

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**

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

Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)

Enclosure: - As Above

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

Name of the Project : 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.

 भारत सरकार नेता शिंजी वराहाल यह संसद, नीति विधान और नीति का विवरण बोर्डी गृही का प्रतिक्रिया Government of India Ministry of Water Resources Department of Water Resources, River Development & Ganga Rejuvenation Central Ground Water Board Central Ground Water Board Authority																																																																																																																																																																																																											
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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**.



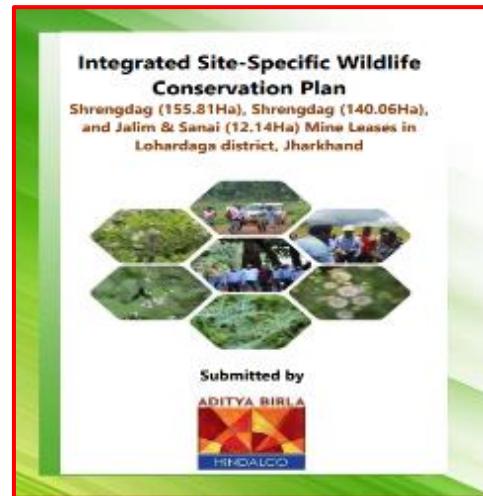
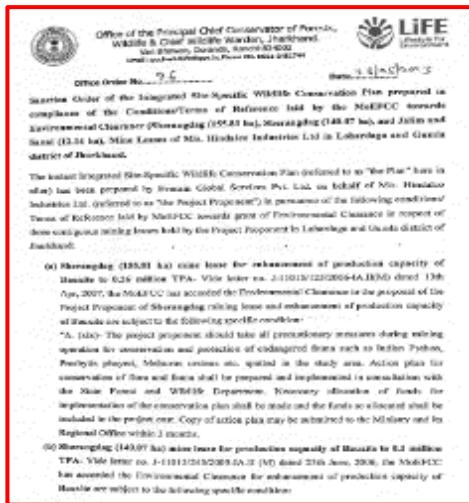
Washing Ramp and Oil and Grease Trap

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 Sherengdag Group of Mines

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

Reply: - Mining Plan along with progressive mine closure plan has been approved by Indian Bureau of Mines. Final Mine Closure Plan will be submitted in due time as per applicable 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



Address:

C-14 - R.C. Nagar, Bokaro
Road No. - 5, Ranchi,
Jharkhand - 834001, India

Customer Ref ID:

ISI 13337: 88877

S10149: 23333

Oscilisys@griffith.edu

S10149: 23333

S10149: 23333

S10149: 23333

Approval No.:

ISI 13337: 88877

Jahnavi Varshney (Certified)

Certified by:

Jahnavi Varshney (Certified)



Analytical Test Certificate

Unique Lab Report No.:	TCI288725000000409	Discipline:	Chemical
Report Unique ID:	RL0139251733	Group:	Atmospheric Pollution
Issue Date/Time:	28.04.2025/ 10:45	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 9971034775
	Email Id:	ankit.das@adityabirla.com
	Order Date:	31.03.2025/ 10:10
	Order Number:	13812313888

References of Quality Management System (Steps of Traceability Chart)

Customer Registration No.:	EPIC/OTH/0139	EPIC-251703
Sample(s) Code:	251733 (A) (B) (C) (D)	Sample Receipt (D/T): 23.04.2025/11:32

Sampling References

Type of Industry:	Bauxite Mine	Ref. of Sampling Plan:	EPIC/LAB/TH/036
Sampling method used:	IS:5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Sampling Start (D/T):	20.04.2025/ 10:02	Sampling End (D/T):	21.04.2025/ 7:34
Mode of Sampling:	Conducted by Laboratory	Sample collected by:	No. Abhishek 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:	SW-100°
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Sampling Location(s) with GPS coordinate(s)

1. Location A:	Near Weigh Bridge	GPS coordinate:	23° 22' 36.59" E/ 84° 26' 34.78"
2. Location B:	OBG Quarry	GPS coordinate:	23° 22' 52.54" E/ 84° 28' 20.83"
3. Location C:	Mine Pit Quarry No.2A	GPS coordinate:	23° 23' 00.83" E/ 84° 28' 13.94"
4. Location D:	Mine Pit Quarry No.2B	GPS coordinate:	23° 22' 37.00" E/ 84° 28' 13.00"

Data(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. No.	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(24hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5182 (P-26) 2019	µg/m ³	40.13	35.21	34.57	33.64	100(24hr)
3.	Sulphur Dioxide (SO ₂)	IS:5182 (P-02) 2023	µg/m ³	8.90	7.02	10.86	8.09	300(1hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5182 (P-06) 2022	µg/m ³	26.80	23.91	25.75	23.47	100(24hr)
5.	Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	16.82	32.00	31.03	32.60	180(1hr)
6.	Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	51.01	46.17	43.00	44.00	400(24hr)
7.	Lead (Pb)	IS:5182 (P-22) 2019	µg/m ³	BDL	BDL	BDL	BDL	1.0(24hr)
8.	Nickel (Ni)	IS:5182 (P-26) 2020	µg/m ³	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA, ID 3.2:1999	µg/m ³	BDL	BDL	BDL	BDL	-

--Test Result End--

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

Signed by
(J. I. SKA)
Technician

Verified & Issued by
(J. I. SKA)
Technician

LabTech SKA

Authorised Signatory

Page 1 of 1

Important Note: 1. The laboratory accepts responsibility for content of this report. 2. Test performed at laboratory's premises/ facility. 3. Any analytical or technical criticism or enquiry will be directed to the sample tested in question and its precision. 4. The test result shall not be used as a specification for the article in question. 5. Test results of other laboratories/ test, will not be used in any enforcement case. 6. All reports are subject to revision, whenever necessary, obtained by user in view of the report. 7. All the test results are based on the samples received at the laboratory. 8. The laboratory does not accept responsibility for any damage caused by use of the report. 9. All the test results are based on the samples received at the laboratory.



Unique Lab Report No.	ICL288725000000410	Discipline	Chemical
Report Unique ID	RL0139251734	Group	Water
Issue date/time	28.04.2025/ 10:47	Sub Group	Drinking Water

Report issued to

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

Contact Person: Mr. Ankit Das
Contact Number: +91 9871034775
Email Id: ankit.das@edhyabirja.com
Order Date: 31.03.2025/ 10:10
Order Number: 135123135558

References of Quality Management Systems (ISO9001:2008)

Customer Registration No.	EPIC/01H40128	Sample Booking Number	EPIC-251734
Samplers' Code	251734	Sample Receipt ID/T:	20-04-2025/11:34

Sampling distribution

Type of Industry	Gold Mine	Ref. of Sampling Plan	EPIC/LAB/NU/06
Sampling method used	IS : 3025 (Part-1) 1987, R-2003		
Sampling Start (DT)	21.04.2025/ 12:00	Sampling End (DT)	21.04.2025/ 12:20
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 Conditions during sampling

Weather condition: Clear, Temperature (°C): 29, Humidity (%): 45, Wind direction: 280°-100°

Sampling Location(s) with ID's, coordinates(x,y,z)

5. Location & Near Mines Office GPS coordinate 23°32' 26.03" S/ 24°38' 24.62" E

Outcome of performance of the laboratory activities

Test start date 23.04.2025/ 12:00 Test completion date 26.04.2025/ 11:00

—Test Result—

Sl.	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable limit	Permissible limit
1.	pH value at 24.6°C	IS 3025 (P-11) 2022	-	6.64	6.5-8.5	None/±0.1
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.71	1	5
3.	Colour	IS 3025 (P-04) 2021	match	<5	9	11
4.	Odour	IS 3025 (P-05) 2018	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2023	mg/l	150.00	100	3000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	12.81	250	5000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	68.00	200	800
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) 1991	mg/l	13.63	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	BDL (0.00-0.4)	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1) 2022	mg/l	1.30	250	450
13.	Nitrate (as NO ₃)	APHA 4500 N 2023	mg/l	0.98	40	70 (maximum)
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BDL (0.00-0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	15.55	30	100

Group Members and Co-maintainers in Web

Subgroup: Trace Metals Concentrations



Analytical Test Certificate

Unique Lab Report No.	TC1288725000000410	Discipline	Chemical
Report Unique ID	RL0138261734	Group	Water
Issue date/time	28.04.2025/ 10:47	Sub Group	Drinking Water

Report from the

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD,
POST OFFICE-LOHARDAGA, DIST. LOHARDAGA,
STATE-JHARKHAND, INDIA 835302
MONITORING SITE: SHIRENDAGA Bauxite MIN.

Contact Person: Mr. Ankit Das
Contact Number: +91 9871034775
Email Id: ankit.das@adityanbiria.com
Order Date: 31.03.2025/ 10:10
Order Number: 1234567890

Parameter	Method	Unit	BDL (µg/L)	SD (µg/L)	CV (%)
16. Copper (as Cu)	APHA 3111 B 2023	µg/L	BDL (HDL-0.2)	0.06	1.5
17. Iron (as Fe)	APHA 3111 B 2023	µg/L	BDL (HDL-0.1)	1.0	No detection
18. Lead (as Pb)	APHA 3111 B 2023	µg/L	BDL (HDL-0.01)	0.01	No detection
19. Cadmium (as Cd)	APHA 3111 B 2023	µg/L	BDL (HDL-0.003)	0.003	No detection
20. Total Chromium (as Cr)	APHA 3111 B 2023	µg/L	BDL (HDL-0.05)	0.08	No detection
21. Nickel (as Ni)	APHA 3111 B 2023	µg/L	BDL (HDL-0.02)	0.02	No detection
22. Total Arsenic (as As)	APHA 3114 B 2023	µg/L	BDL (HDL-0.005)	0.01	0.05
23. Selenium (as Se)	APHA 3114 B 2023	µg/L	BDL (HDL-0.006)	0.01	No detection
24. Manganese (as Mn)	APHA 3111 B 2023	µg/L	BDL (HDL-0.001)	0.1	-3.3
25. Zinc (as Zn)	APHA 3111 B 2023	µg/L	BDL (HDL-0.04)	0.5	15

-Test Result End-

Prescribed limit: 15-1000hr2021
Operational Status: Unit was Operated and Deteriorating

Reviewed by -Prahaa Farms/ India Farms

— G.B. Lauer
Terminal Head

Edited by
G. R. Larson
Technical Staff



Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	BL0139251734	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-MHARASHTRA, INDIA 435302 MONITORING SITE : SHRENDAGA BAUXITE MINE	Contact Person	Mr. Ankit Das
	Contact Number	+91 9971034775
	Email Id	ankit.das@cityubilab.com
	Order Date	31.03.2025/ 10:10
	Order Number	13612313868

References of Quality Management System (Global Variable Data)

Customer Registration No.	EPIC/QTH/0130	Sample Booking Number	EPIC-261734
Sample(s) Code	261734	Sample Receipt (D/T)	23.04.2025/ 11:34

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS : 3025 (Part-3) 1983, II-2003		
Sampling Start (D/T)	21.04.2025/ 12:10	Sampling End (D/T)	31.04.2025/ 12:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team

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

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	29	Humidity %	45	Wind direction	000°-100°
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Sampling Location(s) with GPS coordinate(s)

5. Location A	Near Mine Office	GPS coordinate	23° 22' 35.03" E 78° 39' 34.02"
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Data(s) of performance of the laboratory activities

Test start date	23.04.2025/ 12:06	Test completion date	26.04.2025/ 13:00
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-Test Result -

Sl.	Test Parameters	Method used	Unit	Results	Units	Acceptable Limit	Permissible Limit
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	BDL(MDL-0.1)	1.0	1.5	
Group-Residues and Contaminants in Water							
2.	Aluminum	IS 3025 (P-55)-2019	mg/l	BDL(MDL-0.1)	0.03	0.2	
3.	Boron	IS 3025 (P-57)-2021	mg/l	BDL(MDL-0.1)	0.5	1.0	
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	ng/l	BDL(MDL-0.2)	0.5	No relaxation	
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	ng/l	BDL(MDL-0.05)	0.1	No relaxation	
Group-Residues and Contaminants in Water							
6.	Aachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	20	No relaxation	
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	2.0	No relaxation	
8.	Dieldrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.03	No relaxation	
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.005)	0.01	No relaxation	
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.02)	0.04	No relaxation	
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	175.0	No relaxation	
12.	Chrysophen	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	30.0	No relaxation	
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.005)	0.04	No relaxation	
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	3.0	No relaxation	

Important Note: 1. The laboratory assumes responsibility for contents of this report. 2. The performance of laboratory's personnel, facility, or specific analytical condition as stated required and results relate only to the sample tested as presented Date & Time. 3. The test report shall not be reproduced either in part or in full, nor shall it be loaned to anyone without the consent of the lab. 4. The analytical result of this report should be considered valid for 6 months from the date of issuance. 5. The test report is valid for 6 months from the date of issuance. 6. The test report is valid for 6 months from the date of issuance. 7. The test report is valid for 6 months from the date of issuance. 8. When the results are from external sources, consider as "not applicable".



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 Issued 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	Mr. Ankit Das		
		Contact Number	+91 9971034775		
		Email ID	ankit.das@edtlyabda.com		
		Order Date	31.03.2025/ 10:10		
		Order Number	13612313868		
15. Gamma-HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	100	BDL/mol/L	2.0	No relaxation
16. Malathion	EPIC/LAB/SOP/WA/01/00	100	BDL/mol/L	190.0	No relaxation
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	100	BDL/mol/L	0.3	No relaxation
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	100	BDL/mol/L	1.0	No relaxation
19. Phorate	EPIC/LAB/SOP/WA/01/00	100	BDL/mol/L	2.0	No relaxation
20. DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	ug/L	BDL/ug/L	1.0	No relaxation
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	100	BDL/ug/L	0.4	No relaxation

-Test Report End -

Prescribed Unit: 15.10.2025/2021
Operational Status: Unit was Operational During sampling
Issued by: -Prakash Kumar / Quality Manager



Desshik
(K.K. Das)
Technical Head

Ankit Das
(Ankit Das)
Laboratory Head

Authorised Signatory
EPIC LabTech Pvt. Ltd.
Panaji, Goa, India



EPAC - Analytical Test Certificates

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL0138251735	Group	Water
Issue date/time	28-04-2025/10:49	Sub Group	Drinking Water

Report by an fit

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

Contact Person: Mr. Ankit Das
Contact number: +91 9971034775
Email ID: ankit.das@adityabiria.com
Order Date: 31.03.2025/ 10:10
Order Number: 13612333888

Effectiveness of Quality Management System (QMS) on Product Quality

Customer Registration No. **EPICSOFTHR139**

Sample Booking Number: ERIC-251735
Sample Receipt (DVI): 23.04.2025/11:40

Standard References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling method used	IS : 3025 (Part-1) 1987, R-2003& IS 1622 1981		
Sampling Start (D/T)	21.04.2025/ 12:10	Sampling End (D/T)	21.04.2025/ 12:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team

Distillation/condition of sample

Environmental Condition during sampling:

Prepared by: John C. Smith

Period of confinement of the labouring mother

Test administration date: 20/04/2025 13:00

—Trust yourself—

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	Total Coliform	IS 15185:2002	Pfu/100 mL	Not Detected	
2.	E. coli	IS 15185:2002	Pfu/100 mL	Not Detected	It shall not be detectable in any 100 mL sample

Prescribed Limit

Operational Status: Unit was Operational During inspection.

Dr. B. B. Lewis

✓
9/19/23
Verified Electronically
Krisen Dach

Autodesk Signature
2020 East Lake Park, 1st
Floor, Seattle, WA



Analytical Test Certificate

Unique Lab Report No.:	TC1288725000000411	Discipline:	Chemical
Report Unique ID:	RL0139251736	Group:	Water
Issue date/time:	28.04.2025/10:52	Sub Group:	Ground Water

Report issued to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD,
POST OFFICE-LOHARDAGA, DIST.-LOH
STATE-JHARKHAND, INDIA 835302
MONITORING SITE - SHRENDAGA RAJ

Contact Person: Mr. Ankit Das
Contact Number: +91 9971034775
Email Id: ankit.das@cityoferia.com
Order Date: 31.03.2025/ 10:10
Order Number: 1234567890

Group - Residues and Contaminants in Water

Third Group: Trace Metal Elements

16. Copper (as Cu)	APHA 3111 B 2023	mg/L	BDL(MDL-0.2)	0.05	±5
17. Iron (as Fe)	APHA 3111 B 2023	mg/L	BDL(MDL-0.1)	1.0	No detection
18. Lead (as Pb)	APHA 3111 B 2023	mg/L	BDL(MDL-0.001)	0.01	No detection
19. Cadmium (as Cd)	APHA 3111 B 2023	mg/L	BDL(MDL-0.0003)	0.003	No detection
20. Total Chromium (as Cr)	APHA 3111 B 2023	mg/L	BDL(MDL-0.001)	0.05	No detection
21. Nickel (as Ni)	APHA 3111 B 2023	mg/L	BDL(MDL-0.001)	0.02	No detection
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/L	BDL(MDL-0.0001)	0.01	0.05
23. Selenium (as Se)	APHA 3114 B 2023	mg/L	BDL(MDL-0.0005)	0.01	No detection
24. Manganese (as Mn)	APHA 3111 B 2023	mg/L	BDL(MDL-0.001)	0.1	±3
25. Zinc (as Zn)	APHA 3111 B 2023	mg/L	BDL(MDL-0.04)	0	10

-First Draft End -

Prescribed Limit

Operational Status: Unit 1010 Operations During comp-1

Analysed by [Trenton Kamm](#) / [July 2014](#)

Digitized by
G.T. Long
Georgia Tech

Digitized by
G.T. Long
Georgia Tech

13
28/4/23

Author is from the
University of
Minnesota, USA



Analytical Test Certificate

Unique Lab Report No:	N/A	Discipline:	Chemical		
Report Unique ID:	RI.0130051736	Group:	Water		
Issue date/time:	28.04.2025/ 10:52	Sub Group:	Ground Water		
Report Issue to:					
MM/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE : SHRENDAGA BALIKITE MINE	Contact Person:	Mr. Ankit Das			
	Contact Number:	+91 9973034775			
	Email Id:	ankit.das@edifyabira.com			
	Order Date:	31.03.2025/ 10:10			
	Order Number:	13612313868			
15. Gamma-HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	sgt	BDL/ML-0.5	3.0	Nonrelaxation
16. Malathion	EPIC/LAB/SOP/WA/01/00	sgt	BDL/ML-0.5	180.0	Nonrelaxation
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	sgt	BDL/ML-0.2	0.3	Nonrelaxation
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	sgt	BDL/ML-0.5	1.0	Nonrelaxation
19. Phorate	EPIC/LAB/SOP/WA/01/00	sgt	BDL/ML-0.5	1.0	Nonrelaxation
20. DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	sgt	BDL/ML-0.5	1.0	Nonrelaxation
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	sgt	BDL/ML-0.00	6.4	Nonrelaxation

-Test Result End -

Prescribed Unit: 0.10000000000000002
Operational Status: Unit Was Operational During Sampling.

Analyzed by: -Praveen Kumar/ Ankit Das

Ankita Das
QH Manager
Innovation HeadAnkita Das
Certified By
(Ankit Das)
Laboratory HeadAnalytical Laboratory
EPIC LabTech Pvt. Ltd.
Purulia, Jharkhand



EPIC LabTech Private Limited

Address:
C/o - R.K. Traders, 10th floor
Road No - 3, Ranchi,
Jharkhand - 834001, India

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CIN: U74999JH2022PTC019523
Regd. No: 1001495
GST: 23AAKHC3416M2A

Accredited by:
Government of Jharkhand, Government of India
Certified by:
ISO 9001:2015 and ISO 17025

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0172252176	Group	Atmospheric Pollution
Issue date/time	27.05.2025/ 10:15	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 : SHRENDAGA BALDOTE MINE

Contact Person: Mr. Ankit Das
Contact Number: +91 9871054775
Email Id: ankit.das@hindalcoindia.com
Order Date: 23.03.2025/ 10:10
Order Number: 13812313868

References of Quality Management System (Copy of Inspection Date)

Customer Registration No.	EPIC/OTH/0172	Sample Booking Number	EPIC-052176
Sample No. Code	252176 (A) (B) (C) (D)	Sample Receipt (D/T)	19.05.2025/ 17:02

Sampling References

Type of Industry	Bauxite Mine	Ref. of Sampling Plan	EPIC/LAB/R/006
Sampling Start (D/T)	18.05.2025/ 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 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' 36.59" / 84° 28' 34.74"
S. Location B	BBS Quarry	GPS coordinate	23° 22' 52.54" / 84° 28' 20.63"
S. Location C	Mine Pit Quarry No.2A	GPS coordinate	23° 23' 00.63" / 84° 28' 11.94"
S. Location D	Mine Pit Quarry No.2B	GPS coordinate	23° 22' 37.06" / 84° 29' 13.00"

Data(s) of performance of the laboratory activities

Test start date	18.05.2025/ 17:00	Test completion date	19.05.2025/ 11:30
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--Test Results--

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:11020P-13/2006	ug/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:11020P-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/SD/04/18/2025	mg/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-

--Test Results End--

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

Operational Status: Unit was Operational During sampling.

Analyzed by - AK Saka


Reviewed by
(AK Saka)
Technical Head

Issue by
Gopal Das
Laboratory Head
Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC

Unique Lab Report No.	TC1288725000000016	Discipline	Chemical
Report Unique ID	RL0172252177	Group	Atmospheric Pollution
Issue date/time	27.05.2026/10:17	Sub Group	Ambient Air Quality

Smart home

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA-83530
MONITORING SITE : SHRENDAGA BALUITE MINE

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@indivibra.com
Order Date 31.03.2025 10:10
Order Number 1234567890

Implementation of Quality Management Systems: Case of Transport Sector

Customer Registration No. EPIC/01H-0172 Sample Booking Number EPIC-252177
Sampeksi Case 252177 (A)(B)(C)(D) Sample Receipt ID/T 19.09.2020/17.21

Selected References

Sampling Plan		Ref. of Sampling Plan	EPCL/AS/R/036
Type of Industry	Baute Mines		
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 3182 and CPCB-Air Manual Volume - 1 (NAAQM/26/2012-13)		
Geographical location of sample	Second compartment area BII for ammonia		

Environmental Conditions during removal

City Generator Company, Inc. (CITY) 100% owned by the City of Milwaukee, Wisconsin.

Section 1: *postural shift with GES coordination*

Sampling Location	Nearest Village	GPS coordinates
S. Location A	Near Bantam Village	23° 22' 40.58" E / 84° 30' 11.81" N
S. Location B	Near Paul's Village	23° 20' 10.98" E / 84° 25' 58.00" N
S. Location C	Near Hanup Village	23° 24' 20.73" E / 84° 24' 59.71" N

Results of performance of the photopolymer

- Last Results

Sl.	Test Parameters	Method used	Unit	Results				Units
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:5362 (P-23) 2018	µg/m ³	66.13	62.87	68.19	71.94	180 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:5362 (P-24) 2018	µg/m ³	30.95	29.07	25.98	34.42	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:5362 (P-02) 2018	µg/m ³	08.09	07.50	07.48	08.31	60 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:5362 (P-06) 2018	µg/m ³	22.32	22.39	17.65	18.09	60 (24 hr)
5.	Ammonia (NH ₃)	IS:5362 (P-25) 2018	µg/m ³	43.83	40.58	42.21	38.96	400 (24 hr)
6.	Ozone (O ₃)	IS:5362 (P-09) 2018	µg/m ³	26.11	23.96	27.54	29.69	180 (24 hr)
7.	Lead (Pb)	IS:5362 (P-22) 2018	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.00 (24 hr)
8.	Nickel (Ni)	IS:5362 (P-26) 2018	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)
9.	Arsenic (As)	USEPA 10.3.2.2006	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)

FRECHHOME LINIE Environmental (Prokonsul) RUHR-1888, SCHWELM 07

Operational Status

Reviewed by
(T. K. Kumar)

Issue by
Oxford Univ.

Authorized Signatory
EPIC LabTech Pvt. Ltd.



EPIC LabTech Private Limited

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C/o - R.S. Boppana, 40 Bhupali,
Bopal, Gujarat - 390051, India
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PAN-AH33333TH
GST-03AHC03333TH22

Accredited by
National Accreditation Board
for Laboratory
Excellence (NALAC)
Ref. No. NALAC/EPIC/2015-16
Expiry Date: 11/03/2020 and NALAC/EPIC/2016

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical					
Report Unique ID	HL0172252177	Group	Atmospheric Pollution					
Issue date/time	27.05.2025/ 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 BAUDTE MINE	Contact Person	Mr. Ankit Das						
	Contact Number	+91 9871034775						
	Email Id	ankit.das@hindalcoindia.com						
	Order Date	31.03.2025/ 10:10						
	Order Number	13H12313868						
References of Quality Management System (Basis of Testability Data)								
Customer Registration No.	EPIC/OTH/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/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/36/2012-13)							
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)								
S. Location A	Near Banjan Village	GPS coordinate	23° 22' 40.58" E/ 84° 30' 11.81" N					
S. Location B	Near Panti Village	GPS coordinate	23° 20' 10.98" E/ 84° 28' 59.00" N					
S. Location C	Near Hanup Village	GPS coordinate	23° 24' 20.73" E/ 84° 24' 59.71" N					
S. Location D	Near Pantioli Village	GPS coordinate	23° 26' 36.08" E/ 84° 28' 10.76" N					
Date(s) of performance of the laboratory activities								
Test start date	18.05.2025/ 17:58	Test completion date	19.05.2025/ 11:30					
-Test Results-								
Sl.	Test Parameters	Method used	Unit	A	B	C	D	Units
1.	Benzene (C ₆ H ₆)	IS:1802(P-11) 2006	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:1802(P-12) 2004	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/ISOPARFOL/00	mg/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-
-Test Results End-								

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

Operational Status: Unit was Operational During sampling.

Analyzed by - A. Seta


Reviewed by
(A. Seta)
Technical Head



12
18.5.2025
Reviewed by
Owner-Director
Technical Head
Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi - Jharkhand



EPIC LabTech Private Limited

Address:

Opp - R.K. Taparia, Intermarket,
Road No. 12, Ranchi,
Jharkhand - 834001, India

S. GSTIN 446620C

GSTIN 23557886275

GSTIN 535045129954

Email: lab@epiclabtech.com

CIN - U74999JH2012MA02104243

TAN - APICSE001198

GST - 23AAKZES31001X

Accredited by -

PMDC (Parameter Specific Laboratory Accreditation)

Accredited by -

ISO 17025:2017 and ISO 14025:2016



TC-12987

Analytical Test Certificate

Unique Lab Report No.	TC129872000000017	Discipline	Chemical
Report Unique ID	RL0172252178	Group	Atmospheric Pollution
Issue date/time	27.05.2025/ 10:18	Sub Group	Ambient Noise

Report Issue to

MOX - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST-LOHARDAGA, STATE-JHARKHAND, INDIA 833302
MONITORING SITE : SHRENDAGA BAUXITE MINE

Contact Person
Contact Number
Email ID
Order Date
Order Number

Mr. Amit Das
+91 9867103477
amit.das@citylabtcs.com
31.03.2025/ 10:10
13612313868

References of Quality Management System (Based on Quality Guideline)

Customer Registration No.	EPIC/OTH/0172	Sample Booking Number	EPIC-252178
Sample(s) Code	252178 (A) (B) (C) (D)	Sample Recvnt (D/T)	27.05.2025/ 17:38

Sampling 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 9080:1983 (RA 2020) & CPCB Method:SO.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)	31	Humidity %	45	Wind direction	20°-200°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Weight Bridge	GPS coordinate	23° 22' 36.59" E 84° 28' 34.74"
S. Location B	BBS Quarry	GPS coordinate	23° 22' 52.54" E 84° 28' 20.63"
S. Location C	Mine Pit Quarry No.2A	GPS coordinate	23° 23' 09.82" E 84° 28' 13.94"
S. Location D	Mine Pit Quarry No.2B	GPS coordinate	23° 23' 37.00" E 84° 28' 13.00"

Data of performance of the laboratory activities

Test start date	15.05.2025/ 17:00	Test completion date	26.05.2025/ 11:30
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-Test Results-

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	L ₁ (Day time)	IS: 9080:1983	dB (A)	53.0	46.7	43.5	46.0	75
2.	L ₁ (Night time)	IS: 9080:1983	dB (A)	41.0	37.9	39.7	36.3	70

-Test Results End -

Prescribed Limit: Environmental (Protection) Rules-2000, Schedule 6.
Operational Status: Unit was Operational During sampling.


Submitted by
(A. Kaur)
Technical Head


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

Page 1 of 1

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TC-12887

Analytical Test Certificate

Unique Lab Report No.	TC1288725000000015	Discipline	Chemical
Report Unique ID	RL0172252179	Group	Pollution & Environment
Issue Date/Time	27.05.2025/ 10:21	Sub Group	Water/Water (Effluent)

Report Issue to

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

Contact Person
Mr. Amit Das
Contact Number
+91 9971034776
Email Id
amit.das@ahyabirla.com
Order Date
21.05.2025/ 10:18
Order Number
13812313868

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

Customer Registration No.	EPIC/OTH/8172	Sample Booking Number	EPIC-252179
Sample(s) Code	252179	Sample Receipt (DT)	19.05.2025/ 17:46

Sampling References

Type of Industry	Bauite Mines	Ref. of Sampling Plan	EPIC/LAB/R/030
Sampling Start (DT)	17.05.2025/ 15:30	Sampling End (DT)	17.05.2025/ 15:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 2025 (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)	31	Humidity %	43	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" E 84° 26' 33.24" N
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Date(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-

S.	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25.0°C	IS 3025 (P-12) 2022	-	6.58	6.5-8.5
2.	BOD (3 days at 27°C)	IS 3025 (P-40) 2000	mg/l	12.00	-
3.	COO	IS 3025 (P-30) 2000	mg/l	80.00	250.0
4.	Oil & Grease	IS 3025 (P-30) 2021	mg/l	BOL/HDL-04	10.0
5.	Total Suspended Solid	IS 3025 (P-17) 2022	mg/l	33.00	50.0
6.	Phosphate	IS 3025 (P-31/Sec-1) 2022	mg/l	0.75	-
7.	Zinc (as Zn)	APHA 2111B 2023	mg/l	BOL/HDL-04	-

-Test result End -

Prescribed Limit
Operational Status
Analysed by -Akash Kumar

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

User was Operational During sampling.

Submitted by
Akash Kumar
Technical Head

Issued by
Lab Head
Authorised Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL017252179	Group	Pollution & Environment
Issue date/time	27.05.2025/10:21	Sub Group	Waste Water (Effluent)

Report issued 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 9971004775
 Email Id: ankit.das@hdcyblrta.com
 Order Date: 31.03.2025/ 10:10
 Order Number: 136123313608

References of Quality Management System (Copy of Issuance Doc)

Customer Registration No.	EPIC/OTH/0172	Sample Booking Number	EPIC-252179
Sample(s) Code	252179	Sample Receipt (D/T)	19.05.2025/ 17:48

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/IV036
Sampling Start (D/T)	17.05.2025/ 10:30	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)	31	Humidity %	40	Wind direction	20°-200°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Work Shop (Outsite)	GPS coordinate	23° 22' 27.38" E/ 84° 26' 33.34" N
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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.	Total Dissolve Solids (TDS)	IS 3025 (P-16) 2023	mg/l	265.00	-
2.	Dissolve Oxygen (DO)	IS 3025 (P-38) 1986	mg/l	0.7	-

-Test result End -

Prescribed Limit: Environmental (Protection) Rules-1996, Schedule I, Serial No. 134.
 Operational Status: Unit was Operational During sampling.




 Reviewed by
 (A.K. Kumar)
 Technical Head


 Issued by
 (Gyan Das)
 Laboratory Head

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



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C/o - S.K. Singhania, Industrial
Road No. - 10, Ranchi,
Jharkhand - 834001, India

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91911 805777
919149 77894
Email: epiclabtech@gmail.com

CIN: U74999JH2009PLC000449
Regd. - AARJ20101111
GST - 29AAHOC0199R02
Accredited by -
National Accreditation Board for Laboratory
Certified by -
ISO 9001:2008 and ISO 17025

Analytical Test Certificate

Unique Lab Report No.	NIA	Discipline	Chemical					
Report Unique ID	HL02502525007	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: SHRENDAGA BAUXITE MINE	Contact Person Mr. Ankit Das	Contact Number +91 9871034779	Email Id ankit.das@hydriis.com					
	Order Date 31.03.2025/ 10:10	Order Number 13812313868						
References of Quality Management System (Days of Issuance Date)								
Customer Registration No.	EPIC/OTH/0295	Sample Booking Number	EPIC-2525007					
Sample(s) Code	2525007 (A) (B) (C) (D)	Sample Receipt (D/T)	16.06.2025/ 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 (NAQM/36/2012-13)							
Description/condition of sample	Receipt sample(s) were fit for analysis.							
Environmental Condition during sampling								
Weather condition	Cloudy	Temperature (°C)	29					
		Humidity %	87					
		Wind direction	90°-270°					
Sampling Location(s) with GPS coordinate(s)								
S. Location A	Near Baroni Village	GPS coordinate	23° 22' 40.58" E/ 84° 38' 11.81" N					
S. Location B	Near Pauri Village	GPS coordinate	23° 20' 10.98" E/ 84° 25' 39.06" N					
S. Location C	Near Hanup Village	GPS coordinate	23° 24' 20.73" E/ 84° 24' 59.71" N					
S. Location D	Near Pantihi Village	GPS coordinate	23° 26' 10.00" E/ 84° 28' 16.78" N					
Date(s) of performance of the laboratory activities								
Test start date	16.06.2025/ 11:20	Test completion date	19.06.2025/ 15:13					
-Test Results-								
Sl.	Test Parameters	Method used	Unit	A	B	C	D	Units
1.	Benzene (C ₆ H ₆)	IS:3302(P-11)-2006	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
2.	Benzo (a) Pyrene (Bap)- Particulate phase only	IS:3302(P-12)-2004	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPCLAB/ISOPH/01/00	mg/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-
-Test Results End -								

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

Operational Status: Unit was Operational During sampling.

Analyzed by - Archana Suresh


Reviewed by
SS. Kumar
Technical Head





EPIC LabTech Private Limited

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CIN - U74799JH2022PTC377921
PAN - KARH23611W
GST - 21AAKHC3537M024

Instrumentation -
Hindustani Scientific Company
Certified by -
ISO 9001:2015 Certified Laboratory

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RLD2502525008	Group	Atmospheric Pollution
Issue date/time	20.06.2025/ 10:27	Sub Group	Work Zone Noise

Report issued 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. Aniket Desai
Contact Number: +91 9871034775
Email Id: aniket.desai@edityabrla.com
Order Date: 31.03.2025/ 10:18
Order Number: 13812313268

References of Quality Management System (Copy of Issuance Date)

Customer Registration No.	EPIC/OTH/QC/05	Sample Booking Number	EPIC-2525008
Sample(s) Code	2525008 (A) (B)	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 9680:1981 (RA 2020) & CPCB Method S.O. 56 (E) dated 11/01/2018		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	29	Humidity %	67	Wind direction	SE-270°
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Sampling Location(s) with GPS coordinate(s)

1. Location A	Near Pecan	GPS coordinate	23° 22' 53.46" N/ 84° 28' 17.93" E
2. Location B	Shrendag A Bauxite Mines (155.81 Ha)	GPS coordinate	23° 22' 36.23" N/ 84° 28' 13.84" E

Detail of performance of the laboratory activities

Test start date	16.06.2025/ 11:20	Test completion date	19.06.2025/ 13:10
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-Test Results -

Sl.	Test Parameters	Method used	Unit	A	B	Results	Units
1.	L_{eq}	IS: 9680:1981	dB (A)	71.1	73.4	73.4	dB

-Test Results End -

Prescribed Limit: NIOSH - Publication No. 14-136 in 2012, Table 1-1
Operational Status: Unit was Operational During sampling.


Reviewed by
J.K. Kumar
Technical Head


Reviewed by
Aniket Desai
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





Environmental Test Certificate

Unique Lab Report No.	TC1288725000000867	Discipline	Chemical
Report Unique ID	RL0232252018	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- 825302
MONITORING SITE: SHRENDAG A BAUXITE MINE

Contact Person: Mr. Amit Das
Contact Number: +91 9671034775
Email Id: amit.das@hindalcoindia.com
Order Date: 31.03.2025/ 10:10
Order Number: 13612313888

References of Quality Management System (Copy of Insert into DMS)

Customer Registration No.	EPIC/OTH/0232	Sample Booking Number	EPIC-252018
Sample(s) Code	252018 (A) (B) (C) (D)	Sample Receipt (D/T)	19.07.2025/ 11:17

Sampling References

Type of Industry: Bauxite Mines
Sampling Start (D/T): 12.07.2025/ 12:30
Mode of Sampling: Conducted by Laboratory
Sampling method used: IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)
Description/condition of sample: Receipt sample(s) were fit for analysis.

Environmental Condition during sampling

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

1. Location A	Near Weigh Bridge	GPS coordinate	23° 22' 20.58" / 84° 28' 34.74"
2. Location B	Bag Quarry	GPS coordinate	23° 22' 52.64" / 84° 28' 20.63"
3. Location C	Mine Pit Quarry No.2A	GPS coordinate	23° 23' 00.53" / 84° 28' 13.94"
4. 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	19.07.2025/ 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.	Particulate Matter (PM ₁₀)	IS 5182 (P-23) 2022	µg/m ³	78.09	71.36	72.06	76.92	300 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	36.59	32.69	30.71	34.32	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS 5182 (P-02) 2022	µg/m ³	07.48	06.12	07.12	06.33	90 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS 5182 (P-06) 2022	µg/m ³	18.60	17.52	15.34	14.28	80 (24 hr)
5.	Ammonia (NH ₃)	IS 5182 (P-25) 2019	µg/m ³	50.66	46.22	44.94	44.3	400 (24 hr)
6.	Ozone (O ₃)	IS 5182 (P-08) 2019	µg/m ³	33.29	35.10	34.79	30.4	180 (1 hr)
7.	Lead (Pb)	IS 5182 (P-22) 2019	µg/m ³	BDL	BDL	BDL	BDL	1.2504 (1 hr)
8.	Nickel (Ni)	IS 5182 (P-26) 2020	ng/m ³	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA 60 3.2.1999	ng/m ³	BDL	BDL	BDL	BDL	-

- Test Results Tot -

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

Analyzed by - Vishal Mangani

Vishal Mangani
Technician

Rishi
Owner/Dad
Laboratory Head



Authorized Signatory
EPIC LabTech Pvt. Ltd.



Address:
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93555 70894
Email: labtech@gmail.com

CIN - U74999HR2020PLC074946
PIN - 834001
GST - 23AAHCSATM0242

Analyzed by -
Certified by -
ISO 9001:2015 and 14001:2015

Environmental and Social Compliance

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	PL0332025018	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 835302
MONITORING SITE: SHRENDAG A BAUXITE MINE

Contact Person: Mr. Arpit Das
Contact Number: +91 9871034775
Email Id: arpit.das@ediblebits.com
Order Date: 31.03.2025/ 10:10
Order Number: 13612312888

References of Quality Management System (Date of Issue/Date Due)

Customer Registration No.	EPIC/OTH/0232	Sample Booking Number	EPIC-2528018
Sample(s) Code	2528018 (A) (B) (C) (D)	Sample Received (D/T)	19.07.2025/ 11:17

Sampling References

Type of industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/006
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 5382 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	25	Humidity %	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°22'26.90" / 84°28'34.74"
S. Location B	BK8 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°28'13.84"
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	19.07.2025/ 11:37	Test completion date	19.07.2025/ 15:00
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- Test Results -

Sl.	Test Parameters	Method used	Unit	Results				Units
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:5182(P-12) 2006	µg/m 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) 2006	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC-LABSCPNH0100	mg/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-

- Test Results End -

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

Operational Status Uninited Operational During sampling.

Analyzed by - Vishal Kumar


Reviewed by
Vishal Kumar
Technical Head


Reviewed by
Arpit Das
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Environmental Audit Report Card - Monitoring

Unique Lab Report No.	TC13887250000006868	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

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST-LOHARDAGA, STATE-JHARKHAND, INDIA 805302
MONITORING SITE: SHRENDAG A BAUXITE MINE

Contact Person: Mr. Ankit Das
Contact Number: +91 9871034775
Email Id: ankit.das@hindalcoindia.com
Order Date: 31.03.2025/ 10:10
Order Number: 1388725123456

References of Quality Management System (Copy of Insanity Doc)

Customer Registration No.	EPIC/OTH/0232	Sample Booking Number	EPIC-2529019
Sample(s) Code	2529019 (A) (B) (C) (D)	Sample Receipt (D/T)	19.07.2025/ 11:21

Sampling References

Type of Industry	Bauxite Miners	Ref. of Sampling Plan	EPIC/LAB/T/006
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. Umar Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAQOM/36/2012-13)		
Description/condition of sample	Received sample(s) were fit for analysis.		

Environmental Condition during sampling

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

S. Location A	Near Bargarh Village	GPS coordinate	23° 22' 40.58" E/ 84° 30' 11.81" N
S. Location B	Near Paun Village	GPS coordinate	23° 20' 10.96" E/ 84° 25' 50.00" N
S. Location C	Near Hanup Village	GPS coordinate	23° 24' 20.73" E/ 84° 24' 59.73" N
S. Location D	Near Paitoli Village	GPS coordinate	23° 26' 16.08" E/ 84° 28' 10.78" N

Data(s) of performance of the laboratory activities

Test start date	19.07.2025/ 11:30	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) 2019	µg/m ³	50.74	56.30	63.52	66.45	300 (340) N
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	24.63	23.84	19.18	29.29	80 (240) N
3.	Sulphur Dioxide (SO ₂)	IS 5182 (P-02) 2019	µg/m ³	06.69	05.52	06.72	06.33	-
4.	Nitrogen Dioxide (NO ₂)	IS 5182 (P-06) 2019	µg/m ³	18.60	17.52	15.38	15.39	-
5.	Ammonia (NH ₃)	IS 5182 (P-25) 2019	µg/m ³	37.81	34.74	36.97	32.19	400 (240) N
6.	Ozone (O ₃)	IS 5182 (P-08) 2019	µg/m ³	18.82	18.82	22.07	23.52	160 (140) N
7.	Lead (Pb)	IS 5182 (P-03) 2019	µg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	1.00 (0.4) N
8.	Nickel (Ni)	IS 5182 (P-26) 2019	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
9.	Arsenic (As)	USEPA 10.2.2:1996	ng/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-

-Test Results End -

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

Analysed by - Vishal Mangat


Reviewed by
(S. Kumar)
Technical Head


S. Kumar
Technical Head
Laboratory Head


Authorized Signatory

EPIC LabTech Pvt. Ltd.

Panjab Board

Environmental Audit Report Card



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		Contact Person	Mr. Ankit Das					
MONITORING SITE: SHRENDAG A BAUXITE MINE		Contact Number	+91 9871004775					
		Email Id	ankit.das@earthyscripts.com					
		Order Date	31.03.2025/ 10:10					
		Order Number	13612313868					
References of Quality Management System (QoS) of Insanity Data)								
Customer Registration No.	EPIC/OTH/0232	Sample Booking Number	EPIC-2529019					
Sample(s) Code	2529019 (A) (B) (C) (D)	Sample Receipt (D/T)	19.07.2025/ 11:21					
Sampling References								
Type of industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/P/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 5362 and CPCB Air Manual Volume - 1 (NAAQM/036/2012-13)							
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°					
Sampling Location(s) with GPS coordinate(s)								
S. Location A	Near Banjari Village	GPS coordinate	23° 22' 40.56" / 84° 30' 11.81"					
S. Location B	Near Paudi Village	GPS coordinate	23° 20' 10.96" / 84° 25' 59.00"					
S. Location C	Near Hanup Village	GPS coordinate	23° 24' 20.70" / 84° 24' 58.71"					
S. Location D	Near Pantiya Village	GPS coordinate	23° 26' 16.08" / 84° 26' 10.78"					
Data(s) of performance of the laboratory activities								
Test start date	19.07.2025/ 11:30	Test completion date	19.07.2025/ 15:00					
-Test Results-								
Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	0.0021P-131/2004	mg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	
2.	Benzo (a) Pyrene (Bap)- Petroleum phase only	0.0021P-131/2004	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/14P/01/00	mg/m ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	

Prescribed Limit Environmental Protection Rules-2006, Schedule V
Operational Status Unit was Operational During sampling

Background Info - Virtual Monarchs

REFERENCES

Borrowed by
J. B. Lippincott
Baltimore, Maryland

Downloaded by
S.S. Lerner
University of

[Signature]
Issued by
Joseph Gold
Literary Agent

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Dinesh Dhanashri



Environmental Test Certificate

Unique Lab Report No.	TC1288725000000889	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: SHRENDAG A BAUXITE MINE

Contact Person: Mr. Ankit Das
Contact Number: +91 9871034775
Email Id: ankit.das@hindalcoindia.com
Order Date: 31.03.2025/ 10:10
Order Number: 13812313888

References of Quality Management System (Days of Traceability Date)

Customer Registration No.	EPIC/OTH/0232	Sample Booking Number	EPIC-2529020
Sample(s) Code	2529020	Sample Receipt (D/T)	19.07.2025/ 11:22

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/026
Sampling Start (D/T)	19.07.2025/ 14:30	Sampling End (D/T)	19.07.2025/ 14:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, R-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	180°-220°
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Sampling Location(s) with EPS coordinate(s)	GPS coordinate
S. Location A Near Mine Office	23° 22' 28.32" E 82° 28' 24.02" N

Detail(s) of performance of the laboratory activities	Test completion date
Test start date: 19.07.2025/ 11:42	19.07.2025/ 16:00

-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Acceptable Limit	Limits
1.	pH value at 25.1°C	IS 3025 (P-11) 2022	-	6.71	6.5-8.5	No reaction
2.	Turbidity	IS 3025 (P-10) 2022	NTU	0.78	1	5
3.	Colour	IS 3025 (P-04) 2022	Patton	45	1	15
4.	Odour	IS 3025 (P-05) 2022	-	Agnosable	Agnosable	Agnosable
5.	Taste	IS 3025 (P-07) 2022	-	Agnosable	Agnosable	Agnosable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2022	mg/l	149.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2022	mg/l	12.74	250	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2022	mg/l	67.00	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-25) 2022	mg/l	96.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 2022	mg/l	12.62	75	300
11.	Free Residual Chlorine	IS 3025 (P-20) 2022	mg/l	80.00 (0.40)	3.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24) Sec-1(2022)	mg/l	1.20	200	400
13.	Nitrate (as NO ₃)	APHA 4500 N 2023	mg/l	0.95	45	No reaction
14.	Phenolic Compound	IS 3025 (P-43) Sec-1(2022)	mg/l	80.00 (0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 2500 Mg E 2023	mg/l	14.65	30	100



EPIC

Unique Lab Report No.	TC138872500000888	Discipline	Chemical
Report Unique ID	RL0222252020	Group	Water
Issue date/time	19.07.2025 / 17:04	Sub Group	Drinking Water

Report how to

M/N - MINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA-835302
MONITORING SITE: SHRENDAGA BAUXITE MINE

Contact Person: Mr. Ankit Das
Contact Number: +91 9871034775
Email Id: ankit.das@udhyebirds.com
Order Date: 31.03.2025 10:10
Order Number: 1234567890

Group 8: Residues and Contaminants in Water

Sub-Group - Trace Metals Elements

16. Copper (as Cu)	APHA 21111 B 2003	mg/l	BDL/MDL-6.21	0.03	1.3
17. Iron (as Fe)	APHA 21111 B 2003	mg/l	BDL/MDL-6.11	1.1	No relaxation
18. Lead (as Pb)	APHA 21111 B 2003	mg/l	BDL/MDL-6.03	0.03	No relaxation
19. Cadmium (as Cd)	APHA 21111 B 2003	mg/l	BDL/MDL-0.003	0.003	No relaxation
20. Total Chromium (as Cr)	APHA 21111 B 2003	mg/l	BDL/MDL-0.05	0.05	No relaxation
21. Nickel (as Ni)	APHA 21111 B 2003	mg/l	BDL/MDL-0.02	0.03	No relaxation
22. Total Arsenic (as As)	APHA 21114 B 2003	mg/l	BDL/MDL-0.005	0.01	0.06
23. Selenium (as Se)	APHA 21114 B 2003	mg/l	BDL/MDL-0.005	0.01	No relaxation
24. Manganese (as Mn)	APHA 21111 B 2003	mg/l	BDL/MDL-0.08	0.1	0.3
25. Zinc (as Zn)	APHA 21111 B 2003	mg/l	BDL/MDL-0.04	0	15

-Four must find -

Practical Linux

Operational Status

Analyzed by - Vinodh Mammen

第3460章

Unit was Operational During Sampling

三

Measured by
(B.W. Turner)
Instrument used

Wissenschaft
(H. Gehrke)
Institut für

13-19-145
Issued by
(Street Box)
Colchester, Vt.

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Bhopal, Madhya Pradesh





Analytical and Field Laboratory

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: SHRENDAG A BAUXITE MINE		Contact Person	Mr. Ankit Das			
		Contact Number	+91 9871034775			
		Email Id	ankit.das@editybirds.com			
		Order Date	31.03.2025/ 10:10			
		Order Number	13612313868			
References of Quality Management System (Date of Issue/Expiry Date)						
Customer Registration No.	EPIC/OTH/02232	Sample Booking Number	EPIC-2529020			
Sample(s) Code	2529020	Sample Receipt (D/T)	19.07.2025/ 11:02			
Sampling References						
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/B/09E			
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: 2025 (Part-1) 1987, R-2003					
Description/condition of sample	Received sample(s) were fit for analysis.					
Environmental Condition during sampling						
Weather condition	Cloudy	Temperature (°C)	26			
		Humidity %	72			
		Wind direction	90°-270°			
Sampling Location(s) with GPS coordinate(s)						
S. Location A	Near Mine Office	GPS coordinate	23° 22' 26.03" E/ 84° 28' 24.02" N			
Date(s) of performance of the laboratory activities						
Test start date	19.07.2025/ 11:43	Test completion date	19.07.2025/ 16:00			
-Test Result-						
Sl.	Test Parameters	Method used	Unit	Results	Acceptable Limit	Limits
1.	Fluoride (as F)	APHA 4500-F-C:2023	mg/l	BDL(MOL-0.1)	1.0	1.5
Group-Residues and Contaminants in Water				Sub Group-Trace Metals Elements		
2.	Aluminum	IS: 3025 (P-56):2019	mg/l	BDL(MOL-0.3)	0.03	0.2
3.	Boron	IS: 3025 (P-57):2021	mg/l	BDL(MOL-0.1)	0.8	1.0
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/NAW/01/00	µg/l	BDL(MOL-0.2)	0.8	No regulation
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/NAW/01/00	µg/l	BDL(MOL-0.05)	0.1	No regulation
Group-Residues and Contaminants in Water				Sub Group-Pesticides		
6.	Aalachlor	EPIC/LAB/SOP/NAW/01/00	µg/l	BDL(MOL-0.3)	20	No regulation
7.	Atrazine	EPIC/LAB/SOP/NAW/01/00	µg/l	BDL(MOL-0.5)	2.0	No regulation
8.	Diethdrin	EPIC/LAB/SOP/NAW/01/00	µg/l	BDL(MOL-0.02)	0.03	No regulation
9.	Alpha HCH	EPIC/LAB/SOP/NAW/01/00	µg/l	BDL(MOL-0.005)	0.01	No regulation
10.	Beta HCH	EPIC/LAB/SOP/NAW/01/00	µg/l	BDL(MOL-0.02)	0.04	No regulation
11.	Butachlor	EPIC/LAB/SOP/NAW/01/00	µg/l	BDL(MOL-0.5)	125.0	No regulation
12.	Chloryphos	EPIC/LAB/SOP/NAW/01/00	µg/l	BDL(MOL-0.3)	30.0	No regulation
13.	Delta HCH	EPIC/LAB/SOP/NAW/01/00	µg/l	BDL(MOL-0.02)	0.04	No regulation
14.	Ethion	EPIC/LAB/SOP/NAW/01/00	µg/l	BDL(MOL-0.5)	3.0	No regulation



EPIC LabTech Private Limited

Address:
C/o - K.K. Taparia, Interceptor
Road No. - 3, Ranchi,
Jharkhand - 834005, India

T. 0651 466252
E. 98557 88877
M. 9835 73994
O. rishabhshah@gmail.com

CIN - U74999IN2009PLC075765
PIN - 834003
GST - 25AAKCE339M2A

Revised by -
Rishabh Shah, Laboratory Head
Date/Ref No -
REC 000000144400-4000/2019

Water Quality Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical		
Report Unique ID	RL0332526020	Group	Water		
Issue date/time	19.07.2020/ 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 - 835303		Contact Person	Mr. Ankit Das		
MONITORING SITE: SHRENDAG A BAUXITE MINE		Contact Number	+91 9971034775		
		Email Id	ankit.das@hindalcoindia.com		
		Order Date	31.03.2020/ 10:10		
		Order Number	13612313868		
15. Gamma-HCH(Lindane)	EPICLAB/SOP/WA/01/00	u/g	BOL/MOL-0.5	2.0	No relaxation
16. Malathion	EPICLAB/SOP/WA/01/00	u/g	BOL/MOL-0.5	100.0	No relaxation
17. Methyl parathion	EPICLAB/SOP/WA/01/00	u/g	BOL/MOL-0.5	0.3	No relaxation
18. Monocrotophos	EPICLAB/SOP/WA/01/00	u/g	BOL/MOL-0.5	1.0	No relaxation
19. Phorate	EPICLAB/SOP/WA/01/00	u/g	BOL/MOL-0.5	2.0	No relaxation
20. DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPICLAB/SOP/WA/01/00	u/g	BOL/MOL-0.5	1.0	No relaxation
21. Endosulfan (alpha, beta, and sulphate)	EPICLAB/SOP/WA/01/00	u/g	BOL/MOL-0.5	0.4	No relaxation

--Test result End--

Prescribed Limit

0.10000 2021

Operational Status

Unit was Operational During sampling.

Analyzed by - Rishabh Shah


Reviewed by
Rishabh Shah
Technical Head


Reviewed by
Rishabh Shah
Laboratory Head

Reviewed by Laboratory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





Sampling and Test Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL03322529031	Group	Water
Issue date/time	18.07.2025/ 17:00	Sub Group	Drinking Water

Report Issues 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. Amit Das
Contact Number: +91 9871034775
Email Id: amit.das@ednyabirta.com
Order Date: 31.03.2025/ 10:15
Order Number: 13612313888

References of Quality Management System (Copy of Issuance Date)

Customer Registration No.	EPIC/OTH/0232	Sample Booking Number	EPIC-2529031
Sample(s) Code	2529031	Sample Receipt (D/T)	18.07.2025/ 11:22

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/030
Sampling Start (D/T)	18.07.2025/ 14:30	Sampling End (D/T)	18.07.2025/ 14:45
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS : 10390 (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	NE/270°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Office	GPS coordinate	23° 22' 26.03" E/ 84° 29' 24.02" N
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Site(s) of performance of the laboratory activities

Test start date	18.07.2025/ 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 10390:2003	Per 100 ml	Not Detected	Should not be detectable in any 100 ml sample
2.	E.Coli	IS 10390:2003	Per 100 ml	Not Detected	

-Test result End -

Prescribed Limit: IS 10390:2003

Operational Status: Unit was Operational During sampling.

Analyzed by -Sunita Kumar


Sunita Kumar
(SA Level)
Technical Head


Issued by
Sunita Kumar
Technical Head
Authorized Signatory

EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





TC-12887

Environmental Test Certificate

Unique Lab Report No.	TC1288721000001955	Discipline	Chemical
Report Unique ID	RL0288721000001955	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 - 815302
MONITORING SITE : SHRENDAGA BAUXITE MINE

Contact Person: Mr. Ankit Das
Contact Number: +91 9971034775
Email Id: ankit.das@adityabirla.com
Order Date: 31.03.2025/ 10:18
Order Number: 13812313968

References of Quality Management System (QMS) (See of Trustable Devt)

Customer Registration No.	EPIC/OTH/0254	Sample Booking Number	EPIC-2535023
Sample(s) Code	2535022 (A) (B) (C) (D)	Sample Receipt (D/T)	25.08.2025/ 11:25

Sampling References

Type of Industry	Raodite 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. Akash Kumar & Team
Sampling method used	IS 11862 and CPCB Air Manual Volume - 1 (NAQ/04/36/2012-13)		
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	220°-40°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Weigh Bridge	GPS coordinate	23° 22' 20.89" E/ 84° 26' 34.74"
S. Location B	BK3 Quarry	GPS coordinate	23° 22' 52.64" E/ 84° 26' 20.83"
S. Location C	Mine Pit Quarry No.2A	GPS coordinate	23° 23' 00.83" E/ 84° 26' 13.94"
S. Location D	Mine Pit Quarry No.2B	GPS coordinate	23° 22' 57.07" E/ 84° 26' 13.00"

Date(s) of performance of the laboratory activities

Test start date	25.08.2025/ 11:45	Test completion date	29.08.2025/ 16:00
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-Test Results-

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS:1862 (P-23) 2019	µg/m ³	77.14	70.47	71.25	75.94	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS:1862 (P-24) 2019	µg/m ³	35.68	32.14	30.08	34.00	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS:1862 (P-02) 2019	µg/m ³	07.09	06.30	07.07	06.27	60 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS:1862 (P-06) 2019	µg/m ³	18.27	17.49	15.28	14.15	60 (24 hr)
5.	Ammonia (NH ₃)	IS:1862 (P-25) 2019	µg/m ³	49.72	45.90	44.82	43.90	40 (24 hr)
6.	Ozone (O ₃)	IS:1862 (P-09) 2019	µg/m ³	32.93	34.74	34.38	30.04	100 (1 hr)
7.	Lead (Pb)	IS:1862 (P-22) 2019	µg/m ³	BDL	BDL	BDL	BDL	1.00 (4 hr)
8.	Nickel (Ni)	IS:1862 (P-26) 2020	µg/m ³	BDL	BDL	BDL	BDL	—
9.	Arsenic (As)	IS:1874 (P-22) 2009	µg/m ³	BDL	BDL	BDL	BDL	—

-Test Results End -

Prescribed Limit Environmental Protection Rules-2006, Schedule VI.

Operational Status: Unit was Operational During sampling.

Analyzed by - Yash Mehta



Yash Mehta
Technical Head



Lab Head
Laboratory Head

Attestation & Signature
EPIC LabTech Pvt. Ltd.
Panaji, Goa, India



Report No. 00000000000000000000000000000000

Unique Lab Report No.	N/A	Discipline:	Chemical
Report Unique ID	RL02842030022	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-834002
MONITORING SITE: SHRENDAGA BAUXITE MINE

Contact Person: Mr. Ankit Das
Contact Number: +91 9671034775
Email Id: ankit.das@edbybiria.com
Order Date: 31.03.2025/ 10:10
Order Number: 13613313888

References of Quality Management System (Scope of Traceability Data)

Customer Registration No.	EPIC/OTH/0254	Sample Booking Number	EPIC-2535622
Sample(s) Code	2535622 (A) (B) (C) (D)	Sample Receipt (D/T)	25.08.2025/ 11:25

Sampling References

Type of Industry	Bauxite Mine	Ref. of Sampling Plan	EPIC/LAB/R036
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	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)	37	Humidity %	70	Wind direction	220°-40°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Weigh Bridge	GPS coordinate	23° 22' 26.597" E/ 84° 28' 34.74" N
S. Location B	BBQ Quarry	GPS coordinate	23° 22' 52.647" E/ 84° 28' 20.62" N
S. Location C	Mine Pit Quarry No.2A	GPS coordinate	23° 23' 00.937" E/ 84° 28' 13.94" N
S. Location D	Mine Pit Quarry No.2B	GPS coordinate	23° 22' 37.027" E/ 84° 28' 13.02" N

Data(s) of performance of the laboratory activities

Test start date	25.08.2025/ 11:45	Test completion date	29.08.2025/ 18:00
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--Test Results--

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:5182P-12/2000	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: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/AM/01/03	mg/m ³	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	BDL (MDL-1.0)	-

--Test Results Ref --

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

Operational Status: Unit was Operational During sampling.

Analyzed by - Akash Kumar


Analyzed by
Akash Kumar
Technician



Report No. 00000000000000000000000000000000

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID.	HL02942633033	Group	Aerospheric Pollution
Issue Date/Time	29.08.2025 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 : SHRENDAGA BAUXITE MINE

Contact Person: Mr. Ankit Das
Contact Number: +91 9071034775
Email Id: ankit.das@editybiriz.com
Order Date: 31.03.2025 10:10
Order Number: 13812313888

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

Customer Registration No.	EPIC/OTH/0264	Sample Booking Number	EPIC/2635023
Sample(s) Code	2635023 (A) (B) (C) (D)	Sample Receipt (D/T)	29.08.2025/11:00

Sampling References

Type of Industry	Bauxite Mines	No. of Sampling Plan	EPIC/LAB/038
Sampling Start (D/T)	22.08.2025/ 12:22	Sampling End (D/T)	23.08.2025/ 10:01
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS 5282 and CPCB Air Manual Volume - 1 (NAQMV36/2012-13)		

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	220°-40°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Banjari Village	GPS coordinate	23° 22' 40.96" E 84° 30' 11.81" N
S. Location B	Near Panch Village	GPS coordinate	23° 20' 10.96" E 84° 25' 58.00" N
S. Location C	Near Harup Village	GPS coordinate	23° 24' 20.72" E 84° 24' 58.71" N
S. Location D	Near Panch Village	GPS coordinate	23° 25' 10.86" E 84° 28' 10.70" N

Data(s) of performance of the laboratory activities

Test start date	29.08.2025/ 11:46	Test completion date	29.08.2025/ 16:00
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-Test Results-

Sl	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS 1802(P-12) 2000	µg/m ³	BDL	BDL	BDL	BDL	-
2.	Benz(a) Pyrene (Bap)- Particulate phase only	IS 1802(P-12) 2004	ng/m ³	BDL	BDL	BDL	BDL	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SDWAF/01/00	µg/m ³	BDL	BDL	BDL	BDL	-

-Test Results End -

Presented Limit: Environmental (Protection) Rules 1986, Schedule VI.

Operational Status: Unit was Operational During sampling.

Analyzed by - Vishal Margaria


 Vishal Margaria
 Technical Head


 Authorized Signatory
 EPIC Lab Tech Pvt. Ltd.
 Ranchi, Jharkhand



Most Advanced Test & Consultancy

Unique Lab Report No.	TC12987/20200001057	Discipline	Chemical
Report Unique ID:	HL0264/202004	Group	Water
Issue Date/Time	29.08.2020 17:06	Sub Group	Ground Water

Report Issue to:

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST - LOHARDAGA, STATE - JHARKHAND, INDIA 835307
MONITORING SITE: SHRENDAGA BAUXITE MINE

Contact Person: Mr. Ankit Das
Contact Number: +91 9071034775
Email ID: ankit.das@odishaorbz.com
Order Date: 31.03.2020/ 10:10
Order Number: 13812313868

References of Quality Management System (Days of Inactivity/Out)

Customer Registration No.	EPIC/OTH/0264	Sample Booking Number	EPIC/2020024
Sample(s) Code	2536024	Sample Receipt (D/T)	29.08.2020/ 11:27

Sampling References

Type of industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	21.08.2020/ 12:50	Sampling End (D/T)	21.08.2020/ 13:05
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)	23	Humidity %	70	Wind direction	220°-40°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Panchi Village	GPS coordinates	23° 26' 18.23" E 84° 28' 10.24"
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Details of performance of the laboratory activities

Test start date:	29.08.2020/ 12:30	Test completion date:	29.08.2020/ 16:20
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-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Accuracy (Line)	Units
					Accepted/Line	Permissible (PPM)
1.	pH value at 25.0°C	IS 3025 (P-11) 2022	-	6.92	6.5-6.3	No deviation
2.	Turbidity	IS 3025 (P-18) 2024	NTU	0.88	1	5
3.	Colour	IS 3025 (P-44) 2021	As per	<5	5	15
4.	Odour	IS 3025 (P-05) 2024	-	Agreeable	Agreeable	Agreeable
5.	Teste	IS 3025 (P-47) 2017	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-19) 2023	mg/l	215.00	900	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	17.50	250	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	86.00	200	400
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-23) 2009	mg/l	100.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 2001	mg/l	13.74	75	200
11.	Free Residual Chlorine	IS 3025 (P-25) 1998	mg/l	BDL/MDL 0.4	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/96-1) 2022	mg/l	2.70	200	400
13.	Nitrate (as NO ₃)	APHA 4200 N 2023	mg/l	1.83	45	No deviation
14.	Phenolic Compound	IS 3025 (P-43/Sec 1) 2022	mg/l	BDL/MDL 0.001	0.001	0.002
15.	Magnesium (as Mg)	APHA 2020 Mg E 2021	mg/l	15.44	30	100

Disclaimer Note | 1. The laboratory accepts responsibility for content of this report | 2. All test performed as laboratory's permanent facility, at specific environmental conditions as per required and hence responsibility for the sample tested is given to the sample | 3. The final report shall not be reproduced fully or in part & can't be used as proof in the court of law | 4. Any discrepancy in this report should be resolved by consulting author of the report | 5. Final validity of EPIC LabTech Pvt. Ltd. will be based on certified parameter only | 6. All disputes are referred to Ranchi, Jharkhand and any legal dispute arising out of this report shall be resolved by the concerned authority | 7. This report does not imply acknowledgement of the sample provided by laboratory. Data are confidential, following sample are removed by user of content of this report | 8. When the sample are from external provider are accepted by 3 weeks | 9. Disclaimer: TEL: 130000 1044 (9 AM-11 AM), 1000 (12:00 AM-11:59 PM), 1400 (12:00 AM-11:59 PM)



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GST: 23AANCS23AHS01

Accredited by -
ISO 9001:2015 Number: IC-13947
National Testing Laboratory (NTL) Approved
Certified to -
ISO 9001:2015 and ISO 17025:2017

Environmental Test Certificate

Unique Lab Report No.	TC1288725000001057	Discipline	Chemical
Report Unique ID	FLU2642530324	Group	Water
Issue date/time	29.08.2023- 17:06	Sub Group	Ground Water

Report Issue to:

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

Contact Person: Mr. Arshik Das
Contact Number: +91 9871034775
Email Id: arshik.das@ahyabiria.com
Order Date: 31.03.2023/ 10:30
Order Number: 138123123868

Group - Residues and Contaminants in Water.		Sub Group - Trace Metals Elements			
16. Copper (as Cu)	APHA 3111 B 2023	mg/l	BDL(HDL-0.2)	0.00	LS
17. Iron (as Fe)	APHA 3111 B 2023	mg/l	BDL(HDL-0.1)	1.0	No relaxation
18. Lead (as Pb)	APHA 3111 B 2023	mg/l	BDL(HDL-0.01)	0.01	No relaxation
19. Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BDL(HDL-0.001)	0.003	No relaxation
20. Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BDL(HDL-0.01)	0.01	No relaxation
21. Nickel (as Ni)	APHA 3111 B 2023	mg/l	BDL(HDL-0.01)	0.02	No relaxation
22. Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BDL(HDL-0.0001)	0.01	LS
23. Selenium (as Se)	APHA 3114 B 2023	mg/l	BDL(HDL-0.0001)	0.01	No relaxation
24. Manganese (as Mn)	APHA 3111 B 2023	mg/l	BDL(HDL-0.01)	0.1	LS
25. Zinc (as Zn)	APHA 3111 B 2023	mg/l	BDL(HDL-0.04)	5	LS

-Test result End -

Prescribed Limit
Operational Status
Analyzed by - Peppa Kumar

15.06.2023
Unit was Operational During testing


Reviewed by
ES (Supr)
Technical Head


Reviewed by
Arshik Das
Secretary Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



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Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	HL02642535024	Group	Water
Issue date/time	29.06.2025, 17:08	Sub-Group	Ground Water

Report issued to

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

Contact Person Mr. Ankit Das
Contact Number +91 9871034775
Email Id ankit.das@uditayabiria.com
Order Date 31.03.2025/ 13:19
Order Number 12612213889

15. Gamma-HCH(Lindane)	ENCLAB509/WA01/00	HF	BDL(MDL-0.5)	2.0	No resolution
16. Malathion	ENCLAB509/WA01/00	HF	BDL(MDL-0.5)	100.0	No resolution
17. Methyl parathion	ENCLAB509/WA01/00	HF	BDL(MDL-0.2)	0.3	No resolution
18. Monocrotophos	ENCLAB509/WA01/00	HF	BDL(MDL-0.5)	1.0	No resolution
19. Phenate	ENCLAB509/WA01/00	HF	BDL(MDL-0.5)	2.0	No resolution
20. DDT (o, p and p, p'-isomer of DDT, DDE and DDD)	ENCLAB509/WA01/00	HF	BDL(MDL-0.5)	1.0	No resolution
21. Endosulfan (alpha, beta, and sulphate)	ENCLAB509/WA01/00	HF	BDL(MDL-0.5)	0.4	No resolution

-10-

Practiced Lines

10830

OpenOffice.org

Unit was Operational During Survey


B.R. Kumar
Editorial Panel

[Signature]
Signed by
Glenys Doid
Administrator

Authorised Signatory
EPIC LabTech Pvt. Ltd
Ranjith Jayakarand





Unique Lab Report No.	N/A	Discipline	Biological		
Report Unique ID	RL02942518025	Group	Water		
Issue date/time	29.08.2025: 17:09	Sub Group	Ground Water		
Report Issue to					
M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST. LOHARDAGA, STATE- JHARKHAND, INDIA-825303 MONITORING SITE : SHRENDAGA BAUXITE MINE		Contact Person	Mr. Amit Das		
		Contact Number	+91 9971023475		
		Email Id	amit.das@hdcitycircle.com		
		Order Date	31.03.2025/ 10:10		
		Order Number	13612313868		
References of Quality Management System (Date of Issue/Expiry Date)					
Customer Registration No.	EPIC/OTH/0284	Sample Booking Number	EPIC-2518025		
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/RV030		
Sampling Start (D/T)	21.08.2025/ 12:00	Sampling End (D/T)	21.08.2025/ 13:00		
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°		
Sampling Location(s) with GPS coordinate(s)					
S. Location A	Near Pantihi Village	GPS coordinate	23° 28' 18.33" E 84° 28' 10.24" S		
Date(s) of performance of the laboratory activities					
Test start date	29.08.2025/ 12:30	Test completion date	29.08.2025/ 18:30		
-Test Result-					
Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	Total Coliform	IS 10582:2002	Per 100 ml	Not Detected	Shall not be detectable in any 100 ml sample
2.	E.Coli	IS 10582:2002	Per 100 ml	Not Detected	
-Test result End -					

**Prescribed Limit
Operational Status**



124

Review by
John F. Scott

Laboratory Report
Autopsy & Forensic
EPIC LabTech Pvt. Ltd.
Durg, Madhya Pradesh



Analytical Test Certificate

Unique Lab Report No.	TC1298720200001058	Discipline	Chemical
Report Unique ID	MU029872020001058	Group	Water
Issue date/time	29.08.2025/ 17:12	Sub Group	Surface Water

Report Issue to

M/s - MINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST-OFFICE-LOHARDAGA,
DIST. 4 CHARDAGA, STATE-JHARKHAND, INDIA-833303
MONITORING SITE : SHRENDAGA BAUSITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number

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

References of Quality Management System (Several Testability Data)

Customer Registration No.	EPIC/OTH/0264	Sample Booking Number	EPIC-2536028
Sample(s) Code	2535020	Sample Receipt (DT)	29.08.2025/ 11:28

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LABR/036
Sampling Start (DT)	21.08.2025/ 13:20	Sampling End (DT)	21.08.2025/ 13:25
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS: 3025 (Part-1) 1967, II-2003	Description/condition of sample: Receipt sample(s) were fit for analysis.	
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	220F-45°
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Sampling Location(s) with GPS coordinate(s)	GPS coordinate
S. Location A Tengra Gama (Spring Water)	23° 22' 21.51" N 84° 28' 02.4" E

Date(s) of performance of the laboratory activities

Test start date	29.08.2025/ 12:30	Test completion date	29.08.2025/ 18:30
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-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS:3025 (P-11) 2022	-	6.53	-
2.	Turbidity	IS:3025 (P-10) 2024	NTU	0.88	-
3.	Colour	IS:3025 (P-04) 2023	Nonet.	5	-
4.	Odour	IS:3025 (P-05) 2018	-	Agreeable	-
5.	Taste	IS:3025 (P-07) 2017	-	Agreeable	-
6.	Total Dissolved Solids (TDS)	IS:3025 (P-10) 2023	mg/l	210.00	-
7.	Chloride (as Cl)	IS:3025 (P-02) 2018	mg/l	16.75	-
8.	Total Alkalinity (as CaCO ₃)	IS:3025 (P-21) 2018	mg/l	85.00	-
9.	Total Hardness (as CaCO ₃)	IS:3025 (P-23) 2009	mg/l	98.00	-
10.	Calcium (as Ca)	IS:3025 (P-40) 2004	mg/l	12.20	-
11.	Free Residual Chlorine	IS:3025 (P-26) 2006	mg/l	BDL (NDL-0.0)	-
12.	Sulphate (as SO ₄)	IS:3029 (P-2459c-1) 2022	mg/l	2.70	-
13.	Nitrate (as NO ₃)	APHA 2500 E:2023	mg/l	1.95	-
14.	Phenolic Compound	IS:3029 (P-435c-1) 2022	mg/l	BDL (NDL-0.00)	-



Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline:	Chemical
Report Unique ID	RL03642505028	Group:	Water
Issue date/time	29.06.2025: 17:12	Sub Group:	Surface Water
Report Issue to		Contact Person:	Mr. Arkit Das
M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE LOHARDAGA, DIST - LOHARDAGA, STATE - JHARKHAND, INDIA 835303		Contact Number:	+91 9971034779
MONITORING SITE : SHRENDAGA BAUXITE MINE		Email Id:	ankit.das@citybirla.com
		Order Date:	31.03.2025/10:10
		Order Number:	13612313868
15. Gamma-HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	upt	BDL/MDL-0.5
16. Malathion	EPIC/LAB/SOP/WA/01/00	upt	BDL/MDL-0.5
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	upt	BDL/MDL-0.2
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	upt	BDL/MDL-0.5
19. Phorate	EPIC/LAB/SOP/WA/01/00	upt	BDL/MDL-0.5
20. DDT (o, p and p, p'-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	upt	BDL/MDL-0.5
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	upt	BDL/MDL-0.05

--Test result End--

Prescribed Limit

Operational Status

Analyzed by - Pappu Kumar

Unit was Operational during sampling


 Verified by
Pappu Kumar
Technician


 Issued by
Arkit Das
Laboratory Head

 Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand




Unique Lab Report No.	N/A	Discipline	Biological		
Report Unique ID	RL02942535027	Group	Water		
Issue date/time	29.08.2025 17:15	Sub Group	Surface Water		
Report Issue to					
M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST- LOHARDAGA, STATE- JHARKHAND, INDIA 835302		Contact Person	Mr. Ankit Das		
MONITORING SITE : SHRENDAGA BAUXITE MINE		Contact Number	+91 9871034775		
		Email Id	ankit.das@hdcyberbids.com		
		Order Date	31.03.2025/ 15:19		
		Order Number	1234567890		
References of Quality Management System (Copy of Testility Doc)					
Customer Registration No.	EPIC/OTH/0284	Sample Booking Number	EPIC-2525627		
Sample(s) Code	2525627	Sample Receipt (DT)	29.08.2025/ 11:26		
Sampling References					
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/W/098		
Sampling Start (DT)	21.08.2025/ 12:20	Sampling End (DT)	21.08.2025/ 13:25		
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	222°-40°		
Sampling Location(s) with GPS coordinate(s)					
S. Location A	Tengra Gorha (Spring Water)	GPS coordinate	22° 22' 21.61" E 84° 26' 02.54"		
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-					
#	Test Parameters	Method used	Unit	Results	Units
1.	Total Coliform	IS 15185:2002	Per 100 mL	380	
2.	E.Coli	IS 15185:2002	Per 100 mL	290	
-Test result fail -					

Properties and Limit

Opportunities for action

Approved by -Santa Fe Hwy

Unit-wise Quantitative During semester

Reported by
J. J. Korn
1999-01-01

Report to
S. B. Army
Senate

12
10th
1985
Issued by
Suzanne Reed

Authorised Signature
EPIC LabTech Pvt. Ltd.
Branch: Sharjah



EPIC

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	HL02942530328	Group	Pollution & Environment
Issue date/time	29.06.2005: 17:18	Sub Group	Waste Water (Effluent)

Report Issues to

M/S - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST - LOHARDAGA, STATE - JHARKHAND, INDIA 830002
MONITORING SITE : SHRENDAGA BALKITE MINE

Contact Person Mr. Ankit Das
Contact Number +91 9871034775
Email Id ankit.das@digitvcrs.com
Order Date 31.03.2023/10:10
Order Number 13812313868

References of Quality Management System Class of Transportaion

Customer Registration No.: EPIC/OTH/0264 Sample Booking Number: EPIC 2336028
Sample(s) Code: 2526028 Sample Request ID: 11 25.06.2025/ 11:30

Section References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/030
Sampling Start (D/T)	21.08.2025/ 12:10	Sampling End (D/T)	21.08.2025/ 13:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Aman Kumar & Team
Sampling method used	IS : 3626 (Part 1) 1987, & 2003		
Preservation/Retention of samples	Preserved separately until ready for analysis		

Environmental Conditions during growth

Maximum cloudiness 80% Wind direction 220°-40°

Some are located with our friends

Location A Work Shop (Garret) GPS coordinate 25° 22' 27.39" N 84° 28' 33.24" E

卷一

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	Total Dissolved Solids (TDS)	IS:34029 (P-16) 2003	mg/l	260.0	-
2.	Dissolved Oxygen (DO)	IS:2425 (P-16) 2006	mg/l	0.8	-

-1-
- Last revised 5/2001

Prescribed Unit Environmental (Protection) Rules-2005, Schedule -I, Serial No - 134
Operational Status Unit was Operational During sampling.

B. B. Babbitt
B. B. Babbitt
1984

1255135
Issued by

Authorised Signatory:
EPIC LabTech Pvt. Ltd.
Ranjana Ranjha



Address:
City - B.R. Bhagatpur, Saharanpur
District - S. Saharanpur
State/Union - Uttar Pradesh

• 15.11.2009
• 14.07.2011
• 13.04.2014

Санкт-Петербург

Approved by --
[Signature] Date: [Signature] / [Date]
[Signature] Date: [Signature] / [Date]
Reviewed by --

Unique Lab Report No.	TC128872000001050	Discipline	Chemical		
Report Unique ID	PL02642936029	Group	Water		
Issue Date/Time	29.08.2025, 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	Contact Person	Mr. Ankit Das			
MONITORING SITE : SHRENDAG A BAUXITE MINE	Contact Number	+91 9871034775			
	Email Id	ankit.das@hdcyabria.com			
	Order Date	21.08.2025/ 15:19			
	Order Number	13612313868			
References of Quality Management System (Scope of Testability Dated					
Customer Registration No.	ERIC/OTH/0254	Sample Booking Number	ERIC-2536429		
Sample(s) Code	2536429	Sample Receipt (D/T)	25.08.2025/ 11:01		
Sampling References					
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	ERIC/LAB/B/036		
Sampling Start (D/T)	21.08.2025/ 13:35	Sampling End (D/T)	21.08.2025/ 13:45		
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)	27		
		Humidity %	70		
		Wind direction	220°-40°		
Sampling Location(s) with GPS coordinate(s)					
S. Location A	Kanchi Nadi (Up Stream)	GPS coordinate	23° 32' 45.42" / 84° 27' 15.36"		
Detail(s) of performance of the laboratory activities					
Test start date	25.08.2025/ 12:00	Test completion date	25.08.2025/ 18:00		
-Test Result-					
S.	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2022	-	6.50	-
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.89	-
3.	Colour	IS 3025 (P-04) 2021	NUC	5	-
4.	Odour	IS 3025 (P-05) 2019	-	Agreeable	-
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	-
6.	Total Dissolved Solids (TDS)	IS 3025 (P-01) 2023	mg/l	175.00	-
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	12.81	-
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-21) 2019	mg/l	36.00	-
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	42.16	-
10.	Calcium (as Ca)	IS 3025 (P-46) 1993	mg/l	13.63	-
11.	Free Residual Chlorine	IS 3025 (P-28) 1996	mg/l	80.00 (tolerance)	-
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Spec-1) 2022	mg/l	1.70	-
13.	Nitrate (as NO ₃)	APHA-2500 B 2023	mg/l	1.96	-
14.	Phenolic Compound	IS 3025 (P-42/Spec-1) 2022	mg/l	80.00 (tolerance)	-



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Unique Lab Report No.	TC1258729000001360	Discipline	Chemical
Report Unique ID	PL02942835029	Group	Water
Issue date/time	29.08.2025:17:21	Sub Group	Surface Water

Report from the

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

Contact Person: Mr. Ankit Doe
Contact Number: +91 99971034775
Email Id: ankit.doe@yabiria.com
Order Date: 31.03.2026 10:10
Order Number: 1234567890

Groundwater and Contamination in Watersheds

Two Groups - Trace Matrix Elements

15. Copper (as Cu)	APHA 25111 B 2023	mg/l	BDL/HDL-0.21
16. Iron (as Fe)	APHA 25111 B 2023	mg/l	BDL/HDL-0.11
17. Lead (as Pb)	APHA 25111 B 2023	mg/l	BDL/HDL-0.011
18. Cadmium (as Cd)	APHA 25111 B 2023	mg/l	BDL/HDL-0.0001
19. Total Chromium (as Cr)	APHA 25111 B 2023	mg/l	BDL/HDL-0.05
20. Nickel (as Ni)	APHA 25111 B 2023	mg/l	BDL/HDL-0.02
21. Total Arsenic (as As)	APHA 25114 B 2023	mg/l	BDL/HDL-0.0001
22. Selenium (as Se)	APHA 25114 B 2023	mg/l	BDL/HDL-0.0001
23. Manganese (as Mn)	APHA 25111 B 2023	mg/l	BDL/HDL-0.001
24. Zinc (as Zn)	APHA 25111 B 2023	mg/l	BDL/HDL-0.04

-First result End -

Prescribed Limit

Conventional Statute

Analysed by - Purna Kumar

2016 von Sonnenland Energy vertrieben

Editorial
S. B. Kumar
Indraprastha
Institute of
Information
Technology

100

12
2018
Issued by

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranjan Jayathilaka



www.bhagavadgitaonline.info

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	PL02642334029	Group	Water
Issue date/time	29.08.2026: 17:21	Sub Group	Surface Water

Report issued to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST-LOHARDAGA, STATE-JHARKHAND, INDIA-83430
MONITORING SITE - SHRENDAGA Bauxite Mine

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email Id ankit.dim@edifybirla.com
Order Date 31-03-2025 10:10
Order Number 13812313868

References of Quality Management System (List of Quality Document)

Customer Registration No. EPIC/OTH/0264 Sample Booking Number EPIC-2525028
Sample ID 2525028 Sample Receipt ID/TI 25.08.2009/11.21

Sample References

Type of Industry	Fluorite Mines	Ref. of Sampling Plan	EPIC/LAB/R/038
Sampling Start (D/T)	21.08.2025/ 13:35	Sampling End (D/T)	21.08.2025/ 13:45
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 Percent samples(s) were fit for analysis

Environmental Condition Survey Results

5. Location A Kanchi Nadi (Up Stream)

Date(s) of performance of the laboratory activities:

— Tom Brady

SI	Test Parameters	Method used	Unit	Results	Limits
1	Microscopic examination of the specimen	Microscopic examination of the specimen	—	Normal	Normal

4. PROSPECTIVE (CONT'D)

Group	Residues and Contaminants in Water		Sub Group	Trace Metals Elements
2.	Aluminum	IS 3625 (P-55) 2019	mg/l	BDL(MDL-0.1)
3.	Boron	IS 3625 (P-57) 2021	mg/l	BDL(MDL-0.1)
4.	Polychlorinated biphenyls	EP/CL/AB/SOP/IR/01/08	ug/l	BDL(MDL-0.2)
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EP/CL/AB/SOP/IR/01/08	ug/l	BDL(MDL-0.05)

Grosser-Perschke, und Coauthors / 1849

6. Aachlor	EPICLAB/SOP/MA0108	apf	BDL(MDL-0.3)
7. Atrazine	EPICLAB/SOP/MA0108	apf	BDL(MDL-0.3)
8. Dieldrin	EPICLAB/SOP/MA0108	apf	BDL(MDL-0.03)
9. Alpha HCH	EPICLAB/SOP/MA0108	apf	BDL(MDL-0.001)
10. Beta HCH	EPICLAB/SOP/MA0108	apf	BDL(MDL-0.01)
11. Butachlor	EPICLAB/SOP/MA0108	apf	BDL(MDL-0.3)
12. Chloryphos	EPICLAB/SOP/MA0108	apf	BDL(MDL-0.3)
13. Delta HCH	EPICLAB/SOP/MA0108	apf	BDL(MDL-0.01)



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Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID:	PL02642533029	Group	Water
Issue date/time	29.04.2026, 17:21	Sub Group	Surface Water

Report from the

M/S - HINDALCO INDUSTRIES LIMITED
VILLAGE - COURT ROAD, POST OFFICE - LOHARDAGA,
DIST. LOHARTARAI, STATE - JHARKHAND, INDIA - 825001
MONITORING SITE : SHRIDAGA BAGNI MINE

Contact Person Mr. Ankit Das
Contact Number +91 9871034779
Email Id ankit.das@edifybirla.com
Order Date 31-03-2023 10:10
Order Number 1234567890

14. Ethion	EPIC/LAB/SOP/NW/01/08	ref	BDL/mol-0.5
15. Gamma-HCH(Lindane)	EPIC/LAB/SOP/NW/01/08	ref	BDL/mol-0.5
16. Malathion	EPIC/LAB/SOP/NW/01/08	ref	BDL/mol-0.5
17. Methyl parathion	EPIC/LAB/SOP/NW/01/08	ref	BDL/mol-0.5
18. Monocrotophos	EPIC/LAB/SOP/NW/01/08	ref	BDL/mol-0.5
19. Phorate	EPIC/LAB/SOP/NW/01/08	ref	BDL/mol-0.5
20. DDT (o, p and p, p'-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/NW/01/08	ref	BDL/mol-0.5
21. Endosulfan (alpha, beta, and gamma isomer)	EPIC/LAB/SOP/NW/01/08	ref	BDL/mol-0.25

- Last edited Sat -

Practical Limit

Operational Status

Authored by - Pappu Gang

(Not to be Operated At Dusk or Dawn)

Approved by
Dr. Faruqi
Tutor

12
11/18/2018
12:51 PM
Issued by
Dynamsoft Total PDF

Authorised Signatory
EPIC LabTech Pvt. Ltd.
Panjra - Jharkhand





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Near no. - 2, Raikot,
Raikot - 431001, India

Tel: +91 9331 4663252
+91 93357 88677
+91 93648 72994
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CIN: U74999MH2012PLC058485
PAN: AAHCEZBTM
GST: 23AAHCEZBTM02

Associated by:-
Guru Nanak Dev Institute of Technology,
Raikot, Raikot, Raikot, Raikot, Raikot, Raikot
Certified by:-
ISO 9001:2015 and ISO 17025:2017

TC-12887

Report of Water Sample Analysis

Unique Lab Report No.	IC128872900001061	Discipline	Chemical
Report Unique ID	FL0294253N01	Group	Water
Issue date/time	29.08.2025 17:27	Sub Group	Surface Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST-LOHARDAGA, STATE-RAJHSTHAN, INDIA-333000
MONITORING SITE: SHRENDAGA BAUXITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Arsh Dixit
+91 9371034779
arsh.dixit@cityabiru.com
31.03.2025 10:10
13612313868

References of Quality Management System (Scope of Traceability Detail)

Customer Registration No.	EPIC/OTH/0264	Sample Booking Number	EPIC-2525033
Sample(s) Code	2530501	Sample Receipt (D/T)	29.08.2025 11:32

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
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°-45°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Kanchni Nadi (Down Stream)	GPS coordinate	22° 23' 29.74" E/ 79° 27' 09.85" N
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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.	pH value at 25°C	IS 3025 (P-13) 2022	-	6.47	-
2.	Turbidity	IS 3025 (P-13) 1984	NTU	0.17	-
3.	Colour	IS 3025 (P-94) 2021	Hazen	5	-
4.	Odour	IS 3025 (P-89) 2018	-	Agreeable	-
5.	Taste	IS 3025 (P-87) 2017	-	Agreeable	-
6.	Total Dissolved Solids (TDS)	IS 3025 (P-10) 2023	mg/l	192.00	-
7.	Chloride (as Cl)	IS 3025 (P-32) 2018	mg/l	13.30	-
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	36.00	-
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2019	mg/l	44.176	-
10.	Calcium (as Ca)	IS 3025 (P-40) 1981	mg/l	12.83	-
11.	Free Residual Chlorine	IS 3025 (P-20) 1986	mg/l	SDL/MDL (0.4)	-
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1) 2022	mg/l	1.68	-
13.	Nitrate (as NO ₃)	APHA 4500-N 2023	mg/l	1.88	-
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	SDL/MDL (0.001)	-

Disclaimer Note: 1. The laboratory accepts responsibility for random QA/QC audits 1 & 2 that performed at laboratory's premises/ facility, at specific time/occasions mentioned in standard required and results relate only to the sample tested as per mentioned Date & time. 2. The test report shall not be reproduced for any purpose & shall not be used as proof in the court of law. 3. Any complaint about this report shall be considered valid as per the validity of 60 days. 4. This laboratory is ISO9001:2015 Certified Lab, will be liable to demand a payment only 10-30 days after the issuance of the bill. 5. Response may be delayed to inspect samples due to such reasons as facility of the laboratory does not concern the testing and reporting sample. 6. Response does not imply acceptance of the tested product by laboratory. 7. Due to circumstances, laboratory accepts any claim for cost of retest of this report. 8. When the results are been written, provide as required. 9. -

Information: 1. All above mentioned details, NABL/ILAC/ISO/International Standard, 2. OCL of Quantitative.



Address:
C/o - R.R. Proprietary Institute
Road No. - 2, Ranchi
Jharkhand - 831001, India

• 2001 9888252
• 18557 86677
• 18548 71994

PHOTO: R. AND C. J. MURPHY

Journal of
Business Ethics
Volume 10, Number 10, 1991
pp. 901-911
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0167-454X/91/100901-11\$5.00/0

EPIC

Unique Lab Report No.: TC1248725000001061 Discipline: Chemical
Report Unique ID: HLU2642538023 Group: Water
Issue date/time: 29.08.2025: 17:27 Sub Group: Surface Water

Impact factor

M/S - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST. LOHARDAGA, STATE-JHARKHAND, INDIA-835302
MONITORING SITE - SHRINAGAR Bauxite MINE

Contact Person: Mr. Ankit Das
Contact Number: +91 9971034779
Email Id: ankit.das@hybista.com
Order Date: 31.03.2025 10:10
Order Number: 1234567890

Group - Residues and Contaminants in water.

Sub Group - Three Masters Biennium

15. Copper (as Cu)	APHA 21118-2023	mg/l	SDL(HDL-0.21)
16. Iron (as Fe)	APHA 21118-2023	mg/l	SDL(HDL-0.11)
17. Lead (as Pb)	APHA 21118-2023	mg/l	SDL(HDL-0.01)
18. Cadmium (as Cd)	APHA 21118-2023	mg/l	SDL(HDL-0.003)
19. Total Chromium (as Cr)	APHA 21118-2023	mg/l	SDL(HDL-0.06)
20. Nickel (as Ni)	APHA 21118-2023	mg/l	SDL(HDL-0.02)
21. Total Arsenic (as As)	APHA 21148-2023	mg/l	SDL(HDL-0.005)
22. Selenium (as Se)	APHA 21148-2023	mg/l	SDL(HDL-0.005)
23. Manganese (as Mn)	APHA 21118-2023	mg/l	SDL(HDL-0.03)
24. Zinc (as Zn)	APHA 21118-2023	mg/l	SDL(HDL-0.04)

-First month End -

Prescribed Limit
Operational Status
Analysed by - Fazal Khan

Unit was Operational During Term:

Reviewed by
G.S. Kurnar
Institute Head

Received by
Clementine
University of
Edinburgh

Authorised Signatory
EPIC LabTech Pvt. Ltd.
Ranu Choudhury



Environmental Test Report

Unique Lab Report No.	N/A	Discipline	Chemical		
Report Unique ID	RL02642535601	Group	Water		
Issue date/time	29.08.2025/ 17:27	Sub Group	Surface Water		
Report Issue to		Contact Person	Mr. Ankit Das		
M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST - LOHARDAGA, STATE - JHARKHAND, INDIA-835302 MONITORING SITE - SHRENDAG A BAUXITE MINE		Contact Number	+91 9871034779		
		Email Id	ankit.das@adityabirla.com		
		Order Date	31.03.2025/ 10:10		
		Order Number	13612313566		
References of Quality Management System (Steps of Traceability, Owner)					
Customer Registration No.	EPIC/OTH/0264	Sample Booking Number	EPIC-2535031		
Sample(s) Code	2535031	Sample Receipt (D/T)	29.08.2025/ 11:00		
Sampling References					
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036		
Sampling Start (D/T)	21.08.2025/ 14:00	Sampling End (D/T)	21.08.2025/ 14:10		
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team		
Sampling method used	IS : 2025 (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°		
Sampling Location(s) with GPS coordinate(s)					
S. Location A	Kanchki Nadi (Down Stream)	GPS coordinate	22° 22' 29.74" E/ 84° 27' 09.86" N		
Details of performance of the laboratory activities					
Test start date	29.08.2025/ 12:30	Test completion date	29.08.2025/ 16:00		
-Test Result-					
Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	BOL/MDL-0.1	-
Group-Residues and Contaminants in Water				Sub Group-Trace Metals Elements	
2.	Aluminum	IS 2025 (P-50) 2018	mg/l	BOL/MDL-0.2	-
3.	Boron	IS 2025 (P-57) 2021	mg/l	BOL/MDL-0.1	-
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/03	µg/l	BOL/MDL-0.2	-
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/03	µg/l	BOL/MDL-0.05	-
Group-Residues and Contaminants in Water				Sub Group-Pesticides	
6.	Aachlor	EPIC/LAB/SOP/WA/01/06	µg/l	BOL/MDL-0.2	-
7.	Atrazine	EPIC/LAB/SOP/WA/01/06	µg/l	BOL/MDL-0.5	-
8.	Dieidrin	EPIC/LAB/SOP/WA/01/06	µg/l	BOL/MDL-0.02	-
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/06	µg/l	BOL/MDL-0.005	-
10.	Beta HCH	EPIC/LAB/SOP/WA/01/06	µg/l	BOL/MDL-0.02	-
11.	Butachlor	EPIC/LAB/SOP/WA/01/06	µg/l	BOL/MDL-0.2	-
12.	Chopyrifos	EPIC/LAB/SOP/WA/01/06	µg/l	BOL/MDL-0.5	-
13.	Delta HCH	EPIC/LAB/SOP/WA/01/06	µg/l	BOL/MDL-0.02	-
14.	Ethion	EPIC/LAB/SOP/WA/01/06	µg/l	BOL/MDL-0.5	-



EPIC
Energy and Leaf Composition

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0264/2020031	Group	Water
Issue date/time	29.08.2020: 17:27	Sub Group	Surface Water

Report issued to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST - LOHARDAGA, STATE - JHARKHAND, INDIA - 835307
MONITORING SITE : SHRENDAGA BAUXITE MINE

Contact Person Mr. Ankit Das
Contact Number +91 9871034779
Email Id ankit.ras@adityaqlia.com
Order Date 31.03.2025/ 10:10
Order Number 13612313868

15. Gamma-HCH(Lindane)	ER/CLAS/SOP/NA/01/00	wp	BDL/mol.0.5
16. Malathion	ER/CLAS/SOP/NA/01/00	wp	BDL/mol.0.3
17. Methyl parathion	ER/CLAS/SOP/NA/01/00	wp	BDL/mol.0.2
18. Monocrotophos	ER/CLAS/SOP/NA/01/00	wp	BDL/mol.0.5
19. Pherate	ER/CLAS/SOP/NA/01/00	wp	BDL/mol.0.5
20. DDT (o, p and p, p-isomer of DDT, DDE and DDD) Endosulfan (alpha, beta, and sulphate)	ER/CLAS/SOP/NA/01/00	wp	BDL/mol.0.5
21.	ER/CLAS/SOP/NA/01/00	wp	BDL/mol.0.5

→First result for →

Permitted Limit

Operational Structure

Limitations Observed During Sampling

Reviewed by
H.B. Kowal
Technician

18
1955-12-6
Issued by
Street-List

Authorized Signatory
EFID LabTech Pvt. Ltd.
Panaji, Jharkhand





Environmental Audit & Monitoring

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0292536000	Group	Atmospheric Pollution
Issue date/time	20-09-2025/15:15	Sub Group	Ambient Air Quality

Report Issue to:

M/s - HENDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHNRAGA,
DIST - DHANBADA, STATE - JHARKHAND, INDIA 831012
MONITORING SITE : SHRENDAG A Bauxite Mine

Contact Person: Mr. Amit Das
Contact Number: +91 9871034775
Email Id: amit.das@hendalco.com
Order Date: 31.03.2025/ 10:30
Order Number: 136123133668

References of Quality Management System (Dept of Quality & Env)

Customer Registration No.	EPIC/OTH/2020	Sample Booking Number	EPIC-2536029
Sample(s) Code	2536000 (A) (B) (C) (D)	Sample Receipt (D/T)	17.09.2025/ 10:30

Sampling References

Type of Industry	Bauxite Mine	Ref. of Sampling Plan	EPIC/LAB/IV/036
Sampling Start (D/T)	15.09.2025/ 12:30	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	225-45°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Banjari Village	GPS coordinate	23° 22' 48.56" / 84° 30' 11.81"
S. Location B	Near Pauri Village	GPS coordinate	23° 20' 10.98" / 84° 25' 59.20"
S. Location C	Near Hatup Village	GPS coordinate	23° 24' 29.70" / 84° 24' 50.71"
S. Location D	Near Paiteli Village	GPS coordinate	23° 26' 18.06" / 84° 28' 30.78"

Date(s) of performance of the laboratory activities

Test start date	17.09.2025/ 10:30	Test completion date	20.09.2025/ 15:00
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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 11422(P-13) 2006	µg/m ³	BDL	BDL	BDL	BDL	-
2.	Benzo (a) Pyrene (BaP)- Particulate phase only	IS 11422(P-12) 2004	ng/m ³	BDL	BDL	BDL	BDL	-
3.	Carbon Monoxide (CO)	ERCLAB/AS/01/AF/01/03	µg/m ³	BDL	BDL	BDL	BDL	-

-Test Results End -

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

Operational Status: Unit was Operational During sampling.

Analyzed by - Yashwant

Referred by
Yashwant
Technical Head

Reviewed by
Dr. Amit Das
Laboratory Head
Authorised Signatory
EPIC LabTech Pvt. Ltd.
Dhanbad, Jharkhand



Environmental Test Report Details

Unique Lab Report No.	TC128872900001226	Discipline:	Chemical
Report Unique ID	RL02922938032	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-LOHARDAGA,
DIST- LOHARDAGA, STATE-JHARKHAND, INDIA 835303
MONITORING SITE: SHRENDAGA BAUXITE MINE

Contact Person: Mr. Ankit Das
Contact Number: +91 9871034775
Email Id: ankit.das@edbyabiria.com
Order Date: 31.03.2025/ 10:10
Order Number: 13612313988

References of Quality Management System (QMS) (Part of Testability Doc)

Customer Registration No.	EPIC/OTR/6292	Sample Booking Number:	EPIC-2538032
Sample No. Code	2538032	Sample Receipt (D/T):	17.09.2025/ 10:13

Sampling References:

Type of Industry	Bauxite Mines	No. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	14.09.2025/ 15:00	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 - 2025 (Part-1) 1987, H-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):

E. Location A	Mine Pit Quarry No. 24	GPS coordinate:	23° 22' 94.28" / 84° 28' 12.40"
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Date(s) of performance of the laboratory activities:

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

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS 3626 (P-11) 2022	-	7.05	-
2.	Total Dissolved Solids (TDS)	IS 3626 (P-96) 2022	mg/l	110.0	-
3.	Calcium (as Ca)	IS 3626 (P-46) 1996	mg/l	3.21	-

Group - Residues and Contaminants in Water:

4.	Iron (as Fe)	APHA 2111 B 2020	-	BDL (HDL 0.1)	-
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-Test result End -

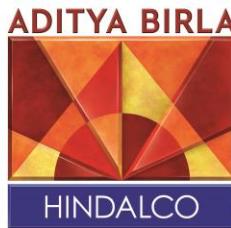
Operational Status: Unit was Operational During sampling.

Analyzed by - Pappu Kumar

Reviewed by
(B.K. Kumar)
Technical Head

Issued by
(Ankit Das)
Laboratory Head

Environmental Laboratory
EPIC LabTech Pvt. Ltd.
Ranchi, 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.



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



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