'neil)

Customer Registration No.	EPIC/GFA/0264	Sample Booking Number	EPIC-2535002
Sample(s) Code	2535002 (A) (B) (C) (D)	Sample Receipt (D/T)	25.09.2025/11:25

Suggested References

Type of Industry	Battery Mines	Ref. of Sampling Plan	EPIC/LAB-R/036
Sampling Start (D/T)	21.08.2025/ 12:31	Sampling End (D/T)	22.08.2025/ 08:57
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Anish Kumar & Team
Sampling method used	IS 5182 and CPCS Air Manual Volume – 1 (NAAQM/36/2012-13)		
Description/condition of sample	Revised sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	225°-40°
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Sampling Location(s) with GPS coordinate(s)

B. Location A	Near Weigh Bridge	GPS coordinate	22° 22' 26.59" N 84° 26' 34.74" W
B. Location B	BNB Quarry	GPS coordinate	22° 22' 52.64" N 84° 26' 20.83" W
B. Location C	Mile Pk Quarry No.2A	GPS coordinate	22° 22' 00.83" N 84° 26' 13.94" W
B. Location D	Mile Pk Quarry No.2B	GPS coordinate	22° 22' 27.00" N 84° 26' 13.98" W

Date(s) of performance of the laboratory activities

Test start date	29.08.2025/ 11:45	Test completion date	29.08.2025/ 16:00
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—Last Month—

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS 5182 (P-24) 2019	µg/m ³	77.14	70.47	71.25	75.94	180 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	35.68	32.14	30.06	34.00	90 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS 5182 (P-02) 2003	µg/m ³	07.09	06.36	07.07	06.27	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS 5182 (P-06) 2002	µg/m ³	18.27	17.49	15.28	14.15	80 (24 hr)
5.	Ammonia (NH ₃)	IS 5182 (P-20) 2018	µg/m ³	49.72	45.90	44.82	43.96	420 (24 hr)
6.	Ozone (O ₃)	IS 5182 (P-09) 2019	µg/m ³	32.93	34.74	34.38	30.04	180 (1 hr)
7.	Lead (Pb)	IS 1502 (P-32) 2019	µg/m ³	BOL	BOL	BOL	BOL	1.0 (24 hr)
8.	Nickel (Ni)	IS 1502 (P-36) 2020	µg/m ³	BOL	BOL	BOL	BOL	
9.	Arsenic (As)	US EPA 813.2-1009	µg/m ³	BOL	BOL	BOL	BOL	

—Test Results Feed—

Prescribed Limit: Environmental Protection Rules 1986, Schedule VII.
Operational Status: Unit was Operational During sampling.
Analysed by: - Taha Narsani

Reviewed by
D. N. Kumar
Technical Head

measured by
University of
Laboratory of

Authorised Signatory
EPIC Lab Tech Pvt. Ltd.
Pune, India

Figure 1



EPIC LabTech Private Limited

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Road No. - 3, Ranchi,
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Lab: 404991422270000885
PIN - 834001
GST: 22AAACE3871AF23

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

Analystical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02642530022	Group	Atmospheric Pollution
Issue date/time	29.08.2025/ 17:00	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST-LOHARDAGA, STATE-JHARKHAND, INDIA 835302
MONITORING SITE: SHRENDAG A BAUKITE MINE

Contact Person: Mr. Ankit Das
Contact Number: +91 9871034775
Email Id: ankit.das@edhyabira.com
Order Date: 31.03.2025/ 10:10
Order Number: 12612313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OT/0264	Sample Booking Number	EPIC 2535022
Sample(s) Code	2535022 (A) (B) (C) (D)	Sample Receipt (DVT)	25.08.2025/ 11:25

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/AB/K/036
Sampling Start (D/T)	21.08.2025/ 12:31	Sampling End (D/T)	22.08.2025/ 08:57
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	(E 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13))		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	330°-40°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Weigh Bridge	GPS coordinate	23° 22' 26.50" N 84° 28' 34.74" E
S. Location B	BKB Quarry	GPS coordinate	23° 22' 52.64" N 84° 28' 20.63" E
S. Location C	Mine Pit Quarry No.2A	GPS coordinate	23° 23' 00.03" N 84° 28' 13.94" E
S. Location D	Mine Pit Quarry No.2B	GPS coordinate	23° 23' 37.02" N 84° 28' 13.02" E

Date(s) of performance of the laboratory activities

Test start date	29.08.2025/ 11:45	Test completion date	29.08.2025/ 18:00
-----------------	-------------------	----------------------	-------------------

--Test Results--

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS 5182P-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 5182P-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/MP/01/03	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 - Tishal Mangra



Reviewed by
T. K. Kumar
Technical Head





EPIC LabTech Private Limited

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Accredited by:
National Quality Assurance Council India
Certified by:
ISO 9001:2015 and ISO 14001:2015

Assigned Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL02642535025	Group	Water
Issue date/time	29.08.2025/ 17:09	Sub Group	Ground Water

Report Issue to		Contact Person	Mr. Ankit Das
M/s - HINDALCO INDUSTRIES LIMITED		Contact Number	+91 9971034775
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,		Email Id	ankit.das@adityacrls.com
DIST. LOHARDAGA, STATE-CHHATTISGARH, INDIA 493303		Order Date	31.03.2025/ 10:10
MONITORING SITE - SHREDDAG A BAUXITE MINE		Order Number	13612313866

References of Quality Management System (Class of Traceability Data)			
Customer Registration No.	EPIC/OTM/0264	Sample Booking Number	EPIC-2535025
Sample(s) Code	2535025	Sample Receipt (D/T)	29.08.2025/ 11:27

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/VC/30
Sampling Start (D/T)	21.08.2025/ 12:50	Sampling End (D/T)	21.08.2025/ 13:05
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part 1) 1987, B-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling			
Weather condition	Cloudy	Temperature (°C)	27
		Humidity %	70
		Wind direction	270°-40°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Near Paintal Village	GPS coordinate	23° 28' 18.33" / 84° 28' 10.24"

Date(s) of performance of the laboratory activities			
Test start date	25.08.2025/ 12:30	Test completion date	29.08.2025/ 16:30

-Test Result-					
Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	Total Coliform	IS 3186:2002	Per 100 ml	Not Detected	Shall not be detectable in any 100 ml sample
2.	E.Coli	IS 3186:2002	Per 100 ml	Not Detected	

-Test result End -					
Prescribed Limit	IS 30849:2021				
Operational Status	Unit was Operational During sampling.				

Analyzed by - Sagar Kumar



Reviewed by
S.K. Kumar
Technical Test

Issued by
Ther Test
Laboratory Test

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Raigarh, Chhattisgarh



Address:
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Jharkhand - 834001, India

Developmental Level Considerations

Report Issue to

Contact Person	Mr. Ankit Das
Contact Number	+91 9971034779
Email Id	ankit.das@achyatsirsa.com
Order Date	31.03.2025/ 12:10
Order Number	13612213868

15.	Gamma-HCH(Lindane)	EPICLAS/SOP/WA/01/00	µg/l	BDL(MDL-0.5)
16.	Malathion	EPICLAS/SOP/WA/01/00	µg/l	BDL(MDL-0.5)
17.	Methyl parathion	EPICLAS/SOP/WA/01/00	µg/l	BDL(MDL-0.2)
18.	Monocrotophos	EPICLAS/SOP/WA/01/00	µg/l	BDL(MDL-0.5)
19.	Phorate	EPICLAS/SOP/WA/01/00	µg/l	BDL(MDL-0.2)
20.	DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPICLAS/SOP/WA/01/00	µg/l	BDL(MDL-0.5)
21.	Endosulfan (alpha, beta, and sulphate)	EPICLAS/SOP/WA/01/00	µg/l	BDL(MDL-0.05)

--Test result End--

Proposed Limit
Operational Status

Analysed by – Pooja Kumar





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ISO 9001:2015/22777000665
Accredited by -
NABL, New Delhi (Number 22-1089)
For the State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

Analysis Test Certificate

Unique Lab Report No.	TC128872000001090	Discipline	Chemical
Report Unique Id	RL02642530029	Group	Water
Issue date/time	29.08.2023/17:21	Sub Group	Surface Water

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
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31.03.2023/10:10
12612313068

Group - Residues and Contaminants in Water.

Sub Group - Trace Metals Elements

15. Copper (as Cu)	APHA 3111 B 2023	mg/l	BOLMCL-0.21	-
16. Iron (as Fe)	APHA 3111 B 2023	mg/l	BOLMCL-0.11	-
17. Lead (as Pb)	APHA 3111 B 2023	mg/l	BOLMCL-0.01	-
18. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BOLMCL-0.003	-
19. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BOLMCL-0.05	-
20. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BOLMCL-0.02	-
21. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BOLMCL-0.005	-
22. Selenium (as Se)	APHA 3114 B 2023	mg/l	BOLMCL-0.009	-
23. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BOLMCL-0.08	-
24. Zinc (as Zn)	APHA 3111 B 2023	mg/l	BOLMCL-0.04	-

-Test result End -

Prescribed Limit
Operational Status

Unit was Operational During sampling.

Analysed by - Pooja Kumar



[Signature]
Issued by
S.R. Kumar
Technical Head

[Signature]
Issued by
Suresh Das
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Page 2 of 2

Declaration: 1. The Laboratory accepts responsibility for content of this report. 2. Test performed at Laboratory's permanent facility. 3. All specific measurements performed at defined regional and levels shall only be the sample tested in prescribed Class A class. 4. This test report shall not be reproduced without in part or not be used at period in the event of law. 5. Any comments about this report should be communicated by writing and not to depend on the issue. 6. Third liability of EPIC LabTech Pvt. Ltd. will be limited to inspection report only. 7. All disputes are completed in Ranchi, Jharkhand and maximum liability of the Laboratory does not exceed the testing and packaging charges. 8. Inspection does not imply endorsement of the service provided by Laboratory. 9. All our measurements, laboratory results are issued by way to inform of this report. 10. When the results are shown national priorities are marked as "A" made. 11. Acknowledgement - ISO 9001:2015 (Quality Management System), ISO 45001:2018 (Occupational Health and Safety Management System), ISO 14001:2015 (Environmental Management System).



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GSTIN: 22AANR1332DPTC019685

PAN: AANR1332TIN

GST: 22AANR1332TIN

Accredited by:

NABL, ISO 9001:2015 (Certificate No. 1208)

Jharkhand State Pollution Control Board

Certified by:

ISO 9001:2015 and ISO 45001:2018

TC-12887

Analysis Test Certificate

Unique Lab Report No.	TC1288725000001061	Discipline	Chemical
Report Unique ID	RL02642533033	Group	Water
Issue date/time	28.08.2023: 17:27	Sub Group	Surface Water

Report Issue to

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

Contact Person

Contact Number

Email Id

Order Date

Order Number

Mr. Ankit Das

+91 9971034775

ankit.das@hindalco.com

31.03.2023: 10:10

13812313868

Group - Residues and Contaminants in Water,

Sub Group - Trace Metals Elements

15. Copper (as Cu)	APHA 3111 B 2023	mg/l	BDL(MDL-0.2)	-
16. Iron (as Fe)	APHA 3111 B 2023	mg/l	BDL(MDL-0.2)	-
17. Lead (as Pb)	APHA 3111 B 2023	mg/l	BDL(MDL-0.01)	-
18. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BDL(MDL-0.002)	-
19. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	-
20. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BDL(MDL-0.02)	-
21. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(MDL-0.055)	-
22. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(MDL-0.055)	-
23. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.05)	-
24. Zinc (as Zn)	APHA 3111 B 2023	mg/l	BDL(MDL-0.04)	-

-Test result End-

Prescribed Limit

Operational Status

Analyzed by - Pappu Kumar

Unit was Operational During sampling.



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

[Signature]
Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Page 2 of 2

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Abbreviation: - BDL (Below Detection Limit), NDL (Not Detectable), ND (Not Done), Q (Quantity), Q (Quantity).



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PIN - 4000000000
GST - 23AAAE0001M2EX

Accredited by -
National State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 15189:2013

Analysis Report Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL02642535032	Group	Water
Issue date/time	29.08.2025/ 17:00	Sub Group	Surface Water

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9971034775
ankit.das@adityabirla.com
31.03.2025/ 10:10
13812315868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/0TH/0264	Sample Booking Number	EPIC-2535032
Samples Code	2535032	Sample Receipt (D/T)	25.08.2025/ 11:32

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/03E
Sampling Start (D/T)	21.08.2025/ 14:00	Sampling End (D/T)	21.08.2025/ 14:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	220° 40°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Kanchhi Nadi (Down Stream)	GPS coordinate	22° 23' 29.74" / 84° 27' 09.86"
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Date(s) of performance of the laboratory activities

Test start date	25.08.2025/ 12:30	Test completion date	29.08.2025/ 16:05
-----------------	-------------------	----------------------	-------------------

-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	Total Coliform	IS 15185:2002	Per 100 ml	440	
2.	E.Coli	IS 15185:2002	Per 100 ml	320	

-Test result End -

Prescribed Limit

Operational Status

Analysed by - Sujata Kumar

Unit was Operational During sampling.



Reviewed by
(S.A. Kumar)
Technical Head

Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ratanji, Bhopal



EPIC LabTech Private Limited



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CIN: U74904HR2022PTC000685

PAF - AAFC230104

GST - 03A44623010412X

Accredited by -

ISO 9001:2015 and ISO 14001:2015
Changam Test Solutions (Private) Ltd.

Certified by -

ISO 18001:2015 and ISO 45001:2018

TC-12887

Amplified Test Certificate

Unique Lab Report No.	TC128672500001224	Discipline	Chemical
Report Unique ID	RL0292538030	Group	Atmospheric Pollution
Issue date/time	20-09-2025/15:15	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 | SHRENDAG A BAUXITE MINE

Contact Person
Contact Number
Email id
Order Date
Order Number

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ankit.das@hindhya.com
31.03.2025/10:10
13612313860

References of Quality Management System (Step of Inequity Step)

Customer Registration No.	EPIC/OTM/0292	Sample Booking Number	EPIC-2538029
Sample(s) Code	2538030 (A) (B) (C) (D)	Sample Receipt (D/T)	17.09.2025/10:10

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/038
Sampling Start (D/T)	15.09.2025/12:35	Sampling End (D/T)	16.09.2025/10:27
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/06/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	26	Humidity %	66	Wind direction	225°-40°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Banjan Village	GPS coordinate	23° 22' 40.58" / 84° 30' 11.81"
S. Location B	Near Pauri Village	GPS coordinate	23° 20' 10.96" / 84° 25' 59.00"
S. Location C	Near Harup Village	GPS coordinate	23° 24' 20.73" / 84° 24' 59.71"
S. Location D	Near Paintol Village	GPS coordinate	23° 26' 19.08" / 84° 25' 10.78"

Date(s) of performance of the laboratory activities

Test start date	17.09.2025/10:30	Test completion date	20.09.2025/15:00
-----------------	------------------	----------------------	------------------

-Test Results-

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS 5182 (P-23) 2020	µg/m ³	61.49	57.24	64.86	67.33	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2018	µg/m ³	25.24	24.83	20.49	30.84	80 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS 5182 (P-02) 2020	µg/m ³	07.04	06.65	07.37	06.98	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS 5182 (P-08) 2020	µg/m ³	19.34	18.46	16.39	16.48	80 (24 hr)
5.	Ammonia (NH ₃)	IS 5182 (P-29) 2018	µg/m ³	38.83	35.47	37.82	33.43	400 (24 hr)
6.	Ozone (O ₃)	IS 5182 (P-09) 2018	µg/m ³	19.62	20.27	23.36	24.82	180 (1 hr)
7.	Lead (Pb)	IS 5182 (P-22) 2019	µg/m ³	BOL	BOL	BOL	BOL	1.0 (24 hr)
			(MDL 6.5)	(MDL 6.5)	(MDL 6.5)	(MDL 6.5)	(MDL 6.5)	
8.	Nickel (Ni)	IS 5182 (P-36) 2020	ng/m ³	BOL	BOL	BOL	BOL	
			(MDL 6.5)	(MDL 6.5)	(MDL 6.5)	(MDL 6.5)	(MDL 6.5)	
9.	Arsenic (As)	USEPA IO 3.2-1988	ng/m ³	BOL	BOL	BOL	BOL	
			(MDL 6.00)	(MDL 6.00)	(MDL 6.00)	(MDL 6.00)	(MDL 6.00)	

-Test Results End-

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

Analysed by - Pooja Mangaraj



Issued by
S.R. Kumar
Technical Head

Issued by
Dr. Anshu Das
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Shree, Bhubaneswar

Page 2 of 2

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Reference: ISO 9001:2015 (Quality Management), ISO 14001:2015 (Environmental Management), ISO 45001:2018 (Occupational Health and Safety).



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Lab No: EPIC/DTM/2025/0260

Lab No: EPIC/DTM/2025/0260

Lab No: EPIC/DTM/2025/0260

Approved by:

Authorized Signatory (Name & Designation)

Authorized by:

Lab No: EPIC/DTM/2025/0260

Analysis Report Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02H02538031	Group	Pollution & Environment
Issue date/time	20-09-2025/15:18	Sub Group	Soil/Sediments

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835303
MONITORING SITE: SHRENDAG A BAUXITE MINE

Contact Person: Mr. Ankit Das
Contact Number: +91 9971034775
Email Id: ankit.das@himalyabir.com
Order Date: 21.09.2025/10:10
Order Number: 13812313866

Reference of Quality Management System Class of Traceability Class

Customer Registration No.	EPIC/DTM/0260	Sample Booking Number	EPIC 2538031
Sample(s) Code	2538031	Sample Receipt (D/T)	17.09.2025/10:12

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/030
Sampling Start (D/T)	14.09.2025/15:25	Sampling End (D/T)	14.09.2025/15:35
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	EPIC/LAB/SOP/PE/01/00		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	25	Humidity %	65	Wind direction	225°-45°
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Sampling location(s) with GPS coordinate(s)

S. Location A	Mines Pn Quality No. 2A	GPS coordinate	23° 23' 00.49" N / 84° 28' 11.18" E
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Date(s) of performance of the laboratory activities

Test start date	17.09.2025/11:30	Test completion date	20.09.2025/15:30
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Test Result

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Chloride (as Cl)	EPIC/LAB/SOP/PE/01/00	%	0.040	-
2.	Mercury (as Hg)	USEPA 16310 B 1996	mg/kg	BDL(BDL 0.001)	-

Test result End

Operational Status

Unit was Operational During sampling.

Analyst by - Ishika Singh



Reviewed by
(ER Kumar)
Technical Head

Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Bharatpur, Jharkhand



EPIC LabTech Private Limited

Address:
C/O. A. K. Tripathi, Varanasi,
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✉ epiclabtech@gmail.com
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Approved by:
Authorized Signatory (Authorized)
Certified by:
ISO 9001:2015 and ISO 14001:2015

Assignment Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02922538032	Group	Water
Issue date/time	20-09-2025/15:21	Sub Group	Surface Water

Report Issue to

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

Contact Person: Mr. Ankit Das
Contact Number: +91 9871034775
Email Id: ankit.das@ardityabirla.com
Order Date: 21.03.2025/ 10:10
Order Number: 12612313668

References of Quality Management System (Scope of Accreditation)

Customer Registration No.	EPIC/OD/0292	Sample Booking Number	EPIC-2538032
Sample(s) Code	2538032	Sample Receipt (D/T)	17.09.2025/ 10:13

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/1038
Sampling Start (D/T)	14.09.2025/ 15:05	Sampling End (D/T)	14.09.2025/ 15:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS: 3025 (Part-1) 1987, R-2003		

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

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	25	Humidity %	65	Wind direction	225° 45°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Mine Pit Quarry No. 2A	GPS coordinate	23° 22' 04.28" N 84° 28' 12.40" E
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Date(s) of performance of the laboratory activities

Test start date	17.09.2025/ 10:23	Test completion date	20.09.2025/ 15:15
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-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	Dissolve Oxygen (DO)	IS 3025 (P-36) 1986	mg/l	3.9	-
2.	Temperature	IS 3025 (P-08) 1986	°C	25.4	-
3.	BOD (3days at 27°C)	IS 3025 (P-44) 2006	mg/l	1.9	-
4.	COD	IS 3025 (P-58) 2006	mg/l	32.0	-
5.	Total Suspended Solids (TSS)	IS 3025 (P-17) 2002	mg/l	10.00	-
6.	Oil & Grease	IS 3025 (P-38) 2001	mg/l	BDL (MDL-04)	-

Group - Residues and Contaminants in Water,

Sub Group - Trace Metals Elements

7.	Aluminum (as Al)	IS 3025 (P-50) 2002	-	BDL (MDL 0.1)	-
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-Test result End -

Operational Status

Unit was Operative at During sampling.

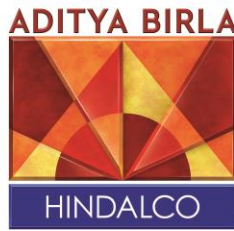
Analyzed by - Pooja Kumar

Reviewed by
(S.R. Kumar)
Technical Head

Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Varanasi, Jharkhand





Annexure 3

Date – 01.05.2025

Office Order

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

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

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

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

Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)

Annexure 4

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

Annexure 4

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

*Static information about the mines included in the above table



Basudev Gangopadhyay
AVP (Planning, Environment and Compliance)

Annexure-5

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

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

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

**Part of OB removed cost



Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)