

HIL/LHD/ENV/MoEF&CC/413

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 Gurdari (584.19 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-11015/136/2006-IA.II (M), dated 7th February 2007.

Dear Sir,

With reference to the above, we are submitting herewith the Compliance status report of EC conditions for **Gurdari (584.19 Ha)** Bauxite Mining project of **M/s Hindalco Industries Limited** located in 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
584.19	325000	23.03.1985 to 22.03.2035

Hope you will find the same in order.

Thanking You

Yours faithfully,
For **Hindalco Industries Limited**

Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)

Enclosure: - As Above

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

Name of the Project : **Gurdari Bauxite Mine (584.19 ha)**
M/s Hindalco Industries Limited,

Environment Clearance No & date : **J-11015/136/2006-IA. II (M), dated 07.02.2007.**

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

A. Specific Conditions

Condition 1- All the conditions stipulated by the State Pollution Control Board in their NOC should be effectively implemented.

Reply to Condition 1 - Implementations of stipulated conditions in NOC are fulfilled post which consent to operate has been granted by SPCB from time to time. The existing consent to operate is valid up to 31.03.2027. Production of bauxite is within limits specified in Consent to Operate.

Condition 2- 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 to Condition 2- 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 the norms set in the agreement. Thus, land acquisition has the approval of the State Government.

Condition 3- 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 to Condition 3- Required exploration is already 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 4- 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 to Condition 4- Since shallow depth mining is being carried out, hence there is no intersection with the groundwater table. In future also, working zones will be restricted to above ground water table. We undertake that no mining is/was carried out below ground water table and the same status will be maintained in future also. Moreover, we regularly monitoring the groundwater table through the installation of a piezometer. A copy of the water level report is attached herewith as **Annexure-1**.

Condition 5- Topsoil shall be stacked properly with proper slope with adequate measures and should be used for reclamation and rehabilitation of mined out areas.

Reply to Condition 5- Topsoil is being stacked properly with proper slope as and when required for reclamation and rehabilitation. Sequential backfilling and reclamation of the mined-out area are being exercised for which topsoil is being spread on backfilled area for reclamation. 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**.

Condition 6- 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 a six-month basis.

Reply to Condition 6- Overburden and waste rock are being used for concurrent backfilling, and topsoil is being spread on the backfilled area for reclamation. Currently, there is no OB dump present in the mine lease area. Monitoring and management of rehabilitated areas is continuing until vegetation becomes self-sustaining through supervision. Data pertaining to backfilling is enclosed as **Annexure-4**. Compliance status is being submitted to MoEF&CC on six monthly basis.

Condition 7- 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 drains (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 Condition 7- 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.



Garland drain around mine pit.



Catch drain Near mine pit.

Condition 8- Plantation shall be raised in an area of 78.44 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 to Condition 8- Progressive plantation of native species is being carried out in and around mining lease, reclaimed area etc. in consultation with local forest department on a regular basis. During FY 2025-26 till September, a total of 7080 saplings have been planted on reclaimed areas. Cumulative 27.40 ha areas have been planted till date. In addition to this agricultural activity is going on reclaimed land as per the consent from the landowners. Rest to be complied during project period.



Plantation and Agriculture on Reclaimed land

Condition 9- The project authority should implement suitable conservation measures to augment ground water resources in area in consultation with Regional Director, Central Ground Water Board.

Reply to Condition 9- 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 Pond.

Condition 10- 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 to Condition 10- We are not using ground water for mining purposes. Shallow depth mining is being carried out, hence there is no intersection of ground water table during the mining operation at present and in future. A piezometer has been installed for monitoring the ground water level. The 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**



Condition 11- Prior permission from the competent authority should be obtained for drawl of water from the surface water bodies.

Reply to Condition 11- 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 जल शक्ति मंत्रालय जल संसाधन विभाग, केन्द्रीय भूमि जल प्राधिकरण GOVERNMENT OF INDIA MINISTRY OF JAL SHAKTI DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION CENTRAL GROUND WATER AUTHORITY		 सत्यमेव जयते			
भूजल निकासी हेतु अनापत्ति प्रमाण पत्र NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION					
PROJECT NAME GURDARI BAUXITE MINING					
PROJECT ADDRESS GURDARI BAUXITE MINING (584.19 HA) VILLAGES - GURDARI, AMBAKONA, RAJADERA AND JANAWAL TEHSIL - BISHNUPUR				PIN CODE 835302	
STATE JHARKHAND		DISTRICT GUMLA		TOWN/BLOCK BISHUNPUR	
COMMUNICATION ADDRESS MINES DIVISION, COURT ROAD					
ADDRESS OF CGWB REGIONAL OFFICE 6th & 7th Floor, Lok Nayak Jai Prakash Bhawan, Frazer Road, Dak Banglow, Patna- 800011, Bihar.					
1. NOC NO. NOC/MIN/JH/2025/8319/R-3/3		2. DATE OF ISSUANCE 24/09/2025			
3. APPLICATION NO. MIN/JH/2025/8319/R-3		4. APPLICATION TYPE Mining			
5. PROJECT STATUS Existing Project		6. NOC TYPE Renew			
7. VALID FROM 09/09/2025		8. VALID UP TO 08/09/2027			
9. WATER QUALITY TYPE Fresh Water		10. AREA TYPE CATEGORY Safe (GWRE - 2024)			

NOC for Ground water Extraction

Condition 12- 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 Bhubaneshwar.

Reply to Condition 12- Water Monitoring of Spring and Stream water are being monitored and 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 13- 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 minerals. The vehicles should be covered with a tarpaulin and shall not be overloaded.

Reply to Condition 13- 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. Photographs of Tarpaulin Covered Vehicle and PUC Certificate are attached below.



Tarpaulin covered Vehicle

Form 59 [See rules 115 (2)]				
Pollution Under Control Certificate				
Authorised By : Government of Jharkhand				
Date	02/07/2025			
Time	18:43:23 PM			
Validity upto	01/07/2026			
<div> <div>Certificate No.</div> <div>JH01900240008826</div> </div> <div> <div>Registration No.</div> <div>JH031625</div> </div> <div> <div>Date of Registration</div> <div>29/Aug/2023</div> </div> <div> <div>Month & Year of Manufacturing</div> <div>February-2023</div> </div> <div> <div>Vehicle Model Number</div> <div>1900</div> </div> <div> <div>Emission Norms</div> <div>BHARAT STAGE VI</div> </div> <div> <div>Fuel</div> <div>DIESEL</div> </div> <div> <div>PUC Code</div> <div>JH0190024</div> </div> <div> <div>QSTN</div> <div>Rs.120.00</div> </div> <div> <div>ML observation</div> <div>No</div> </div>				
<div>Vehicle Photo with Registration plate</div> <div>60 mm x 30 mm</div> <div> </div>				
Sr. No.	Pollutant (as applicable)	Units (as applicable)	Emission limits	Measured Value (upto 2 decimal places)
1	Carbon Monoxide (CO)	percentage (%)		
2	Hydrocarbon (THC/HC)	ppm		
3	CO	percentage (%)		
4	RPM	RPM	2500 ± 200	
5	Lambda	-	1 ± 0.03	
6	Smoke Density	Light absorption coefficient	0.7	0.6
This PUC certificate is system generated through the national register of motor vehicles and does not require any signature.				
Note : 1. Vehicle owners to link their mobile numbers to registered vehicle by logging to https://puc.parivahan.gov.in Authorised Signature with stamp of PUC Operator 60mm x 20 mm				

PUC Certificate

Condition 14- Drills should either be operated with dust extractors or should be equipped with a water injection system.

Reply to Condition 14- Wet drilling is in practice



Wet drilling is being carried out.

Condition 15- 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 to Condition 15- 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 16- Consent to operate should be obtained from SPCB prior to start of enhanced production from the mine.

Reply to Condition 16- We have already obtained the Consent to Operate for Bauxite Ore as per production capacity mentioned in EC.

Condition 17- Sewage treatment plant should be installed for the colony. ETP should also be provided for workshops and wastewater generated from mining operations.

Reply to Condition 17- 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 for treatment of this effluent. The treated water is in close circuit and being reused for washing of vehicle in the workshop. We are not discharging any wastewater outside the mine lease area. Furthermore, the quality of this treated water is being monitored regularly and the monitoring report is enclosed herewith as **Annexure 2**. The sewage water from domestic uses is being collected through individual Septic Tank and followed by Soak Pit.



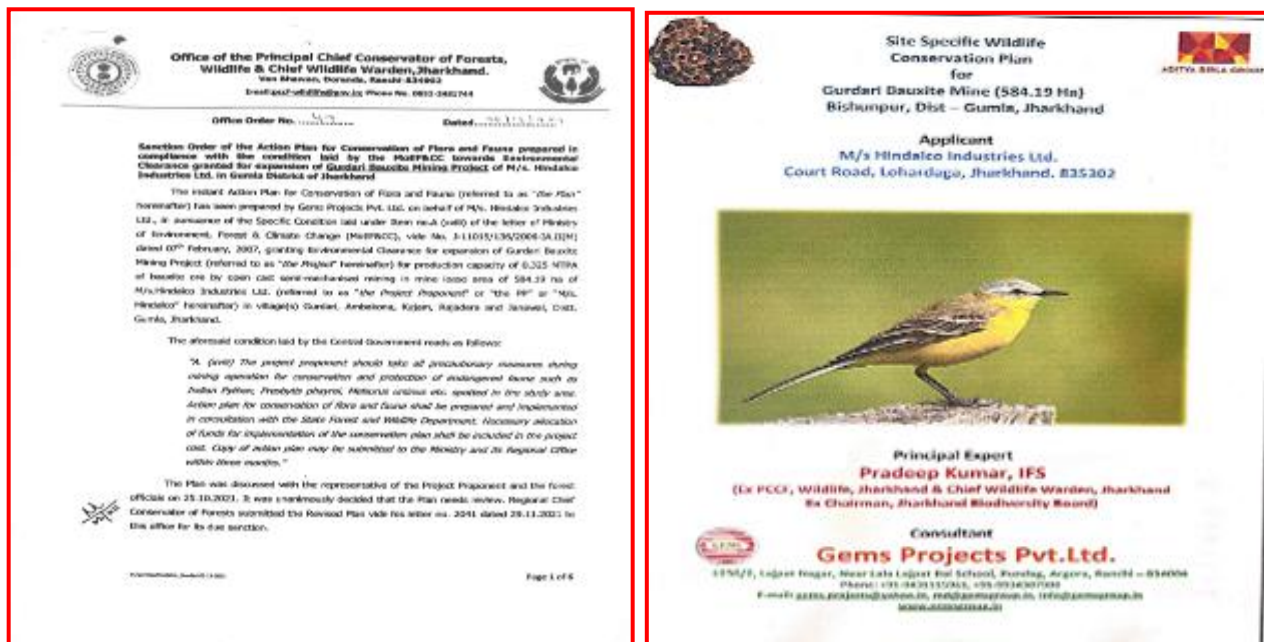
Washing Ramp with Oil and Grease trap

Condition 18- The project proponent should take all precautionary measures during mining operation for conservation and protection of endangered fauna such as Indian Python, *Presbytis phayrei*, *Melururus 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. The 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. A copy of the action plan may be submitted to the Ministry and its Regional Office within 3 months.

Reply to Condition 18- Safeguard Measures already implemented and being implemented as suggested by forest department are as follows: -

1. Minimum level of Noise during Mining.
2. Permanent pillars are established within the mine lease area.
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 Site-Specific Wildlife Conservation Plan (WLCP) 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. 48 dated 02.12.2021 for conservation and protection of flora and fauna in the core and buffer zone for Gurdari Bauxite Mine. A copy of same Approval letter has been submitted to your good office on 21.02.2022



Site Specific Wildlife Conservation Plan

Condition 19- 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 to Condition 19- 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.

B. General Conditions

Condition 1- No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forest.

Reply to Condition 1- Noted.

Condition 2- No change in the calendar plan including excavation, quantum of mineral bauxite and waste should be made.

Reply to Condition 2- Calendar plan including excavation, quantum of mineral bauxite and waste is being done as per IBM approved mining scheme and in scientific manner. Data pertaining to excavation, quantum of mineral bauxite etc. are mentioned in report attached as **Annexure 4**.

Condition 3- Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RPM, SPM, SO₂, NO_x monitoring. Location of the stations should be decided based on the 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 to Condition 3- We have already established four ambient air quality monitoring stations in the core zone as well as the buffer zone. Monitoring is being carried out and reported to the concerned authorities. Monitoring Report is attached as **Annexure 2**.

Condition 4- 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 to Condition 4- 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 5- 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 to Condition 5- Water tankers have been provided for sprinkling of water on haul roads and active mining areas to suppress the fugitive dust. Water spraying at loading, unloading, etc. is also being done regularly.



Water Tanker for dust suppression

Condition 6- 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 to Condition 6- Noise monitoring is being done regularly. Workers engaged in the operation of HEMMs, etc., have also been provided with PPEs such as ear plugs and earmuffs. Monitoring of noise levels is being conducted at various locations of the work zone area. The report is attached as **Annexure 2**.

Condition 7- Industrial wastewater (workshops and wastewater from the mine) Should be properly collected and 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 to Condition 7- There is no industrial wastewater generation from mining operation. We are not discharging any wastewater outside the mine lease area. However, negligible amount of wastewater is generated in workshop from washing vehicles and Oil & grease trap system is already installed for treatment of this effluent. The treated water is in a closed circuit and being reused for washing vehicles in the workshop.

Furthermore, the quality of this treated water is monitored regularly, and all water parameters are within permissible limits. The monitoring report is attached herewith as **Annexure- 2**. Photograph of Oil and grease traps is already attached below.



Washing Ramp with Oil and Grease trap

Condition 8- Personnel working in dusty areas should wear protective respiratory devices and they should also provide 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 to Condition 8- All the workers have been provided with PPEs including dust mask and dust respirators. Apart from PPEs distribution to all workers, we are also providing adequate safety training and conducting awareness session on Safety and health aspects on regular basis. Periodical Occupational health surveillance program of the workers is being carried out and records maintained as per statute.

Condition 9- 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 to Condition 9- 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 attached herewith as **Annexure 3**.

Condition 10- The project authorities should inform the Regional Office located at Bhubaneswar regarding the date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.

Reply to Condition 10- This is an operating mine. Hence, the provision related to financial closure is not applicable. Now, the regional office of MoEF&CC is in Ranchi.

Condition 11- The funds earmarked for environmental protection measures should be kept in separate accounts and should not be diverted for other purposes. Year-wise expenditure should be reported to the Ministry and its Regional Office located at Bhubaneswar.

Reply to Condition 11- Every year, the funds earmarked for environmental protection measures are being 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 12- The Regional Office of this Ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.

Reply to Condition 12- Noted and Agreed.

Condition 13- 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 to Condition 13- Complied. A copy of the clearance letter has already been submitted.

Condition 14- 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 to Condition 14- Noted. The EC Letter has been submitted to JSPCB for display of same at its regional office and other government offices.

Condition 15- 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 Bhubaneshwar.

Reply to Condition 15- 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 vide letter no HIL/GMO(M)/ENV/140 Dated 23.04.2007. Now, the regional office of MoEF&CC is in Ranchi.

Piezometer Monitoring Report

Mine: Gurdari Bauxite Mine (584.19 Ha)

S No	Month	Ground Water Level (BGL) in meter
1	Apr-25	33.52
2	May-25	33.57
3	Jun-25	33.05
4	Jul-25	32.73
5	Aug-25	32.53
6	Sep-25	32.89



EPIC LabTech Private Limited

Address:
G/F - R.C. Tripathi, Indraprastha,
Road No. - 5, Naraina,
New Delhi - 110028, India

☎ Tel: +91 8860 2912
☎ MOBILE: 98267 48611
☎ 98449 72084
☎ epic.labtech@gmail.com

☎ Tel: +91 8860 2912
☎ MOBILE: 98267 48611
☎ 98449 72084
☎ epic.labtech@gmail.com

Accredited by:
NABL (National Accreditation Board for Testing Laboratories)
Certificate No. NABL/1001/2019
Valid till: 31/03/2024



Environmental Test Certificate

Annexure - 2

Unique Lab Report No.	TC128872500000383	Discipline	Chemical
Report Unique ID	RL0142251665	Group	Atmospheric Pollution
Issue date/time	26.04.2025/ 11:10	Sub Group	Ambient Air Quality

Report Issued to	M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302 MONITORING SITE: GURDARI BAUXITE MINE	Contact Person	Mr. Ankit Das
		Contact Number	+91 9071034775
		Email Id	ankit.das@himalyabirla.com
		Order Date	31.03.2025/ 10:10
		Order Number	13612313668

Reference of Quality Management System (Type of Accreditation)	Customer Registration No.	Sample Booking Number	EPIC/251665
	EPIC/OTH/0142	Sample Receipt (D/T)	19.04.2025/ 12:08
	Sample(s) Code		251665 (A) (B) (C) (D)

Sampling Reference	Type of Industry	Ref. of Sampling Plan	EPIC/LAB/9/036
	Bauxite Mines		
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Sampling Start (D/T)	17.04.2025/ 11:30	Sampling End (D/T)	18.04.2025/ 07:05
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Karan Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling	Weather condition	Clear	Temperature (°C)	29	Humidity%	49	Wind direction	270°-90°
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Sampling Location(s) with GPS coordinate(s)			
S. Location A	Near Mine Office	GPS coordinate	23° 18' 50.60" / 84° 14' 44.15"
S. Location B	Near Kathwajpuri P2-23	GPS coordinate	23° 20' 48.18" / 84° 14' 16.11"
S. Location C	Near Mine Weigh Bridge	GPS coordinate	23° 19' 09.09" / 84° 14' 40.38"
S. Location D	Near Dhobi Kutumb	GPS coordinate	23° 16' 58.11" / 84° 15' 42.03"

Date(s) of performance of the laboratory activities	Test start date	19.04.2025/ 13:05	Test completion date	25.04.2025/ 16:00
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-Test Result-								
Sl	Test Parameters	Method used	Unit	A	B	C	D	Limits
1.	Particulate Matter (PM ₁₀)	IS 5182 (P-23) 2012	µg/m ³	70.03	81.98	96.01	81.03	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	31.94	38.10	43.11	36.86	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS 5182 (P-02) 2012	µg/m ³	10.07	07.86	10.12	07.26	60 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS 5182 (P-06) 2012	µg/m ³	24.52	19.77	26.45	21.21	60 (24 hr)
5.	Ozone (O ₃)	IS 5182 (P-08) 2019	µg/m ³	26.86	27.16	29.10	26.40	180 (1 hr)
6.	Ammonia (NH ₃)	IS 5182 (P-25) 2018	µg/m ³	41.07	38.17	48.02	37.91	400 (24 hr)
7.	Lead (Pb)	IS 5182 (P-22) 2019	µg/m ³	BDL	BDL	BDL	BDL	1.00 (1 hr)
8.	Nickel (Ni)	IS 5182 (P-26) 2020	µg/m ³	BDL	BDL	BDL	BDL	-
9.	Arsenic (As)	USEPA IO 3.2-1009	µg/m ³	BDL	BDL	BDL	BDL	-

Prescribed Limit	Environmental (Protection) Rules 1986, Schedule VI
Operational Status	Lab was Operational during sampling.

Analysed by - S.C. SINGH



Checked by
(S.C. SINGH)
Technical Head

Forhead Issue by
(S.C. SINGH)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.

Sample Collection Date & Time

Annexure - 2

Cui = K.C. Cuijpers, Amsterdam
 David Ho = J. David Ho
 Donaldson = Donald Donaldson

1. 2017-2018
 2. 2017-2018
 3. 2017-2018
 4. 2017-2018

[illegible]

Reviewed by:
H. H. van der Valk (University of Amsterdam)
Reviewed by:
H. H. van der Valk (University of Amsterdam)

Analytical Test Certificate

Unique Lab Report No.	TC1298735000000384	Discipline	Chemical
Report Unique ID	RL0142251600	Group	Water
Issue date/time	26.04.2025 / 11:12	Sub Group	Drinking Water

Research Issues in

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

Contact Person	Mr. Ankit Das
Contact Number	+91 9071034775
Email Id	ankit.das@odishajyoti.com
Order Date	31.03.2025/ 10.10
Order No/Invoice	13672913868

References of Quality Management Systems (QMS) at Insurance Company

Customer Registration No.	EPIC/OT4-00142	Sample Booking Number	EPIC-251666
Sample(s) Code	251666	Sample Received (DT)	19.04.2025/ 12:15

Sampling References

Type of Industry	Saudia Mines	Ref. of Sampling Plan	EPIC/LAB/R036
Sampling method used	(S : 3025 (Part-3) 1967, 8-2003)		
Sampling Start (D/T)	17.04.2025/ 17:30	Sampling End (D/T)	17.04.2025/ 17:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Karan Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during exercise

Weather condition	Clear	Temperature (°C)	29	Humidity (%)	48	Wind direction	270° (SE)
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Sampling Location(s) with GPS coordinate(s)

2. Location A	Near Office	GPS coordinate	23° 19' 00.38" / 14° 14' 44.80"
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Date(s) of performance of the laboratory activities

Test start date	19.04.2025/ 12:40	Test completion date	25.04.2025/ 14:00
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—Fast Facts—

Sl.	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible limit
1.	pH value at 25°C	IS 3025 (P-11) 2002	-	6.62	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.39	1	5
2.	Colour	IS 3025 (P-04) 2021	Hazen	<5	5	10
4.	Odor	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	188.00	500	1000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	29.56	250	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2019	mg/l	92.00	200	500
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	102.00	200	500
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	19.24	75	200
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	BOL(MDL-0.4)	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1) 2022	mg/l	67.70	200	400
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	61.71	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BOL(MDL-0.001)	0.005	0.02
15.	Magnesium (as Mg)	APHA 3500 Mg E 2023	mg/l	13.12	90	100

Cite: E.E. Fagundes, *Indígenas*,
 São Paulo: S. Fagundes,
 [revised] 2000, 2001

- [2017-2018](#)
- [2016-2017](#)
- [2015-2016](#)
- [2014-2015](#)

Cite as: 74 Fed. Cl. 1112 (2005) www.uscourts.gov
 From: asl@cpa.com
 CTR: 2022-03-04 10:12:14

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Journal of Internal Medicine 258: 103–110

Analytical Tool Certificate

Unique Lab Report No.	N/A	Description	Chemical
Report Unique ID	RL0142251808	Group	Water
Issue date/time	26.04.2025/ 11:38	Sub Group	Ground Water

Request Issue to M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835300 MONITORING SITE- GURDAS BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +91 9871034778 ankit.das@adityabirla.com 21.03.2025/ 10:10 13012333898
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------

References of Quality Management Systems (Status of Transparency Case)

Customer Registration No.	EPIC/OTH/0142	Sample Booking Number	EPIC 201698
Sample(s) Code	251698	Sample Receipt (DVT)	19.04.2025/ 12:14

Citing References

Type of Industry	Secrete Mines	Ref. of Sampling Plan	EPIC/LAB/R038
Sampling method used	IS : 3026 (Part-1) 1987, R-2003		
Sampling Start (D/T)	17.04.2025/ 17:00	Sampling End (D/T)	17.04.2025/ 17:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Karan Kumar & Team
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Conditions during sampling

Weather condition	Clear	Temperature (°C)	29	Humidity %	49	Wind direction	270°-30°
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Sampling Location(s) with GPS coordinates(s)

S. Locality A	Near Moth Gate	GPS coordinate	23° 18' 58.52" N / 84° 14' 43.89" W
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Date(s) of performance of the laboratory activities

Test start date	18.04.2025/ 12:40	Test completion date	25.04.2025/ 14:00
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—First Round—

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable limit	Permissible limit
1.	Fluoride (as F)	APHA 8000 F-C 2023	mg/l	SDI (pH=8.1)	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 (pH=8.1)	0.03	0.7
3.	Boron	IS 3025 (P-57):2021	mg/l	BDL (pH=8.1)	0.5	1.0
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	BDL (pH=8.1)	0.0	No restriction
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL (pH=8.08)	0.1	No restriction
Group-Residues and Contaminants in Water				Sub Group-Pesticides		
6.	Aldicarb	EPIC/LAB/SOP/WA/01/00	µg/l	BDL (pH=8.1)	20	No restriction
7.	Azinphos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL (pH=8.1)	2.0	No restriction
8.	Glodrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL (pH=8.02)	0.03	No restriction
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL (pH=8.003)	0.03	No restriction
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL (pH=8.02)	0.04	No restriction
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL (pH=8.1)	125.0	No restriction
12.	Chlorpyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL (pH=8.1)	30.0	No restriction
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL (pH=8.02)	0.04	No restriction
14.	Endrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL (pH=8.1)	3.0	No restriction



EPIC LabTech Private Limited

Address:
C/O - B.S. Tripathi, Indrakant,
Road No. - 5, Ranchi,
Jharkhand - 834005, India

Tel: 0351-4066999
98257 89977
933448 78884
epiclabtech@gmail.com

CIN: U74900JH2022PTC000485
PAN: AABTS5815M
GST: USTANVC3307M123

Accredited by:
NABL and ISO/IEC 17025:2017
Swachh Bharat Mission (Central Board)
Certified by:
ISO 9001:2015 and ISO 14001:2015



Analytical Test Certificate

Unique Lab Report No.	TC1208725000000016	Discipline	Chemical
Report Unique ID	RL0175262030	Group	Atmospheric Pollution
Issue date/time	20.05.2025/ 12:40	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 : GURDARI BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Anshu Das +91 9871034775 anshu.das@adhyabrisa.com 31.03.2025/ 10:10 13012313868
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTM/0176	Sample Booking Number	EPIC 252030
Sample(s) Code	252030 (A) (B) (C) (D)	Sample Receipt (D/T)	19.05.2025/ 11:14

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/038
Sampling Start (D/T)	13.05.2025/ 11:30	Sampling End (D/T)	14.05.2025/ 08:27
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5162 and CPCB Air Manual Volume - 1 (NAAQM/06/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	26	Humidity %	49	Wind direction	240°-40°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Office	GPS coordinate	23°18'58.88"/ 84°14'44.35"
S. Location B	Near Kathwagari Pt. 23	GPS coordinate	23°20'48.18"/ 84°14'16.11"
S. Location C	Near Mine Weigh Bridge	GPS coordinate	23°19'09.00"/ 84°14'40.38"
S. Location D	Near Dhobi Kumbh	GPS coordinate	23°16'58.11"/ 84°15'42.03"

Data(s) of performance of the laboratory activities

Test start date	15.05.2025/ 11:20	Test completion date	19.05.2025/ 13:00
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-Test Results-

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS 5182 (P-23) 2022	µg/m ³	88.97	86.98	92.02	90.10	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2018	µg/m ³	42.75	39.87	37.03	45.13	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS 5182 (P-42) 2023	µg/m ³	57.40	10.51	06.17	09.23	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS 5182 (P-06) 2022	µg/m ³	18.62	24.48	21.68	23.22	80 (24 hr)
5.	Ammonia (NH ₃)	IS 5182 (P-26) 2018	µg/m ³	33.96	43.68	40.45	37.21	400 (24 hr)
6.	Ozone (O ₃)	IS 5182 (P-08) 2018	µg/m ³	21.30	27.09	24.95	22.81	180 (2 hr)
7.	Lead (Pb)	IS 5142 (P-22) 2019	µg/m ³	BDL	BDL	BDL	BDL	1.0 (24 hr)
				(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	
8.	Nickel (Ni)	IS 5102 (P-26) 2020	ng/m ³	BDL	BDL	BDL	BDL	
				(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	(MDL-0.1)	
9.	Arsenic (As)	USEPA IO 3.2-3380	ng/m ³	BDL	BDL	BDL	BDL	
				(MDL-0.001)	(MDL-0.001)	(MDL-0.001)	(MDL-0.001)	

-Test Results End-

Prescribed Limit: Environmental (Protection) Rules-2006, Schedule VI.

Operational Status: Unit was Operational During sampling.

Analyst by - A.K. Sinha



Reviewed by
B.K. Kumar
Technical Head

Issue by
Chiranjit Das
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

Address:
C/O - R. S. Tripathi, Indraprastha
Road No. - 5, Kirti,
Chandigarh - 160002, India

☎ 0202 4944000
 📧 info@hugoboss.com
 📍 10448 Zürich
 🌐 www.hugoboss.com

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Archaeological Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL017520030	Group	Atmospheric Pollution
Issue date/time	20.05.2020/ 12:40	Sub Group	Ambient Air Quality

Report Issue to	Contact Person	Mr. Ankit Das
M/s - HINDALCO INDUSTRIES LIMITED	Contact Number	+91 9971034775
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,	Email Id	ankit.das@wdiafabirsa.com
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835302	Order Date	23.03.2025/ 10:30
MONITORING SITE : GURDARI BAUXITE MINE	Order Number	13012313888

References of Quality Management System (Date of Issuance: 2025/01/15)			
Customer Registration No.	EPIC/OTM/0176	Sample Booking Number	EPIC-252030
Samples Code	252030 (A) (B) (C) (D)	Sample Receipt (DT)	15.05.2025/ 11:14

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	13.05.2025/ 11:30	Sampling End (D/T)	14.05.2025/ 08:27
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAACM/06/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling			
Weather condition	Clear	Temperature (°C)	28
		Humidity %	40
		Wind direction	240°-40°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Near Mine Office	GPS coordinate	23°18'59.80"/84°14'44.55"
S. Location B	Near Kuthawapara Pt. 23	GPS coordinate	23°20'48.18"/84°14'16.11"
S. Location C	Near Mine Weigh Bridge	GPS coordinate	23°19'00.00"/84°14'40.38"
S. Location D	Near Dhedi Kutumb	GPS coordinate	23°18'58.11"/84°15'42.03"

Date(s) of performance of the laboratory activities	
Test start date	15.05.2025/ 11:20
Test completion date	19.05.2025/ 13:00

Sl.	Test Parameters	Method used	Unit	-Test Results-				Limits
				A	B	C	D	
1.	Benzene (C ₆ H ₆)	IS:3282(P-11) 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:3282(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)	EN:1418/SO:NA/01/00	mg/m ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

Prescribed Limit: Environmental Protection Rule 1206, Schedule VII.
Operational Status: Unit was Operational During sampling.
Analysed by: A K Saha



Reviewed by
J. A. Kinnear
Technical Head

Issue by
Growth Task
Leadership Team

Authorized Signatory
EPIC LabTech Pvt. Ltd
Ranchi, Jharkhand

Cda - 8.8, Tripartito, Indragiri
 Road No. - 3, Barotti,
 Charkham - 684005, India

☎ 0201 490000
 📧 info@paul.com
 📍 1000 1000
 🌐 www.paul.com

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Accredited by:
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 ISO 14001:2015
 ISO 45001:2018
 Certified by:
 BSI

TC-1790

Aboriginal Fish Consumption

Unique Lab Report No.	YC1260720000000519	Discipline	Chemical
Report Unique ID	RL0175292001	Group	Atmospheric Pollution
Issue date/time	28.09.2009 12:43	Sub Group	Ambient Noise

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-MHARHAND, INDIA 835303
MONITORING SITE - CURDARI BAUXITE MINE

Contact Person	Mr. Ankit Das
Contact Number	+91 9871034775
Email Id	ankit.das@edhybirla.com
Order Date	31.03.2025/ 10:10
Order Number	13612313668

References of Quality Management System Class of Universities Chong

Customer Registration No.	EPIC/OTH/0175
Sample(s) Code	262001 (A) (B) (C) (D)

Sample Booking Number	EPC-252031
Sample Receipt (GMT)	15-06-2009 11:19

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPC/LAB/006
Sampling Start (D/T)	13.05.2025/ 11:30	Sampling End (D/T)	14.05.2025/ 09:27
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 9989-1981 (RA 2020) & CPCB Method (S.O. 50 (E)) dated 11/01/2010		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	28	Humidity %	49	Wind direction	220°-40°
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Sampling Location(s) with GPS coordinate(s)

5. Location A	Near Mine Office	GPS coordinate	22°18' 58.60"/04°14' 44.15"
6. Location B	Near Kathawapam Pt-23	GPS coordinate	22°20' 48.18"/04°14' 16.11"
7. Location C	Near Mine Weigh Bridge	GPS coordinate	22°19' 00.06"/04°14' 40.38"
8. Location D	Near Dhobi Kutumb	GPS coordinate	22°30' 58.11"/04°15' 42.00"

Date(s) of performance of the laboratory activities

Test start date	15.08.2025/ 11:25	Test completion date	19.08.2025/ 13:06
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Test Results

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	L_{50} (Daytime)	IS: 9969-1 (98)	dB(A)	58.8	65.2	63.4	52.5	75
2.	L_{50} (Night time)	IS: 9969-1 (98)	dB(A)	47.9	46.3	51.8	39.1	50

—Test Results List—

Prescribed Limit	Environmental Protection Rules 126
Operational Status	Unit was Operational During sampling

Analyzed by: A.E. Sutter

Reviewed by
J. A. Kuyper
Theoretical Group

Summary
(2 words: 21)

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

Address:
 C/o - R.A. Rajgopal, Indraprasth,
 Road No. - 4, Ranchi,
 Jharkhand - 834005, India

☎ 0661-4066000
 ☎ 98557 86577
 ☎ 93348 78884
 ✉ epiclabtech@gmail.com

☎ 0661-4066000/022-27130608
 🌐 www.epiclabtech.com
 ☎ 022-2544403/022-27130608

Accredited by:-
 NABL, with certificate number TC-0387
 Pollution Test Laboratory Control Board
 Certified by:-
 ISO 9001:2015 and ISO 14001:2015



Analytical Test Certificate

Unique Lab Report No.	TC1266725000000529	Discipline	Chemical
Report Unique ID	RL017523032	Group	Pollution & Environment
Issue date/time	20.05.2025/ 12:43	Sub Group	Waste Water (Effluent)

Report Issue to

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

Contact Person
 Contact Number
 Email Id
 Order Date
 Order Number

Mr. Ankit Das
 +91 9971034775
 ankit.das@idshydrifa.com
 31.03.2025/ 10:10
 13612313808

References of Quality Management System (Certi of Traceability Data)

Customer Registration No.	EPIC/OTW/0175	Sample Booking Number	EPIC-252032
Sample(s) Code	252032	Sample Receipt (D/T)	15.05.2025/ 11:21

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/W/036
Sampling Start (D/T)	13.05.2025/ 16:45	Sampling End (D/T)	13.05.2025/ 16:55
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS - 3025 (Part-1) 1987, IS-3003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	28	Humidity %	49	Wind direction	240°-40°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Work Shop (Outlet)	GPS coordinate	23° 18' 58.68" N 84° 14' 44.70" E
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Data(s) of performance of the laboratory activities

Test start date	15.05.2025/ 11:40	Test completion date	18.05.2025/ 14:00
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-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2002	-	6.86	6.5-8.5
2.	BOD (3 days at 27°C)	IS 3025 (P-44) 2000	mg/l	12.00	-
3.	COD	IS 3025 (P-66) 2006	mg/l	92.00	100.0
4.	Oil & Grease	IS 3025 (P-59) 2001	mg/l	BDL(MBL-04)	10.0
5.	Total Suspended Solid	IS 3025 (P-17) 2002	mg/l	29.00	50.0
6.	Phosphate	IS 3025 (P-31/Sec-1) 2002	mg/l	1.05	-
7.	Zinc (as Zn)	APHA 8111 B 2003	mg/l	BDL(MBL-0.04)	-

-Test result End-

Prescribed Limit: Environmental (Protection) Rules-1986, Schedule 1, Serial No. 114.

Operational Status: Unit was Operational During sampling.

Analysed by - Anjali Kumari



Reviewed by
 (R. Kumar)
 Technical Head





EPIC LabTech Private Limited

Address:
C/o - R.A. Tripathi, Indraprastha,
Road No. - 5, Ranchi,
Jharkhand - 834002, India

Tel: 0661-4666293
98327 84077
93346 73886
labtech@epiclabtech.com

Lab: 1179999/1221271031/MSLs
MSL: 649C3301780
NET: 25A4HE30719K2X

Accredited by:
Jharkhand State Pollution Control Board
Certificate No:
JSC/2020/MSL/1031/2020

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RU8176252032	Group	Pollution & Environment
Issue date/time	20.05.2025/ 12:45	Sub Group	Waste Water (Effluent)

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9971034775
ankit.das@adhyabita.com
21.03.2025/ 10:10
12012313968

References of Quality Management System (Days of Traceability Data)

Customer Registration No.	EPIC/OTH/0175	Sample Booking Number	EPIC-252032
Sample(s) Code	252032	Sample Receipt (D/T)	15.05.2025/ 11:21

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/IN/030
Sampling Start (D/T)	13.05.2025/ 16:45	Sampling End (D/T)	13.05.2025/ 16:55
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS : 3025 (Part-1) 1987, & 2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	28	Humidity %	49	Wind direction	240°-40°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Work Shop (Outlet)	GPS coordinate	22° 18' 59.38" N 84° 34' 44.70" E
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Date(s) of performance of the laboratory activities

Test start date	15.05.2025/ 11:40	Test completion date	19.05.2025/ 14:00
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-Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Total Dissolve Solids (TDS)	IS 3025 (P-1) 1987, 2003	mg/l	635.00	-

-Test result End -

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

Operational Status: Unit was Operational During sampling.

Analysed by - Anjali Kumar

Reviewed by
R.A. Kumar
Technical Head

Reviewed by
Girish Das
Laboratory Head



Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

City - Kota Kinabalu, Malaysia
 Road No. - 1, Sarawak
 District - Kudat, Sabah

- 2022.4000000
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CH-114884-PC012PNC1440
 PW-1440C154110
 CST-105440C154110C14

Reviewed by:
 Prof. John Smith, University of
 California, Berkeley, CA 94720-1300
 E-mail: john.smith@berkeley.edu

Analytical Test Certificate

Unique Lab Report No.	1C125672000000695	Discipline	Chemical
Report Unique ID	RL0206252427	Group	Atmospheric Pollution
Issue date/time	16.06.2015/ 13:29	Sub Group	Ambient Air Quality

Report issue to

M/s - HINDALCO INDUSTRIES LIMITED	Contact Person	Mr. Anil Das
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,	Contact Number	+91 9971034775
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA-835302	Email Id	anil.das@adityaonline.com
MONITORING SITE: GURDARI BAUXITE MINE	Order Date	31.03.2025/ 10:10
	Order Number	12612313968

References of Quality Management Systems (use of Feasibility Study)

Customer Registration No.	EPIC/OTH/0209	Sample Booking Number	EPIC-352427
Sample(s) Code	252077 (A) (B) (C) (D)	Sample Receipt (D/T)	12.06.2025/ 10:36

Sending References

Type of Industry	Besicore Mines	Ref. of Sampling Plan	SPC/LAB/R/006
Sampling Start (D/T)	10.06.2025/ 11:40	Sampling End (D/T)	11.06.2025/ 08:42
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5152 and OPCS Air Manual Volume - 1 (HACM/30/2012-13)		
Description/condition of sample	Received sample(s) were fit for analysis		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	25	Humidity %	49	Wind direction	260°-80°
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Correlating Location(s) with GPS coordinate(s)

5. Location A	Near Mine Office	GPS coordinate	23° 18' 59.90" / 84° 14' 44.15"
6. Location B	Near Kithumwapi PM 23	GPS coordinate	23° 20' 40.18" / 84° 14' 16.11"
7. Location C	Near Mine Weigh Bridge	GPS coordinate	23° 19' 09.06" / 84° 14' 40.38"
8. Location D	Near Obabi Kuteb	GPS coordinate	23° 16' 58.11" / 84° 15' 42.03"

Date(s) of performance of the laboratory activities	
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99	100

Test start date	12.06.2025/ 10:56	Test completion date	16.06.2025/ 10:10
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—Last Words—

Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM_{10})	IS 5182 (P-23) 2022	$\mu g/m^3$	69.01	79.17	85.12	80.43	100 (24 hr)
2.	Fine Particulate Matter ($PM_{2.5}$)	IS 5182 (P-24) 2019	$\mu g/m^3$	30.39	36.10	42.16	34.30	60 (24 hr)
3.	Sulphur Dioxide (SO_2)	IS 5182 (P-42) 2022	$\mu g/m^3$	09.01	06.26	09.40	07.44	80 (24 hr)
4.	Nitrogen Dioxide (NO_2)	IS 5182 (P-46) 2022	$\mu g/m^3$	22.20	20.08	24.31	21.14	80 (24 hr)
5.	Ammonia (NH_3)	IS 5182 (P-25) 2016	$\mu g/m^3$	40.26	38.31	46.10	36.04	400 (24 hr)
6.	Ozone (O_3)	IS 5182 (P-40) 2019	$\mu g/m^3$	23.23	25.17	27.10	24.01	100 (1 hr)
7.	Lead (Pb)	IS 5182 (P-22) 2019	$\mu g/m^3$	BOL (MCL-0.1)	BOL (MCL-0.1)	BOL (MCL-0.1)	BOL (MCL-0.1)	1.0 (24 hr)
8.	Nickel (Ni)	IS 5182 (P-26) 2020	$\mu g/m^3$	BOL (MCL-0.1)	BOL (MCL-0.1)	BOL (MCL-0.1)	BOL (MCL-0.1)	-
9.	Arsenic (As)	USEPA ID 3.3 1988	$\mu g/m^3$	BOL (MCL-0.001)	BOL (MCL-0.001)	BOL (MCL-0.001)	BOL (MCL-0.001)	-

—Just Another Day—

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



Reviewed by
(B.N. Kumar)
Economics Officer

Authorized signatory
EPIC LabTech Pvt. Ltd.
Raichur, Karnataka



EPIC LabTech Private Limited

Address:
C/o - M.C. Tripathi, Indraprastha,
Road No. - 5, Ranchi,
Jharkhand - 834002, India

☎ 0651-49991292
☎ 98327 84077
☎ 93349 77886
✉ epiclabtech@gmail.com

LINE: +91 98349 77886
Phone: +91 93349 77886
GST: 20AAHCE3611W129

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

Analysical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RUJ208252427	Group	Atmospheric Pollution
Issue Date/Time	10.06.2025/ 10:20	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835300
MONITORING SITE: GURDARI BAUXITE MINE

Contact Person
Contact Number
Email id
Order Date
Order Number

Mr. Ankit Das
+91 9871034775
ankit.das@odhyabirra.com
31.03.2025/ 10:10
13612313868

References of Quality Management System (Steps of Traceability Data)

Customer Registration No.	EPIC/OTM/0206	Sample Booking Number	EPIC 250427
Sample(s) Code	252427 (A) (B) (C) (D)	Sample Receipt (D/T)	12.06.2025/ 10:30

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/0206
Sampling Start (D/T)	10.06.2025/ 11:40	Sampling End (D/T)	11.06.2025/ 08:42
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	35	Humidity %	40	Wind direction	280°-80°
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Sampling Location(s) with GPS coordinate(s)

1. Location A	Near Mine Office	GPS coordinate	23° 15' 09.00" N 84° 14' 44.15" E
2. Location B	Near Kathwapaat Ph-23	GPS coordinate	23° 20' 48.18" N 84° 14' 18.11" E
3. Location C	Near Mine Weigh Bridge	GPS coordinate	23° 15' 09.06" N 84° 14' 40.38" E
3. Location D	Near Dhobi Kumbh	GPS coordinate	23° 10' 58.11" N 84° 15' 42.03" E

Date(s) of performance of the laboratory activities

Test start date	12.06.2025/ 10:56	Test completion date	10.06.2025/ 10:50
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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 3182P-11/2006	µgm 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 3182P-12/2004	µgm ³	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	BDL (MDL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/SOP/AN/01/00	mgm ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

-Test Results End-

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

Operational Status Unit was Operational During sampling.

Analysed by - AK Saha



Reviewed by
J.R. Saha
Technical Head





EPIC LabTech Private Limited

Address:
Plot - A-5, Tripathi, Indraprastha,
Road No. - 3, Mayapuri,
Bharatnagar - 834002, India

☎ 091-4889301
☎ 09127 34579
☎ 09448 73884
✉ epiclabtech@gmail.com

☎ +91 9999102211 (EPIC Helpline)
☎ 091-488930130
☎ 091-26440129 (MTC)

Accredited by -
NABL (NABL/1004775)
Certified by -
ISO 9001:2015 and ISO 14001:2015

Analytical Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL0208252428	Group	Atmospheric Pollution
Issue Date/Time	10.06.2025/ 13:22	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: GURDARI BAUXITE MINE

Contact Person
Contact Number
Email id
Order Date
Order Number

Mr. Ankit Das
+91 9971034775
ankit.das@hdfyabirla.com
31.03.2025/ 10:10
13613213868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTH/0308	Sample Booking Number	EPIC-252428
Sample(s) Code	252428 (A) (B)	Sample Receipt (DVT)	12.06.2025/ 10:32

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/0306
Sampling Start (D)	10.06.2025	Sampling End (D)	10.06.2025
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Vishal Kumar & Team
Sampling method used	(S) 9089:1981 (I)A 2020) & CFCB Method (S.O.50 (E) dated 11/01/2010)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	25	Humidity %	48	Wind direction	280°-80°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Kathuaipani PH	GPS coordinate	23° 20' 46.09" / 84° 14' 07.09"
S. Location B	Gurdari Bauxite Mine (584.12 ha)	GPS coordinate	23° 20' 46.01" / 84° 14' 06.10"

Date(s) of performance of the laboratory activities

Test start date	12.06.2025/ 10:51	Test completion date	18.06.2025/ 10:43
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-Test Results-

Sl.	Test Parameters	Method used	Unit	Results		Limits
				A	B	
1.	L _{eq}	IS: 9889:1981	dB (A)	70.1	75.3	55

-Test Results End -

Prescribed Limit: NIOSH - Publication No. 98-126 in 1972, Table 2-1

Operational Status: Unit was Operational During sampling.

Analysed by - A.K. Saha



Reviewed by
(A.K. Saha)
Technical Feed

12
Reviewed by
(Ankit Das)
Laboratory Feed
Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

Address:
C/o - M. Singh, Indraprastha,
Ranchi - 834001, India
Jharkhand - 834001, India

Tel: 9821 488380
98217 94677
93345 73884
epiclabtech@gmail.com

CIN: U74900JH2022PTC000663
GST: AAACZ3885M
GST: 22AAACZ3885M23

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

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02362628077	Group	Atmospheric Pollution
Issue Date/Time	17.07.2025/ 17:10	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: GURDARI BAUXITE MINE

Contact Person: Mr. Anil Das
Contact Number: +91 9971034775
Email Id: anil.das@icadysbirla.com
Order Date: 31.03.2025/ 10:10
Order Number: 12612313888

References of Quality Management System (Date of Issuance Date)

Customer Registration No.	EPIC/OTM/0235	Sample Booking Number	EPIC-3528077
Samples Code	2528077 (A) (B) (C) (D)	Sample Receipt (D/T)	12.07.2025/12:48

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/036
Sampling Start (D/T)	10.07.2025/ 11:30	Sampling End (D/T)	11.07.2025/ 09:43
Mode of sampling	Conducted by Laboratory	Sample collected by	Mr. Ansh Kumar & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume - 1 (NAAQS/36/2012-13)		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition:	Clear	Temperature (°C)	25	Humidity %	66	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Office	GPS coordinate	23° 18' 50.50"/ 84° 14' 44.15"
S. Location B	Near Kathuwapari Pe-33	GPS coordinate	23° 20' 45.15"/ 84° 14' 10.11"
S. Location C	Near Mina Weigh Bridge	GPS coordinate	23° 19' 09.00"/ 84° 14' 40.36"
S. Location D	Near Dhobi Kumbh	GPS coordinate	23° 16' 58.11"/ 84° 15' 42.03"

Date(s) of performance of the laboratory activities

Test start date	12.07.2025/ 13:23	Test completion date	17.07.2025/ 10:00
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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 5102P-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)- Polycyclic aromatic hydrocarbons	IS 5102P-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/036/01/20	mg/m ³	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	BDL (MDL-1.8)	-

-Test Results End-

Prescribed Limit: Environmental (Protection) Rules-2006, Schedule VI.

Operational Status: Unit was Operational During sampling.

Analysed by - Vibha Mangay



Reviewed by
(S.K. Kumar)
Technical Head





EPIC LabTech Private Limited

Address:
C/o - K.A. Tripathi, Indraprastha,
Road No. - 3, Barapali,
Bachmandal - 831002, India

☎ 0971 9993392
☎ 98337 94677
☎ 93448 73994
✉ epiclabtech@gmail.com

CRN: 147999010022PTC00666
PAN: AAHCT3331M
GST: 29AAHCT3331M2Z

Accredited by -
NABL, ISO 15189 Number: 01-1289
(Designated State Pollution Control Board)
Certified by -
ISO 9001:2015 and ISO 14001:2015



TC-12897

Sampled and Analyzed

Unique Lab Report No.	TC12897/5000000672	Discipline	Chemical
Report Unique ID	RL02352528078	Group	Water
Issue date/time	17.07.2025/ 17:13	Sub Group	Drinking Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAJA, DIST.-LOHARDAJA, STATE-JHARKHAND, INDIA 835303 MONITORING SITE: GURDARI BAUXITE MINE	Contact Person Contact Number Email id Order Date Order Number	Mr. Ankit Das +91 9971034775 ankit.das@adhyabina.com 31.03.2025/ 10:10 12612313468
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------	------------------------------------------------------------------------------------------------

References of Quality Management System (Date of Issuance Date)

Customer Registration No.	EPIC/OTH/0235	Sample Booking Number	EPIC-2528078
Sample(s) Code	2528078	Sample Receipt (D/T)	12.07.2025/12:49

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/9/036
Sampling Start (D/T)	10.07.2025/ 14:05	Sampling End (D/T)	10.07.2025/ 14:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Anshu 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	Clear	Temperature (°C)	25	Humidity %	65	Wind direction	0°-180°
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Sampling Location(s) with GPS coordinate(s)

E. Location A	Near Office	GPS coordinate	23° 19' 00.28" / 84° 14' 44.95"
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Date(s) of performance of the laboratory activities

Test start date	12.07.2025/ 12:09	Test completion date	17.07.2025/ 15:00
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-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible limit
1.	pH value at 25.5°C	IS 3025 (P-11) 2022	-	06.88	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.42	1	5
3.	Colour	IS 3025 (P-04) 2021	Hazen	<5	5	15
4.	Odour	IS 3025 (P-05) 2019	-	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	183.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2019	mg/l	26.81	200	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-20) 2019	mg/l	90.00	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	100.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	18.23	75	200
11.	Free Residual Chlorine	IS 3025 (P-36) 1990	mg/l	RO (excess)	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1) 2022	mg/l	6.80	200	400
13.	Nitrate (as NO ₃)	APHA 4500 B 2023	mg/l	1.40	45	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2022	mg/l	BOL (MCL-0.001)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3000 Mg E 2023	mg/l	12.12	30	100

Page 3 of 3

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Abbreviation - BSL (Bachmandal Subordinate District), MHA (Muzaffarpur Subordinate District), Tq (Tehsil) of Gopabandhu.



EPIC LabTech Private Limited

Address:
S/O - K.A. Tripathi, Indraprastha
Road No - 1, Ranchi
Jharkhand - 834005, India

☎ 0651 4883301
☎ 98267 44077
☎ 93668 73884
✉ epiclabtech@gmail.com

CIN: U74999JH2012PTC019683
REGD: 451C33675W
GST: 20AAHCE9615M123

Accredited by:
NABL, ISO 17025 Number TC 1287
Jharkhand State Pollution Control Board
Certified by:
ISO 9001:2015 and ISO 45001:2018



Designated Test Capabilities

Unique Lab Report No.	TC1288725000000872	Discipline	Chemical
Report Unique ID	RL02362028078	Group	Water
Issue Date/Time	17.07.2025/ 17:13	Sub Group	Drinking Water

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Arjit Das
+91 9871034775
arjit.das@adityabeta.com
31.03.2025/ 10:10
12612313888

Group - Residues and Contaminants in Water			Sub Group - Trace Metals Elements		
16. Copper (as Cu)	APHA 3111.9.2023	mg/l	BDL(MCL:0.2)	0.05	1.8
17. Iron (as Fe)	APHA 3111.8.2023	mg/l	BDL(MCL:0.5)	1.0	No reaction
18. Lead (as Pb)	APHA 3111.9.2023	mg/l	BDL(MCL:0.01)	0.01	No reaction
19. Cadmium (as Cd)	APHA 3111.9.2023	mg/l	BDL(MCL:0.005)	0.005	No reaction
20. Total Chromium (as Cr)	APHA 3111.9.2023	mg/l	BDL(MCL:0.05)	0.05	No reaction
21. Nickel (as Ni)	APHA 3111.9.2023	mg/l	BDL(MCL:0.02)	0.02	No reaction
22. Total Arsenic (as As)	APHA 3134.9.2023	mg/l	BDL(MCL:0.005)	0.01	0.05
23. Selenium (as Se)	APHA 3134.9.2023	mg/l	BDL(MCL:0.005)	0.01	No reaction
24. Manganese (as Mn)	APHA 3111.9.2023	mg/l	BDL(MCL:0.05)	0.1	0.3
25. Zinc (as Zn)	APHA 3111.9.2023	mg/l	BDL(MCL:0.04)	0	10

-Test result End-

Prescribed Limit
Operational Status
Analyzed by - Vimal Rengra

SI 18908/2025
Unit was Operational During sampling



Reviewed by
(J.R. Kumar)
Technical Head

Issued by
(Arjit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Page 2 of 2

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Abbreviation: BDL (Below Detectable Limit), MDA (Minimum Detectable Amount), LQ (Limit of Quantification).



EPIC LabTech Private Limited

Address:
C/o - A.K. Tripathi, Indraprastha,
Road No. - 3, Sector-10,
Mayapuri - 110002, Noida

☎ 0011-49990001
☎ 00011-354777
☎ 00000-78884
✉ epiclabtech@gmail.com

City - 2014009/IN/2022/10/21/641
PAN - KANCC3871M
GST - 20AAHCB0751CEK

Accredited by -
Certified (Date of Issue) Control System
Certified by -
ISO 9001:2015 and ISO 17025:2017

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02362528078	Group	Water
Issue date/time	17.07.2025/ 17:13	Sub Group	Drinking Water

Report Issue to

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

Contact Person
Contact Number
Email id
Order Date
Order Number

Mr. Arkit Das
+91 9971034775
arkit.das@adityabeta.com
31.03.2025/ 10:10
12612313968

References of Quality Management System (Days of Invalidity Date)

Customer Registration No.	EPIC/OTH/0235	Sample Booking Number	EPIC-2528078
Sample(s) Code	2528078	Sample Receipt (D/T)	12.07.2025/12:49

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	10.07.2025/ 14:05	Sampling End (D/T)	10.07.2025/ 14:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Akash Kumar & Team
Sampling method used	IS - 3025 (Part-1) 1987, IS-3033		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Clear	Temperature (°C)	25	Humidity %	60	Wind direction	SE-150°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Office	GPS coordinate	23° 19' 00.26" N / 84° 14' 44.95" E
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Date(s) of performance of the laboratory activities

Test start date	12.07.2025/ 13:00	Test completion date	17.07.2025/ 15:00
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-Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Specifiable Limit
1.	Fluoride (as F)	NHA/MSB 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-65):2010	mg/l	BDL(MOL-0.1)	0.05	0.2
3.	Boron	IS 3025 (P-67):2021	mg/l	BDL(MOL-0.1)	0.5	1.0
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MOL-0.2)	0.5	No relaxation
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MOL-0.06)	0.1	No relaxation
Group-Residues and Contaminants in Water				Sub Group-Pesticides		
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MOL-0.5)	20	No relaxation
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MOL-0.5)	2.0	No relaxation
8.	Dieldrin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MOL-0.02)	0.03	No relaxation
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MOL-0.005)	0.01	No relaxation
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MOL-0.01)	0.04	No relaxation
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MOL-0.5)	120.0	No relaxation
12.	Chlorpyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MOL-0.5)	20.0	No relaxation
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MOL-0.02)	0.04	No relaxation
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MOL-0.5)	3.0	No relaxation

Page 4 of 2

General Note: 1. The laboratory accepts responsibility for the content of this report. 2. Test performed at laboratory's purchased facility. 3. All specific environmental conditions are tested required and results relate only to the sample tested in given test date & time. 4. The Test report shall not be reproduced full or in part & shall not be used as proof in the court of law. 5. Any computer done this report should be accompanied by writing within 10 days of its issue. 6. Total liability of EPIC LabTech Pvt. Ltd. will be limited to involved amount only. 7. All changes are authorized through circulation and electronic delivery of the laboratory does not accept the testing and sampling charges. 8. Operator does not imply involvement of the tested product by laboratory. Order or cancellations, laboratory accepts are issued by use or release of this report. 9. Where the results are found within tolerance are marked as "pass".

Headquarter - B-10, Shree Swastika Colony, WDA, Mahaveer, Sector-10, East of Green of Gurgaon, Haryana.



EPIC LabTech Private Limited

Address:-
C/o - M. K. Tripathi, Indraprastha,
Road No. - 3, Ranchi,
Jharkhand - 834002, India

Tel: 0661 4800200
98257 84477
93343 73884
epiclabtech@gmail.com

CIN: U74900JH2021PTC000025
PAN: AAKPC2870K
GST: UDAARH12B01W1C25

Accredited by:-
NABL (ISO 15189:2013) under ISO 15189:2013
Certified by:-
ISO 9001:2015 and ISO 14001:2015

Unique Lab Report No.	N/A	Discipline	Chemical		
Report Unique ID	RL00352528078	Group	Water		
Issue date/time	17.07.2025/ 17:13	Sub Group	Drinking Water		
Report Issue to		Contact Person	Mr. Ankit Das		
M/s - HINDALCO INDUSTRIES LIMITED		Contact Number	+91 9071034775		
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,		Email id	ankit.das@vishyabiria.com		
DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA.835302		Order Date	31.03.2025/ 10:10		
MONITORING SITE: GURDAM BAUXITE MINE		Order Number	13012313888		
15. Gamma- HCH(Lindane)	EPIC/LAB/SOP/WW/01/06	AP1	BOL/HOL-0.5	0.0	No relaxation
16. Malathion	EPIC/LAB/SOP/WW/01/06	AP1	BOL/HOL-0.5	100.0	No relaxation
17. Methyl parathion	EPIC/LAB/SOP/WW/01/06	AP1	BOL/HOL-0.2	0.3	No relaxation
18. Monocrotophos	EPIC/LAB/SOP/WW/01/06	AP1	BOL/HOL-0.5	1.0	No relaxation
19. Phorate	EPIC/LAB/SOP/WW/01/06	AP1	BOL/HOL-0.5	2.0	No relaxation
20. DDT (o,p and p,p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WW/01/06	AP1	BOL/HOL-0.5	1.0	No relaxation
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WW/01/06	AP1	BOL/HOL-0.00	0.4	No relaxation

-Test result End-

Prescribed Limit
Operational Status
Analyzed by - Vishal Mangra

IS 31600:2021
Unit was Operational During sampling.

Reviewed by
S.R. Gaur
Technical Head

Reviewed by
Ankit Das
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

Address:
C/o - S.A. Nagaraj, Indraprastha,
Road No. - 5, Rajouri,
Jharkhand - 834002, India

☎ 0662 4668302
☎ 06627 86477
☎ 06649 75884
✉ epiclabtech@gmail.com

☎ 0662 4668302 (EPIC LabTech)
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ISO 15189:2013



YC-12887

Unique Lab Report No.	TC126872500001017	Discipline	Chemical
Report Unique ID	RL30672534029	Group	Atmospheric Pollution
Issue date/time	25.08.2025/ 13:21	Sub Group	Ambient Air Quality

Report issue to	M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 833302 MONITORING SITE : GURDARI BAUXITE MINE	Contact Person	Mr. Ankit Das
		Contact Number	+91 9871034775
		Email Id	ankit.das@indhyabirya.com
		Order Date	31.03.2025/ 10:10
		Order Number	13612313668

References of Quality Management System (Date of Freshness Date)			
Customer Registration No.	EPIC/OTM/0267	Sample Booking Number	EPIC-2634029
Sample(s) Code	2534029 (A) (B) (C) (D)	Sample Receipt (D/T)	25.08.2025/ 11:02

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/036
Sampling Start (D/T)	18.08.2025/ 11:56	Sampling End (D/T)	19.08.2025/ 09:41
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Shagat & Team
Sampling method used	IS 5152 and CPCB Air Manual Volume - 1 (NAAQM/30/2012-13)		
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	120°-300°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Near Mine Office	GPS coordinate	23°18'59.80"V 84°14'44.10"E
S. Location B	Near Kothawapali Ph-23	GPS coordinate	23°20'48.10"V 84°14'16.11"E
S. Location C	Near Mine Weigh Bridge	GPS coordinate	23°19'09.06"V 84°14'40.38"E
S. Location D	Near Dhori Kulumbi	GPS coordinate	23°18'58.11"V 84°15'43.03"E

Date(s) of performance of the laboratory activities			
Test start date	20.08.2025/ 11:22	Test completion date	25.08.2025/ 12:00

-Test Results-								
Sl.	Test Parameters	Method used	Unit	Results				Limits
				A	B	C	D	
1.	Particulate Matter (PM ₁₀)	IS 5182 (P-25) 2022	µg/m³	67.86	77.35	84.02	78.55	100 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2018	µg/m³	29.88	35.00	41.12	33.06	60 (24 hr)
3.	Sulphur Dioxide (SO ₂)	IS 5182 (P-02) 2022	µg/m³	06.16	06.19	08.14	06.66	80 (24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS 5182 (P-06) 2022	µg/m³	19.57	18.52	22.62	19.52	80 (24 hr)
5.	Ammonia (NH ₃)	IS 5182 (P-25) 2018	µg/m³	38.73	38.98	45.13	34.94	400 (24 hr)
6.	Ozone (O ₃)	IS 5182 (P-08) 2018	µg/m³	20.60	22.15	21.82	21.15	180 (1 hr)
7.	Lead (Pb)	IS 5182 (P-22) 2020	µg/m³	BOL	BOL	BOL	BOL	1.0 (24 hr)
				(MCL 0.1)	(MCL 0.1)	(MCL 0.1)	(MCL 0.1)	
8.	Nickel (Ni)	IS 5182 (P-26) 2020	ng/m³	BOL	BOL	BOL	BOL	
				(MCL 0.1)	(MCL 0.1)	(MCL 0.1)	(MCL 0.1)	
9.	Arsenic (As)	USEPA IO 3.2-1996	ng/m³	BOL	BOL	BOL	BOL	
				(MCL 0.001)	(MCL 0.001)	(MCL 0.001)	(MCL 0.001)	

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

Signature of Analyst	Signature of Analyst
Signature of Analyst	Signature of Analyst
Signature of Analyst	Signature of Analyst

Signature of Analyst	Signature of Analyst
Signature of Analyst	Signature of Analyst
Signature of Analyst	Signature of Analyst



Accounting by: _____
 Title: _____
 Signature: _____
 Date: _____

TELETYPE

Abstract

Unique Lab Report No.	1C1266725000001018	Discipline	Chemical
Report Unique ID	RL00672634030	Group	Water
Issue date/time	25.08.2020/ 13:24	Sub Group	Ground Water

Report issue to:

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

Contact Person	Mr. Ankit Das
Contact Number	+91 9971034775
Email Id	ankit.das@edbytelia.com
Order Date	11.03.2025/ 12:10
Order Number	13612313868

References of Quality Management System (Case of Irkutsk District)

Customer Registration No.	EPIC/OTW/0207
Sample(s) Code	2534030

Sample Booking Number	EPHC-25040300
Sample Receipt (CVT)	20/08/2025/11:10

Sending References

Type of Industry	Basalt Mine	Ref. of Sampling Plan	EPCLAB/R/036
Sampling Start (D/T)	18.08.2025/ 15:10	Sampling End (D/T)	18.08.2025/ 15:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhugat & Team
Sampling method used	(S-1025 (Part-1) 1987, R-2000)		
Description/condition of sample	Recent sample(s) were fit for analysis.		

Environmental Conditions during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	120°-300°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Main Gate	GPS coordinate	23° 18' 30.03" / 84° 54' 43.88"
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Date(s) of performance of the laboratory activities

Test start date	20.08.2025/ 11:20	Test completion date	26.08.2025/ 11:50
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Test Results:

Sl	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable limit	Permissible limit
1.	pH value at 25.7°C	IS 3025 (P-11) 2012	-	6.91	6.5-8.5	No relaxation
2.	Turbidity	IS 3025 (P-10) 1984	NTU	0.53	1	5
3.	Colour	IS 3025 (P-04) 2012	Hazen	<5	5	15
4.	Odour	IS 3025 (P-08) 2018	-	Agreeable	Agreeable	Agreeable
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	Agreeable	Agreeable
6.	Total Dissolved Solids (TDS)	IS 3025 (P-18) 2012	mg/l	258.00	500	2000
7.	Chloride (as Cl)	IS 3025 (P-32) 2008	mg/l	33.47	250	1000
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2018	mg/l	111.00	200	600
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-23) 2008	mg/l	157.00	200	600
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	24.61	75	200
11.	Free Residual Chlorine	IS 3025 (P-20) 1988	mg/l	BDL (MBL 0.4)	0.2	1
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1) 2012	mg/l	7.00	200	400
13.	Nitrate (as NO ₃)	APHA 4500-N-2012	mg/l	1.92	40	No relaxation
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2012	mg/l	BDL (MDL 0.002)	0.001	0.002
15.	Magnesium (as Mg)	APHA 3500-Mg-T 2012	mg/l	21.61	30	500

City - S.E. Virginia, Bedfordville,
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Postcode - 514001, India

☎ 001 440 212
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FAX: +16062345678
GST: 123456789012345678

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TC-13083

Unique Lab Report No.	TC128M72500001018
Report Unique ID	R02672534030
Issue date/time	25.08.2025 13:24

Discipline	Chemical
Group	Water
Sub Group	Ground Water

Report Issue to

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

Contact Person	Mr. Ankit Das
Contact Number	+91 9971034775
Email Id	ankit.das@cityabira.com
Order Date	31.03.2025/10:10
Order Number	13012313888

Group - Residues and Contaminants in Water.

Sub Group: Trace Metals Elements

16.	Copper (as Cu)	APHA 3111.9-2020	mg/l	BDL(MDL-0.2)	0.05	1.5
17.	Iron (as Fe)	APHA 3111.9-2020	mg/l	BDL(MDL-0.3)	1.0	No relaxation
18.	Lead (as Pb)	APHA 3111.9-2020	mg/l	BDL(MDL-0.01)	0.01	No relaxation
19.	Cadmium (as Cd)	APHA 3111.9-2020	mg/l	BDL(MDL-0.003)	0.003	No relaxation
20.	Total Chromium (as Cr)	APHA 3111.9-2020	mg/l	BDL(MDL-0.05)	0.05	No relaxation
21.	Nickel (as Ni)	APHA 3111.9-2020	mg/l	BDL(MDL-0.07)	0.02	No relaxation
22.	Total Arsenic (as As)	APHA 3154.9-2020	mg/l	BDL(MDL-0.005)	0.01	0.05
23.	Selenium (as Se)	APHA 3154.9-2020	mg/l	BDL(MDL-0.005)	0.01	No relaxation
24.	Manganese (as Mn)	APHA 3111.9-2020	mg/l	BDL(MDL-0.05)	0.1	0.3
25.	Zinc (as Zn)	APHA 3111.9-2020	mg/l	BDL(MDL-0.04)	5	10

—Test result End—

Prescribed Limit
Consumption Blanks

18 JANUARY 2021

used were: *Chrysomelids* & *Dorcas* spp.

Analysed by - Pooja Kumar

Reviewed by
C. H. Kuper
National Head

12
Approved by
Graham East
Secretary General

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Pune, India

2000

Contracted Items: 1. The laboratory accepts responsibility for content of this report. 2. This performance of laboratory's personnel facility of specific environmental condition is not intended and results relate only to the sample tested as provided Table 4 Item 1. 3. The Test report shall not be reproduced without in part 4. can't be used as proof in the court of law. 4. Any complaint about this report should be communicated in writing within 14 days of the issue. 5. Total liability of GPC Ltd/Item 5: GPC will be limited to amount only. 6. All disputes are subject to Panel 1 Arbitration and maximum liability of the laboratory does not exceed the testing and sampling charges. 7. Options does not imply endorsement of the tested product by laboratory. Hence no recommendation, laboratory report can't be used as evidence of this report. 8. When the results are in numerical number are written as "dash".

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Address:
C/o - R.D. Inglehart, Indianapolis,
Ind. 46201 - U.S.A.
E-Mail - RDI@INDIANA.EDU

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 Ref: 44442305
 URL: 2012-04-06 08:15:29

Approved by: _____
Department: _____
Certified by: _____

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RLSGW72534035	Group	Water
Issue date/time	23.08.2020/ 13:34	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: GURDARI BAUXITE MINE

Contact Person	Mr. Anil Das
Contact Number	+91 9871034775
Email Id	anil.das@editya.in
Order Date	31.03.2025/10:10
Order Number	13812313858

References of Quality Management Systems (Class of Inequality, Date)

Customer Registration No.	EPIC/OTR/0267	Sample Booking Number	EPIC 3034330
Supplier(s) Code	2534330	Sample Receipt (D/T)	20.08.2025/11.03

Journaling References

Type of Industry	Bastide Mines	Ref. of Sampling Plan	EPIC/LAB/036
Sampling Start (D/T)	18.08.2025/ 15:10	Sampling End (D/T)	18.08.2025/ 15:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS : 2025 (Part-1) 1067, A-2003		
Description/condition of sample	Receptor samples were fit for analysis.		

Environmental conditions during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity%	75	Wind direction	120°-330°
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Sensitive Location(s) with GPS coordinates:

S. Location A	Near Main Gate	GPS coordinate	23° 28' 50.53" / 84° 54' 43.00"
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Date(s) of performance of the laboratory activities

Test start date: 20.08.2015/ 11:20 Test completion date: 25.08.2015/ 11:50

—Test Break—

Sl.	Test Parameters	Method used	Unit	Results	Limits	
					Acceptable Limit	Permissible Limit
1.	Fluoride (as F)	APHA 4500 F-C 2023	mg/l	BDL(MDL-0.1)	1.5	1.5
Group-Residues and Contaminants in Water				Sub Group-Trace Metals Elements		
2.	Aluminum	IS 3025 (P-05) 2018	mg/l	BDL(MDL-0.1)	0.05	0.2
3.	Boron	IS 3025 (P-07) 2021	mg/l	BDL(MDL-0.1)	2.5	1.0
4.	Polychlorinated biphenyls	SPC(LAB/SOP/WA/01/00)	µg/l	BDL(MDL-0.3)	0.5	No regulation
5.	Polynuclear Aromatic Hydrocarbons (PAH)	SPC(LAB/SOP/WA/01/00)	µg/l	BDL(MDL-0.05)	0.1	No regulation
Group-Residues and Contaminants in Water				Sub Group-Pesticides		
6.	Alachlor	SPC(LAB/SOP/WA/01/00)	µg/l	BDL(MDL-0.5)	20	No regulation
7.	Atrazine	SPC(LAB/SOP/WA/01/00)	µg/l	BDL(MDL-0.5)	2.0	No regulation
8.	Dieldrin	SPC(LAB/SOP/WA/01/00)	µg/l	BDL(MDL-0.02)	0.03	No regulation
9.	Alpha HCH	SPC(LAB/SOP/WA/01/00)	µg/l	BDL(MDL-0.005)	0.01	No regulation
10.	Beta HCH	SPC(LAB/SOP/WA/01/00)	µg/l	BDL(MDL-0.05)	0.04	No regulation
11.	Butachlor	SPC(LAB/SOP/WA/01/00)	µg/l	BDL(MDL-0.5)	125.0	No regulation
12.	Chlorpyrifos	SPC(LAB/SOP/WA/01/00)	µg/l	BDL(MDL-0.5)	30.0	No regulation
13.	Delta HCH	SPC(LAB/SOP/WA/01/00)	µg/l	BDL(MDL-0.02)	0.04	No regulation
14.	Ethion	SPC(LAB/SOP/WA/01/00)	µg/l	BDL(MDL-0.5)	3.0	No regulation



EPIC LabTech Private Limited

Address:
C/o - S.S. Singhvi, Indraprastha,
Block No. - 5, Sector-1,
Gurgaon - 122002, India

☎ 9011 4666707
☎ 9011 4666711
☎ 9011 4666708
✉ epiclabtech@gmail.com

LINE - 8788884422 (WHATSAPP)
Email - info@epiclabtech.com
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Certified by -
ISO 9001:2015 and ISO 17025:2017

Comprehensive Test Configuration

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	PL02672534030	Group	Water
Issue date/time	25.08.2025/ 13:24	Sub Group	Ground Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHAROGA,
DIST.-LOHAROGA, STATE-JHARKHAND, INDIA-835302
MONITORING SITE: GURDARI SAUKITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Ajay Das
+91 9971034775
ajay.das@adityabirla.com
31.03.2025/ 10:10
13612313668

15. Gamma-HCH (Lindane)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL (MDL-6.5)	2.0	No relaxation
16. Malathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL (MDL-6.5)	100.0	No relaxation
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	µg/l	BDL (MDL-6.5)	0.2	No relaxation
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL (MDL-6.5)	1.0	No relaxation
19. Phorate	EPIC/LAB/SOP/WA/01/00	µg/l	BDL (MDL-6.5)	3.0	No relaxation
20. DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL (MDL-6.5)	1.0	No relaxation
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL (MDL-0.05)	0.4	No relaxation

-Test result End -

Prescribed Limit
Operational Status
Analysed by - Pooja Kumar

IS 10300:2021
Unit was Operational During sampling.

Reviewed by
(P.K. Kumar)
Technical Head

Approved by
(Ajay Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

Address:
C/o - M.A. Tripathi, Indraprastha,
Road No. - 5, Ranchi,
Jharkhand - 834002, India

Tel: 0351 4442852
98337 96371
93949 73884
epiclabtech@gmail.com

CIN: U74900JH2022PTC000021
PAN: RAACE5800W
GST: 22AAACE2207A1G3X

Accredited by:-
Apollonia Quality Helpline Control Board
Certified by:-
ISO 9001:2015 and ISO 15189:2013

Calibration and Certificate

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL02672634031	Group	Water
Issue Date/Time	25.08.2025/ 13:27	Sub Group	Ground Water

Report Issue In

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9971004775
ankit.das@adityabirra.com
21.03.2025/ 10:10
13612313868

References of Quality Management System (Days of Traceability Chain)

Customer Registration No.	EPIC/OTH/0367	Sample Booking Number	EPIC 2534031
Sample(s) Code	2534031	Sample Receipt (D/T)	20.08.2025/11:00

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.08.2025/ 10:10	Sampling End (D/T)	18.08.2025/ 15:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & 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	120°-300°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Main Gate	GPS coordinate	23° 18' 59.677" N 84° 14' 43.80"
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Date(s) of performance of the laboratory activities

Test start date	20.08.2025/ 11:23	Test completion date	25.08.2025/ 11:30
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-Test Result-

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

-Test result End -

Prescribed Limit
Operational Status
Analysed by -Sudata Kumar

© 10000:2021
Unit was Operational During sampling.

Reviewed by
S.R. Kumar
Technical Head

Analysed by
Shree Das
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Address:
C/o - S.K. Nigam's Indraprasth,
Road No. - 3, Sector,
Chandigarh - 160001, India

☎ 2014 496392
 📠 30227 8617
 📠 3340 7384
 📧 scott@scott@scott.com

DOI: 10.1002/anie.200500960

Accounted for by:
 100% non-vested shares (2007: 100%)
 100% non-vested shares (2007: 100%)
 100% non-vested shares (2007: 100%)
 100% non-vested shares (2007: 100%)

95-1288

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Unique Lab Report No.	TC1268725000061019	Discipline	Chemical
Report Unique ID	RL02673534032	Group	Water
Issue date/time	25.08.2024/ 13:30	Sub Group	Surface Water

Report Issue to

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

Contact Person	Mr. Ankit Das
Contact Number	+91 9871034775
Email Id	ankit.das@satyabha.com
Order Date	31.03.2024/ 10:10
Order Number	1361231366

References of Quality Management System (Cases of Inequality Cases)

Customer Registration No.	EPC/OTM/0207	Sample Booking Number	EPC 2634330
Sample(s) Code	2534032	Sample Receipt (O/T)	20.08.2020/ 11:26

Existing References

Type of Industry	Basaltic Mines	Ref. of Sampling Plan	EPHC/LAB/R/036
Sampling Start (D/T)	18.06.2025/ 15:25	Sampling End (D/T)	18.06.2025/ 15:25
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Rowen Deep Shagat & Team
Sampling method used	IS : 3025 (Part-1) 1987, A-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	120°-330°
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Sampling Location(s) with GPS coordinate(s)

II. Location A	Sakhuapare (Spring Water)	GPS coordinate	22° 19' 18.91" N / 64° 15' 42.32" W
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Data(s) of performance of the laboratory activities

Test start date	20.08.2025/ 11:25	Test completion date	25.08.2025/ 11:50
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Test 11/12

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2020	-	6.65	-
2.	Turbidity	IS 3025 (P-10) 1984	NTU	1.6	-
3.	Colour	IS 3025 (P-04) 2021	Hazen	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-16) 2020	mg/l	197.00	-
7.	Chloride (as Cl)	IS 3025 (P-32) 2018	mg/l	31.04	-
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2018	mg/l	105.00	-
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	150.6	-
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	28.00	-
11.	Free Residual Chlorine	IS 3025 (P-28) 1986	mg/l	BDL (MCL: 0.4)	-
12.	Sulphate (as SO ₄)	IS 3025 (P-24) Sec-1 (2020)	mg/l	4.80	-
13.	Nitrate (as NO ₃)	APHA 4500 N 2023	mg/l	2.06	-
14.	Phenolic Compound	IS 3025 (P-43) Sec-1 (2020)	mg/l	BDL (MCL: 0.001)	-



EPIC LabTech Private Limited

Address:
C/o - S.A. Riganti, Indraprasth,
Road No - 1, Ranchi,
Jharkhand - 834001, India

Tel: 0661 4446262
066227 86677
066248 73884
epiclabtech@gmail.com

CIN: U74999JH2022PTC019943
Bank - SBI/20196
GST - 03AAHCB1619W124

Accredited by -
Lab-ware certificate number TC-12687
Jharkhand State Pollution Control Board
Lab/Ref No -
BCL-88872075 and BCL-88872074



TC-12687

Unique Lab Report No.	TC1268725000001019	Discipline	Chemical
Report Unique ID	RL02672634032	Group	Water
Issue Date/Time	25.08.2025/ 13:30	Sub Group	Surface Water

Report Issue is

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9971054775
ankit.das@epiclabtech.com
21.03.2025/ 10:10
13612313068

Group - Residues and Contaminants in Water,

Sub Group - Trace Metal Elements

15.	Copper (as Cu)	APHA 3111 B 2023	mg/l	BOL (MDL-0.2)	-
16.	Iron (as Fe)	APHA 3111 B 2023	mg/l	BOL (MDL-0.1)	-
17.	Lead (as Pb)	APHA 3111 B 2023	mg/l	BOL (MDL-0.01)	-
18.	Cadmium (as Cd)	APHA 3111 B 2023	mg/l	BOL (MDL-0.005)	-
19.	Total Chromium (as Cr)	APHA 3111 B 2023	mg/l	BOL (MDL-0.01)	-
20.	Nickel (as Ni)	APHA 3111 B 2023	mg/l	BOL (MDL-0.02)	-
21.	Total Arsenic (as As)	APHA 3114 B 2023	mg/l	BOL (MDL-0.005)	-
22.	Selenium (as Se)	APHA 3114 B 2023	mg/l	BOL (MDL-0.005)	-
23.	Manganese (as Mn)	APHA 3111 B 2023	mg/l	BOL (MDL-0.05)	-
24.	Zinc (as Zn)	APHA 3111 B 2023	mg/l	BOL (MDL-0.04)	-

-Test result End-

Prescribed Limit

Operational Status

Analyzed by - Pappu Kumar

Unit was Operational During Sampling.

Reviewed by
P. K. Kumar
Technical Head

Issued by
Green Leaf
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

Address:
C/o - S.S. Tripathi, Indraprastha,
Post-10, - S. Yamuna,
Bharatpur - 221002, India

☎ 0521-4446102
☎ 05221-846111
☎ 83348 73384
✉ epiclabtech@gmail.com

☎ 0521-4446102/05221-846111
☎ 83348 73384
☎ 0521-4446102/05221-846111

Accredited by:-
NABL (NABL/1001/INDIA/2017/0001)
Certified by:-
NABL (NABL/1001/INDIA/2017/0001)

Comprehensive Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02672534032	Group	Water
Issue date/time	25.08.2025/ 11:20	Sub Group	Surface Water

Report Issue to

M/s. HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST. LOHARDAGA, STATE-JHARKHAND, INDIA 835300
MONITORING SITE:- GURDARI BAUXITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9975034775
ankit.das@edityabirra.com
31.03.2025/ 10:10
13612313668

References of Quality Management System (Date of Issuance Date)

Customer Registration No.	EPIC/OT/40087	Sample Booking Number	EPIC-2534032
Sample(s) Code	2534032	Sample Receipt (D/T)	20.08.2025/ 11:05

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/9036
Sampling Start (D/T)	18.08.2025/ 15:21	Sampling End (D/T)	18.08.2025/ 15:25
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Shagat & Team
Sampling method used	IS: 3025 (Part-1) 1967, & 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	120°-300°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Sakhuapuri (Spring Water)	GPS coordinate	22° 19' 18.01" N 84° 15' 42.32" E
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Date(s) of performance of the laboratory activities

Test start date	20.08.2025/ 11:25	Test completion date	25.08.2025/ 11:50
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-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	Fluoride (as F)	APHA 4500 F-C 2005	mg/l	BOL/MOL-0.1	-
Group Residues and Contaminants in Water				Sub Group-Trace Metals Elements	
2.	Aluminum	IS 3025 (P-53) 2019	mg/l	BOL/MOL-0.1	-
3.	Boron	IS 3025 (P-57) 2021	mg/l	BOL/MOL-0.1	-
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	BOL/MOL-0.2	-
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	BOL/MOL-0.001	-
Group Residues and Contaminants in Water				Sub Group-Pesticides	
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BOL/MOL-0.3	-
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	BOL/MOL-0.5	-
8.	Dieldrin	EPIC/LAB/SOP/WA/01/00	µg/l	BOL/MOL-0.02	-
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BOL/MOL-0.005	-
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BOL/MOL-0.02	-
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BOL/MOL-0.5	-
12.	Chlorpyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	BOL/MOL-0.5	-
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BOL/MOL-0.02	-
14.	Ethion	EPIC/LAB/SOP/WA/01/00	µg/l	BOL/MOL-0.5	-



EPIC LabTech Private Limited

Address:
C/o - S.S. Tripathi, Indraprastha,
Road No. - 5, Ranchi,
Jharkhand - 834005, India

☎ 0671 4099192
📠 99277 94677
📠 93348 73884
✉ epiclabtech@gmail.com

☎ 0671 4099192/0671 4099193
📠 0671 4099192/0671 4099193
✉ 0671 4099192/0671 4099193

Registered by -
Department: State Technical Bureau
Certified by -
ISO 9001:2015 certified laboratory

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RLIGET2504032	Group	Water
Issue date/time	25.04.2025/ 13:30	Sub Group	Surface Water

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Anil Das
+91 9971034779
anil.das@epiclabtech.com
21.03.2025/ 10:10
13612313668

15. Gamma-HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	100%	BDL(MDL-0.3)	-
16. Malathion	EPIC/LAB/SOP/WA/01/00	100%	BDL(MDL-0.5)	-
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	100%	BDL(MDL-0.3)	-
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	100%	BDL(MDL-0.3)	-
19. Phorate	EPIC/LAB/SOP/WA/01/00	100%	BDL(MDL-0.5)	-
20. DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	100%	BDL(MDL-0.5)	-
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	100%	BDL(MDL-0.05)	-

-Test result End -

Prescribed Unit

Operational Status

Analyzed by - Pappu Kumar

Unit was Operational During sampling.



Noted by
(S.K. Kumar)
Technical Head

Noted by
(Anil Das)
Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





Accredited by:
 AQA, the Quality Assurance Institute, 100
 High Street, London EC2A 4DF
 Tel: 020 7626 6200
 Fax: 020 7626 6201
 Email: info@aqainstitute.com
 Website: www.aqainstitute.com

TEL: 1-800-2

Unique Lab Report No.	TC1268725000061020
Report Unique ID	RL0672524034
Issue Date/Time	25.08.2025/ 13:30

Discipline	Chemical
Group	Water
Sub Group	Surface Water

Report Issue for

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

Contact Person	Mr. Ardit Das
Contact Number	+91 9871034775
Email id	ardit.das@citybirla.com
Order Date	31.03.2025/ 10:10
Order Number	13012313668

References of Quality Management Systems (Steps of a Quality Check)

Customer Registration No.	EPIC/OTH/0257
Sampler's Code	2534034

Sample Booking Number	EPIC-2004004
Sample Receipt (d/f)	20-08-2020 11:06

Sampling References

Type of industry	Basaltic Mines
Sampling Start (D/T)	18.06.2025/ 15:28
Mode of Sampling	Conducted by Laboratory
Sampling method used	IS : 3025 (Part-1) 1987, A-2003
Description/condition of sample	Receipt sample/s were fit for

Ref. of Sampling Plan	EPC/LA6/0038
Sampling End (D/T)	18.08.2025 / 15:33
Sample collected by	Mr. Pawan Deep Shrestha & Team

Description/condition of sample: Receipt samples (5) were fit for analysis.

Environmental Condition during exercise

Weather condition	Cloudy	Temperature (°C)	27	Humidity (%)	70	Wind direction	135°-300°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Sink River (Down Stream)	GPS coordinate	22° 17' 00.70" N / 84° 13' 40.54" W
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Outcome(s) of performance of the laboratory activities

Test start date	20.08.2025/ 12:00	Test completion date	20.08.2025/ 11:50
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---Test Result---

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25.7°C	IS 3025 (P-11) 2012	-	7.06	-
2.	Turbidity	IS 3025 (P-10) 1984	NTU	9.88	-
3.	Colour	IS 3025 (P-04) 2012	Hazen	5	-
4.	Odour	IS 3025 (P-06) 2014	-	Agreeable	-
5.	Taste	IS 3025 (P-07) 2012	-	Agreeable	-
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2012	mg/l	195.00	-
7.	Chloride (as Cl)	IS 3025 (P-32) 2014	mg/l	32.02	-
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2014	mg/l	95.00	-
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	144.57	-
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	25.65	-
11.	Free Residual Chlorine	IS 3025 (P-26) 1984	mg/l	BDL (MDL: 0.4)	-
12.	Sulphate (as SO ₄)	IS 3025 (P-24) Sec-1, 2012	mg/l	4.8	-
13.	Nitrate (as NO ₃)	APHA 4500 B 2012	mg/l	2.04	-
14.	Phenolic Compound	IS 3025 (P-43) Sec-1, 2012	mg/l	BDL (MDL: 0.001)	-

C/o - S.A. Tripartito, Indragiri,
 Regal No. - 5, Boreto
 (Aralhaud - 834000, India)

[illegible]

```

1200: 11799904D112F0C276680
1201: 8000000000000000
1202: 0000000000000000

```

Reviewed by:
 Adult: monica@paulguyard.com (U: 1000)
 Approved: monica@paulguyard.com (U: 1000)
 Certified by:
 Paul Guyard (U: 1000)

97-11000

Unique Lab Report No.	TC1288725000081021
Report Unique ID	RL02672534036
Issue Date/Time	25.08.2020/13:42

Discipline	Chemical
Group	Water
Sub-Group	Surface Water

Report Issue to

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

Contact Person	Mr. Ankit Das
Contact Number	+91 9971036775
Email Id	ankit.das@satyabeta.com
Order Date	31.03.2025/ 10:10
Order Number	13612313668

References of Quality Management Systems (Date of Issuance, Date)

Customer Registration No.	EPIC/OTH/0257
Sample(s) Code	2934030

Sample Booking Number	EPIC-2534336
Sample Receipt (C/F)	20/06/2016/ 11:38

Sampling References

Type of industry	Bauxite Mines
Sampling Start (D/T)	18.06.2025/ 15:35
Mode of Sampling	Conducted by Laboratory
Sampling method used	IS : 3625 (Part-1) 1987, R-2000

Ref. of Sampling Plan	EPIC/LA68/0381
Sampling End (D/T)	18-06-2025/ 15:40
Sample collected by	Mr. Rowan Deep Shrestha & Team

Descriptive/condition of sample	Receipt samples (s) were fit for analysis
---------------------------------	-------------------------------------------

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	120°-330°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Sank River (Up Stream)	GPS coordinate	23° 18' 10.11" / 84° 16' 15.80"
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Date(s) of performance of the laboratory activities

Test start date	20.08.2025 11:28	Test completion date	20.08.2025 11:50
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Test Result:

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25.7°C	IS 3025 (P-11) 2002	-	7.2	-
2.	Turbidity	IS 3025 (P-10) 1984	NTU	8.06	-
3.	Colour	IS 3025 (P-06) 2001	Hazen	5	-
4.	Odour	IS 3025 (P-08) 2018	-	Agreeable	-
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	-
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2003	mg/l	196.00	-
7.	Chloride (as Cl)	IS 3025 (P-32) 2018	mg/l	30.05	-
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2018	mg/l	100.00	-
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	148.59	-
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	26.45	-
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	SOLIMOL (4.4)	-
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1) 2022	mg/l	4.90	-
13.	Nitrate (as NO ₃)	APHA 4500 IS 2023	mg/l	2.06	-
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2002	mg/l	SOLIMOL (0.002)	-



EPIC LabTech Private Limited

Address:
C/o - E.S. Nagar, Indrapur,
Road No. - 5, Ranchi,
Jharkhand - 834002, India

☎ 0657-4648330
☎ 98357 84477
☎ 93095 13884
✉ epiclabtech@gmail.com

☎ 0657-4648330
☎ 98357 84477
☎ 93095 13884
☎ 98357 84477

☎ 0657-4648330
☎ 98357 84477
☎ 93095 13884
☎ 98357 84477

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RLX0672534036	Group	Water
Issue date/time	25.08.2025/ 13:42	Sub Group	Surface Water

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9871034778
ankit.das@epiclabtech.com
31.03.2025/ 10:10
13612313888

14. Ethion	EPIC/LAB/SOP/YKA/01/00	µg/l	BDL(MCL-0.5)	-
15. Gamma-HCH(Endane)	EPIC/LAB/SOP/YKA/01/00	µg/l	BDL(MCL-0.5)	-
16. Malathion	EPIC/LAB/SOP/YKA/01/00	µg/l	BDL(MCL-0.5)	-
17. Methyl parathion	EPIC/LAB/SOP/YKA/01/00	µg/l	BDL(MCL-0.2)	-
18. Monocrotophos	EPIC/LAB/SOP/YKA/01/00	µg/l	BDL(MCL-0.5)	-
19. Phorate	EPIC/LAB/SOP/YKA/01/00	µg/l	BDL(MCL-0.5)	-
20. DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/YKA/01/00	µg/l	BDL(MCL-0.5)	-
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/YKA/01/00	µg/l	BDL(MCL-0.25)	-

-Test result End -

Prescribed Unit

Operational Status

Analysed by - Pappu Kumar

Unit was Operational During sampling.

Signed by
(Pappu Kumar)
Technical Head

Signed by
Ankit Das
Laboratory Head
Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

Address:
C/o - R.R. Tripathi, Indraprastha,
Road No. - 5, Ranchi,
Jharkhand - 834005, India

Tel: 9821 499092
98227 86377
98649 78864
epiclabtech@gmail.com

CIN - U09999JK2022PTC019643
PAN - AANCC2071M
GST - 22AANCC2071MCE4

Accredited by -
NABL (ISO 9001:2015) Certificate No. 1801
NABL (ISO 17025) Certificate No. 1802

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL00672534037	Group	Water
Issue date/time	25.08.2025/ 13:45	Sub Group	Surface Water

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

References of Quality Management System (Step of Traceability Chain)			
Customer Registration No.	EPIC/OTH/0287	Sample Booking Number	EPIC-2534037
Sample(s) Code	2534037	Sample Receipt (D/T)	26.08.2025/ 11:08

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/H/006
Sampling Start (D/T)	18.08.2025/ 18:35	Sampling End (D/T)	18.08.2025/ 19:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS : 3025 (Part-1) 1987, B-2003		
Description/condition of sample	Receipt sample(s) were fit for analyses.		

Environmental Condition during sampling			
Weather condition	Cloudy	Temperature (°C)	27
		Humidity %	70
		Wind direction	120°-300°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Sone River (UP Stream)	GPS coordinate	23° 15' 10.11" N 84° 18' 15.92" E

Date(s) of performance of the laboratory activities			
Test start date	20.08.2025/ 11:28	Test completion date	25.08.2025/ 11:50

-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	Total Coliform	IS 15195:2002	Per 100 ml	480	-
2.	E.Coli	IS 15195:2002	Per 100 ml	300	-

-Test result End -

Prescribed Limit			
Operational Status	Unit was Operational During sampling.		
Analysed by - Sujata Kumar			



Analysed by
S.K. Kumar
Technical Seal

Issued by
Sujata Kumar
Laboratory Seal

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

Address:
C/o : N.S. Nigam, Indraprastha
Road No. - 5, Sector 1
Gurgaon - 122002, India

☎ 9021 4546200
☎ 90207 86471
☎ 90448 70004
✉ epiclabtech@gmail.com

CIN : UH49999IN2022PH020969
BVN : BAAVC287036
GST : 03AAHCB379W129

Accredited by :-
NABL, with certificate number TC-12987
(Surveillance State Review (SRR) not done)
Certified by :-
Dr. RRR, DTS and ISO 9001:2015



TC-12987

Unique Lab Report No.	TC-1298725000001022	Discipline	Chemical
Report Unique ID	RL02672534038	Group	Water
Issue date/time	25.08.2025/ 13:48	Sub Group	Surface Water

Report Issue is

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Anil Das
+91 9971034775
anil.das@adhyabirsa.com
31.03.2025/ 10:10
12612313868

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

Customer Registration No.	EPIC/OTM/0267	Sample Booking Number	EPIC 2534038
Sample(s) Code	2534038	Sample Receipt (D/T)	20.08.2025/ 11:09

Sampling References

Type of industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/IAS/R/038
Sampling Start (D/T)	18.08.2025/ 18:45	Sampling End (D/T)	18.08.2025/ 15:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS : 3025 (Part-1) 1987, IS-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	120°-300°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Chandhani Nadi (UP Stream)	GPS coordinate	23° 30' 03.11" N 84° 10' 12.76" E
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Data(s) of performance of the laboratory activities

Test start date	20.08.2025/ 11:29	Test completion date	25.08.2025/ 11:50
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-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25.0°C	IS 3025 (P-11) 2002	-	7.1	-
2.	Turbidity	IS 3025 (P-10) 1984	NTU	9.85	-
3.	Colour	IS 3025 (P-04) 2002	Hazen	10	-
4.	Odour	IS 3025 (P-09) 2018	-	Agreeable	-
5.	Taste	IS 3025 (P-07) 2017	-	Agreeable	-
6.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2002	mg/l	200.00	-
7.	Chloride (as Cl)	IS 3025 (P-32) 2018	mg/l	31.04	-
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-25) 2018	mg/l	105	-
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	150.5	-
10.	Calcium (as Ca)	IS 3025 (P-48) 1995	mg/l	27.25	-
11.	Free Residual Chlorine	IS 3025 (P-28) 1986	mg/l	BDU/MDL 0.4	-
12.	Sulphate (as SO ₄)	IS 3025 (P-34/Sec-1) 2002	mg/l	6.80	-
13.	Nitrate (as NO ₃)	APHA 4500 N-2003	mg/l	2.04	-
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2002	mg/l	BDU/MDL 0.001	-



EPIC LabTech Private Limited

Address:
C/o - S.K. Singh, Indraprastha,
Road No. - 5, Ranchi,
Jharkhand - 834002, India

☎ 9821 446092
📞 98227 86477
📞 98948 73864
✉ epiclabtech@gmail.com

☎ 9821 446092
📞 98227 86477
📞 98948 73864
✉ epiclabtech@gmail.com

Accredited by -
Jalpaipur, Jalpaiguri, Jalpaiguri
Jalpaiguri, Jalpaiguri, Jalpaiguri
Jalpaiguri, Jalpaiguri, Jalpaiguri

EPIC LabTech Private Limited

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL02672534039	Group	Water
Issue date/time	25.08.2025/ 13:51	Sub Group	Surface Water

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Anil Das
+91 9971034775
anil.das@hindalco.com
31.03.2025/ 10:10
13612313068

References of Quality Management System (Open if Traceability Data)

Customer Registration No.	EPIC/OTH/0267	Sample Booking Number	EPIC-2534039
Sample(s) Code	2534039	Sample Receipt (D/T)	25.08.2025/ 11:09

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/0036
Sampling Start (D/T)	18.08.2025/ 15:45	Sampling End (D/T)	18.08.2025/ 15:50
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS : 3025 (Part 1) 1957, A-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	120°-300°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Dharmdev Nadi (UP Stream)	GPS coordinate	22° 19' 03.11" / 84° 10' 12.76"
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Date(s) of performance of the laboratory activities

Test start date	25.08.2025/ 11:29	Test completion date	25.08.2025/ 11:50
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-Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Total Coliform	IS 3025:2002	Per 100 ml	450	
2.	E.Coli	IS 3025:2002	Per 100 ml	380	

-Test result End -

Prescribed Limit

Operational Status: Unit was Operational During sampling.

Analysed by - Saptar Kumar



Signature
S.K. Kumar
Technical Head

Signature
S.K. Kumar
Technical Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

Address:
C/o - R.S. Vigrahi, Indraprastha,
Road No. 1, S. K. Road,
Jharkhand - 831005, India

☎ 0331-4066001
☎ 03337 89072
☎ 93049 33994
✉ epiclabtech@gmail.com

☎ 0331-4066001
☎ 03337 89072
☎ 93049 33994
✉ epiclabtech@gmail.com

Accredited by:
NABL, with certificate Number: TC-12087
Recognized State Pollution Control Board
Certified by:
ISO 9001:2015 and ISO 45001:2018



TC-12087

Environmental Test Certificate

Unique Lab Report No.	EC1208725000001023	Discipline	Chemical
Report Unique ID	RL02672534040	Group	Water
Issue date/time	25.08.2025/ 11:54	Sub Group	Surface Water

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Anil Das
+91 9971034775
anil.das@hdcindia.com
31.03.2025/ 10:10
12612313868

References of Quality Management System (Date of Issuance Date)

Customer Registration No.	EPIC/0114/0267	Sample Booking Number	EPIC - 2534040
Sample(s) Code	2534040	Sample Receipt (S/R)	20.08.2025/ 11:10

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/1A/8/026
Sampling Start (D/T)	18.08.2025/ 18:00	Sampling End (D/T)	18.08.2025/ 18:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS: 3025 (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)	27	Humidity %	70	Wind direction	120°-300°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Koel River (Up Stream)	GPS coordinate	23° 26' 47.47" N/ 84° 19' 20.19" E
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Data(s) of performance of the laboratory activities

Test start date	20.08.2025/ 11:30	Test completion date	26.08.2025/ 11:50
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-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25.0°C	IS:3025 (P-11) 2022	-	7.2	-
2.	Turbidity	IS:3025 (P-10) 2004	NTU	9.96	-
3.	Colour	IS:3025 (P-04) 2023	Pazen	10	-
4.	Odour	IS:3025 (P-06) 2018	-	Agreeable	-
5.	Taste	IS:3025 (P-07) 2017	-	Agreeable	-
6.	Total Dissolved Solids (TDS)	IS:3025 (P-16) 2023	mg/l	205.00	-
7.	Chloride (as Cl)	IS:3025 (P-32) 2019	mg/l	32.02	-
8.	Total Alkalinity (as CaCO ₃)	IS:3025 (P-20) 2019	mg/l	110.00	-
9.	Total Hardness (as CaCO ₃)	IS:3025 (P-21) 2009	mg/l	152.6	-
10.	Calcium (as Ca)	IS:3025 (P-40) 2001	mg/l	28.06	-
11.	Free Residual Chlorine	IS:3025 (P-28) 2006	mg/l	BDLMCL 0.4	-
12.	Sulphate (as SO ₄)	IS:3025 (P-34/56) 12002	mg/l	4.90	-
13.	Nitrate (as NO ₃)	APHA 4500 N-2023	mg/l	2.06	-
14.	Phenolic Compound	IS:3025 (P-43/56) 12002	mg/l	BDLMCL 0.001	-

Page 4 of 4

Disclaimer: We, EPIC LabTech Private Limited, are not responsible for the results of this report. The test performed at laboratory's permanent facility. At specific working period, modification or addition required and results will vary in the sample tested in prescribed Date & Time. The Test report shall not be implemented full or in part if it is not the used as per the test method. The test report shall not be implemented in writing within 10 days of the issue. The Test Laboratory of EPIC LabTech Pvt. Ltd. will be limited to reference purpose only. All disputes are referred to District, Jharkhand and maximum liability of the laboratory does not exceed the testing and sampling charges. The laboratory does not imply any warranty of the test result by laboratory. Further no representation, laboratory accepts any liability by use or misuse of this report. Where the results are flow normal parameter are marked as "dash".

Address: 305, Sector-Ten, Indraprastha, 835302, Jharkhand, India. SAG (State of Jharkhand).



EPIC LabTech Private Limited

Address:
C/o - R.K. Tripathi, Indraprastha
Road No. - 5, Ranchi
Jharkhand - 834002, India

☎ 0331 4442267
☎ 93321 85477
☎ 93642 70084
✉ epiclabtech@gmail.com

Call - 47489941 (2022/10/10/2023)
Fax - 4442267/8
Web - 220440230710004

Accredited by:-
National Bureau of Testing & Calibration
Certified by:-
NABL 1001:2015 and ISO 9001:2015

Certified Test Certificate

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02672534040	Group	Water
Issue Date/Time	20.08.2025/ 11:54	Sub Group	Surface Water

Report Issued to

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

Contact Person
Contact Number
Email id
Order Date
Order Number

Mr. Ankit Das
+91 9975104775
ankit.das@adityabirla.com
31.03.2025/ 10:10
13612013668

References of Quality Management System (Date of Issuance Date)

Customer Registration No.	EPIC/OTM/0267	Sample Booking Number	EPIC - 2534040
Sample(s) Code	2534040	Sample Receipt (D/T)	20.08.2025/ 11:10

Sampling References

Type of industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.08.2025/ 10:00	Sampling End (D/T)	18.08.2025/ 10:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS : 3025 (Part-1) 1987, IS-2003		
Description/location of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	27	Humidity %	70	Wind direction	120°-300°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Koel River (Up Stream)	GPS coordinate	23°25' 47.47" N 84°19' 20.10" E
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Details of performance of the laboratory activities

Test start date	20.08.2025/ 11:30	Test completion date	25.08.2025/ 11:50
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-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	Fluoride (as F)	APHA 4500- F-C 2005	mg/l	BDL(MDL-0.1)	-
Group-Residues and Contaminants in Water				Sub Group-Trace Metals Elements	
2.	Aluminum	IS 3025 (P-1):2018	mg/l	BDL(MDL-0.1)	-
3.	Boron	IS 3025 (P-1):2018	mg/l	BDL(MDL-0.1)	-
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.2)	-
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.05)	-
Group-Residues and Contaminants in Water				Sub Group-Pesticides	
6.	Alachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
7.	Atrazine	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
8.	Chlorzin	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.10)	-
9.	Alpha HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.005)	-
10.	Beta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.10)	-
11.	Butachlor	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
12.	Chlorpyrifos	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.5)	-
13.	Delta HCH	EPIC/LAB/SOP/WA/01/00	µg/l	BDL(MDL-0.10)	-

Page 2 of 2

Disclaimer: Series 1. The laboratory accepts responsibility for content of this report. 2. The performance of laboratory's personnel facility, at specific times and under conditions as outlined in report and results relate only to the sample tested as provided Data & Time. 3. The Test report shall not be reproduced (all or in part) or used as proof in the court of law. 4. Any complaint about this report should be communicated in writing within 10 days of the issue. 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to amount received only. I.e. EPIC does not accept any liability for damages and maximum liability of the laboratory does not exceed the testing and sampling charges. 6. EPIC does not imply any representation of the test results by laboratory. Under no circumstances, laboratory accepts any liability for use or misuse of this report. 7. When the results are first released, preliminary are marked as "P" mark. 8. Information: BSL (Biosafety Level 1) facility, ISO 9001:2015 (Quality Management System), ISO 14001:2015 (Environmental Management System), ISO 45001:2018 (Occupational Health & Safety Management System).



EPIC LabTech Private Limited

Address:

Plot - B-1, Tripathi, Indraprastha,
Road No. - 1, Ranchi,
Jharkhand - 834022, India

☎ 0661 8886281

☎ 98157 84277

☎ 93668 73884

✉ epiclabtech@gmail.com

CRM: 07469410222/PTC010405

REG - ASHIC030716

QST - 20CAAP/0301/14/23

Accredited by:

Indian Bureau of Standards (BIS)

Certified by:

ISO 9001:2015 and ISO 15189:2013

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL02672534041	Group	Water
Issue Date/Time	25.08.2025/ 13:57	Sub Group	Surface Water

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9871034775
ankit.das@adthbina.com
31.03.2025/ 10:10
13612313868

References of Quality Management System (Date of Issuability Date)

Customer Registration No.	EPIC/OTM/0267	Sample Booking Number	EPIC - 2504041
Samples Code	2534041	Sample Receipt (D/T)	25.08.2025/ 11:10

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/0306
Sampling Start (D/T)	18.08.2025/ 13:56	Sampling End (D/T)	18.08.2025/ 16:00
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS - 3025 (Part-1) 1987, IS-3003		
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	120°-300°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Koel River (Up Stream)	GPS coordinate	23° 25' 47.47" N 84° 18' 20.50" E
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Deix(s) of performance of the laboratory activities

Test start date	20.08.2025/ 11:30	Test completion date	25.08.2025/ 11:50
-----------------	-------------------	----------------------	-------------------

-Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Total Coliform	IS 15185:2002	Per 100 ml	425	—
2.	E.Coli	IS 15185:2002	Per 100 ml	360	—

-Test result End -

Prescribed Limit

Operational Status: Unit was Operational During sampling

Analysed by - Sujata Kumar



Reviewed by
(S.K. Kumar)
Technical Head

Issued by
Direct Head
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

Address:
C/o - R.K. Tripathi, Indrayani,
Road No. - 5, Kalyani,
Bachkhand - 234005, India

☎ 991 4440000
☎ 99151 44571
☎ 99346 10004
✉ epiclabtech@gmail.com

CR-4174990/2022/PT/CDMA/25
PDR-Subot 234005
GST - 23AAH1236PW123

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

Comprehensive Test Comprehensive

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	PLAUN/2534042	Group	Water
Issue date/time	25.08.2025/ 14:00	Sub Group	Stream Water

Report Issue to	M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 836303 MONITORING SITE : GURDARI BAUXITE MINE	Contact Person	Mr. Ankit Das
		Contact Number	+91 9871034775
		Email Id	ankit.das@epiclabtech.com
		Order Date	31.03.2025/ 10:10
		Order Number	13612313668

References of Quality Management System (Open if Inability Chart)			
Customer Registration No.	EPIC/OTM/0207	Sample Booking Number	EPIC - 2534042
Sample(s) Code	2534042	Sample Receipt (D/T)	20.08.2025/ 11:11

Sampling References			
Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.08.2025/ 18:10	Sampling End (D/T)	18.08.2025/ 18:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS: 3025 (Part-1) 1987, IS-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	120°-300°

Sampling Location(s) with GPS coordinate(s)			
S. Location A	Kosi River (Down Stream)	GPS coordinate	23° 25' 01.09" N 84° 19' 55.21" E

Date(s) of performance of the laboratory activities			
Test start date	20.08.2025/ 11:35	Test completion date	29.08.2025/ 11:50

-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	Fluoride (as F)	APHA 4500 F-C 2005	mg/l	BDL(MDL-0.3)	-
Group-Residues and Contaminants in Water			Sub Group-Trace Metals Elements		
2.	Aluminum	IS 3025 (P-55) 2018	mg/l	BDL(MDL-0.5)	-
3.	Boron	IS 3025 (P-57) 2023	mg/l	BDL(MDL-0.3)	-
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/MA/01.00	µg/l	BDL(MDL-0.3)	-
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/MA/01.00	µg/l	BDL(MDL-0.05)	-
Group-Residues and Contaminants in Water			Sub Group-Pesticides		
6.	Alachlor	EPIC/LAB/SOP/MA/01.00	µg/l	BDL(MDL-0.5)	-
7.	Atrazine	EPIC/LAB/SOP/MA/01.00	µg/l	BDL(MDL-0.3)	-
8.	Dieldrin	EPIC/LAB/SOP/MA/01.00	µg/l	BDL(MDL-0.02)	-
9.	Alpha HCH	EPIC/LAB/SOP/MA/01.00	µg/l	BDL(MDL-0.005)	-
10.	Beta HCH	EPIC/LAB/SOP/MA/01.00	µg/l	BDL(MDL-0.02)	-
11.	Butachlor	EPIC/LAB/SOP/MA/01.00	µg/l	BDL(MDL-0.5)	-
12.	Chlorpyrifos	EPIC/LAB/SOP/MA/01.00	µg/l	BDL(MDL-0.5)	-
13.	Delta HCH	EPIC/LAB/SOP/MA/01.00	µg/l	BDL(MDL-0.02)	-



EPIC LabTech Private Limited

Address:
C/o - K.A. Tripathi, Indraprastha,
Road No. - 3, Ranchi,
Jharkhand - 834005, India

Tel: 091 4442222
09337 86071
03449 70004
epiclabtech@gmail.com

CIN: 471999JH2022PT000045
Pan: AAKC2887W
GST: 22AAHC2887WCE

Accredited by -
Labring India Private Limited, Ranchi
Certified by -
ISO 9001:2015 and ISO 17025:2017

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02672634042	Group	Water
Issue date/time	20.05.2025/ 14:00	Sub Group	Drain Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST -JHARKHADA, STATE-JHARKHAND, INDIA 834303
MONITORING SITE : GURDARI BAUXITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Anil Das
+91 9971034775
anil.das@adityabirla.com
31.03.2025/ 10:30
13612013868

14. Ethion	EPIC/LAB/SOP/WA/01/00	ug/l	BOL/MOL-0.5	-
15. Gamma- HCH(Lindane)	EPIC/LAB/SOP/WA/01/00	ug/l	BOL/MOL-0.5	-
16. Malathion	EPIC/LAB/SOP/WA/01/00	ug/l	BOL/MOL-0.5	-
17. Methyl parathion	EPIC/LAB/SOP/WA/01/00	ug/l	BOL/MOL-0.2	-
18. Monocrotophos	EPIC/LAB/SOP/WA/01/00	ug/l	BOL/MOL-0.5	-
19. Phorate	EPIC/LAB/SOP/WA/01/00	ug/l	BOL/MOL-0.5	-
20. DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/WA/01/00	ug/l	BOL/MOL-0.5	-
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/WA/01/00	ug/l	BOL/MOL-0.00	-

-Test result End-

Prescribed Limit
Operational Status

Analysed by - Pappu Kumar

Unit was Operational During sampling.

Reviewed by
(P.K. Kumar)
Technical Head

Issued by
(Anil Das)
Secretary Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Page 2 of 2

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Abbreviation - BSL: Biochemical Safety Level; WSL: Water Sampling Level; LSL: Limit of Quantitation.



EPIC LabTech Private Limited

Address: C/o - R.A. Tripathi, Sonapat, Dist. - LOHARDAGA, STATE-JHARKHAND, INDIA 815303
 Phone No. - 934005 78884
 Email - epiclabtech@gmail.com
 CMC - 124000042022EPIC000043
 PIN - 815303
 GST - 22AAACE2837FM1C2A
 Accredited by - Jharkhand State Pollution Control Board
 Certified by - ISO 9001:2015 and ISO 14001:2015

Comprehensive Test Compliance

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	RL02672534043	Group	Water
Issue date/time	26.08.2025/ 14:03	Sub Group	Surface Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST. - LOHARDAGA, STATE-JHARKHAND, INDIA 815303 MONITORING SITE - CURDARI BAUXITE MINE	Contact Person Contact Number Email Id Order Date Order Number	Mr. Ankit Das +91 9871034775 ankit.das@indiatelnet.com 31.03.2025/ 10:10 13612313868
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------

References of Quality Management System (Step of Traceability Data)

Customer Registration No.	EPIC/OD/0267	Sample Booking Number	EPIC - 2534043
Sample(s) Code	2534043	Sample Receipt (D/T)	26.08.2025/ 11:11

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/008
Sampling Start (D/T)	18.08.2025/ 16:10	Sampling End (D/T)	18.08.2025/ 16:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS : 3025 (Part-1) 1987, A-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	120°-300°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Kheel River (Down Stream)	GPS coordinate	22° 25' 01.90" N 84° 19' 55.21" E
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Date(s) of performance of the laboratory activities

Test start date	20.08.2025/ 11:31	Test completion date	26.08.2025/ 11:50
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-Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Total Coliform	IS 15185:2003	Per 100 ml	440	—
2.	E.Coli	IS 15185:2003	Per 100 ml	350	—

-Test result End -

Prescribed Limit

Operational Status: Unit was Operational During sampling.

Analysed by - Sujata Kumar



Signature of
Sujata Kumar
Technical Head

Signature of
Sujata Kumar
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

Address:
C/o - R.R. Vigasaki, Indraprastha
Road No. - 5, Sector-1,
Noida-201301, India

☎ 011 4990202
✉ 00227 80477
📠 81049 73886
🌐 casos@taucherman.com

[CNC-6T4000N2022F020154](#)
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 Number: 281
 Author: *Journal of the American Medical Association*
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Journal of Management Education 34(10)

Unique Lab Report No.	TCL268725000061525	Discipline	Chemical
Report Unique ID	RLJJB72534044	Group	water
Issue date/time	25.08.2024/ 14:00	Sub Group	Surface Water

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST -LOHARDAGA, STATE-JHARKHAND, PINA-833302
MONITORING SITE : GURDARI BAUXITE MINE

Contact Person	Mr. Ankit Das
Contact Number	+91 9871034775
Email Id	ankit.das@editybilla.com
Order Date	31.03.2024/ 10:10
Order Number	13612313668

References of Quality Management Systems (Stage of Immaturity, Decline)

Customer Registration No.	EPC/OTH/0207	Sample Booking Number	EPC - 2534044
Sample(s) Code	2534044	Sample Receipt (D/T)	20.08.2026/ 13:35

Executive Summary

Type of Industry	Raukote Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.06.2025/ 18:10	Sampling End (D/T)	18.06.2025/ 18:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Shrestha & Team
Sampling method used	(S : 3025 (Part 1) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Claudy	Temperature (°C)	27	Humidity %	70	Wind direction	120°-330°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Dhordhan Nadi (Down Stream)	GPS coordinate	23° 17' 10.03"/ 34° 17' 50.50"
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Example) of performance of the laboratory activities

Test start date	20.08.2025/ 11:35	Test comparison date	25.08.2025/ 11:50
-----------------	-------------------	----------------------	-------------------

---Test Result---

Sr	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25.7°C	IS 3025 (P-11) 2002	-	7.36	-
2.	Turbidity	IS 3025 (P-10) 1994	ntu	4.89	-
3.	Colour	IS 3025 (P-04) 2001	Hazen	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-16) 2002	mg/l	198.00	-
7.	Chloride (as Cl)	IS 3025 (P-32) 2018	mg/l	31.04	-
8.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23) 2018	mg/l	105.00	-
9.	Total Hardness (as CaCO ₃)	IS 3025 (P-21) 2009	mg/l	146.58	-
10.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	24.65	-
11.	Free Residual Chlorine	IS 3025 (P-26) 1986	mg/l	BOL (MCL 0.4)	-
12.	Sulphate (as SO ₄)	IS 3025 (P-24/Sec-1) 2002	mg/l	5.1	-
13.	Nitrate (as NO ₃)	APHA 4500 N-2002	mg/l	1.91	-
14.	Phenolic Compound	IS 3025 (P-43/Sec-1) 2002	mg/l	BOL (MCL 0.001)	-



EPIC LabTech Private Limited

Address:
C/o - R.K. Tripathi, Indraprastha,
Road No. - 5, Ranchi
Jharkhand - 834001, India

T: 0931 4688300
M: 98267 86677
S: 93048 73890
epiclabtech@gmail.com

CIN: U74999JH2022PTCH000005
PAN: AAKC3801M
GST: 20AAKCB3801M029

Recognized by -
NABL, ISO 15189:2013 (Chemical)
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 14001:2015



Environmental and Food Compliance

Unique Lab Report No.	TC12967250009010025	Discipline	Chemical
Report Unique ID	RL02672500004	Group	Water
Issue date/time	25.08.2023/ 14:08	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: GURDARI BAUXITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number

M. Arjit Das
+91 9971034775
arjit.das@adityabirla.com
31.03.2023/ 10:10
13612013868

Group - Residues and Contaminants in Water,

Sub Group - Trace Metals Elements

15. Copper (as Cu)	APHA 3111.8-2003	mg/l	BOL(MDL-0.2)	-
16. Iron (as Fe)	APHA 3111.8-2003	mg/l	BOL(MDL-0.1)	-
17. Lead (as Pb)	APHA 3111.8-2003	mg/l	BOL(MDL-0.01)	-
18. Cadmium (as Cd)	APHA 3111.8-2003	mg/l	BOL(MDL-0.003)	-
19. Total Chromium (as Cr)	APHA 3111.8-2003	mg/l	BOL(MDL-0.05)	-
20. Nickel (as Ni)	APHA 3111.8-2003	mg/l	BOL(MDL-0.02)	-
21. Total Arsenic (as As)	APHA 3114.8-2003	mg/l	BOL(MDL-0.005)	-
22. Selenium (as Se)	APHA 3114.8-2003	mg/l	BOL(MDL-0.005)	-
23. Manganese (as Mn)	APHA 3111.8-2003	mg/l	BOL(MDL-0.08)	-
24. Zinc (as Zn)	APHA 3111.8-2003	mg/l	BOL(MDL-0.04)	-

-Test result End -

Prescribed Limit
Operational Status

Limit was Operational During sampling

Analysed by - Poppu Kumar



Poppu Kumar
Reviewed by
(S.R. Kumar)
Technical Head

Arjit Das
Issued by
Chief Exec.
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Page 2 of 2

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Headquarters - B-10, (Below Executive Level), MIDC (Maharashtra Industrial Development Corporation), Dist. Dahanu (Gujarat).



EPIC LabTech Private Limited

Address:
C/o. N.S. Tripathi, Indraprastha,
Post No. - 5, Sector-1,
Gurgaon - 122002, India

☎ 0121-4446262
☎ 0121-4446271
☎ 0121-4446272
✉ info@epiclabtech.com

LINE - 0121-4446262/0121-4446271
WhatsApp - 84400230196
GST - 07AAHCE1911M125

Accredited by -
NABL (ISO 9001:2015) for Environmental Testing
NABL (ISO 17025) for Water Testing
NABL (ISO 17025) for Soil Testing

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL026/2534044	Group	Water
Issue date/time	25.08.2025/ 14:00	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 : GURDARI BAUXITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9871034775
ankit.das@epiclabtech.com
31.03.2025/ 10:10
13612313668

References of Quality Management System (Span of Traceability Chart)

Customer Registration No.	EPIC/OTM/087	Sample Booking Number	EPIC - 2534044
Sample(s) Code	2534044	Sample Receipt (D/T)	20.08.2025/ 11:15

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	18.08.2025/ 16:10	Sampling End (D/T)	18.08.2025/ 16:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS : 3025 (Part-1) 1087, II-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	120°-300°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Ohardhari Nadi (Down Stream)	GPS coordinate	23° 17' 10.63" N 84° 17' 08.09" E
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Date(s) of performance of the laboratory activities

Test start date	20.08.2025/ 11:31	Test completion date	25.08.2025/ 11:50
-----------------	-------------------	----------------------	-------------------

-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	Fluoride (as F)	APHA 4500 F-C 2005	mg/l	BDL(MCL-0.1)	-
Group-Residues and Contaminants in Water				Sub Group-Trace Metals Elements	
2.	Aluminum	IS 3025 (P-05) 2013	mg/l	BDL(MCL-0.1)	-
3.	Boron	IS 3025 (P-07) 2021	mg/l	BDL(MCL-0.1)	-
4.	Polychlorinated biphenyls	EPIC/LAB/SOP/WA/01.00	µg/l	BDL(MCL-0.2)	-
5.	Polynuclear Aromatic Hydrocarbons (PAH)	EPIC/LAB/SOP/WA/01.00	µg/l	BDL(MCL-0.05)	-
Group-Residues and Contaminants in Water				Sub Group-Pesticides	
6.	Alachlor	EPIC/LAB/SOP/WA/01.00	µg/l	BDL(MCL-0.03)	-
7.	Atrazine	EPIC/LAB/SOP/WA/01.00	µg/l	BDL(MCL-0.01)	-
8.	Dieldrin	EPIC/LAB/SOP/WA/01.00	µg/l	BDL(MCL-0.02)	-
9.	Alpha HCH	EPIC/LAB/SOP/WA/01.00	µg/l	BDL(MCL-0.005)	-
10.	Beta HCH	EPIC/LAB/SOP/WA/01.00	µg/l	BDL(MCL-0.02)	-
11.	Butachlor	EPIC/LAB/SOP/WA/01.00	µg/l	BDL(MCL-0.01)	-
12.	Chlorpyrifos	EPIC/LAB/SOP/WA/01.00	µg/l	BDL(MCL-0.01)	-
13.	Delta HCH	EPIC/LAB/SOP/WA/01.00	µg/l	BDL(MCL-0.02)	-



EPIC LabTech Private Limited

Address: C/o. / B.A. 11/24/10, Indraprastha Road No. - 5, Ranchi, Jharkhand - 834005, India.
 Phone: +91 9871034775
 Email: ankit.das@epiclabtech.com
 GST: 20K4HICL3019H129

Accredited by:
 National Bureau of Testing & Calibration
 Certified by:
 ISO 9001:2015 and ISO 17025:2017

Unique Lab Report No. N/A
 Report unique id: RLX26/2534044
 Issue date/time: 25.03.2025/ 14:00

Report issue to:
 M/s - HINDALCO INDUSTRIES LIMITED
 VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
 DIST -LOHARDAGA, STATE-JHARKHAND, INDIA 835303
 MONITORING SITE: GURDARI BAUXITE MINE

Contact Person: Mr. Ankit Das
 Contact Number: +91 9871034775
 Email id: ankit.das@epiclabtech.com
 Order Date: 31.03.2025/ 10:10
 Order Number: 13612313868

14. Ethion	EPIC/LAB/SOP/RWA/0100	µg/l	BDL(MCL-0.5)	-
15. Gamma- HCH(Lindane)	EPIC/LAB/SOP/RWA/0100	µg/l	BDL(MCL-0.5)	-
16. Malathion	EPIC/LAB/SOP/RWA/0100	µg/l	BDL(MCL-0.5)	-
17. Methyl parathion	EPIC/LAB/SOP/RWA/0100	µg/l	BDL(MCL-0.2)	-
18. Monocrotophos	EPIC/LAB/SOP/RWA/0100	µg/l	BDL(MCL-0.5)	-
19. Phorate	EPIC/LAB/SOP/RWA/0100	µg/l	BDL(MCL-0.5)	-
20. DDT (o, p and p, p-isomer of DDT, DDE and DDD)	EPIC/LAB/SOP/RWA/0100	µg/l	BDL(MCL-0.5)	-
21. Endosulfan (alpha, beta, and sulphate)	EPIC/LAB/SOP/RWA/0100	µg/l	BDL(MCL-0.05)	-

-Test result End -

Prescribed Unit:

Operational Status:

Analysed by - Pappu Kumar

Unit was Operational During sampling.

Controlled by
 (S.K. Kumar)
 Technical Head

Checked by
 (S.K. Kumar)
 Laboratory Head

Authorized Signatory
 EPIC LabTech Pvt. Ltd.
 Ranchi, Jharkhand



Page 2 of 2

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Address: BCL (Bharat Petroleum Limited), MPCL (Madhya Pradesh Petroleum Limited), LSC (Liquor Control Board) (Gardubhawan).



EPIC LabTech Private Limited

Address:-
C/o - N.S. Vigraha, Indhapalli,
Road No. - 5, Ranchi,
Jharkhand - 834003, India

Tel: 9821 446091
98257 86377
98048 71884
epiclabtech@gmail.com

CIN: U74999JH2022PT029643
ROD: JHANC02011M
GST: 33AAHCE3347MF24

Accredited by:-
NABL (NABL/0001/2022/0001/2022)
NABL (NABL/0001/2022/0001/2022)
NABL (NABL/0001/2022/0001/2022)

Unique Lab Report No.	N/A	Discipline	Biological
Report Unique ID	PLU/2534045	Group	Water
Issue date/time	25.08.2025/ 14:09	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 : GURDARI BAUXITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number

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

Reference of Quality Management System (Step of Traceability Detail)

Customer Registration No.	EPIC/OTH/0267	Sample Booking Number	EPIC - 2534045
Sample(s) Code	2534045	Sample Receipt (D/T)	20.08.2025/ 11:15

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R008
Sampling Start (D/T)	18.08.2025/ 16:10	Sampling End (D/T)	18.08.2025/ 16:15
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS: 3025 (Part-1) 1987, A-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	120°-300°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Dhandhari Nadi (Down Stream)	GPS coordinate	23° 17' 10.53" N 84° 17' 38.58" E
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Date(s) of performance of the laboratory activities

Test start date	20.08.2025/ 11:25	Test completion date	25.08.2025/ 11:50
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-Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	Total Coliform	IS 15195:2002	Per 100 ml	480	Shall not be detectable in any 100 ml sample
2.	E.Coli	IS 15195:2002	Per 100 ml	340	

-Test result End -

Prescribed Limit

Operational Status: Unit was Operational During sampling

Analysed by - Sapta Kumar



Reviewed by
S.K. Kumar
Technical Head

Issued by
Sapta Kumar
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

Address:
C/o - A.K. Tripathi, Indraprastha,
Road No. - 5, Ranchi,
Jharkhand - 834002, India

Phone: +91 98962507
+91 989625077
+91 989625088
Email: epiclabtech@gmail.com

CIN: U74900JH2019PT000001
PAN: AAKCC2803M
GST: 22AAHCL2979M1C2

Accredited by:-
NABL, with certificate number: 01-1380
Environment, Soil, Water, Control System
Certified by:-
ISO 9001:2015 and ISO 14001:2015



Environmental Test Certificate

Unique Lab Report No.	1C1269725000001025	Discipline	Chemical
Report unique ID	RL026/2504046	Group	Pollution & Environment
Issue date/time	25.08.2025/ 14:12	Sub Group	Waste Water (Effluent)

Report Issue In

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

Contact Person: Mr. Anil Das
Contact Number: +91 9871004775
Email Id: anil.das@adflyapbta.com
Order Date: 31.03.2025/ 10:10
Order Number: 12612313868

Reference of Quality Management System (Days of Traceability Direct)

Customer Registration No.	EPIC/OTM0267	Sample Booking Number	EPIC-2534046
Sample(S) Code	2534046	Sample Receipt (D/T)	20.08.2025/ 11:18

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/0336
Sampling Start (D/T)	18.08.2025/ 15:18	Sampling End (D/T)	18.08.2025/ 15:30
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS : 3025 (Part-1) 1987, & 3003		
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	120°-300°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Work Shop (Outlet)	GPS coordinate	23° 18' 58.087" N 84° 14' 44.70"
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Date(s) of performance of the laboratory activities

Test start date	20.08.2025/ 11:38	Test completion date	25.08.2025/ 11:30
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-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25.7°C	IS 3025 (P-11) 2002	-	6.09	6.5-8.3
2.	BOD (3 days at 27°C)	IS 3025 (P-46) 2000	mg/l	14.00	-
3.	COD	IS 3025 (P-56) 2006	mg/l	64.00	190
4.	Oil & Grease	IS 3025 (P-39) 2001	mg/l	BDL(MDL-04)	10.0
5.	Total Suspended Solid	IS 3025 (P-17) 2002	mg/l	46.00	60.0
6.	Phosphate	IS 3025 (P-31.5m-1) 2002	mg/l	0.53	-
7.	Zinc (as Zn)	APHA 3111 B 2001	mg/l	BDL(MDL-0.04)	-

-Test result End -

Prescribed Limit: Environmental (Protection) Rules-1986, Schedule I, Serial No.134
Operational Status: Unit was Operational During sampling

Analysed by - Yashu Kumar



Reviewed by
(Yashu Kumar)
Technical Head

Assessed by
(Yashu Kumar)
Laboratory Head
Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

Address:
C/o - S.R. Tripathi, Indraprastha,
Post No. - 5, Ranchi,
Jharkhand - 834005, India

☎ 0651 4446700
📠 93337 94677
📠 93348 73884
📧 epiclabtech@gmail.com

☎ 0651 4446700/0651 4446701
📠 93337 94677
📠 93348 73884
📧 epiclabtech@gmail.com

Accredited by :-
NABL (ISO 9001:2015) Certified
NABL (ISO 17025:2017) Certified
NABL (ISO 14001:2015) Certified

Summary of Test Compartment

Unique Lab Report No.	NA	Discipline	Chemical
Report Unique ID	RL02672334046	Group	Pollution & Environment
Issue date/time	25.08.2025/ 14:12	Sub Group	Waste Water (Effluent)

Report Issue to:

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST. LOHARDAGA, STATE -JHARKHAND, INDIA 836303
MONITORING SITE: GURDARI BAUXITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Anil Das
+91 9971034775
anil.das@adityapirita.com
31.03.2025/ 10:10
12612313668

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No.	EPIC/OTM/0267	Sample Booking Number	EPIC-2534046
Sample(s) Code	2534046	Sample Receipt (D/T)	25.08.2025/ 11:18

Sampling References

Type of industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/SAB/R/036
Sampling Start (D/T)	18.08.2025/ 15:38	Sampling End (D/T)	18.08.2025/ 15:20
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Fawaz Deep Bhagat & Team
Sampling method used	IS : 3025 (Part-1) 1987, II-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	120°-300°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Work Shop (Outlet)	GPS coordinate	23° 18' 59.08" / 84° 14' 44.70"
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Date(s) of performance of the laboratory activities

Test start date	20.08.2025/ 11:38	Test completion date	25.08.2025/ 11:00
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Test Result

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	Total Dissolve Solids (TDS)	IS 3025 (P-1) 2003	mg/l	663.0	-

Test result Fail

Prescribed Limit
Operational Status

(Environmental Protection) Rules-1986, Schedule I, Serial No. 134.
Unit Was Operational During sampling.

Analyzed by - Pooja Kaur



Reviewed by
S.R. Tripathi
Technical Head

Issued by
Direct Head
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

Unique Lab Report No.	TC1288725000001193
Report Unique ID	96.02962537032
Issue date/time	17.09.2025/ 13:27

Discipline	Chemical
Group	Atmospheric Pollution
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: GURDARI BAUXITE MINE

Contact Person	Mr. Ankit Das
Contact Number	+91 99751034775
Email Id	ankit.das@edityabiria.com
Order Date	31.03.2025/ 10:10
Order Number	13612312866

References of Quality Management System (View of Feasibility Study)

Customer Registration No.	EPNC/OTW0205
Sample(s) Code	2537032 (A) (B)

Sample Booking Number	EPNC-0537032
Sample Receipt (D/T)	13.06.2024/ 11:31

Sampling References

Type of Industry	Raukote Mines	Ref. of Sampling Plan	EPIC/LAB/R/006
Sampling Start (D/T)	11.09.2025/ 12:08	Sampling End (D/T)	12.09.2025/ 09:47
Made of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS 5582 and CPCE Air Manual Volume – 1 (HAAQM/30/2012-13)		
Description/condition of sample	Respect sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	30	Humidity %	67	Wind direction	45°-225°
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Traveling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Office	GPS coordinate	23°13' 58.93"/ 84°14' 44.13"
S. Location B	Near Kithuwepiti Pt 22	GPS coordinate	23°20' 46.18"/ 84°14' 16.11"
S. Location C	Near Mine Weigh Bridge	GPS coordinate	23°13' 09.00"/ 84°14' 45.39"
S. Location D	Near Dhola Kulumb	GPS coordinate	23°19' 58.11"/ 84°15' 42.83"

Data(s) of performance of the laboratory activities

Test start date	13.09.2025/ 11:51	Test completion date	17.09.2025/ 11:00
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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	57.91	58.94	54.95	56.92	180 (24 hr)
2.	Fine Particulate Matter (PM _{2.5})	IS 5182 (P-24) 2019	µg/m ³	27.08	24.21	26.50	26.48	90(24 hr)
3.	Sulphur Dioxide (SO ₂)	IS 5182 (P-03) 2023	µg/m ³	09.26	08.66	08.86	07.74	80(24 hr)
4.	Nitrogen Dioxide (NO ₂)	IS 5182 (P-36) 2022	µg/m ³	19.55	18.51	19.47	18.44	80(24 hr)
5.	Ammonia (NH ₃)	IS 5182 (P-25) 2018	µg/m ³	27.66	27.37	27.06	26.55	400(24 hr)
6.	Ozone (O ₃)	IS 5182 (P-09) 2019	µg/m ³	23.47	25.79	27.77	24.80	180(1 hr)
7.	Lead (Pb)	IS 5182(P-22) 2019	µg/m ³	BOL (MCL-0.1)	BOL (MCL-0.1)	BOL (MCL-0.1)	BOL (MCL-0.1)	1.0(24 hr)
8.	Nickel (Ni)	IS 5182(P-26) 2020	µg/m ³	BOL (MCL-0.1)	BOL (MCL-0.1)	BOL (MCL-0.1)	BOL (MCL-0.1)	
9.	Arsenic (As)	USEPA IO 3.2 1999	µg/m ³	BOL (MCL-0.001)	BOL (MCL-0.001)	BOL (MCL-0.001)	BOL (MCL-0.001)	

—Fast Forward Live—

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

Analyzed by – Ethel Mawardi



Run around the
E.W. Kerner/
Kernland House

Issue No.
— (Insert Code)
— (Insert Code)

Advanced Signatory
EPAC Lubbock P/L, Ltd.

Figure 4.10



EPIC LabTech Private Limited

Address:
C/o - R.K. Tripathi, Indrawati,
Block No. - 5, Ranchi,
Jharkhand - 834005, India

Phone: 99337 88677
93998 73999
epiclabtech@gmail.com

CIN: U74300JH2022PTC056683
GST: 22AAJH1399TM127

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

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RL02952537032	Group	Atmospheric Pollution
Issue date/time	17.09.2025/ 13:27	Sub Group	Ambient Air Quality

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA, DIST.-LOHARDAGA, STATE-JHARKHAND, INDIA 835902 MONITORING SITE: GURDARI BAUXITE MINE	Contact Person Contact Number Email id Order Date Order Number	Mr. Anil Das +91 9971034775 anil.das@adityabirla.com 31.03.2025/ 10:10 13612313868
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------	------------------------------------------------------------------------------------------------

References of Quality Management System (Date of Issuance Date)

Customer Registration No.	EPIC/OTM/0295	Sample Booking Number	EPIC-2537032
Sample(s) Code	2537032 (A) (B) (C) (D)	Sample Receipt (S/R)	13.09.2025/ 11:31

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/036
Sampling Start (D/T)	11.09.2025/ 12:05	Sampling End (D/T)	12.09.2025/ 09:47
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS 5182 and CPCB Air Manual Volume-1 (NAAQS/06/2012-13)		
Description/condition of sample	Receipt sample(s) were for analysis		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	30	Humidity %	67	Wind direction	45°-225°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Mine Office	GPS coordinate	23°18' 09.80" N 84° 14' 44.12" E
S. Location B	Near Kathwagani Pk-23	GPS coordinate	23° 20' 40.18" N 84° 14' 16.11" E
S. Location C	Near Mine Weigh Bridge	GPS coordinate	23° 19' 09.86" N 84° 14' 40.38" E
S. Location D	Near Dhobi Kutumb	GPS coordinate	23° 18' 58.13" N 84° 15' 42.03" E

Data(s) of performance of the laboratory activities

Test start date	13.09.2025/ 11:51	Test completion date	17.09.2025/ 11:00
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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-11) 2006	µg/m ³	BDL (MCL-0.1)	BDL (MCL-0.1)	BDL (MCL-0.1)	BDL (MCL-0.1)	-
2.	Benz(a) Pyrene (Bap)- Particulate phase only	IS 5182P-12) 2004	ng/m ³	BDL (MCL-0.1)	BDL (MCL-0.1)	BDL (MCL-0.1)	BDL (MCL-0.1)	-
3.	Carbon Monoxide (CO)	EPIC/LAB/ISO/AFR/11/02	mg/m ³	BDL (MCL-1.0)	BDL (MCL-1.0)	BDL (MCL-1.0)	BDL (MCL-1.0)	-

-Test Results End-

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

Operational Status: Unit was Operational During sampling

Analysed by - Vikas Mangaraj

Reviewed by
S.S. Kumar
Technical Head





EPIC LabTech Private Limited

Address:
C/o - R.K. Properties, Indraprastha,
Road No. - 5, Sector 13,
Gurgaon - 124002, India

Tel: 0121 4048300
98021 84477
98049 73894
epiclabtech@gmail.com

CHN-12400012022PCH0001
PAN - AAKW0001M
GST - 06AAHCB017M5C6

Recognized by:
Haryana State Pollution Control Board
Pollution Control Board
Gurgaon
Certified by:
ISO 9001:2015 and ISO 17025:2017



TC-12687

Unique Lab Report No.	TC126872500001194	Discipline	Chemical
Report Unique ID	RL02962637033	Group	Water
Issue date/time	17.09.2025/ 13:30	Sub Group	Surface Water

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Ankit Das
+91 9971034775
ankit.das@odhybha.com
31.03.2025/ 10:10
13612313688

References of Quality Management System (Date of Freshness Date)

Customer Registration No.	EPIC/OTN/0296	Sample Booking Number	EPIC 2537033
Sample(s) Code	2537033	Sample Receipt (D/T)	13.09.2025/ 11:32

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/0306
Sampling Start (D/T)	17.09.2025/ 15:30	Sampling End (D/T)	11.09.2025/ 16:40
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS: 3025 (Part-1) 1987, R-2000		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	30	Humidity %	67	Wind direction	45°-225°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Kothuwarapali P.H. - 23	GPS coordinate	23° 20' 48.10" N 84° 14' 16.10" E
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Date(s) of performance of the laboratory activities

Test start date	13.09.2025/ 11:52	Test completion date	17.09.2025/ 10:59
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-Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25°C	IS 3025 (P-11) 2002	-	7.2	-
2.	Total Dissolved Solids (TDS)	IS 3025 (P-16) 2002	mg/l	205.00	-
3.	Calcium (as Ca)	IS 3025 (P-40) 1991	mg/l	28.08	-

Group - Residues and Contaminants in Water,**Sub Group - Trace Metals Elements**

4.	Iron (as Fe)	APHA 3111 B 2002	-	RD LMDL-4.3)	-
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-Test result End -**Operational Status**

Unit was Operational During sampling.

Analysed by - Pawan Kumar



Reviewed by
(P.K. Kumar)
Technical Head





EPIC LabTech Private Limited

Address:
C/O - K.A. Tripathi, Indraprastha,
Post Box - 5, Ranchi,
Jharkhand - 834005, India

☎ 0357 4066252
☎ 0357 406677
☎ 0357 406677
✉ epiclabtech@gmail.com

CIN: U74900JH2012PTC000001
GSTIN: AARCT0007W
GST: 22AAACW03571M024

Accredited by:
NABL, with certificate number: 1010
Recognized State Pollution Control Board
Certified by:
ISO 9001:2015 and ISO 45001:2018



TC-12807

Unique Lab Report No.	TC1266725000001195	Discipline	Chemical
Report Unique ID	RL02952537034	Group	Pollution & Environment
Issue date/time	17.09.2025/ 13:30	Sub Group	Sol/Sediments

Report Issue to

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

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

References of Quality Management System (Scope of Traceability Chain)

Customer Registration No.	EPIC/OTM/0296	Sample Booking Number	EPIC-2537034
Sample(s) Code	2537034	Sample Receipt (D/T)	13.09.2025/ 13:30

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/AB/R/030
Sampling Start (D/T)	11.09.2025/ 16:00	Sampling End (D/T)	11.09.2025/ 16:10
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS - 3025 (Part-5) 1987, R-2003		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	30	Humidity %	67	Wind direction	45°/225°
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Sampling Location(s) with GPS coordinate(s)

S. Location A	Near Kathwopari Pkt -23	GPS coordinate	23°20' 46.18" N 84°1' 16.12" E
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Details of performance of the laboratory activities

Test start date	13.09.2025/ 12:30	Test completion date	17.09.2025/ 10:30
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-Test Result-

Sl	Test Parameters	Method used	Unit	Results	Limits
1.	pH value at 25.7°C	MAOI 2011	-	6.02	-
2.	Available Phosphorus	MAOI 2011	µg/lw	9.6	-
3.	Available Potassium	MAOI 2011	µg/lw	129.0	-
4.	Organic Carbon	MAOI 2011	%	1.48	-
5.	Electrical Conductivity	MAOI 2011	µm/cm	121.0	-
6.	Magnesium	MAOI 2011	mg/kg	48.3	-
7.	Nitrogen	MAOI 2011	%	0.14	-
8.	Arsenic (as As)	IS/ISA 3050 B 1990	mg/kg	BOLMDL-0.003	-
9.	Cadmium (as Cd)	IS/ISA 3050 B 1990	mg/kg	0.96	-
10.	Selenium (as Se)	IS/ISA 3050 B 1990	mg/kg	BOLMDL-0.006	-

-Test result End -

Operational status: Unit was Operational During sampling.

Analysed by - Ishika Singh



Reviewed by
G.K. Guleri
Technical Head

Issued by
(Direct Exd)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.

Page 2 of 2

General Note: 1. The Laboratory accepts responsibility for content of this report. 2. Test performed at laboratory's permanent facility. 3. All test results are subject to the method used. 4. The Test report shall not be reproduced or used in part or whole, as proof or in the event of any. 5. Any complaint about this report should be communicated in writing within 30 days of the issue. 6. Final liability of EPIC LabTech Pvt. Ltd. will be limited to the amount of the fee. 7. All disputes are subject to Ranchi, Jharkhand and the jurisdiction of this laboratory does not extend to the testing and sampling charges. 8. Operation does not imply endorsement of the method used by laboratory. Under no circumstances, laboratory accepts any liability for use or misuse of this report. 9. When the results are given external parties are advised to "look". 10. Retention - 30% (Other External Users: 30% (Without Retention Limit), 10% (Limit of Questionnaire)).



EPIC LabTech Private Limited

Address:
C/o - R.A. Tripathi, Indraprastha,
Road No. - 5, Sector-10,
Mehar Road - 824002, India

☎ 0931 4936263
☎ 09327 95477
☎ 09949 70984
✉ labtech@gmail.com

☎ +91 9979034775
Email: labtech@gmail.com
☎ +91 9979034775

Accredited by:
National Bureau of Environmental Testing
Certified by:
ISO 9001:2015 and ISO 14001:2015

Comprehensive Test Comprehensive

Unique Lab Report No.	N/A	Discipline	Chemical
Report Unique ID	RLJ2962537034	Group	Pollution & Environment
Issue date/time	17.09.2025/ 13:30	Sub Group	Soil/Sediments

Report Issue to

M/s - HINDALCO INDUSTRIES LIMITED
VILLAGE-COURT ROAD, POST OFFICE-LOHARDAGA,
DIST. - LOHARDAGA, STATE-(HARIDWAR), INDIA 825302
MONITORING SITE: GURDARI BAUXITE MINE

Contact Person
Contact Number
Email Id
Order Date
Order Number

Mr. Ansh Das
+91 9979034775
ansh.das@epiclabtech.com
31.03.2025/ 10:10
13612313868

References of Quality Management System (Steps of Traceability Chart)

Customer Registration No.	EPIC/QM/0295	Sample Booking Number	EPIC-2537034
Sample(s) Code	2537034	Sample Receipt (D/T)	13.09.2025/ 11:35

Sampling References

Type of Industry	Bauxite Mines	Ref. of Sampling Plan	EPIC/LAB/R/036
Sampling Start (D/T)	11.09.2025/ 16:08	Sampling End (D/T)	11.09.2025/ 16:18
Mode of Sampling	Conducted by Laboratory	Sample collected by	Mr. Pawan Deep Bhagat & Team
Sampling method used	IS : 5025 (Part-1) 1987, II-2005		
Description/condition of sample	Receipt sample(s) were fit for analysis.		

Environmental Condition during sampling

Weather condition	Cloudy	Temperature (°C)	30	Humidity %	67	Wind direction	45°-225°
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Sampling Location(s) with GPS coordinate(s)

S. Location &	Near Kuthawaspara PE -03	GPS coordinate	23° 20' 48.18" N 84° 1' 16.12" E
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Date(s) of performance of the laboratory activities

Test start date	13.09.2025/ 12:30	Test completion date	17.09.2025/ 10:30
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-Test Result-

Sl.	Test Parameters	Method used	Unit	Results	Limits
1.	Chloride (as Cl)	EPIC/LAB/SOP/01/00	%	0.062	-
2.	Mercury (as Hg)	USEPA 3052 B 1996	mg/kg	BDL (MDL-0.005)	-

-Test result End -

Operational Status

Unit was Operational During sampling.

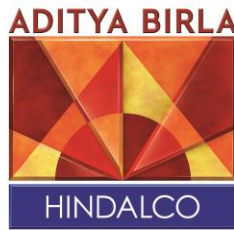
Analysed by - Ishika Singh



Reviewed by
(S & T)
Technical Head

Reviewed by
(S & T)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Panch, mehar road



Annexure 3

Date – 01.11.2025

Office Order

Environmental Cell has been re-constituted for Gurdari Bauxite Mine (Area 584.19 Ha) comprising below mentioned team members. The team will ensure compliance with the Environment Acts, Rules & Regulations in respect of the said mines of Hindalco Industries Limited.

1. Mr. Vidya Singh (Coordinator)
2. Mr. Gyan Panda (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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