



HIL/LHD/ENV/MoEF&CC/418

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 Amtipani (190.95 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. EC25A001JH139944, dated 29th July 2025.

Dear Sir,

With reference to the above, we are submitting herewith the Compliance status report of EC conditions for **Amtipani (190.95 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 as below:

| Lease area (ha) | Production Capacity (MT) | Lease Period |
|-----------------|--------------------------|--------------------------|
| 190.95 | 150000 | 13.03.2006 to 12.03.2056 |

Hope you will find the same in order.

Thanking You

Yours faithfully,
For **Hindalco Industries Limited**

Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)

Enclosure: - As Above

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Name of the Project : Amtipani Bauxite Mine (190.95 ha)
M/s Hindalco Industries Limited,

Environment Clearance No & date : EC25A001JH139944, dated 29.07.2025.

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

General Instructions:

Condition No 01 - The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC/ SEIAA website where it is displayed.

Reply to Condition No 01 – Complied. The information regarding grant of the EC has been published in two local newspapers, namely “Hindustan” and “Hindustan Times.” Copies of the advertisement in local newspapers have already been submitted to the Regional Office of MoEF&CC, Ranchi and JSPCB, Ranchi, vide letter no. HIL/LHD/ENV/JSPCB/262 dated 16.08.2025. The copy of the same advertisement in the newspapers is attached below.



Advertisement in the “Hindustan” Newspaper



Advertisement in the “Hindustan Times” Newspaper

The acknowledgement copy of the submission is attached as **Annexure – 6**.

Condition No 02 - The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

Reply to Condition No 02 – Complied. The copy of the environmental clearance has been submitted to the gram panchayats on dated 21.08.2025 vide letter no. HIL /LHD/ENV/GRAM-PANCHAYAT/271. The copy of the same is attached as **Annexure-7**.

Condition No 03 – The project proponent shall have a well laid down environmental policy duly approved by the Board of Directors (in case of Company) or competent

authority, duly prescribing standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/ forest / wildlife norms / conditions.

Reply to Condition No 03 – HIL has Formulated an Environmental Management Policy which has been duly approved by the Board of Directors/competent authority. The policy includes clearly defined standard operating procedures (SOPs) to ensure effective checks and balances. It also provides a structured mechanism to identify, report, and address any infringements, deviations, or violations related to environmental, forest, or wildlife norms and conditions. The copy of the Policy is attached as **Annexure-8**.

Condition No 04 – Action plan for implementing EMP and environmental conditions along with responsibility matrix of the project proponent (during construction phase) and authorized entity mandated with compliance of conditions (during operational phase) shall be prepared. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Six monthly progresses of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.

Reply to Condition No 04 – Environmental Management plan and environmental conditions along with responsibility matrix and its action plan has been already made and being complied. Every year, the funds earmarked for environmental protection measures is being budgeted separately and its expenditure is being reported to the Ministry. The copy of the same is attached as **Annexure-5**. Compliance status is being submitted to MoEF&CC / Regional office on a six-monthly basis.

Condition No 05 – Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

Reply to Condition No 05 – Noted.

Condition No 06 –The Regional Office of this Ministry 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 No 06 – Noted and Agreed.

Condition No 07 –Any appeal against this EC shall lie with the National Green Tribunal, if preferred within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Reply to Condition No 07 – Noted.

Condition No 08 – PP needs to comply the OM dated 24.07.2024 of MoEFCC, where it is stated that the plantation of saplings shall be carried out in the earmarked 33% greenbelt

area as part of the tree plantation campaign “Ek Ped Ma ke Naam” (एक पेड मा के नाम) and the details of the same shall be uploaded in the MeriLife portal (<https://merilife.nic.in>).

Reply to Condition No 08 – Progressive plantation and green belt developments of native species is being carried out in and around mining lease, reclaimed area etc. in consultation with local forest department on regular basis. During FY 2024-25, a total of 2710 nos. saplings have been planted in the mining premises. Cumulative 21.195 ha areas have been planted till date. Additionally, an “Ek Ped Maa Ke Naam” plantation campaign was organized, and photographs of the activity have been uploaded on the MeriLife portal. The same photographs are attached below:



Standard EC Conditions:

Condition No 01 – PP shall comply with all judgments, or decisions rendered by the Hon’ble Court of competent jurisdiction in the matter pf W.P.C No. 7320 of 2017, Hindalco Industries Limited vs. The State of Jharkhand and others. PP shall ensure prompt and full compliance with the final decision of the Hon’ble Court of competent jurisdiction and shall not act in any manner that is contrary to or inconsistent with such decision. PP shall take all necessary steps to give effect to the same.

Reply to Condition No 01 – Noted and Agreed.

Condition No 02 – The Environmental Clearance will not be operational till such time the project proponent complies with all the statutory requirements and judgement of Hon’ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.

Reply to Condition No 02 – Noted and Agreed.

Condition No 03 – State Government concerned shall ensure that mining operation shall not commence till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of judgement of Hon'ble Supreme Court dated 2nd August 2017 in Writ Petition (Civil) No.114 of 2014 in the matter of Common Cause versus Union of India and Ors.

Reply to Condition No 03 – Noted and Agreed.

Condition No 04 – Mobile tankers shall be used in the project for dust mitigation within the mine lease area. A logbook of water tankers should be maintained mentioning running hours, kilometre reading, maintenance hours of water tankers for each shift.

Reply to Condition No 04 – Mobile water tanker with sprinkling facility has been provided in and around the mining lease area to suppress the dust generation. Logbook of the water tanker is being maintained regularly.



Mobile water tanker with sprinkling facility

Condition No 05 – PP to submit a detailed report on the baseline environmental conditions of the area, including an assessment of air, water, soil quality, and ecological health, particularly focusing on potential impacts on the nearby Mahuadanar and Palamu Wildlife Sanctuary to Ministry's Regional office on an annual basis.

Reply to Condition No 05 – A detailed baseline environmental assessment, including air, water, soil quality, and ecological status, has been conducted. A comprehensive biological study covering the core and buffer zones, including portions of the Palamu Wildlife Sanctuary and the Mahuadanr Wildlife region, has also been undertaken as part of the EIA/EMP study.

The EIA/EMP Report has already been submitted to the Ministry's Regional Office. Additionally, environmental monitoring is being carried out on a regular basis, and the monitoring reports are submitted periodically to the concerned authorities.

Condition No 06 – The Project Proponent should take adequate measures to prevent the fly rock falling onto the nearby village. Project Proponent needs to set up a permanent monitoring facility in the nearby village to monitor the blast induced ground vibration and air over pressure.

Reply to Condition No 06 – Controlled blasting method is in practice. All efforts such as use of Nonel and delay, reduction in charge per delay etc. are being taken to mitigate impact of blasting. Blast vibration monitoring is being carried out periodically as per guidelines of DGMS and the report is attached herewith as **Annexure-9**.

Condition No 07 –The Project Proponent shall carry out the blasting in such a way that the direction of the blasting should be perpendicular to the Village and following the guidelines of DGMS (Metalliferous Mining Regulations).

Reply to Condition No 07 – Controlled blasting practices are being implemented, and all applicable DGMS guidelines are strictly followed.

Condition No 08 – The PP needs to execute the progressive backfilling plan in order to restore the land for the Agriculture or Pisciculture activity.

Reply to Condition No 08 – Concurrent backfilling is being carried out as per the approved mining plan and topsoil is being spread over the backfilled areas to support effective land reclamation. we return the land to the landowners for agriculture purpose or plantation whichever is desired by them (landowners /villagers)

A rainwater harvesting pond has also been developed, and necessary support has been provided to facilitate pisciculture activities. Photographs of the same are attached below.



Agricultural Activities on Reclaimed Land



Rainwater Harvesting Pond & Pisciculture Activity

Condition No 09 – The Project Proponent shall also organize employment-based apprenticeship/ internship training program every year with appropriate stipend for the youth and the other programs to enhance the skill of the local people. The data should be maintained for the training imparted to the persons and the outcome of the training, for the assessment of the training program should be analysed periodically and improved accordingly. The preference shall be given to the local people for the purpose of employment. An implementation report in this regard shall be submitted to Ministry's Regional Office on an annual basis.

Reply to Condition No 09 – Being Complied with. Training and livelihood development initiatives are being regularly undertaken with the objective of imparting employable skills, promoting entrepreneurship, and enabling long-term economic independence within the local community.

During the reporting period, a livelihood enhancement program on mushroom cultivation was conducted for women from **10 Self Help Groups (SHGs)** in the village of Gorapahar under the Amtipani Mines area. In addition to hands-on training, support materials including *50 kg mushroom spawn, Bavistin powder, polythene sheets, and rubber bands* provided to facilitate the initiation of mushroom cultivation.

This initiative aims to build technical capability, support sustainable income generation, and empower women through skill-based livelihood opportunities.



Skill development Training programmes for local Communities

Condition No 10 – The Project Proponent needs to submit the proof of submission of funds for Wildlife Conservation plan to be approved and its initiation/ commencement by Forest Department to Regional Office of the Ministry. The Project Proponent should follow-up the status of implementation on Wildlife Conservation Plan from the Forest Officials and the same shall be submitted to the Ministry's Regional Office in the six-monthly compliance reports.

Reply to Condition No 10 – Noted and complied with. A Site-Specific Wildlife Conservation Plan (WLCP) has been prepared in consultation with the State Forest Department and approved by the PCCF (Wildlife), Jharkhand. As per the approved WLCP, we receive a demand note from the DFO each year and make the corresponding payment accordingly. A copy of the latest payment receipt is enclosed herewith as **Annexure-10**.

Condition No 11 – The Project Proponent shall monitor the air quality, noise level, water quality, water level and ground vibration during drilling and blasting at the edge of the mine, near the village and at other sensitive receptors and such collected data shall be submitted quarterly to the Ministry's Regional Office.

Reply to Condition No 11 – Regular monitoring of environmental parameters, including ambient air quality, noise levels, water quality, and groundwater levels, is being carried out as per the prescribed norms. The monitoring reports are being submitted to the Ministry's Regional Office on a regular basis. The analysis report is attached as **Annexure-2**.

In addition, ground vibration monitoring during drilling and blasting operations is being conducted periodically in accordance with DGMS guidelines. The monitoring report is enclosed as **Annexure-9**.

Condition No 12 – The Project Proponent needs to install the permanent fixed water sprinklers along the haul road and the approach road. Further, 10 nos. of fog canon/mist sprayer of at least 40 m throw shall be installed at various locations in the mine area including railway siding (and/ or other area prone to dust pollution). Effective dust suppression system shall also be adopted at others parts of the mining lease to arrest the fugitive dust emission.

Reply to Condition No 12 – To control fugitive dust emissions, mobile water tankers are deployed in and around the mine lease area, including the haul roads and approach roads. Mobile water tanker with sprinkling facility has been provided in and around the mining lease area to suppress the dust generation. Logbook of the water tanker is being maintained regularly

Condition No 13 – The air pollution control equipment's like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at areas prone to air pollution. PP shall take necessary measures to avoid generation of fugitive dust emissions. Dense plantation shall be carried out in the vicinity of the crusher.

Reply to Condition No 13 – There is **no crusher installed within the mine lease area**; therefore, air pollution control systems such as bag filters, vacuum suction hoods, and dry fogging systems are **not applicable to this mine**.

However, measures to control fugitive dust emissions are being implemented. Mobile water tanker with sprinkling facility has been provided in and around the mining lease area to suppress the dust generation.

Condition No 14 – **The Project Proponent shall ensure that the transportation shall not occur through village road. Ore transportation trucks should be properly covered, and it should be ensured that there is no spillage of ore on the roads.**

Reply to Condition No 14 – Transportation of minerals through village roads is avoided. A dedicated road has been developed exclusively for village movement, while a separate haul road is being utilized for mining-related transportation activities. All vehicles transporting minerals are covered with tarpaulins, and non-overloading guidelines are strictly followed to prevent spillage during transit. Regular inspections are carried out to ensure there is no spillage of ore along the transportation route, and all mineral-carrying vehicles remain securely covered with tarpaulins throughout movement. Photographs of covered vehicles are enclosed herewith for reference.



Tarpaulin covered truck.

Condition No 15 – **The Project Proponent needs to explore the possibility to reduce the water consumption by using non-toxic chemicals for haul road dust suppression.**

Reply to Condition No 15 – Noted and to be explored.

Condition No 16 – **The Project Proponent needs to complete the entire 7.5 m peripheral plantation, safety barrier plantation and gap plantation within three years. The Project**

Proponent should plant quality sapling of appropriate height of native and fruit bearing species. In case of tall transplants (seedlings) the seedlings should have proper trained root stock with root biomass commensurate with seedling height to ensure good growth after out planting. Plantation shall be undertaken in consultation with the State Forest Department. The Project Proponent shall make the actual count on the saplings (2500/ha) planted and its survival rate and in case of failure of achievement of 95% survival rate, action plan for achieving the target survival rate shall be submitted to the Ministry's Regional Office.

Reply to Condition No 16 – Progressive plantation of native species is being carried out in and around mining lease, reclaimed area etc. in consultation with local forest department on regular basis During FY 2025-26 till September, a total of 2710 nos. saplings have been planted in the mining premises. Cumulative 21.195 ha areas have been planted till date. In addition to this agricultural activity is going on in reclaimed land with the consent of landowners. The Green belt development programme is in progress with the progress of mining activities



Plantation at Mine

Condition No 17 – The Project Proponent should adopt the proper mitigation measures as proposed under EMP. The adoption of mitigation measures and monitoring of the same as proposed in the EMP shall be done under the supervision of the qualified environmental personnel. The implementation status of the same shall be submitted to the Ministry's Regional Office.

Reply to Condition No 17 – All mitigation measures are being implemented in accordance with the approved EMP. Monitoring and management of rehabilitated areas are being carried out under effective supervision. Data pertaining to mine operations and backfilling is enclosed as **Annexure-4**.

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

Condition No 18 – The Project Proponent should establish in house (as project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground). A dedicated team to oversee environment management shall be setup at site which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis instead of engaging environmental monitoring laboratories/consultants. Any non-compliance or infringement should be reported to the concerned authority.

Reply to Condition No 18 – We have engaged a NABL-accredited laboratory to carry out monitoring and testing of environmental parameters with respect to air quality and water (surface and ground). The monitoring reports are submitted regularly to the concerned authorities. A separate environmental management cell with comprises suitable qualified personnel and Environment Engineers has been set up under the control of a Senior Executive, who is reporting directly to the Head of the Organization. The same is being attached herewith as **Annexure 3**.

Condition No 19 – The Project Proponent shall conduct third party audit of compliance of EC condition at an interval of one year and its report shall be submitted to RO, MoEF&CC.

Reply to Condition No 19 – Noted and Shall be complied.

Condition No 20 – The budget to address the concerns raised by the public in the public hearing/consultation to be completed within 3 years from the date of start of mining operations. PP shall comply with all action plans made for public hearing /consultation concerns and make regular maintenance and record the progressive activity outcomes. The Project proponent shall ensure that the activities proposed under the public hearing is different from the CSR activities.

Reply to Condition No 20 – Noted. The concerns raised during the Public Hearing/consultation is being implemented as per the budgetary provisions.

Condition No 21 – The Project proponent shall create awareness among the local people working within the project area as well as its surrounding area on the ban of Single Use Plastic (SUP) in order to ensure the compliance of Notification published by MoEF&CC on 12/08/2021. A report, along with photographs, on the measures taken shall also be included in the six-monthly compliance report.

Reply to Condition No 21 – Awareness programmes on the ban of Single Use Plastic (SUP) have been conducted within the project area and in nearby villages to ensure compliance with the notification. Photograph of the awareness activities is enclosed below:



Awareness programmes

Condition No 22 – The Project Proponent shall explore the possibility of using 20% of Electric vehicles / CNG / Solar instead of diesel operation within three years.

Reply to Condition No 22 – 15 kVA solar power system has been installed in the mine office area, and approximately 60–70% of the energy requirement in this zone is currently being met through solar energy.



solar power system

Condition No 23 – The Project Proponent shall provide the rainwater harvesting structure at mine office and other infrastructures to recharge the ground water. Consultation with CGWA should be done in this regard.

Reply to Condition No 23 – The rainwater harvesting structure has been already constructed to recharge the ground water with consultation with CGWA. Photographs of the same is attached below:



Rainwater harvesting structure

Condition No 24 – Ther Project Proponent needs to obtain the permission from CGWA before intersection of ground water if applicable.

Reply to Condition No 24 – Noted. Shallow depth mining is being carried out in the Mine. Therefore, Mining operation does not involve intersection of ground water table. However, we are regularly monitoring the ground water table through installation of piezometer. The copy of the same report is attached herewith as **Annexure 1**.

As the water table is not intersecting during mining operation, therefore it is not applicable to us.

Condition No 25 – The Project Proponent needs to provide the RO drinking water supply and also by laying network of pipelines to villages namely Amtipani, Chirodih & Gurdari at free of cost.

Reply to Condition No 25 – Drinking water is regularly supplied to the nearby villages, and the facility is provided free of cost to the local community.

Condition No 26 – The Project Proponent should periodically monitor and maintain the health records of the mine workers digitally prior to mining operations, at the time of operation of mine and post mining operations. Regular surveillance on Silicosis shall be carried through regular occupational health check-up every year for mine workers. PP shall also organize medical camp for the benefit of the local people and also the monitor the health impacts due to mining activity.

Reply to Condition No 26 – Periodic occupational health surveillance programs are conducted for all workers, and health records are maintained digitally in accordance with statutory requirements. Initial and Periodical Medical Examinations (IME/PME) are carried out under the supervision of a qualified Medical Officer. The IME/PME records are enclosed as **Annexure-11**.

Regular medical camps are also organized in nearby villages to benefit the local population and to monitor their health status.



Medical Camp

Condition No 27 – The Mining lease holders shall, after ceasing mining operations, undertake regressing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. The implementation report of the above said condition shall be submitted to the Ministry's Regional Office.

Reply to Condition No 27 – Concurrent backfilling is being carried out, and topsoil is spread over the backfilled areas to facilitate effective reclamation. Monitoring and management of rehabilitated zones continue until vegetation becomes self-sustaining under proper supervision.

Condition No 28 – The Project Proponent should install Continuous Ambient Air Quality Monitoring Stations (CAAQMS) as per the scientific study and in consultation with CPCB/SPCB. The real time data so generated should be displayed digitally at entry and exit gate of mine lease area for public display and shall be linked to server of CPCB/SPCB.

Reply to Condition No 28 – We have established four ambient air quality monitoring stations in the core zone as well as buffer zone. Monitoring is being carried out and reported to the concerned authorities including CPCB/JSPCB. The copy of the same report is attached as **Annexure-2**. A display board has also been installed in front of the mine office for public information.

Condition No 29 – The Project Proponent needs to use modern equipment's such as Camera Traps for ensuring presence and movement of wild animals in the study area in consultation with Wildlife Wing of Forest Department. Appropriate interventions shall be taken to minimise stress conditions for wild animals and to avoid Man-Animal Conflict.

Reply to Condition No 29 – Noted. We have installed CCTV Camera nearby office area to avoid Man-Animal Conflict.

Condition No 30 – PP needs to comply the OM dated 24.07.2024 of MoEFCC, wherein it is stated that the plantation of saplings shall be carried out in the earmarked 33% greenbelt as part of the tree plantation campaign “ Ek Ped Ma Ke Naam” (एक पेड मा के नाम) and the details of the same shall be uploaded in the MeriLife portal (<https://merilife.nic.in>).

Reply to Condition No 30 – Progressive plantation and green belt developments of native species is being carried out in and around mining lease, reclaimed area etc. in consultation with local forest department on regular basis. During FY 2024-25, a total of 2710 nos. saplings have been planted in the mining premises. Cumulative 21.195 ha areas have been planted till date. Additionally, an “Ek Ped Maa Ke Naam” plantation campaign was organized, and photographs of the activity have been uploaded on the MeriLife portal. The same photographs are attached below:



Condition No 31 – PP shall monitor the spring/natural streams discharge on long term basis both in terms of quantity and quality of water and records maintained. Six monthly report should be submitted to the Ministry’s Regional Office located at Ranchi.

Reply to Condition No 31 – Water quality monitoring of the spring is being carried out regularly, and the analysis report is enclosed as **Annexure–2**. The six-monthly compliance report is also being submitted regularly to the Regional Office of MoEF&CC, Ranchi.

Standard Conditions (Non-Coal Mining)

1. Statutory Compliance

Condition No 1.1 - This Environmental Clearance (EC) is subject to orders/ judgement of Hon’ble Supreme Court of India, Hon’ble High Court, Hon’ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.

Reply to Condition No 1.1 – Noted.

Condition No 1.2 - The Project proponent complies with all the statutory requirements and judgement of Hon’ble Supreme Court dated 2nd August.2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before connecting the mining operations.

Reply to Condition No 1.2 – Noted and Agree.

Condition No 1.3 - The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the project proponent through their respective Department of Mining & Geology in Strict Compliance of Judgement of Hon'ble Supreme Court dated 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.

Reply to Condition No 1.3 – Noted.

Condition No 1.4 - The Project Proponent shall follow the mitigation measures provided in MoEFCC's Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29th October, 2014, titled "Impact of Mining activities on Habitations issues related to the mining Projects wherein Habitations and Villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".

Reply to Condition No 1.4 – Noted and Agree.

Condition No 1.5 - A copy of EC letter will be marked to concerned Panchayat/ local NGO etc. if any, from whom suggestion/ representation has been received while processing the proposal.

Reply to Condition No 1.5 – Complied. The copy of the environmental clearance has been submitted to the gram panchayats on dated 21.08.2025 vide letter no. HIL /LHD/ENV/GRAM-PANCHAYAT/271. The copy of the same is attached as **Annexure-7**.

Condition No 1.6 - State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsilder's Office for days.

Reply to Condition No 1.6 – Noted.

Condition No 1.7 - The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board/Committee and website of the Ministry of Environment, Forest and Climate Change (www.parivesh.nic.in). A copy of the advertisement may be forwarded to the concerned MoEFCC Regional Office for compliance and record.

Reply to Condition No 1.7 – Complied. The information regarding grant of the EC has been published in two local newspapers, namely "Hindustan" and "Hindustan Times." Copies of the advertisement in local newspapers have already been submitted to the Regional Office of

MoEF&CC, Ranchi and JSPCB, Ranchi, vide letter no. HIL/LHD/ENV/JSPCB/262 dated 16.08.2025. The copy of the same advertisement in the newspapers is attached below.



Advertisement in the “Hindustan” Newspaper



Advertisement in the “Hindustan Times” Newspaper

The acknowledgement copy of the submission is attached as **Annexure – 6**.

Condition No 1.8 - The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of para 11 EIA Notification, 2006 as amended from time to time.

Reply to Condition No 1.8 – Noted and Agreed.

2. **Air Quality monitoring and preservation:**

Condition No 2.1 - The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM 10, PM 2.5, NO2, CO and SO2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.

Reply to Condition No 2.1 – We have established four ambient air quality monitoring stations in the core zone as well as buffer zone. Monitoring is being carried out and reported to the concerned authorities. The report is attached as **Annexure 2. The display board is already installed in front of mine gate office. We have already installed an online PM10 analyzer at mine site.**

Condition No 2.2 - Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM10 and PM2.5 are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipments/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEFCC/ Central Pollution Control Board.

Reply to Condition No 2.2 - Continuous water sprinkling is being done to prevent dust suppression on haul road. Online PM10 analyzer has been installed for regular monitoring purposes. Suitable water-soluble chemical dust suppressing agents will be used in future if required.

3. Water quality monitoring and preservation:

Condition No 3.1 - In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEFCC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.

Reply to Condition No 3.1 – Noted. Since shallow depth mining is being carried out in Amtiani Bauxite Mine. Therefore, Mining operation does not involve intersection of ground water table. However, we are regularly monitoring the ground water table through installation of piezometer. The copy of the same report is attached herewith as **Annexure-1**. As the water table is not intersecting during mining operation, the detailed hydro-geological study is not applicable for this mine.

Condition No 3.2 - Project Proponent shall regularly monitor and maintain records w.r.t ground water level and quality in and around the mine lease by establishing a network of existing wells as wells as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department.

Reply to Condition No 3.2 – We regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease. However, we are not using groundwater for any mining purposes. As shallow depth mining is being carried out, there is no intersection of the groundwater table during the mining operation at present and in the future. A piezometer has also been installed in the mine to monitor the ground water level. The ground water level and quality report are attached herewith as **Annexure 1 and 2**.



Piezometer

Condition No 3.3 - The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease including upstream and downstream. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. The parameters to be monitored shall include their water quality vis-à-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and / or alteration be made to water bodies during mining operations without justification and prior approval of MoEFCC. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre-monsoon (April-May), monsoon (August), post-monsoon (November) and Winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.

Reply to Condition No 3.3 – Regular monitoring of water quality parameters of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease is being carried out and record is being maintained for the same.

However, we are not using groundwater for any mining purposes. As shallow depth mining is being carried out, there is no intersection of the groundwater table during the mining operation at present and in the future. No natural watercourse and/or water resource is being and will be obstructed due to mining operations.

The water quality reports are being submitted regularly on a six-monthly basis to the regional office of the Ministry, CGWA, and JSPCB. The same are attached herewith as **Annexure 2**.

Condition No 3.4 - Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J-20012/1/2006IA-II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.

Reply to Condition No 3.4 – There is no polluted water generated during mining operations. However, a negligible amount of wastewater is generated in the workshop from washing vehicles, and an Oil & grease trap system is already installed for Amtipani mines to treat this effluent. The treated water is in close circuit and being reused for washing of vehicle in the workshop.

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

The monitoring report is being uploaded on the company website along with Six-monthly EC Compliance report regularly. An Environmental Display board is already installed at the Mine Main Gate.

Condition No 3.5 - Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office MoEF&CC annually.

Reply to Condition No 3.5 – Rainwater harvesting pond with proper fencing has been already constructed on long term basis to augment ground water in the area of Amtipani Bauxite Mines, in consultation with Central Ground Water Board. Photographs of the same have been attached below. Total amount of water recharge has been found to be 15,094 m³/Annum.



Rainwater Harvesting Pond

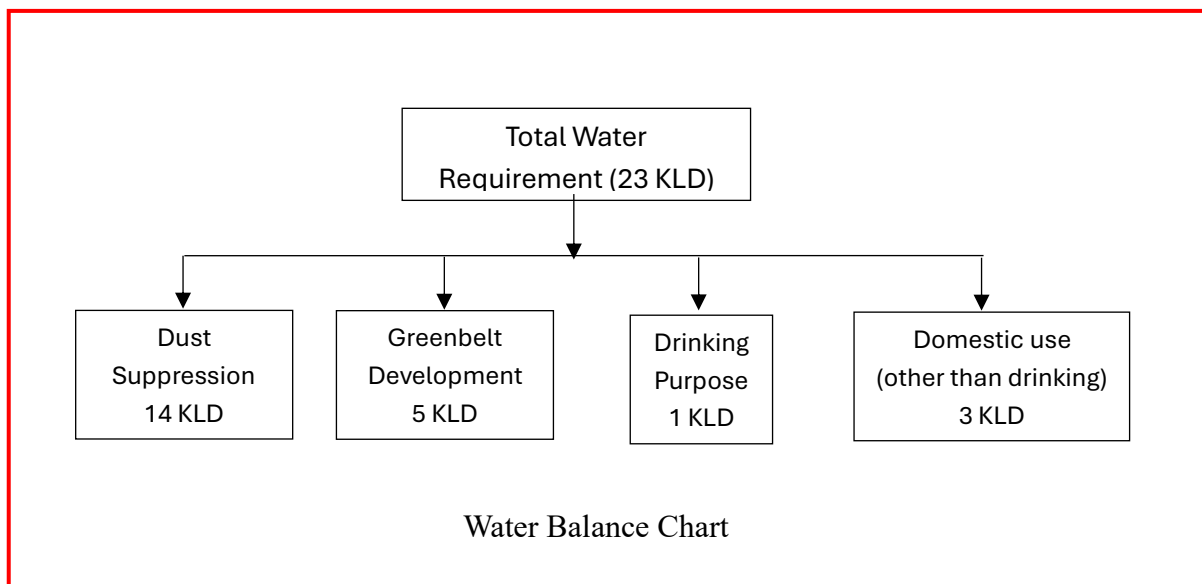
Condition No 3.6 - Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.

Reply to Condition No 3.6 – There is no polluted water generated during mining operations. However, a negligible amount of wastewater is generated in the workshop from vehicles washing, and an Oil & grease trap system is already installed for Amtipani Bauxite mines to treat this effluent. The treated water is in close circuit and being reused for washing of vehicle in the workshop.

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

Condition No 3.7 - The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.

Reply to Condition No 3.7 – Noted. The water balance for this mine is attached below. We are taking water from the rainwater harvesting pond for sprinkling and other activities. We are not abstracting any ground water for mining purposes. However, we have obtained NOC from CGWA for drinking purposes only.



4. Noise and Vibration monitoring and prevention:

Condition No 4.1 - The peak particle velocity at 500m distance or within the nearest habitation. Whichever is closer shall be monitored periodically as per applicable DGMS guidelines.

Reply to Condition No 4.1 – Noted and being adhered to. Blast vibration study is being carried out on regular basis, and the report is attached herewith as **Annexure-9**.

Condition No 4.2 - The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.

Reply to Condition No 4.2 – Noted. Mining operation is restricted to daytime only. So, there is no disturbance created in the nearby villages regarding illumination and sound.

Condition No 4.3 - The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The workers engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personal including labourers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/personals/ labourers are working without personal protective equipment.

Reply to Condition No 4.3 – Noted. The noise level monitoring is being conducted at a regular interval. The noise level is below the prescribed norms. The report has been attached as **Annexure 2**. All workers engaged in operation have been provided with PPEs. Training on Health and safety aspects is being imparted.

5. Mining Plan:

Condition No 5.1 - The Project Proponent shall adhere to approved mining plan, inter alia, including total excavation (quantum of mineral, waste, over burden, inter burden and topsoil etc.) ; mining technology ; lease area ; scope of working (method of mining, overburden & dump management, O.B & dump mining, mineral transportation mode, ultimate depth of mining, concurrent reclamation and reclamation at mine closure; land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life; etc.).

Reply to Condition No 5.1 – Noted and being adhered to.

Condition No 5.2 - The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-à-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEFCC and its concerned Regional Office.

Reply to Condition No 5.2 – Noted and being adhered. The excavated area is being back filled concurrently and the back filled area is used for afforestation/agricultural activity as required after reclamation. Monitoring and management of rehabilitated areas continues through supervision. The photograph is attached below. Data pertaining to Production, Mined Out area, backfilling are enclosed as **Annexure 4**. Half-yearly compliance status is being submitted to the MoEFCC and concerned authorities.

6. **Land Reclamation:**

Condition No 6.1 - The Overburden (O.B) waste and topsoil generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not keep active for a long period of time. The physical parameters of the OB/ waste dumps / topsoil dump like height, width angle of slope shall governed as per approved Mining Plan and the guidelines/circulars issued by D.G.M.S. The topsoil shall be used for land reclamation and plantation.

Reply to Condition No 6.1 – Overburden and waste rock are being used for concurrent backfilling, and topsoil is being spread on the backfilled area for reclamation as per mining plan approved by IBM. Currently, there is no OB dump present in the mine lease area. All Safety measures are being adhered to the guidelines/circulars issued by DGMS. Data pertaining to backfilling is enclosed as **Annexure 4**. Monitoring and management of rehabilitated areas is being done through effective supervision.



Condition No 6.2 - The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compacters thereby ensuring proper filling/ levelling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.

Reply to Condition No 6.2 – Noted. Currently, there is no OB dump present in the mine lease area as we follow concurrent backfilling and reclamation process in scientific manner.

Condition No 6.3 - Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top Soil/ OB / Waste dumps to prevent run off water and flow of sediment directly into the water bodies (Nallah/ River / Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.

Reply to Condition No 6.3 – 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.

Condition No 6.4 - Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the corners of the garland drains.

Reply to Condition No 6.4 – 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.



Retaining wall and siltation pit to prevent solid



Garland drains

7. Transportation:

Condition No 7.1 - No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a “bypass” road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution under Control (PUC) certificate for all vehicles from authorized pollution testing centres. [If applicable in case of road transport]

Reply to Condition No 7.1 – Haul Road has been constructed for transportation of minerals. Mobile water tankers with sprinkling facility have been provided along-haul roads, loading, unloading & at transfer points to arrest dust emission. Regular maintenance of vehicles is undertaken to minimize vehicular emission. All measures are being taken to control vehicular emission. The vehicles are being covered with tarpaulin while transportation of mineral. PUC Certificate is attached as **Annexure-12**.



Tarpaulin covered vehicles

Condition No 7.2 - The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed a Crushers, belt-conveyors and the other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.

Reply to Condition No 7.2 – Haul Road has been constructed for transportation of minerals. Mobile water tankers with sprinkling facilities have been provided on long-haul roads, loading, unloading & at transfer points to arrest dust emission. Regular maintenance of vehicles is undertaken to minimize vehicular emission. All measures are being taken to control vehicular emission. The vehicles are being covered with tarpaulin while transportation of mineral.

8. Green Belt:

Condition No 8.1 - The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB to arrest pollution

emanating from mining operations within the lease. The whole green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.

Reply to Condition No 8.1 – Green belt development work is in progress in safety zone of mine lease already. Plantation work is being governed as per the approved mining plan and EC granted.



Plantation Activities in Mining lease area

Condition No 8.2 - The Project Proponent shall carry out plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall be also be adhered. The density of the trees should around 2500 saplings per Hectare. Adequate budgetary shall be made for protection and care of trees.

Reply to Condition No 8.2 – Progressive plantation and green belt developments of native species is being carried out in and around mining lease, reclaimed area etc. in consultation with local forest department on regular basis. During FY 2024-25, a total of 2710 nos. saplings have been planted in the mining premises. Cumulative 21.195 ha areas have been planted till date. In addition to these agricultural activities is going on reclaimed land as per the consent from landowners. The Green belt development program is in progress with the progress of mining activities. Photographs attached above.

Condition No 8.3 - The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which

are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.

Reply to Condition No 8.3 – As per the agreement by DC, we are acquiring land on the lease basis in consultation with the State Government and with the consent of the landowner. After completing mining operations followed by reclamation and topsoil spreading, we return the land to the landowners for agriculture purpose or plantation whichever is desired by them (landowners /villagers). Hence, we do not deteriorate the quality of the land and there is no need to create grazing land. No cutting of trees/ felling of trees are involved in the mining process.

9. Public hearing and human health issues:

Condition No 9.1 - Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/ outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche for kids etc. The housing may be provided related infrastructure. The domestic wastewater should be treated with STP in order to avoid contamination of underground water.

Reply to Condition No 9.1 - Rest shelters have been provided to labourers. As most of the workers are from local villages, there is no need for labor camps.

10. Corporate Environment Responsibility (CER):

Condition No 10.1 - The Project Proponent shall submit the time-bound action plan to the concerned regional office of the Ministry within 6 months from the date of issuance of environmental clearance for undertaking the CER activities, committed during public consultation by the project proponent and as discussed by the EAC, in terms of the provisions of the MoEF&CC Office Memorandum No.22-65/2017-IA.III dated 30 September, 2020. The action plan shall be implemented within three years of commencement of the project.

Reply to Condition No 10.1 – Every year, the funds earmarked for environmental protection measures is budgeted separately and its expenditure is being reported to the regional office of Ministry. The copy of the same is attached as **Annexure - 5**.

11. Miscellaneous:

Condition No 11.1 - The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC.

Reply to Condition No 11.1 – Noted and will be complied with. However, Digital Map of land use and land cover is being prepared every year and is being submitted to IBM Ranchi. The same is attached herewith as **Annexure-13**.

Condition No 11.2 - The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.

Reply to Condition No 11.2 – This is an operative mine hence provision related to financial closure is not applicable.

Condition No 11.3 - The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEFCC and its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.

Reply to Condition No 11.3 – Six monthly reports on the status of the EC conditions are being submitted regularly to MoEFCC and concerned authorities.

Condition No 11.4 - A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of Qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEFCC.

Reply to Condition No 11.4 – A separate environmental management cell with suitable qualified personnel has been set up under the control of a Senior Executive, who is reporting directly to the Head of the Organization. The same is being attached herewith as **Annexure 3**.

Condition No 11.5 – The concerned Regional Office of the MoEF&CC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEFCC officer(s) by furnishing the requisite data/ information/ monitoring reports.

Reply to Condition No 11.5 – Noted and Agreed.

Condition No 11.6 – In pursuant to Ministry’s O.M No 22-34/2018-IA.III dated 16.01.2020 to comply with the direction made by Hon’ble Supreme Court on 08.01.2020 in W.P. (Civil) No 114/2014 in the matter Common Cause vs Union of India, the Mining lease holder shall after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to other mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.

Reply to Condition No 11.6 – Noted.

Condition No 11.7 – The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

Reply to Condition No 11.7 – Noted and Agreed.

Condition No 11.8 – Concealing factual data failure to comply with any or submission of false/ fabricated data and of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

Reply to Condition No 11.8 – Noted and Agreed.

Condition No 11.9 – The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (prevention & Control of Pollution) Act, 1981, the Environment (protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any others passed by the Hon’ble Supreme Court of India/ High Court and any other Court of Law relating to the subject matter.

Reply to Condition No 11.9 – Noted.

Reply to Condition No 11.10 – Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Reply to Condition No 11.10 – Noted.

Piezometer Monitoring Report

Mine: Amtipani Bauxite Mine (190.95 Ha)

| S No | Month | Ground Water Level (BGL) in meter |
|-------------|---------------|--|
| 1 | Apr-25 | 33.05 |
| 2 | May-25 | 33.23 |
| 3 | Jun-25 | 33.13 |
| 4 | Jul-25 | 33.01 |
| 5 | Aug-25 | 32.92 |
| 6 | Sep-25 | 32.79 |



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✉ epiclabtech@gmail.com

CIN: U74999JH2022PTC019683
RAN: AAHCE3811M
GST: 20AAHCE3811M1Z8

Accredited by -
NABL, acc. certificate Number TC-12887
Environmental Testing Laboratory
Certified by -
ISO 9001:2015 and ISO 45001:2018



TC-12887

Annexure - 2

| | | | |
|-----------------------|--------------------|------------|-----------------------|
| Unique Lab Report No. | TC1288725000000394 | Discipline | Chemical |
| Report Unique ID | RL0143251711 | Group | Atmospheric Pollution |
| Issue date/time | 26.04.2025/ 13:10 | 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: AMTIPANI BAUXITE MINE | Contact Person Contact Number Email Id Order Date Order Number | Mr. Ankit Das +91 9971034775 ankit.das@adityabirla.com 31.03.2025/ 10:10 13612313868 |
|---|--|--|

| | | | |
|---|------------------------|-----------------------|-------------------|
| References of Quality Management System (Steps of Traceability Chain) | | | |
| Customer Registration No. | EPIC/OTH/0143 | Sample Booking Number | EPIC-251711 |
| Sample(s) Code | 251711 (A) (B) (C) (D) | Sample Receipt (D/T) | 21.04.2025/ 11:18 |

| | | | |
|---------------------------------|---|-----------------------|------------------------|
| Sampling References | | | |
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling method used | IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13) | | |
| Sampling Start (D/T) | 18.04.2025/ 10:56 | Sampling End (D/T) | 19.04.2025/ 07:25 |
| 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) | 30 | Humidity % | 59 | Wind direction | 320°-140° |

| | | | |
|---|------------------------|----------------|-------------------------------|
| Sampling Location(s) with GPS coordinate(s) | | | |
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02"/84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09"/84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 1F | GPS coordinate | 23° 20' 48.16"/84° 15' 24.28" |
| S. Location D | Mines Near Quarry - 7C | GPS coordinate | 23° 20' 18.12"/84° 15' 34.07" |

| | | | |
|---|-------------------|----------------------|-------------------|
| Date(s) of performance of the laboratory activities | | | |
| Test start date | 21.04.2025/ 11:45 | Test completion date | 25.04.2025/ 12:50 |

--Test Result --

| Sl | Test Parameters | Method used | Unit | Results | | | | Limits |
|----|--|---------------------|-------|--------------------|--------------------|--------------------|--------------------|-------------|
| | | | | A | B | C | D | |
| 1. | Particulate Matter (PM ₁₀) | IS:5182 (P-23) 2022 | µg/m3 | 84.93 | 74.88 | 78.83 | 77.82 | 100 (24 hr) |
| 2. | Fine Particulate Matter (PM _{2.5}) | IS 5182 (P-24) 2019 | µg/m3 | 46.30 | 33.43 | 36.91 | 35.55 | 80(24 hr) |
| 3. | Sulphur Dioxide (SO ₂) | IS:5182 (P-02) 2023 | µg/m3 | 09.94 | 10.05 | 08.13 | 07.86 | 80(24 hr) |
| 4. | Nitrogen Dioxide (NO ₂) | IS:5182 (P-06) 2022 | µg/m3 | 25.77 | 22.50 | 23.61 | 22.54 | 80(24 hr) |
| 5. | Ozone (O ₃) | IS:5182 (P-09) 2019 | µg/m3 | 38.47 | 37.83 | 35.89 | 34.59 | 180(1 hr) |
| 6. | Ammonia (NH ₃) | IS:5182 (P-25) 2018 | µg/m3 | 53.07 | 51.18 | 48.02 | 46.75 | 400(24 hr) |
| 7. | Lead (Pb) | IS:5182(P-22) 2019 | µg/m3 | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | 1.0(24 hr) |
| 8. | Nickel (Ni) | IS:5182(P-26) 2020 | ng/m3 | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | - |
| 9. | Arsenic (As) | USEPA IO 3.2:1999 | ng/m3 | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | - |

--Test Result End --

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

Analysed by -A. K. SINHA



Checked by
(B.R. Kumar)
Technical Head

Verified & Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory

Page 1 of 1

Contractual Status - 1. The laboratory accepts responsibility for content of this report. 2. Test performed at laboratory's permanent facility or specific environment as method required and results relate only to the sample tested in prescribed Date & time. 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law. 4. Any complaint about this report should be communicated in writing within 30 days of its issue. 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to involved amount only. 6. All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges. 7. Opinion does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any caused by use or misuse of this report. 8. When the results are from external provider are marked as * mark.

Abbreviation - BDL (Below Detectable Limit), MDL (Minimum Detectable Limit), LoD (Limit of Quantitative).



EPIC LabTech Private Limited

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✉ epiclabtech@gmail.com

CIN:-U14999JH2022PTC018625
PAN:-AAHCE5611M
GST:-20AAHCE5611M1Z1X

Accredited by:-
Bharatiya Standards Control Board
Certified by:-
ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|-----------------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL0143251711 | Group | Atmospheric Pollution |
| Issue date/time | 26.04.2025/ 13:10 | 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: AMTIPANI BAUXITE MINE | Contact Person Contact Number Email Id Order Date Order Number | Mr. Ankit Das +91 9971034775 ankit.das@adityabirla.com 31.03.2025/ 10:10 13612313868 |
|---|--|--|

| | | | |
|---|------------------------|-----------------------|-------------------|
| References of Quality Management System (Steps of Traceability Chain) | | | |
| Customer Registration No. | EPIC/OTH/0143 | Sample Booking Number | EPIC-251711 |
| Sample(s) Code | 251711 (A) (B) (C) (D) | Sample Receipt (D/T) | 21.04.2025/ 11:18 |

| | | | |
|---------------------------------|---|-----------------------|------------------------|
| Sampling References | | | |
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling method used | IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13) | | |
| Sampling Start (D/T) | 18.04.2025/ 10:56 | Sampling End (D/T) | 19.04.2025/ 07:25 |
| 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) | 30 | Humidity % | 59 | Wind direction | 320°-140° |

| | | | |
|---|------------------------|----------------|--------------------------------|
| Sampling Location(s) with GPS coordinate(s) | | | |
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02"/ 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09"/ 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 1F | GPS coordinate | 23° 20' 48.16"/ 84° 15' 24.28" |
| S. Location D | Mines Near Quarry - 7C | GPS coordinate | 23° 20' 18.12"/ 84° 15' 34.07" |

| | | | |
|---|-------------------|----------------------|-------------------|
| Date(s) of performance of the laboratory activities | | | |
| Test start date | 21.04.2025/ 11:45 | Test completion date | 25.04.2025/ 12:50 |

--Test Result --

| Sl. | Test Parameters | Method used | Unit | Results | | | | Limits |
|-----|---|-----------------------|-------------------|------------------|------------------|------------------|------------------|--------|
| | | | | A | B | C | D | |
| 1. | Benzene (C ₆ H ₆) | IS:5182(P-11) 2008 | µg/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | - |
| 2. | Benzo (a) Pyrene (Bap)- Particulate phase only | IS:5182(P-12) 2004 | ng/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | - |
| 3. | Carbon Monoxide (CO) | EPIC/LAB/SOP/AP/01/00 | mg/m ³ | BDL (MDL-1.6) | BDL (MDL-1.6) | BDL (MDL-1.6) | BDL (MDL-1.6) | - |

--Test Result End --

| | |
|-------------------------|---|
| Prescribed Limit | Environmental (Protection) Rules-1986, Schedule VII |
| Operational Status | Unit was Operational During sampling. |
| Analysed by -A.K. SINHA | |



Checked by
(B.N. Kumar)
Technical Head

Verified & Issued by
(Anish Das)
Laboratory Head

Signature of Laboratory Head
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

Address:
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✉ epiclabtech@gmail.com

CIN:-UT4099142022PTC019423
PAN:-AAHCE5611M
GST:-28AAHCE5611M1Z3

Accredited by :-
NABL, with certificate Number TC-13837
Field and Value Institution Control Board
Certified by :-
ISO 9001:2015 and ISO 45001:2018



Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|----------------|
| Unique Lab Report No. | TC1288725000000395 | Discipline | Chemical |
| Report Unique ID | RL0143251712 | Group | Water |
| Issue date/time | 26.04.2025/ 13:12 | Sub Group | Drinking Water |

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

| | | | |
|---|---------------|-----------------------|-------------------|
| References of Quality Management System (Steps of Traceability Chain) | | | |
| Customer Registration No. | EPIC/OTH/0143 | Sample Booking Number | EPIC-251712 |
| Sample(s) Code | 251712 | Sample Receipt (D/T) | 21.04.2025/ 11:21 |

| | | | |
|---------------------------------|--|-----------------------|------------------------|
| Sampling References | | | |
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/038 |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003 | | |
| Sampling Start (D/T) | 18.04.2025/ 11:30 | Sampling End (D/T) | 18.04.2025/ 11:40 |
| 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 sampling | | | |
| Weather condition | Clear | Temperature (°C) | 30 |
| | | Humidity % | 59 |
| | | Wind direction | 320°-140° |

| | | | |
|---|-------------|----------------|-------------------------------|
| Sampling Location(s) with GPS coordinate(s) | | | |
| S. Location A | Near office | GPS coordinate | 23° 20' 37.08"/84° 15' 32.28" |

| | | | |
|---|-------------------|----------------------|-------------------|
| Date(s) of performance of the laboratory activities | | | |
| Test start date | 21.04.2025/ 11:35 | Test completion date | 25.04.2025/ 14:00 |

--Test Result --

| Sl | Test Parameters | Method used | Unit | Results | Limits | |
|-----|--|---------------------------|-------|----------------|------------------|-------------------|
| | | | | | Acceptable Limit | Permissible limit |
| 1. | pH value at 24.6°C | IS 3025 (P-11) 2022 | - | 6.80 | 6.5-8.5 | No relaxation |
| 2. | Turbidity | IS 3025 (P-10) 1984 | NTU | 0.37 | 1 | 5 |
| 3. | Colour | IS 3025 (P-04) 2021 | Hazen | <5 | 6 | 15 |
| 4. | Odour | IS 3025 (P-05) 2018 | - | Agreeable | Agreeable | Agreeable |
| 5. | Taste | IS 3025 (P-07) 2017 | - | Agreeable | Agreeable | Agreeable |
| 6. | Total Dissolved Solids (TDS) | IS 3025 (P-16) 2023 | mg/l | 89.00 | 500 | 2000 |
| 7. | Chloride (as Cl) | IS 3025 (P-32) 2019 | mg/l | 18.72 | 250 | 1000 |
| 8. | Total Alkalinity (as CaCO ₃) | IS 3025 (P-23) 2019 | mg/l | 50.00 | 200 | 600 |
| 9. | Total Hardness (as CaCO ₃) | IS 3025 (P-21) 2009 | mg/l | 70.00 | 200 | 600 |
| 10. | Calcium (as Ca) | IS 3025 (P-40) 1991 | mg/l | 12.34 | 75 | 200 |
| 11. | Free Residual Chlorine | IS 3025 (P-26) 1986 | mg/l | BDL(MDL-0.4) | 0.2 | 1 |
| 12. | Sulphate (as SO ₄) | IS 3025 (P-24/Sec-1)2022 | mg/l | 1.30 | 200 | 400 |
| 13. | Nitrate (as NO ₃) | APHA 4500 B 2023 | mg/l | 1.04 | 45 | No relaxation |
| 14. | Phenolic Compound | IS 3025 (P-43/Sec-1) 2022 | mg/l | BDL(MDL-0.001) | 0.001 | 0.002 |
| 15. | Magnesium (as Mg) | APHA 3500 Mg E 2023 | mg/l | 9.52 | 30 | 100 |

Group - Residues and Contaminants in Water

Sub Group- Trace Metals Elements



EPIC LabTech Private Limited

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CIN:-U74999JH2022PTC018685
PAN:-AANCE3811M
GST:-20AANCE3811M1ZV

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



Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|----------------|
| Unique Lab Report No. | TC1288725000000395 | Discipline | Chemical |
| Report Unique ID | RL0143251712 | Group | Water |
| Issue date/time | 26.04.2025/ 13:12 | 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: AMTIPANI BAUXITE MINE

Contact Person

Mr. Ankit Das

Contact Number

+91 9971034775

Email Id

ankit.das@adityabirla.com

Order Date

31.03.2025/ 10:10

Order Number

13612313868

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

--Test result End --

Prescribed Limit

IS 10600:2021

Operational Status

Unit was Operational During sampling.

Analysed by -Pratima Kumar/ Anjali Kumar



Checked by
(E.N. Kumar)
Technical Head

Verified & Issued by
(Anish Das)
Laboratory Head

Signature
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

Address:-
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CIN:-U74999JH2022PTC018683
PAN:-AAHCE5611M
GST:-20AAHCE5611M1ZK

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

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|----------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL0143251712 | Group | Water |
| Issue date/time | 26.04.2025/ 13:12 | Sub Group | Drinking Water |

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

| | | | |
|---|---------------|-----------------------|-------------------|
| References of Quality Management System (Steps of Traceability Chain) | | | |
| Customer Registration No. | EPIC/OTH/0143 | Sample Booking Number | EPIC-251712 |
| Sample(s) Code | 251712 | Sample Receipt (D/T) | 21.04.2025/ 11:21 |

| | | | |
|---------------------------------|--|-----------------------|------------------------|
| Sampling References | | | |
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003 | | |
| Sampling Start (D/T) | 18.04.2025/ 11:30 | Sampling End (D/T) | 18.04.2025/ 11:40 |
| 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 sampling | | | | | | | |
| Weather condition | Clear | Temperature (°C) | 30 | Humidity % | 59 | Wind direction | 320°-140° |

| | | | |
|---|-------------|----------------|---------------------------------|
| Sampling Location(s) with GPS coordinate(s) | | | |
| S. Location A | Near office | GPS coordinate | 23° 20' 37.08" / 84° 15' 32.28" |

| | | | |
|---|-------------------|----------------------|-------------------|
| Date(s) of performance of the laboratory activities | | | |
| Test start date | 21.04.2025/ 11:35 | Test completion date | 25.04.2025/ 14:00 |

--Test Result --

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



EPIC LabTech Private Limited

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CIN - U74999JH2022PTC013685
PAN - AAKCE3811M
GST - 20AAHCE3811M1Z8

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

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|----------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL0143251712 | Group | Water |
| Issue date/time | 26.04.2025/ 13:12 | Sub Group | Drinking Water |

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

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

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

--Test Result End--

Prescribed Limit
Operational Status
Analysed by -Pratima Kumari/ Anjali Kumari

IS 10500:2021
Unit was Operational During sampling.



Checked by
(B.N. Kumar)
Technical Head

Verified & Issue by
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

Address:-

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CIN:-U74999JH2022PTC019681

PAN:-AAHCE3811M

GST:-20AAHCE3811M1Z9

Accredited by:-

Jharkhand State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|----------------|
| Unique Lab Report No. | N/A | Discipline | Biological |
| Report Unique ID | RL0143251713 | Group | Water |
| Issue date/time | 26.04.2025/ 13:14 | Sub Group | Drinking Water |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0143 | Sample Booking Number | EPIC-251713 |
| Sample(s) Code | 251713 | Sample Receipt (D/T) | 21.04.2025/ 11:22 |

Sampling References

| | | | |
|---------------------------------|---|-----------------------|------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003& IS 1622 1981 | | |
| Sampling Start (D/T) | 18.04.2025/ 11:30 | Sampling End (D/T) | 18.04.2025/ 11:40 |
| 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 sampling

| | | | | | | | |
|-------------------|-------|------------------|----|------------|----|----------------|-----------|
| Weather condition | Clear | Temperature (°C) | 30 | Humidity % | 59 | Wind direction | 320°-140° |
|-------------------|-------|------------------|----|------------|----|----------------|-----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|-------------|----------------|---------------------------------|
| S. Location A | Near office | GPS coordinate | 23° 20' 37.08" / 84° 15' 32.28" |
|---------------|-------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 21.04.2025/ 11:35 | Test completion date | 25.04.2025/ 14:00 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result --

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

--Test Result End --

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



Checked by
(B.N. Kumar)
Technical Head

Verified & Issued by
(Omesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

Address:-
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CIN - U74999JH2022PTC019685
PAN - AARCE3611M
GST - 20AA-HCE3611M12X

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



TC-12887

Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|--------------|
| Unique Lab Report No. | TC1288725000000396 | Discipline | Chemical |
| Report Unique ID | RL0143251714 | Group | Water |
| Issue date/time | 26.04.2025/ 13:16 | 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: AMTIPANI BAUXITE MINE | Contact Person Contact Number Email Id Order Date Order Number | Mr. Ankit Das +91 9971034775 ankit.das@adityabiria.com 31.03.2025/ 10:10 13612313868 |
|---|--|---|

| | | | |
|--|---------------|-----------------------|-------------------|
| References of Quality Management System (Stages of Traceability Chain) | | | |
| Customer Registration No. | EPIC/OTH/0143 | Sample Booking Number | EPIC-251714 |
| Sample(s) Code | 251714 | Sample Receipt (D/T) | 21.04.2025/ 11:23 |

| | | | |
|---------------------------------|--|-----------------------|------------------------|
| Sampling References | | | |
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003 | | |
| Sampling Start (D/T) | 18.04.2025/ 12:00 | Sampling End (D/T) | 18.04.2025/ 12:15 |
| 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) | 30 | Humidity % | 59 | Wind direction | 320°-140° |

| | | | |
|---|-------------------|----------------|-------------------------------|
| Sampling Location(s) with GPS coordinate(s) | | | |
| S. Location A | Near Weigh Bridge | GPS coordinate | 23° 20' 38.01"/84° 15' 30.41" |

| | | | |
|---|-------------------|----------------------|-------------------|
| Date(s) of performance of the laboratory activities | | | |
| Test start date | 21.04.2025/ 11:35 | Test completion date | 25.04.2025/ 14:00 |

--Test Result --

| Sl. | Test Parameters | Method used | Unit | Results | Limits | |
|-----|--|---------------------------|-------|----------------|------------------|-------------------|
| | | | | | Acceptable Limit | Permissible Limit |
| 1. | pH value at 25°C | IS 3025 (P-11) 2022 | - | 7.16 | 6.5-8.5 | No relaxation |
| 2. | Turbidity | IS 3025 (P-10) 1984 | NTU | 0.41 | 1 | 5 |
| 3. | Colour | IS 3025 (P-04) 2021 | Hazen | <5 | 5 | 15 |
| 4. | Odour | IS 3025 (P-05) 2018 | - | Agreeable | Agreeable | Agreeable |
| 5. | Taste | IS 3025 (P-07) 2017 | - | Agreeable | Agreeable | Agreeable |
| 6. | Total Dissolved Solids (TDS) | IS 3025 (P-16) 2023 | mg/l | 130 | 500 | 2000 |
| 7. | Chloride (as Cl) | IS 3025 (P-32) 2019 | mg/l | 21.68 | 250 | 1000 |
| 8. | Total Alkalinity (as CaCO ₃) | IS 3025 (P-23) 2019 | mg/l | 68 | 200 | 600 |
| 9. | Total Hardness (as CaCO ₃) | IS 3025 (P-21) 2009 | mg/l | 98 | 200 | 600 |
| 10. | Calcium (as Ca) | IS 3025 (P-40) 1991 | mg/l | 18.44 | 75 | 200 |
| 11. | Free Residual Chlorine | IS 3025 (P-26) 1986 | mg/l | BDL(MDL-0.4) | 0.2 | 1 |
| 12. | Sulphate (as SO ₄) | IS 3025 (P-24/Sec-1)2022 | mg/l | 2.90 | 200 | 400 |
| 13. | Nitrate (as NO ₃) | APHA 4500 B 2023 | mg/l | 1.99 | 45 | No relaxation |
| 14. | Phenolic Compound | IS 3025 (P-43/Sec-1) 2022 | mg/l | BDL(MDL-0.001) | 0.001 | 0.002 |
| 15. | Magnesium (as Mg) | APHA 3500 Mg E 2023 | mg/l | 12.63 | 30 | 100 |

Group - Residues and Contaminants in Water

Sub Group- Trace Metals Elements



EPIC LabTech Private Limited



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CIN - U74999JH2022PTC019683
PAN - AAHCE5811M
GST - 20AAHCE3011M1Z3

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

TC-12887

Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|--------------|
| Unique Lab Report No. | TC1288725000000396 | Discipline | Chemical |
| Report Unique ID | RL0143251714 | Group | Water |
| Issue date/time | 26.04.2025/ 13:18 | 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: AMTIPANI BAUXITE MINE

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

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

--Test Result End--

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



Checked by
(E.N. Kumar)
Technical Head

Verified & Issued by
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

Address:-

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

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☎ 93049 73994

✉ epiclabtech@gmail.com

CIN - U74999JH2022PTC019685 Accredited by -

PAN - AAMCE3011M

GST - 20AA4CE3611M1Z3

Jharkhand State Pollution Control Board

Certified by -

ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|--------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL0143251714 | Group | Water |
| Issue date/time | 26.04.2025/ 13:16 | Sub Group | Ground Water |

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

| | | | |
|---|---------------|-----------------------|-------------------|
| References of Quality Management System (Steps of Traceability Chain) | | | |
| Customer Registration No. | EPIC/OTH/0143 | Sample Booking Number | EPIC-251714 |
| Sample(s) Code | 251714 | Sample Receipt (D/T) | 21.04.2025/ 11:23 |

| | | | |
|---------------------------------|--|-----------------------|------------------------|
| Sampling References | | | |
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003 | | |
| Sampling Start (D/T) | 18.04.2025/ 12:00 | Sampling End (D/T) | 18.04.2025/ 12:15 |
| 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) | 30 | Humidity % | 59 | Wind direction | 320°-140° |

| | | | |
|---|-------------------|----------------|-------------------------------|
| Sampling Location(s) with GPS coordinate(s) | | | |
| S. Location A | Near Weigh Bridge | GPS coordinate | 23° 20' 38.01"/84° 15' 30.41" |

| | | | |
|---|-------------------|----------------------|-------------------|
| Date(s) of performance of the laboratory activities | | | |
| Test start date | 21.04.2025/ 11:35 | Test completion date | 25.04.2025/ 14:00 |

--Test Result --

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



EPIC LabTech Private Limited

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CIN:-U74900JH2022PTC019685

PAN:-AANICE3611M

GSTIN:-20AANCE3611ML2X

Accredited by:-

Jharkhand State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 15001:2015

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|--------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL0143251714 | Group | Water |
| Issue date/time | 26.04.2025/ 13:16 | Sub Group | Ground Water |

Report Issue to

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

Contact Person
Contact Number
Email Id
Order Date
Order Number

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

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

--Test Result End --

Prescribed Limit
Operational Status
Analysed by -Pratima Kumari/ Anjali Kumari

IS 10500:2021
Unit was Operational During sampling.



Checked by
(B.N. Kumar)
Technical Head

Verified & Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

Address:-

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☎ 93049 73994

✉ epiclabtech@gmail.com

CTC:-U74999JH2022PTC019A83

PAN:-AAHCE3611M

GST:-20AAHCE3611M1ZK

Accredited by:-

Jharkhand State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|--------------|
| Unique Lab Report No. | N/A | Discipline | Biological |
| Report Unique ID | RL0143251715 | Group | Water |
| Issue date/time | 26.04.2025/ 13:18 | 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 : AMTIPANI BAUXITE MINE | Contact Person Contact Number Email Id Order Date Order Number | Mr. Ankit Das +91 9971034775 ankit.das@adityabirla.com 31.03.2025/ 10:10 13612313868 |
|---|--|--|

| | | | |
|---|---------------|-----------------------|-------------------|
| References of Quality Management System (Steps of Traceability Chain) | | | |
| Customer Registration No. | EPIC/OTH/0143 | Sample Booking Number | EPIC-251715 |
| Sample(s) Code | 251715 | Sample Receipt (D/T) | 21.04.2025/ 11:23 |

| | | | |
|---------------------------------|---|-----------------------|------------------------|
| Sampling References | | | |
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003& IS 1622 1981 | | |
| Sampling Start (D/T) | 18.04.2025/ 12:00 | Sampling End (D/T) | 18.04.2025/ 12:15 |
| 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) | 30 | Humidity % | 59 | Wind direction | 320°-140° |

| | | | |
|---|-------------------|----------------|-------------------------------|
| Sampling Location(s) with GPS coordinate(s) | | | |
| S. Location A | Near Weigh Bridge | GPS coordinate | 23° 20' 38.01"/84° 15' 30.41" |

| | | | |
|---|-------------------|----------------------|-------------------|
| Date(s) of performance of the laboratory activities | | | |
| Test start date | 21.04.2025/ 11:35 | Test completion date | 25.04.2025/ 14:00 |

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

| | |
|--|---------------------------------------|
| --Test Result End -- | |
| Prescribed Limit | IS 10500:2021 |
| Operational Status | Unit was Operational During sampling. |
| Analysed by -Preetina Kumar/ Anjali Kumari | |



Checked by
(B.N. Kumar)
Technical Head

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



EPIC LabTech Private Limited

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

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☎ 91049 73994
✉ epiclabtech@gmail.com

CIN:- U74999JH2022PTC019683
PAN:- AAHCE3611M
GST:- 20AAHCE3611M1ZK

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



Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|-----------------------|
| Unique Lab Report No. | TC1288725000000525 | Discipline | Chemical |
| Report Unique ID | RL0176252035 | Group | Atmospheric Pollution |
| Issue date/time | 21.05.2025/ 15:14 | 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: AMTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0176 | Sample Booking Number | EPIC-252035 |
| Sample(s) Code | 252035 (A) (B) (C) (D) | Sample Receipt (D/T) | 16.05.2025/ 10:52 |

Sampling References

| | | | |
|---------------------------------|---|-----------------------|-------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 14.05.2025/ 11:29 | Sampling End (D/T) | 15.05.2025/ 08:32 |
| 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) | 29 | Humidity % | 52 | Wind direction | 0°-180° |
|-------------------|-------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 1F | GPS coordinate | 23° 20' 48.16" / 84° 15' 24.26" |
| S. Location D | Mines Near Quarry - 7C | GPS coordinate | 23° 20' 18.12" / 84° 15' 34.07" |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 16.05.2025/ 11:15 | Test completion date | 20.05.2025/ 12:00 |
|-----------------|-------------------|----------------------|-------------------|

-Test Results-

| Sl | Test Parameters | Method used | Unit | Results | | | | Limits |
|----|--|---------------------|-------------------|--------------------|--------------------|--------------------|--------------------|-------------|
| | | | | A | B | C | D | |
| 1. | Particulate Matter (PM ₁₀) | IS-5182 (P-23) 2022 | µg/m ³ | 82.00 | 86.98 | 76.98 | 89.99 | 100 (24 hr) |
| 2. | Fine Particulate Matter (PM _{2.5}) | IS 5182 (P-24) 2019 | µg/m ³ | 37.86 | 39.99 | 33.12 | 36.94 | 60(24 hr) |
| 3. | Sulphur Dioxide (SO ₂) | IS-5182 (P-07) 2023 | µg/m ³ | 7.15 | 10.18 | 7.77 | 9.49 | 80(24 hr) |
| 4. | Nitrogen Dioxide (NO ₂) | IS-5182 (P-06) 2022 | µg/m ³ | 1912 | 23.71 | 20.31 | 21.95 | 80(24 hr) |
| 5. | Ammonia (NH ₃) | IS-5182 (P-25) 2018 | µg/m ³ | 40.58 | 38.64 | 43.83 | 47.73 | 400(24 hr) |
| 6. | Ozone (O ₃) | IS-5182 (P-09) 2019 | µg/m ³ | 35.77 | 32.19 | 39.34 | 33.98 | 180(1 hr) |
| 7. | Lead (Pb) | IS-5182(P-22) 2019 | µg/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | 1.0(24 hr) |
| 8. | Nickel (Ni) | IS-5182(P-26) 2020 | ng/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | - |
| 9. | Arsenic (As) | USEPA IO 3.2-1999 | ng/m ³ | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | - |

-Test Results End -

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



Reviewed by
(E.N. Kumar)
Technical Head

Issued by
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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

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✉ epiclabtech@gmail.com

CIN - U74999JH2022PTC019683
PAN - AAHCE3611M
GST - 20AAHCE3611M1ZK

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

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|-----------------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL0176252035 | Group | Atmospheric Pollution |
| Issue date/time | 21.05.2025/ 15:14 | 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 : AMTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0176 | Sample Booking Number | EPIC-252035 |
| Sample(s) Code | 252035 (A) (B) (C) (D) | Sample Receipt (D/T) | 16.05.2025/ 10:52 |

Sampling References

| | | | |
|---------------------------------|---|-----------------------|-------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 14.05.2025/ 11:29 | Sampling End (D/T) | 15.05.2025/ 08:32 |
| 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) | 29 | Humidity % | 52 | Wind direction | 0°-180° |
|-------------------|-------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 1F | GPS coordinate | 23° 20' 48.16" / 84° 15' 24.28" |
| S. Location D | Mines Near Quarry - 7C | GPS coordinate | 23° 20' 18.12" / 84° 15' 34.07" |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 16.05.2025/ 11:15 | Test completion date | 20.05.2025/ 12:00 |
|-----------------|-------------------|----------------------|-------------------|

-Test Results-

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

-Test Results End -

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

Operational Status Unit was Operational During sampling.

Analysed by - AK Senha



Reviewed by
(E.N. Kumar)
Technical Head





EPIC LabTech Private Limited



Address:-

C/o - R.K. Tripathi, Indrapuri,
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📞 93049 73994

✉ epiclabtech@gmail.com

CIN: U74999JH2022PTC019685

PAN: AAHCE3611M

GST: 20AAHCE3611M1ZK

Accredited by:-

NABL, lab certificate number TC-1387

Jharkhand State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|-----------------------|
| Unique Lab Report No. | TC1288725000000526 | Discipline | Chemical |
| Report Unique ID | RL0176252036 | Group | Atmospheric Pollution |
| Issue date/time | 21.05.2025/ 15:16 | Sub Group | Ambient Noise |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0176 | Sample Booking Number | EPIC-252036 |
| Sample(s) Code | 252036 (A) (B) (C) (D) | Sample Receipt (D/T) | 16.05.2025/ 10:55 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|-------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 14.05.2025/ 11:29 | Sampling End (D/T) | 15.05.2025/ 08:32 |
| 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) | 29 | Humidity % | 52 | Wind direction | 0°-180° |
|-------------------|-------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 1F | GPS coordinate | 23° 20' 48.16" / 84° 15' 24.28" |
| S. Location D | Mines Near Quarry - 7C | GPS coordinate | 23° 20' 18.12" / 84° 15' 34.07" |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 16.05.2025/ 11:20 | Test completion date | 20.05.2025/ 12:05 |
|-----------------|-------------------|----------------------|-------------------|

-Test Results-

| Sl | Test Parameters | Method used | Unit | Results | | | | Limits |
|----|------------------------------|---------------|--------|---------|------|------|------|--------|
| | | | | A | B | C | D | |
| 1. | L _{eq} (Day time) | IS: 9989:1981 | dB (A) | 58.8 | 53.9 | 49.2 | 47.0 | 75 |
| 2. | L _{eq} (Night time) | IS: 9989:1981 | dB (A) | 43.9 | 41.8 | 39.8 | 37.4 | 70 |

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



Reviewed by
(B.K. Kumar)
Technical Head

Issued by
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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✉ epiclabtech@gmail.com

CIN:-U74999JH2022PTC019683
PAN:-AANCE3611M
GST:-20AANCE3611M1ZX

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



Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|-------------------------|
| Unique Lab Report No. | TC1288725000000527 | Discipline | Chemical |
| Report Unique ID | RL0176252037 | Group | Pollution & Environment |
| Issue date/time | 21.05.2025/ 15:18 | 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 : AMTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0176 | Sample Booking Number | EPIC-252037 |
| Sample(s) Code | 252037 | Sample Receipt (D/T) | 16.05.2025/ 10:58 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|-------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 14.05.2025/ 16:30 | Sampling End (D/T) | 14.05.2025/ 16:50 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Vishal Kumar & Team |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003 | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|-------|------------------|----|------------|----|----------------|---------|
| Weather condition | Clear | Temperature (°C) | 29 | Humidity % | 52 | Wind direction | 0°-180° |
|-------------------|-------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|--------------------|----------------|---------------------------------|
| S. Location A | Work Shop (Outlet) | GPS coordinate | 23° 20' 37.43" / 84° 15' 33.93" |
|---------------|--------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 16.05.2025/ 11:15 | Test completion date | 21.05.2025/ 12:30 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result--

| Sl | Test Parameters | Method used | Unit | Results | Limits |
|----|-----------------------|---------------------------|------|---------------|---------|
| 1. | pH value at 25.2°C | IS 3025 (P-11) 2022 | - | 6.55 | 6.5-8.5 |
| 2. | BOD (3 days at 27°C) | IS 3025 (P-44) 2000 | mg/l | 14.00 | - |
| 3. | COD | IS 3025 (P-58) 2006 | mg/l | 64.00 | 150.0 |
| 4. | Oil & Grease | IS 3025 (P-39) 2021 | mg/l | BDL(MDL-04) | 10.0 |
| 5. | Total Suspended Solid | IS 3025 (P-17) 2022 | mg/l | 45.00 | 50.0 |
| 6. | Phosphate | IS 3025 (P-31/Sec-1) 2022 | mg/l | 0.58 | - |
| 7. | Zinc | APHA 3111 B 2023 | mg/l | BDL(MDL-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
(B.N. Kumar)
Technical Head





EPIC LabTech Private Limited

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CIN:-U74999JH2022PTC019685

PAN:-AAHCE3611M

GST:-20AAHCE3611M1ZK

Accredited by:-

Jharkhand State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|-------------------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL0176252037 | Group | Pollution & Environment |
| Issue date/time | 21.05.2025/ 15:18 | Sub Group | Waste Water (Effluent) |

Report Issued to

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

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0176 | Sample Booking Number | EPIC-252037 |
| Sample(s) Code | 252037 | Sample Receipt (D/T) | 16.05.2025/ 10:58 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|-------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 14.05.2025/ 16:30 | Sampling End (D/T) | 14.05.2025/ 16:50 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Vishal Kumar & Team |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003 | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|-------|------------------|----|------------|----|----------------|---------|
| Weather condition | Clear | Temperature (°C) | 29 | Humidity % | 52 | Wind direction | 0°-180° |
|-------------------|-------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|--------------------|----------------|---------------------------------|
| S. Location A | Work Shop (Outlet) | GPS coordinate | 23° 20' 37.43" / 84° 15' 33.93" |
|---------------|--------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 16.05.2025/ 11:15 | Test completion date | 21.05.2025/ 12:30 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result--

| Sl | Test Parameters | Method used | Unit | Results | Limits |
|----|-----------------------------|---------------------|------|---------|--------|
| 1. | Total Dissolve Solids (TDS) | IS 3025 (P-16) 2023 | mg/l | 161.00 | - |
| 2. | Dissolve Oxygen (DO) | IS 3025 (P-38) 1984 | mg/l | 1.80 | - |

--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
(E.K. Kumar)
Technical Head

Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited



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CIN:-U74999JH2022PTC015683
PAN:-AAHCE5611M
GST:-30AAHCE5611M1Z8

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

TC-12887

Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|-----------------------|
| Unique Lab Report No. | TC1288725000000701 | Discipline | Chemical |
| Report Unique ID | RL0209252429 | Group | Atmospheric Pollution |
| Issue date/time | 18.06.2025/ 12:30 | Sub Group | Ambient Air Quality |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0209 | Sample Booking Number | EPIC-252429 |
| Sample(s) Code | 252429 (A) (B) (C) (D) | Sample Receipt (D/T) | 13.06.2025/ 10:09 |

Sampling References

| | | | |
|---------------------------------|---|-----------------------|-------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 11.06.2025/ 12:34 | Sampling End (D/T) | 12.06.2025/ 09:48 |
| 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) | 26 | Humidity % | 50 | Wind direction | 240°-60° |
|-------------------|-------|------------------|----|------------|----|----------------|----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|---------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 2 A11 | GPS coordinate | 23° 19' 59.00" / 84° 15' 49.02" |
| S. Location D | Mines Near Quarry - 7C 16 | GPS coordinate | 23° 19' 17.88" / 84° 15' 34.09" |

Data(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 13.06.2025/ 10:50 | Test completion date | 17.06.2025/ 11:43 |
|-----------------|-------------------|----------------------|-------------------|

--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 | 80.03 | 84.19 | 75.15 | 87.43 | 100 (24 hr) |
| 2. | Fine Particulate Matter (PM _{2.5}) | IS:5182 (P-24) 2019 | µg/m ³ | 35.47 | 38.24 | 30.48 | 34.36 | 60(24 hr) |
| 3. | Sulphur Dioxide (SO ₂) | IS:5182 (P-02) 2023 | µg/m ³ | 07.05 | 09.01 | 06.26 | 08.22 | 80(24 hr) |
| 4. | Nitrogen Dioxide (NO ₂) | IS:5182 (P-06) 2022 | µg/m ³ | 17.97 | 22.20 | 19.03 | 20.08 | 80(24 hr) |
| 5. | Ammonia (NH ₃) | IS:5182 (P-25) 2018 | µg/m ³ | 39.29 | 37.01 | 42.21 | 46.10 | 400(24 hr) |
| 6. | Ozone (O ₃) | IS:5182 (P-09) 2019 | µg/m ³ | 33.26 | 31.12 | 38.27 | 32.19 | 180(1 hr) |
| 7. | Lead (Pb) | IS:5182(P-22) 2019 | µg/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | 1.0(24 hr) |
| 8. | Nickel (Ni) | IS:5182(P-26) 2020 | ng/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | - |
| 9. | Arsenic (As) | USEPA IO 3.2:1999 | ng/m ³ | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | - |

--Test Results End--

| | |
|------------------------------|---|
| Prescribed Limit | Environmental (Protection) Rules-1986, Schedule VI. |
| Operational Status | Unit was Operational During sampling. |
| Analysed by - Archana Gorain | |



Reviewed by
(S.N. Kumar)
Technical Head

Issue by
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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

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CIN:-U74999JH2022PTC015685
PAN:-AANCC3611M
GST:-20AAHCE3611M1ZK

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

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|-----------------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL0209252429 | Group | Atmospheric Pollution |
| Issue date/time | 18.06.2025/ 12:30 | Sub Group | Ambient Air Quality |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0209 | Sample Booking Number | EPIC-252429 |
| Sample(s) Code | 252429 (A) (B) (C) (D) | Sample Receipt (D/T) | 13.06.2025/ 10:09 |

Sampling References

| | | | |
|---------------------------------|---|-----------------------|-------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 11.06.2025/ 12:34 | Sampling End (D/T) | 12.06.2025/ 09:48 |
| 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) | 26 | Humidity % | 50 | Wind direction | 240°-60° |
|-------------------|-------|------------------|----|------------|----|----------------|----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|---------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 2 A11 | GPS coordinate | 23° 19' 59.00" / 84° 15' 49.02" |
| S. Location D | Mines Near Quarry - 7C 16 | GPS coordinate | 23° 19' 17.88" / 84° 15' 34.09" |

Data(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 13.06.2025/ 10:50 | Test completion date | 17.06.2025/ 11:43 |
|-----------------|-------------------|----------------------|-------------------|

-Test Results-

| Sl | Test Parameters | Method used | Unit | Results | | | | Limits |
|----|---|-----------------------|-------------------|------------------|------------------|------------------|------------------|--------|
| | | | | A | B | C | D | |
| 1. | Benzene (C ₆ H ₆) | IS:5182(P-11) 2006 | µg/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | - |
| 2. | Benzo (a) Pyrene (Bap)- Particulate phase only | IS:5182(P-12) 2004 | ng/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | - |
| 3. | Carbon Monoxide (CO) | EPIC/LAB/SOP/AP/01/00 | mg/m ³ | BDL (MDL-1.6) | BDL (MDL-1.6) | BDL (MDL-1.6) | BDL (MDL-1.6) | - |

-Test Results End -

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

Operational Status Unit was Operational During sampling.

Analysed by - Archana Gargain



Reviewed by
(B.K. Kumar)
Technical Head





EPIC LabTech Private Limited

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CIN - U74899JH2022PTC019665
PAN - AAKCE3611M
GST - 22AAKCE3611M1ZK

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

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|-----------------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL0209252430 | Group | Atmospheric Pollution |
| Issue date/time | 18.06.2025/ 12:32 | Sub Group | Work Zone Noise |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|----------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0209 | Sample Booking Number | EPIC-252430 |
| Sample(s) Code | 252430 (A) (B) | Sample Receipt (D/T) | 13.08.2025/ 10:10 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D) | 11.06.2025/ 12:34 | Sampling End (D) | 11.06.2025/ 09:33 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Akash Kumar & Team |
| Sampling method used | IS 9989:1981 (RA 2020) & CPCB Method S.O.50 (E) dated 11/01/2010 | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|-------|------------------|----|------------|----|----------------|----------|
| Weather condition | Clear | Temperature (°C) | 26 | Humidity % | 50 | Wind direction | 240°-60° |
|-------------------|-------|------------------|----|------------|----|----------------|----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|--------------------------|----------------|---------------------------------|
| S. Location A | Near Mines Quarry - 7C16 | GPS coordinate | 23° 19' 59.00" / 84° 15' 49.02" |
| S. Location B | Near Mines Quarry 2A11 | GPS coordinate | 23° 19' 17.88" / 84° 15' 34.09" |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 13.06.2025/ 10:25 | Test completion date | 17.06.2025/ 11:44 |
|-----------------|-------------------|----------------------|-------------------|

--Test Results--

| Sl | Test Parameters | Method used | Unit | Results | | Limits |
|----|-----------------|---------------|--------|---------|------|--------|
| | | | | A | B | |
| 1. | L_{eq} | IS: 9989:1981 | dB (A) | 73.1 | 71.3 | 85 |

--Test Results End --

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

Analysed by -A.K.Sinha



Reviewed by
(S.N. Kumar)
Technical Head

Issue By
(Anesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited



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CIN:-U74999JH2022PTC019685

PAN:-AAHCE3611M

GST:-20AAHCE3611M1Z

Accredited by:-

ISO/IEC certificate Number TC-12887

Parkland State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|-----------------------|
| Unique Lab Report No. | TC1288725000000884 | Discipline | Chemical |
| Report Unique ID | RL02362529012 | Group | Atmospheric Pollution |
| Issue date/time | 18.07.2025/ 17:25 | Sub Group | Ambient Air Quality |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|-------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0236 | Sample Booking Number | EPIC-2529012 |
| Sample(s) Code | 2529012 (A) (B) (C) (D) | Sample Receipt (D/T) | 14.07.2025/ 11:30 |

Sampling References

| | | | |
|---------------------------------|---|-----------------------|------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 11.07.2025/ 12:50 | Sampling End (D/T) | 12.07.2025/ 08:20 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Akash Kumar & Team |
| Sampling method used | IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13) | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|--------|------------------|----|------------|----|----------------|---------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity % | 66 | Wind direction | 0°-180° |
|-------------------|--------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|---------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 2 A11 | GPS coordinate | 23° 19' 59.00" / 84° 15' 40.02" |
| S. Location D | Mines Near Quarry - 7C 16 | GPS coordinate | 23° 19' 17.88" / 84° 15' 34.09" |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 14.07.2025/ 11:50 | Test completion date | 18.07.2025/ 16:00 |
|-----------------|-------------------|----------------------|-------------------|

--Test Results--

| Sl. | Test Parameters | Method used | Unit | Results | | | | Limits |
|-----|--|---------------------|-------------------|--------------------|--------------------|--------------------|--------------------|-------------|
| | | | | A | B | C | D | |
| 1. | Particulate Matter (PM ₁₀) | IS:5182 (P-23) 2022 | µg/m ³ | 76.16 | 80.19 | 71.12 | 83.22 | 100 (24 hr) |
| 2. | Fine Particulate Matter (PM _{2.5}) | IS:5182 (P-24) 2019 | µg/m ³ | 32.11 | 35.31 | 27.64 | 30.85 | 60(24 hr) |
| 3. | Sulphur Dioxide (SO ₂) | IS:5182 (P-02) 2023 | µg/m ³ | 06.49 | 08.54 | 05.31 | 07.78 | 80(24 hr) |
| 4. | Nitrogen Dioxide (NO ₂) | IS:5182 (P-06) 2022 | µg/m ³ | 15.77 | 20.33 | 18.15 | 18.20 | 60(24 hr) |
| 5. | Ammonia (NH ₃) | IS:5182 (P-25) 2018 | µg/m ³ | 36.18 | 34.50 | 39.55 | 44.04 | 400(24 hr) |
| 6. | Ozone (O ₃) | IS:5182 (P-09) 2019 | µg/m ³ | 30.89 | 28.50 | 35.35 | 29.62 | 180(1 hr) |
| 7. | Lead (Pb) | IS:5182(P-22) 2019 | µg/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | 1.0(24 hr) |
| 8. | Nickel (Ni) | IS:5182(P-26) 2020 | ng/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | - |
| 9. | Arsenic (As) | USEPA IO 3.2:1999 | ng/m ³ | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | - |

--Test Results End--

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



Reviewed by
(B.N. Kumar)
Technical Feed

Issue by
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.

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



EPIC LabTech Private Limited

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CIN:-U74999JH2022PTC019685

RAN:-AAHCE3611M

GST:-28AAHCE3611M1ZK

Accredited by:-

Jharkhand State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|-----------------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02362529012 | Group | Atmospheric Pollution |
| Issue date/time | 18.07.2025/ 17:25 | Sub Group | Ambient Air Quality |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|-------------------------|-----------------------|------------------|
| Customer Registration No. | EPIC/OTH/0236 | Sample Booking Number | EPIC-2529012 |
| Sample(s) Code | 2529012 (A) (B) (C) (D) | Sample Receipt (D/T) | 14.07.2025/11:30 |

Sampling References

| | | | |
|---------------------------------|---|-----------------------|------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 11.07.2025/ 12:50 | Sampling End (D/T) | 12.07.2025/ 08:20 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Akash Kumar & Team |
| Sampling method used | IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13) | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|--------|------------------|----|------------|----|----------------|---------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity % | 66 | Wind direction | 0°-180° |
|-------------------|--------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|---------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 2 A11 | GPS coordinate | 23° 19' 59.00" / 84° 15' 49.02" |
| S. Location D | Mines Near Quarry - 7C 16 | GPS coordinate | 23° 19' 17.88" / 84° 15' 34.09" |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 14.07.2025/ 11:50 | Test completion date | 18.07.2025/ 16:00 |
|-----------------|-------------------|----------------------|-------------------|

-Test Results-

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

-Test Results End-

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by
(B.N. Kumar)
Technical Head





EPIC LabTech Private Limited

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CIN: U74999JH2022PTC010685
PAN: AAHCE3613M
GST: 20AAHCE3613M1ZK

Accredited by:-
NABL vide certificate number JC- 13867
Jharkhand State Pollution Control Board
Certified by:-
ISO 9001:2015 and ISO 45001:2018



TC-12887

Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|----------------|
| Unique Lab Report No. | TC1288725000000885 | Discipline | Chemical |
| Report Unique ID | RL02362529013 | Group | Water |
| Issue date/time | 18.07.2025/ 17:27 | Sub Group | Drinking Water |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|------------------|
| Customer Registration No. | EPIC/OTH/0236 | Sample Booking Number | EPIC-2529013 |
| Sample(s) Code | 2529013 | Sample Receipt (D/T) | 14.07.2025/11:31 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|-------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 11.07.2025/ 13:40 | Sampling End (D/T) | 11.07.2025/ 13:52 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Vishal Kumar & Team |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003 | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|--------|------------------|----|------------|----|----------------|---------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity % | 66 | Wind direction | 0°-180° |
|-------------------|--------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|-------------|----------------|---------------------------------|
| S. Location A | Near office | GPS coordinate | 23° 20' 37.08" / 84° 15' 32.28" |
|---------------|-------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 14.07.2025/ 11:51 | Test completion date | 18.07.2025/ 14:05 |
|-----------------|-------------------|----------------------|-------------------|

--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 | - | 6.90 | 6.5-8.5 | No relaxation |
| 2. | Turbidity | IS 3025 (P-10) 1984 | NTU | 0.40 | 1 | 5 |
| 3. | Colour | IS 3025 (P-04) 2021 | Hazen | <5 | 5 | 15 |
| 4. | Odour | IS 3025 (P-06) 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 | 85.00 | 500 | 2000 |
| 7. | Chloride (as Cl) | IS 3025 (P-32) 2019 | mg/l | 17.36 | 250 | 1000 |
| 8. | Total Alkalinity (as CaCO ₃) | IS 3025 (P-23) 2019 | mg/l | 48.00 | 200 | 600 |
| 9. | Total Hardness (as CaCO ₃) | IS 3025 (P-21) 2009 | mg/l | 68.00 | 200 | 600 |
| 10. | Calcium (as Ca) | IS 3025 (P-40) 1991 | mg/l | 11.89 | 75 | 200 |
| 11. | Free Residual Chlorine | IS 3025 (P-26) 1986 | mg/l | BDL(MDL-0.4) | 0.2 | 1 |
| 12. | Sulphate (as SO ₄) | IS 3025 (P-24/Sec-1)2022 | mg/l | 1.24 | 200 | 400 |
| 13. | Nitrate (as NO ₃) | APHA 4500 B 2023 | mg/l | 1.00 | 45 | No relaxation |
| 14. | Phenolic Compound | IS 3025 (P-43/Sec-1) 2022 | mg/l | BDL(MDL-0.001) | 0.001 | 0.002 |
| 15. | Magnesium (as Mg) | APHA 3500 Mg E 2023 | mg/l | 9.00 | 30 | 100 |



EPIC LabTech Private Limited



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CIN:-U74999JH2022PTC015665

FAN:-AAHCE3611M

GST:-20AAHCE3611M1ZK

Accredited by:-

NABL with certificate number JC-12867
Jharkhand State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 45001:2018

TC-12887

Analytical Test Certificate

Unique Lab Report No. TC1288725000000885
Report Unique ID RL02362529013
Issue date/time 18.07.2025/ 17:27

Discipline Chemical
Group Water
Sub Group Drinking Water

Report Issue to

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

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

Group - Residues and Contaminants in Water

Sub Group - Trace Metals Elements

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

--Test result End--

Prescribed Limit
Operational Status

IS 10500:2021
Unit was Operational During sampling.

Analysed by - Vishal Mangraj



Reviewed by
(E.K. Kumar)
Technical Head

Issued by
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



Page 2 of 2

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

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



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CIN:-U74999JH2022PTC019625

PAN:-AAHCE3611M

GST:-20AAHCE3611M1ZK

Accredited by:-

Parkland State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|----------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02362529013 | Group | Water |
| Issue date/time | 18.07.2025/ 17:27 | Sub Group | Drinking Water |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|------------------|
| Customer Registration No. | EPIC/OTH/0236 | Sample Booking Number | EPIC-2529013 |
| Sample(s) Code | 2529013 | Sample Receipt (D/T) | 14-07-2025/11:31 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|-------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 11.07.2025/ 13:40 | Sampling End (D/T) | 11.07.2025/ 13:52 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Vishal Kumar & Team |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003 | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|--------|------------------|----|------------|----|----------------|---------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity % | 66 | Wind direction | 0°-180° |
|-------------------|--------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|-------------|----------------|---------------------------------|
| S. Location A | Near office | GPS coordinate | 23° 20' 37.08" / 84° 15' 32.28" |
|---------------|-------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 14.07.2025/ 11:51 | Test completion date | 11.07.2025/ 10:30 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result--

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



EPIC LabTech Private Limited

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

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✉ epiclabtech@gmail.com

CIN:-U74999JH2022PTC019685
PAN:-AANCE3611M
GST:-20AANCE3611M1ZK

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

Analytical Test Certificate

Unique Lab Report No. N/A
Report Unique ID RL02362529013
Issue date/time 18.07.2025/ 17:27

Discipline
Group
Sub Group
Chemical
Water
Drinking Water

Report Issue to

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

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

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

--Test result End--

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



Reviewed by
(E.N. Kumar)
Technical Head

Issued by
(Dinesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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Jharkhand - 834005, India

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CIN: U74999JH2022PTC019485
PAN: AAHCE3611M
GST: 20AAHCE3611M1ZK

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

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|----------------|
| Unique Lab Report No. | N/A | Discipline | Biological |
| Report Unique ID | RL02362529014 | Group | Water |
| Issue date/time | 18.07.2025/ 17:29 | Sub Group | Drinking Water |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|------------------|
| Customer Registration No. | EPIC/OTH/0236 | Sample Booking Number | EPIC-2529014 |
| Sample(s) Code | 2529014 | Sample Receipt (D/T) | 14.07.2025/11:31 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 11.07.2025/ 13:40 | Sampling End (D/T) | 11.07.2025/ 13:52 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Akash Kumar & Team |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003 | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|--------|------------------|----|------------|----|----------------|---------|
| Weather condition | Cloudy | Temperature (°C) | 27 | Humidity % | 66 | Wind direction | 0°-180° |
|-------------------|--------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|-------------|----------------|---------------------------------|
| S. Location A | Near office | GPS coordinate | 23° 20' 37.08" / 84° 15' 32.28" |
|---------------|-------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 14.07.2025/ 12:30 | Test completion date | 18.07.2026/ 16:30 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result--

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

--Test result End --

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



Reviewed by
(B.K. Kumar)
Technical Head

Issued by
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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

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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3611M
GST:-30AAHCE3611M1ZK

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



TC-12887

Analytical Test Certificate

Unique Lab Report No. TC1288725000001027
Report Unique ID RL02682534047
Issue date/time 26.08.2025/ 12:00

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 : AMTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No. EPIC/OTH/0268 Sample Booking Number EPIC-2534047
Sample(s) Code 2534047 (A) (B) (C) (D) Sample Receipt (D/T) 21.08.2025/ 10:53

Sampling References

Type of Industry Bauxite Mines Ref. of Sampling Plan EPIC/LAB/R/038
Sampling Start (D/T) 19.08.2025/ 12:51 Sampling End (D/T) 20.08.2025/ 08:40
Mode of Sampling Conducted by Laboratory Sample collected by Mr. Pawan Deep & Bhagat
Sampling method used IS 5182 and CPCB Air Manual Volume - 1 (NAAQM/36/2012-13)
Description/condition of sample Receipt sample(s) were fit for analysis.

Environmental Condition during sampling

Weather condition Cloudy Temperature (°C) 25 Humidity % 70 Wind direction 90°-270°

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 1F | GPS coordinate | 23° 20' 48.16" / 84° 15' 24.28" |
| S. Location D | Mines Near Quarry - 7C | GPS coordinate | 23° 20' 18.12" / 84° 15' 34.07" |

Date(s) of performance of the laboratory activities

Test start date 21.08.2025/ 11:13 Test completion date 26.08.2025/ 11:00

--Test Results--

| Sl | Test Parameters | Method used | Unit | Results | | | | Limits |
|----|--|---------------------|-------------------|--------------------|--------------------|--------------------|--------------------|-------------|
| | | | | A | B | C | D | |
| 1. | Particulate Matter (PM ₁₀) | IS:5182 (P-23) 2022 | µg/m ³ | 76.03 | 79.65 | 70.98 | 82.78 | 100 (24 hr) |
| 2. | Fine Particulate Matter (PM _{2.5}) | IS:5182 (P-24) 2019 | µg/m ³ | 31.59 | 35.19 | 27.47 | 30.19 | 60(24 hr) |
| 3. | Sulphur Dioxide (SO ₂) | IS:5182 (P-02) 2023 | µg/m ³ | 06.08 | 08.11 | 06.29 | 07.34 | 80(24 hr) |
| 4. | Nitrogen Dioxide (NO ₂) | IS:5182 (P-06) 2022 | µg/m ³ | 14.65 | 19.14 | 16.91 | 16.99 | 80(24 hr) |
| 5. | Ammonia (NH ₃) | IS:5182 (P-25) 2018 | µg/m ³ | 34.22 | 33.66 | 38.43 | 40.95 | 400(24 hr) |
| 6. | Ozone (O ₃) | IS:5182 (P-09) 2019 | µg/m ³ | 24.52 | 22.93 | 26.75 | 24.20 | 180(1 hr) |
| 7. | Lead (Pb) | IS:5182(P-22) 2019 | µg/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | 1.0(24 hr) |
| 8. | Nickel (Ni) | IS:5182(P-26) 2020 | ng/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | - |
| 9. | Arsenic (As) | USEPA IO 3.2:1999 | ng/m ³ | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | - |

--Test Results End--

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by
(B.N. Kumar)
Technical Head

Issued by
(Omash Das)
Laboratory Head

Authorized Signatory

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

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



EPIC LabTech Private Limited

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

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

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|-----------------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02682534047 | Group | Atmospheric Pollution |
| Issue date/time | 26.08.2025/ 12:00 | Sub Group | Ambient Air Quality |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|-------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0268 | Sample Booking Number | EPIC-2534047 |
| Sample(s) Code | 2534047 (A) (B) (C) (D) | Sample Receipt (D/T) | 21.08.2025/ 10:53 |

Sampling References

| | | | |
|---------------------------------|---|-----------------------|------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 19.08.2025/ 12:51 | Sampling End (D/T) | 20.08.2025/ 06:40 |
| 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 (NAAQM/36/2012-13) | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|--------|------------------|----|------------|----|----------------|----------|
| Weather condition | Cloudy | Temperature (°C) | 25 | Humidity % | 70 | Wind direction | 90°-270° |
|-------------------|--------|------------------|----|------------|----|----------------|----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 1F | GPS coordinate | 23° 20' 48.16" / 84° 15' 24.28" |
| S. Location D | Mines Near Quarry - 7C | GPS coordinate | 23° 20' 18.12" / 84° 15' 34.07" |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 21.08.2025/ 11:13 | Test completion date | 26.08.2025/ 11:00 |
|-----------------|-------------------|----------------------|-------------------|

--Test Results--

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

--Test Results End --

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

Operational Status Unit was Operational During sampling.

Analysed by - Vishal Mangaraj



Reviewed by
(B.N. Kumar)
Technical Head





EPIC LabTech Private Limited

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CIN:-U74999JH2022PTC019685
PAN:-AAHCE3011M
GST:-20AAHCE3011M1ZK

Accredited by:-
NABL, vide certificate Number TC-12867
Jharkhand State Pollution Control Board
Certified by:-
ISO 9001:2015 and ISO 45001:2018



TC-12867

Analytical Test Certificate

Unique Lab Report No. TC1286725000001028
Report Unique ID RL02682534048
Issue date/time 26.08.2025/ 12:03

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: AMTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No. EPIC/OTH/0268
Sample(s) Code 2534048

Sample Booking Number EPIC-2534048
Sample Receipt (D/T) 21.08.2025/ 10:57

Sampling References

Type of Industry Bauxite Mines
Sampling Start (D/T) 19.08.2025/ 16:05
Mode of Sampling Conducted by Laboratory
Sampling method used IS : 3025 (Part-1) 1987, R-2003
Description/condition of sample Receipt sample(s) were fit for analysis.

Ref. of Sampling Plan EPIC/LAB/R/036
Sampling End (D/T) 19.08.2025/ 16:15
Sample collected by Mr. Pawan Deep Bhagat & Team

Environmental Condition during sampling

Weather condition Cloudy Temperature (°C) 25 Humidity % 70 Wind direction 90°-270°

Sampling Location(s) with GPS coordinate(s)

S. Location A Near Weigh Bridge GPS coordinate 23° 20' 38.01" / 84° 15' 30.41"

Date(s) of performance of the laboratory activities

Test start date 21.08.2025/ 11:15 Test completion date 26.08.2025/ 10:38

--Test Result--

| Sl | Test Parameters | Method used | Unit | Results | Limits | |
|-----|--|---------------------------|-------|----------------|------------------|-------------------|
| | | | | | Acceptable Limit | Permissible limit |
| 1. | pH value at 25.7°C | IS 3025 (P-11) 2022 | - | 7.57 | 6.5-8.5 | No relaxation |
| 2. | Turbidity | IS 3025 (P-10) 1984 | NTU | 0.46 | 1 | 5 |
| 3. | Colour | IS 3025 (P-04) 2021 | Hazen | <5 | 5 | 15 |
| 4. | Odour | IS 3025 (P-05) 2018 | - | Agreeable | Agreeable | Agreeable |
| 5. | Taste | IS 3025 (P-07) 2017 | - | Agreeable | Agreeable | Agreeable |
| 6. | Total Dissolved Solids (TDS) | IS 3025 (P-16) 2023 | mg/l | 124.00 | 500 | 2000 |
| 7. | Chloride (as Cl) | IS 3025 (P-32) 2019 | mg/l | 20.48 | 250 | 1000 |
| 8. | Total Alkalinity (as CaCO ₃) | IS 3025 (P-23) 2019 | mg/l | 65.00 | 200 | 600 |
| 9. | Total Hardness (as CaCO ₃) | IS 3025 (P-21) 2009 | mg/l | 96.384 | 200 | 600 |
| 10. | Calcium (as Ca) | IS 3025 (P-40) 1991 | mg/l | 17.64 | 75 | 200 |
| 11. | Free Residual Chlorine | IS 3025 (P-26) 1986 | mg/l | BDL(MDL-0.4) | 0.2 | 1 |
| 12. | Sulphate (as SO ₄) | IS 3025 (P-24/Sec-1) 2022 | mg/l | 2.45 | 200 | 400 |
| 13. | Nitrate (as NO ₃) | APHA 4500 B 2023 | mg/l | 1.65 | 45 | No relaxation |
| 14. | Phenolic Compound | IS 3025 (P-43/Sec-1) 2022 | mg/l | BDL(MDL-0.001) | 0.001 | 0.002 |
| 15. | Magnesium (as Mg) | APHA 3500 Mg E 2023 | mg/l | 12.1 | 30 | 100 |



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PAN:-AAHCE3611M
GST:-20AAHCE3611MT2X

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



Analytical Test Certificate

Unique Lab Report No. TC1288725000001028
Report Unique ID RL02682534048
Issue date/time 26.08.2025/ 12:03

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: AMTIPANI BAUXITE MINE

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

Group - Residues and Contaminants in Water,

Sub Group - Trace Metals Elements

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

--Test result End--

Prescribed Limit
Operational Status
Analysed by - Pappu Kumar

IS 10500:2021
Unit was Operational During sampling.



Reviewed by
(R.K. Kumar)
Technical Head

Issued By
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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

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✉ epiclabtech@gmail.com

CIN:-U74999JH2022PTC016685
PAN:-AAHCE3611M
GST:-30AAHCE3611M1ZV

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

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|--------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02682534048 | Group | Water |
| Issue date/time | 26.08.2025/ 12:03 | 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: AMTIPANI BAUXITE MINE

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

References of Quality Management System (Stages of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0268 | Sample Booking Number | EPIC-2534048 |
| Sample(s) Code | 2534048 | Sample Receipt (D/T) | 21.08.2025/ 10:57 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 19.08.2025/ 16:05 | Sampling End (D/T) | 19.08.2025/ 16:15 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Pawan Deep Bhagat & Team |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003 | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|--------|------------------|----|------------|----|----------------|----------|
| Weather condition | Cloudy | Temperature (°C) | 25 | Humidity % | 70 | Wind direction | 90°-270° |
|-------------------|--------|------------------|----|------------|----|----------------|----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|-------------------|----------------|---------------------------------|
| S. Location A | Near Weigh Bridge | GPS coordinate | 23° 20' 38.01" / 84° 15' 30.41" |
|---------------|-------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 21.08.2025/ 11:15 | Test completion date | 26.08.2025/ 10:38 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result--

| Sl | Test Parameters | Method used | Unit | Results | Limits | |
|--|---|-----------------------|------|---------------------------------|------------------|-------------------|
| | | | | | Acceptable Limit | Permissible Limit |
| 1. | Fluoride (as F) | APHA 4500 F-C 2023 | mg/l | BDL(MDL-0.1) | 1.0 | 1.5 |
| Group-Residues and Contaminants in Water | | | | Sub Group-Trace Metals Elements | | |
| 2. | Aluminum | IS 3025 (P-56):2019 | mg/l | BDL(MDL-0.1) | 0.03 | 0.2 |
| 3. | Boron | IS 3025 (P-57):2021 | mg/l | BDL(MDL-0.1) | 0.5 | 1.0 |
| 4. | Polychlorinated biphenyls | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.2) | 0.5 | No relaxation |
| 5. | Polynuclear Aromatic Hydrocarbons (PAH) | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.05) | 0.1 | No relaxation |
| Group-Residues and Contaminants in Water | | | | Sub Group-Pesticides | | |
| 6. | Alachlor | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.5) | 20 | No relaxation |
| 7. | Atrazine | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.5) | 2.0 | No relaxation |
| 8. | Dieldrin | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.02) | 0.03 | No relaxation |
| 9. | Alpha HCH | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.005) | 0.01 | No relaxation |
| 10. | Beta HCH | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.02) | 0.04 | No relaxation |
| 11. | Butachlor | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.5) | 125.0 | No relaxation |
| 12. | Chlopyrifos | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.5) | 30.0 | No relaxation |
| 13. | Delta HCH | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.02) | 0.04 | No relaxation |
| 14. | Ethion | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.5) | 3.0 | No relaxation |



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CIN:-U74999JH2022PTC016683
PAN:-AHHCE3611M
GST:-20AAHCE3611M1ZK

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

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|--------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02682534048 | Group | Water |
| Issue date/time | 26.08.2025/ 12:03 | 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: AMTIPANI BAUXITE MINE

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

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

--Test result End --

| | |
|---------------------------|---------------------------------------|
| Prescribed Limit | IS 10500:2021 |
| Operational Status | Unit was Operational During sampling. |
| Analysed by - Pappu Kumar | |




Reviewed by
(B.N. Kumar)
Technical Head


Issued by
(Omesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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✉ epiclabtech@gmail.com

CIN:-U74999/JH2022PTC019683
PAN:-AAHCE3611M
GST:-20AAHCE3611M1ZK

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

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|--------------|
| Unique Lab Report No. | N/A | Discipline | Biological |
| Report Unique ID | RL02682534049 | Group | Water |
| Issue date/time | 26.08.2025/ 12:06 | Sub Group | Ground Water |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0268 | Sample Booking Number | EPIC-2534049 |
| Sample(s) Code | 2534049 | Sample Receipt (D/T) | 21.08.2025/ 10:57 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 19.08.2025/ 16:05 | Sampling End (D/T) | 19.08.2025/ 16:15 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Pawan Deep Bhagat & Team |
| Sampling method used | IS : 3025 (Part-1) 1987, R-2003 | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|--------|------------------|----|------------|----|----------------|----------|
| Weather condition | Cloudy | Temperature (°C) | 25 | Humidity % | 70 | Wind direction | 90°-270° |
|-------------------|--------|------------------|----|------------|----|----------------|----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|-------------------|----------------|---------------------------------|
| S. Location A | Near Weigh Bridge | GPS coordinate | 23° 20' 38.01" / 84° 15' 30.41" |
|---------------|-------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 21.08.2025/ 11:15 | Test completion date | 26.08.2025/ 10:38 |
|-----------------|-------------------|----------------------|-------------------|

-Test Result-

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

-Test result End -

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



Reviewed by
(B.N. Kumar)
Technical Head

Issued by
(Ajayesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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CIN:-U74999JH2022PTC019583

PAN:-AAHCE3611M

GST:-20AAHCE3611M12X

Accredited by:-

NABL with certificate number TC-12887

Jharkhand State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 45001:2018



TC-12887

Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|---------------|
| Unique Lab Report No. | TC1288725000001029 | Discipline | Chemical |
| Report Unique ID | RL02682534050 | Group | Water |
| Issue date/time | 26.08.2025/ 12:09 | 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: AMTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0268 | Sample Booking Number | EPIC-2534050 |
| Sample(s) Code | 2534050 | Sample Receipt (D/T) | 21.08.2025/ 11.01 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 19.08.2025/ 14:45 | Sampling End (D/T) | 19.08.2025/ 14:55 |
| 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) | 25 | Humidity % | 70 | Wind direction | 90°-270° |
|-------------------|--------|------------------|----|------------|----|----------------|----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|---------------------------|----------------|---------------------------------|
| S. Location A | Khari Part (Spring Water) | GPS coordinate | 23° 21' 03.54" / 84° 15' 44.62" |
|---------------|---------------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 21.08.2025/ 11:21 | Test completion date | 26.08.2025/ 11:25 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result--

| Sl | Test Parameters | Method used | Unit | Results | Limits |
|-----|--|---------------------------|-------|----------------|--------|
| 1. | pH value at 25.7°C | IS 3025 (P-11) 2022 | - | 6.37 | - |
| 2. | Turbidity | IS 3025 (P-10) 1984 | NTU | 0.12 | - |
| 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) 2023 | mg/l | 150.00 | - |
| 7. | Chloride (as Cl) | IS 3025 (P-32) 2019 | mg/l | 12.31 | - |
| 8. | Total Alkalinity (as CaCO ₃) | IS 3025 (P-23) 2019 | mg/l | 30.00 | - |
| 9. | Total Hardness (as CaCO ₃) | IS 3025 (P-21) 2009 | mg/l | 40.16 | - |
| 10. | Calcium (as Ca) | IS 3025 (P-40) 1991 | mg/l | 14.43 | - |
| 11. | Free Residual Chlorine | IS 3025 (P-26) 1986 | mg/l | BDL(MDL-0.4) | - |
| 12. | Sulphate (as SO ₄) | IS 3025 (P-24/Sec-1)2022 | mg/l | 1.70 | - |
| 13. | Nitrate (as NO ₃) | APHA 4500 B 2023 | mg/l | 1.88 | - |
| 14. | Phenolic Compound | IS 3025 (P-43/Sec-1) 2022 | mg/l | BDL(MDL-0.001) | - |



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CIN:-U74999JH2022PTC019683
PAN:-AAHCE3671M
GST:-20AAHCE3671M1Z3

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



TC-12887

Analytical Test Certificate

Unique Lab Report No. TC1288725000001029
Report Unique ID RL02682534050
Issue date/time 26.08.2025/ 12:09

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: AMTIPANI BAUXITE MINE

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

Group - Residues and Contaminants in Water,

Sub Group - Trace Metals Elements

| | | | | |
|----------------------------|------------------|------|----------------|---|
| 15. Copper (as Cu) | APHA 3111 B 2023 | mg/l | BDL(MDL-0.2) | - |
| 16. Iron (as Fe) | APHA 3111 B 2023 | mg/l | BDL(MDL-0.1) | - |
| 17. Lead (as Pb) | APHA 3111 B 2023 | mg/l | BDL(MDL-0.01) | - |
| 18. Cadmium (as Cd) | APHA 3111 B 2023 | mg/l | BDL(MDL-0.003) | - |
| 19. Total Chromium (as Cr) | APHA 3111 B 2023 | mg/l | BDL(MDL-0.05) | - |
| 20. Nickel (as Ni) | APHA 3111 B 2023 | mg/l | BDL(MDL-0.02) | - |
| 21. Total Arsenic (as As) | APHA 3114 B 2023 | mg/l | BDL(MDL-0.005) | - |
| 22. Selenium (as Se) | APHA 3114 B 2023 | mg/l | BDL(MDL-0.005) | - |
| 23. Manganese (as Mn) | APHA 3111 B 2023 | mg/l | BDL(MDL-0.09) | - |
| 24. Zinc (as Zn) | APHA 3111 B 2023 | mg/l | BDL(MDL-0.04) | - |

--Test result End --

Prescribed Limit

Operational Status

Analysed by - Pappu Kumar

Unit was Operational During sampling.


Reviewed by
(B.R. Kumar)
Technical Head


Issued by
(Unmesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand





EPIC LabTech Private Limited

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CIN:-U74999JH2022PTC018683

PAN:-AAHCE3611M

GST:-20AAHCE3611M1ZX

Accredited by:-

Jharkhand State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02682534050 | Group | Water |
| Issue date/time | 26.08.2025/ 12:09 | 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: AMTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0268 | Sample Booking Number | EPIC-2534050 |
| Sample(s) Code | 2534050 | Sample Receipt (D/T) | 21.08.2025/ 11:01 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 19.08.2025/ 14:45 | Sampling End (D/T) | 19.08.2025/ 14:55 |
| 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) | 25 | Humidity % | 70 | Wind direction | 90°-270° |
|-------------------|--------|------------------|----|------------|----|----------------|----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|---------------------------|----------------|--------------------------------|
| S. Location A | Khari Part (Spring Water) | GPS coordinate | 23° 21' 03.54"/ 84° 15' 44.62" |
|---------------|---------------------------|----------------|--------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 21.08.2025/ 11:21 | Test completion date | 26.08.2025/ 11:25 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result--

| Sl | Test Parameters | Method used | Unit | Results | Limits |
|--|---|-----------------------|------|---------------------------------|--------|
| 1. | Fluoride (as F) | APHA 4500 F-C 2023 | mg/l | BDL(MDL-0.1) | - |
| Group-Residues and Contaminants in Water | | | | Sub Group-Trace Metals Elements | |
| 2. | Aluminum | IS 3025 (P-55):2019 | mg/l | BDL(MDL-0.1) | - |
| 3. | Boron | IS 3025 (P-57):2021 | 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. | Dieldrin | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.02) | - |
| 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-0.02) | - |
| 11. | Butachlor | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.5) | - |
| 12. | Chlopyrifos | 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-0.02) | - |
| 14. | Ethion | EPIC/LAB/SOP/WA/01/00 | µg/l | BDL(MDL-0.5) | - |



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CIN:-U74999JH2012PTC019681

PAN:-AAHCE5811M

GST:-20AAHCE5811M1ZK

Accredited by:-

Jharkhand State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02682534050 | Group | Water |
| Issue date/time | 26.08.2025/ 12:09 | 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: AMTIPANI BAUXITE MINE

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

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

--Test result End --

Prescribed Limit

Operational Status

Analysed by - Pappu Kumar

Unit was Operational During sampling




Reviewed by
(B.K. Kumar)
Technical Head


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



Page 2 of 2

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



EPIC LabTech Private Limited

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

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☎ 95049 73994
✉ epiclabtech@gmail.com

CIN:-U74899JH2022PTC019685
PAN:-AAHCE3611M
GST:-20AAHCE3611M1Z3

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

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|---------------|
| Unique Lab Report No. | N/A | Discipline | Biological |
| Report Unique ID | RL02682534051 | Group | Water |
| Issue date/time | 26.08.2025/ 12:12 | 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: AMTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0268 | Sample Booking Number | EPIC-2534051 |
| Sample(s) Code | 2534051 | Sample Receipt (D/T) | 21.08.2025/ 11:02 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 19.08.2025/ 14:45 | Sampling End (D/T) | 19.08.2025/ 14:55 |
| 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) | 25 | Humidity % | 70 | Wind direction | 90°-270° |
|-------------------|--------|------------------|----|------------|----|----------------|----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|---------------------------|----------------|---------------------------------|
| S. Location A | Khari Part (Spring Water) | GPS coordinate | 23° 21' 03.54" / 84° 15' 44.62" |
|---------------|---------------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 21.08.2025/ 11:21 | Test completion date | 26.08.2025/ 11:25 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result--

| Sl | Test Parameters | Method used | Unit | Results | Limits |
|----|-----------------|---------------|------------|--------------|--------|
| 1. | Total Coliform | IS 15185:2002 | Per 100 ml | Not Detected | |
| 2. | E. Coli | IS 15185:2002 | Per 100 ml | Not Detected | |

--Test result End --

Prescribed Limit

Operational Status

Analysed by - Sujata Kumari

Unit was Operational During sampling.



Reviewed by
(B.N. Kumar)
Technical Head

Issued by
(Umesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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

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✉ epiclabtech@gmail.com

CIN:-U74999/JH2022PTC019683
PAN:-AAHCE3611M
GST:-20AAHCE3611M1Z8

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



TC-12887

Analytical Test Certificate

Unique Lab Report No. TC1288725000001030
Report Unique ID RL02682534052
Issue date/time 26.08.2025/ 12:15

Discipline Chemical
Group Pollution & Environment
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 : AMTIPANI BAUXITE MINE

Contact Person Mr. Ankit Das
Contact Number +91 9971034775
Email Id ankit.das@adityabirla.com
Order Date 31.03.2025/ 10:10
Order Number 13812313868

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No. EPIC/OTH/0268
Sample(s) Code 2534052

Sample Booking Number EPIC-2534052
Sample Receipt (D/T) 21.08.2025/ 11:03

Sampling References

Type of Industry Bauxite Mines
Sampling Start (D/T) 19.08.2025/ 17:15
Mode of Sampling Conducted by Laboratory
Sampling method used IS: 3025 (Part-1) 1987, R-2003
Description/condition of sample Receipt sample(s) were fit for analysis.

Ref. of Sampling Plan EPIC/LAB/R/036
Sampling End (D/T) 19.08.2025/ 17:20
Sample collected by Mr. Pawan Deep Bhagat & Team

Environmental Condition during sampling

Weather condition Cloudy Temperature (°C) 25 Humidity % 70 Wind direction 90°-270°

Sampling Location(s) with GPS coordinate(s)

S. Location A Work Shop (Outlet) GPS coordinate 23° 20' 37.43" / 84° 15' 33.93"

Date(s) of performance of the laboratory activities

Test start date 21.08.2025/ 11:23 Test completion date 26.08.2025/ 10:38

--Test Result--

| Sl | Test Parameters | Method used | Unit | Results | Limits |
|----|-----------------------|---------------------------|------|---------------|---------|
| 1. | pH value at 25.7°C | IS 3025 (P-11) 2022 | - | 6.89 | 6.5-8.5 |
| 2. | BOD (3 days at 27°C) | IS 3025 (P-44) 2000 | mg/l | 16.0 | - |
| 3. | COD | IS 3025 (P-58) 2006 | mg/l | 68.0 | 150.0 |
| 4. | Oil & Grease | IS 3025 (P-39) 2021 | mg/l | BDL(MDL-04) | 10.0 |
| 5. | Total Suspended Solid | IS 3025 (P-17) 2022 | mg/l | 47.0 | - |
| 6. | Phosphate | IS 3025 (P-31/Sec-1) 2022 | mg/l | 0.55 | - |
| 7. | Zinc | APHA 3111 B 2023 | mg/l | BDL(MDL-0.04) | - |

--Test result End --

Prescribed Limit Environmental (Protection) Rules-1986, Schedule I, Serial No. 114
Operational Status Unit was Operational During sampling.

Analysed by - Pappu Kumar



Reviewed by
(B.N. Kumar)
Technical Head

Issued by
(Anish Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

Address:-

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✉ epiclabtech@gmail.com

CIN:-U74999JH2022PTC019683

PAN:-AAHCE3611M

GST:-20AAHCE3611M1ZX

Accredited by:-

Jharkhand State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

| | | | |
|-----------------------|-------------------|------------|-------------------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02682534052 | Group | Pollution & Environment |
| Issue date/time | 26.08.2025/ 12:15 | 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 : AMTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0268 | Sample Booking Number | EPIC-2534052 |
| Sample(s) Code | 2534052 | Sample Receipt (D/T) | 21.08.2025/ 11:03 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 19.08.2025/ 17:15 | Sampling End (D/T) | 19.08.2025/ 17:20 |
| 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) | 25 | Humidity % | 70 | Wind direction | 90°-270° |
|-------------------|--------|------------------|----|------------|----|----------------|----------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|--------------------|----------------|---------------------------------|
| S. Location A | Work Shop (Outlet) | GPS coordinate | 23° 20' 37.43" / 84° 15' 33.93" |
|---------------|--------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 21.08.2025/ 11:23 | Test completion date | 26.08.2025/ 10:38 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result--

| Sl | Test Parameters | Method used | Unit | Results | Limits |
|----|-----------------------------|---------------------|------|---------|--------|
| 1. | Total Dissolve Solids (TDS) | IS 3025 (P-16) 2023 | mg/l | 162.00 | - |
| 2. | Dissolve Oxygen (DO) | IS 3025 (P-38) 1986 | mg/l | 1.0 | - |

--Test result End --

| | |
|--------------------|---|
| Prescribed Limit | Environmental (Protection) Rules-1986, Schedule I, Serial No. 114 |
| Operational Status | Unit was Operational During sampling. |

Analysed by - Pappu Kumar



Reviewed by
(B.N. Kumar)
Technical Head

Issued by
(Omesh Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited

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Jharkhand - 834005, India

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CIN:-U74999JH2022PTC019685
PAN:-AANCE3611M
GST:-20AANCE3611M12X

Accredited by:-
NABL with certificate number TC-12887
Hazardous Waste Pollution Control Board
Certified by:-
ISO 9001:2015 and ISO 45001:2018



TC-12887

Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|-----------------------|
| Unique Lab Report No. | TC1288725000001199 | Discipline | Chemical |
| Report Unique ID | RL02962538004 | Group | Atmospheric Pollution |
| Issue date/time | 18.09.2025/17:09 | 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: AMTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|-------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0296 | Sample Booking Number | EPIC-2538004 |
| Sample(s) Code | 2538004 (A) (B) (C) (D) | Sample Receipt (D/T) | 15.09.2025/ 10:42 |

Sampling References

| | | | |
|---------------------------------|---|-----------------------|--------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 12.09.2025/ 13:00 | Sampling End (D/T) | 13.09.2025/ 09:10 |
| 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 (NAAQM/36/2012-13) | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|--------|------------------|----|------------|----|----------------|---------|
| Weather condition | Cloudy | Temperature (°C) | 26 | Humidity % | 64 | Wind direction | 0°-180° |
|-------------------|--------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 1F | GPS coordinate | 23° 20' 48.16" / 84° 15' 24.28" |
| S. Location D | Mines Near Quarry - 7C | GPS coordinate | 23° 20' 18.12" / 84° 15' 34.07" |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 15.09.2025/ 11:02 | Test completion date | 18.09.2025/ 16:00 |
|-----------------|-------------------|----------------------|-------------------|

-Test Results-

| Sl | Test Parameters | Method used | Unit | Results | | | | Limits |
|----|--|---------------------|-------------------|--------------------|--------------------|--------------------|--------------------|-------------|
| | | | | A | B | C | D | |
| 1. | Particulate Matter (PM ₁₀) | IS-5182 (P-23) 2022 | µg/m ³ | 56.96 | 59.08 | 52.85 | 54.95 | 100 (24 hr) |
| 2. | Fine Particulate Matter (PM _{2.5}) | IS 5182 (P-24) 2019 | µg/m ³ | 22.27 | 25.33 | 26.32 | 29.91 | 60(24 hr) |
| 3. | Sulphur Dioxide (SO ₂) | IS-5182 (P-02) 2023 | µg/m ³ | 07.27 | 08.87 | 06.84 | 08.85 | 80(24 hr) |
| 4. | Nitrogen Dioxide (NO ₂) | IS-5182 (P-06) 2022 | µg/m ³ | 16.83 | 17.92 | 16.77 | 18.99 | 80(24 hr) |
| 5. | Ammonia (NH ₃) | IS-5182 (P-25) 2018 | µg/m ³ | 25.52 | 25.80 | 26.65 | 26.93 | 400(24 hr) |
| 6. | Ozone (O ₃) | IS-5182 (P-08) 2019 | µg/m ³ | 13.69 | 14.01 | 14.97 | 15.60 | 180(1 hr) |
| 7. | Lead (Pb) | IS-5182(P-22) 2019 | µg/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | 1.0(24 hr) |
| 8. | Nickel (Ni) | IS-5182(P-26) 2020 | ng/m ³ | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | BDL (MDL-0.1) | |
| 9. | Arsenic (As) | USEPA IO 3.2:1999 | ng/m ³ | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | BDL (MDL-0.001) | |

-Test Results End -

| | |
|-------------------------------|--|
| Prescribed Limit | Environmental (Protection) Rules-1986, Schedule VII. |
| Operational Status | Unit was Operational During sampling. |
| Analyzed by - Vishal Mangaraj | |



Reviewed by
(S.K. Kumar)
Technical Head

Issue by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand

Page 1 of 1

Contractual Notes | 1. The Laboratory accepts responsibility for content of this report | 2. Test performed at laboratory's permanent facility at specific environmental condition as method required and results relate only to the sample tested in prescribed Date & time | 3. The Test report shall not be reproduced full or in part & can't be used as proof in the court of law. | 4. Any complaint about this report should be communicated in writing within 30 days of its issue | 5. Total liability of EPIC LabTech Pvt. Ltd. will be limited to involved amount only. | 6. All disputes are subjected to Ranchi Jurisdiction and maximum liability of the laboratory does not exceed the testing and sampling charges | 7. Opinion does not imply endorsement of the tested product by laboratory. Under no circumstances, laboratory accepts any caused by use or misuse of this report. | 8. When the results are from external provider are marked as * mark. |

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



EPIC LabTech Private Limited

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☎ 93049 73994
✉ epiclabtech@gmail.com

CIN:-U74999JH2022PTC019685 Accredited by:-
Jharkhand State Pollution Control Board
PAN:-AAHCE3611M Certified by:-
ISO 9001:2015 and ISO 45001:2018
GST:-20AAHCE3611MT2X

Analytical Test Certificate

| | | | |
|-----------------------|------------------|------------|-----------------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02962538004 | Group | Atmospheric Pollution |
| Issue date/time | 18.09.2025/17:09 | 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 : AMTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|-------------------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0296 | Sample Booking Number | EPIC-2538004 |
| Sample(s) Code | 2538004 (A) (B) (C) (D) | Sample Receipt (D/T) | 15.09.2025/ 10:42 |

Sampling References

| | | | |
|---------------------------------|---|-----------------------|------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 19.08.2025/ 13:00 | Sampling End (D/T) | 20.08.2025/ 09:10 |
| 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 (NAAQM/36/2012-13) | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|--------|------------------|----|------------|----|----------------|---------|
| Weather condition | Cloudy | Temperature (°C) | 26 | Humidity % | 64 | Wind direction | 0°-180° |
|-------------------|--------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mine Entrance Gate | GPS coordinate | 23° 20' 41.02" / 84° 15' 24.41" |
| S. Location B | Near Mine Office/WB | GPS coordinate | 23° 20' 37.09" / 84° 15' 32.23" |
| S. Location C | Mines Near Quarry - 1F | GPS coordinate | 23° 20' 48.16" / 84° 15' 24.28" |
| S. Location D | Mines Near Quarry - 7C | GPS coordinate | 23° 20' 18.12" / 84° 15' 34.07" |

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 15.09.2025/ 11:02 | Test completion date | 18.09.2025/ 16:00 |
|-----------------|-------------------|----------------------|-------------------|

--Test Results--

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

--Test Results End --

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



Reviewed by
(R.N. Kumar)
Technical Head





EPIC LabTech Private Limited

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

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☎ 93049 73994
✉ epiclabtech@gmail.com

CIN: U74999/JH2022PTC019685
PAN: AAHCE3611M
GST: 20AAHCE3611M1ZK

Accredited by -
NABL vide certificate number JC - 13687
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018



TC-12887

Analytical Test Certificate

| | | | |
|-----------------------|--------------------|------------|-------------------------|
| Unique Lab Report No. | TC1288725000001200 | Discipline | Chemical |
| Report Unique ID | RL02962538005 | Group | Pollution & Environment |
| Issue date/time | 18-09-2025/17:12 | Sub Group | Soil/Sediments |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0296 | Sample Booking Number | EPIC-2538005 |
| Sample(s) Code | 2538005 | Sample Receipt (D/T) | 15.09.2025/ 10:43 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 12.09.2025/ 16:10 | Sampling End (D/T) | 12.09.2025/ 16:20 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Pawan Deep Bhagat & Team |
| Sampling method used | EPIC/LAB/SOP/PE/01/00 | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|--------|------------------|----|------------|----|----------------|---------|
| Weather condition | Cloudy | Temperature (°C) | 26 | Humidity % | 64 | Wind direction | 0°-180° |
|-------------------|--------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mines Near Quarry - IF | GPS coordinate | 23° 20' 48.80" / 84° 15' 23.50" |
|---------------|------------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 15.09.2025/ 11:35 | Test completion date | 18.09.2025/ 15:45 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result--

| Sl | Test Parameters | Method used | Unit | Results | Limits |
|-----|-------------------------|-------------------|-------|----------------|--------|
| 1. | pH value at 25.7°C | MAGI 2011 | - | 6.02 | - |
| 2. | Available Phosphorus | MAGI 2011 | Kg/ha | 11.00 | - |
| 3. | Available Potassium | MAGI 2011 | Kg/ha | 130.00 | - |
| 4. | Organic Carbon | MAGI 2011 | % | 1.66 | - |
| 5. | Electrical Conductivity | MAGI 2011 | µs/cm | 121.0 | - |
| 6. | Magnesium | MAGI 2011 | mg/kg | 62.06 | - |
| 7. | Nitrogen | MAGI 2011 | % | 0.14 | - |
| 8. | Arsenic (as As) | USEPA 3050 B 1996 | mg/kg | BDL(MDL-0.005) | - |
| 9. | Cadmium (as Cd) | USEPA 3050 B 1996 | mg/kg | 0.90 | - |
| 10. | Selenium (as Se) | USEPA 3050 B 1996 | mg/kg | BDL(MDL-0.006) | - |

--Test result End --

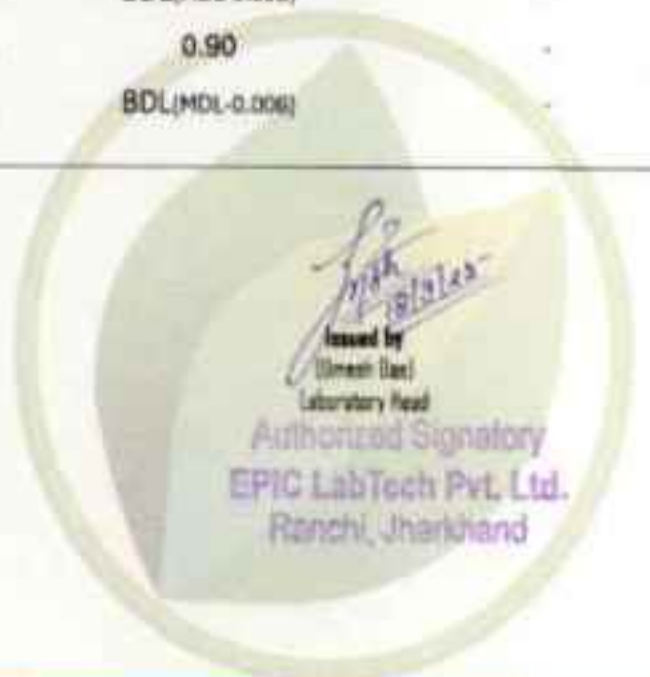
Operational Status

Unit was Operational During sampling.

Analysed by - Ishika Singh



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





EPIC LabTech Private Limited

Address:-

C/o - R.K. Tripathi, Indraprastha,
Road No. - 5, Ranchi,
Jharkhand - 834003, India

☎ 0651 4666392

☎ 98357 86477

☎ 93049 73984

✉ epiclabtech@gmail.com

CIN:-U74999JH2022PTC019685

PAN:-AAHCE3811M

GST:-20AAHCE3811M12X

Accredited by:-

Jharkhand State Pollution Control Board

Certified by:-

ISO 9001:2015 and ISO 45001:2018

Analytical Test Certificate

| | | | |
|-----------------------|------------------|------------|-------------------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02962538005 | Group | Pollution & Environment |
| Issue date/time | 18-09-2025/17:12 | Sub Group | Soil/Sediments |

Report Issue to

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

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

References of Quality Management System (Scope of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0296 | Sample Booking Number | EPIC-2538005 |
| Sample(s) Code | 2538005 | Sample Receipt (D/T) | 15.09.2025/ 10:43 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 12.09.2025/ 16:10 | Sampling End (D/T) | 12.09.2025/ 16:20 |
| Mode of Sampling | Conducted by Laboratory | Sample collected by | Mr. Pawan Deep Bhagat & Team |
| Sampling method used | EPIC/LAB/SOP/PE/01/00 | | |
| Description/condition of sample | Receipt sample(s) were fit for analysis. | | |

Environmental Condition during sampling

| | | | | | | | |
|-------------------|--------|------------------|----|------------|----|----------------|---------|
| Weather condition | Cloudy | Temperature (°C) | 26 | Humidity % | 64 | Wind direction | 0°-180° |
|-------------------|--------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mines Near Quarry - IF | GPS coordinate | 23° 20' 48.80" / 84° 15' 23.50" |
|---------------|------------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 15.09.2025/ 11:35 | Test completion date | 18.09.2025/ 15:45 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result--

| Sl. | Test Parameters | Method used | Unit | Results | Limits |
|-----|------------------|-----------------------|-------|----------------|--------|
| 1. | Chloride (as Cl) | EPIC/LAB/SOP/PE/01/00 | mg/kg | 0.062 | - |
| 2. | Mercury (as Hg) | USEPA 3050 B 1996 | mg/kg | BDL(MDL-0.005) | - |

--Test result End--

Operational Status Unit was Operational During sampling.

Analysed by - Ishika Singh



Reviewed by
(E.N. Kumar)
Technical Head

Issued by
(Ankit Das)
Laboratory Head

Authorized Signatory
EPIC LabTech Pvt. Ltd.
Ranchi, Jharkhand



EPIC LabTech Private Limited



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

☎ 0651 4666392
☎ 98257 89477
☎ 92049 73994
✉ epiclabtech@gmail.com

CIN:-U74999JH2022PTC019683
PAN:-AANCE3611M
GST:-20AAHCE3411A12X

Accredited by -
NABL, with certificate Number TC- 12867
Jharkhand State Pollution Control Board
Certified by -
ISO 9001:2015 and ISO 45001:2018

TC-12867

Analytical Test Certificate

Unique Lab Report No. TC1286725000001201
Report Unique ID RL02962538006
Issue date/time 18-09-2025/17:15

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 : AMTIPANI BAUXITE MINE

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

References of Quality Management System (Steps of Traceability Chain)

Customer Registration No. EPIC/OTH/0296
Sample(s) Code 2538006
Sample Booking Number EPIC-2538006
Sample Receipt (D/T) 15.09.2025/ 10:43

Sampling References

Type of Industry Bauxite Mines
Sampling Start (D/T) 12.09.2025/ 15:25
Mode of Sampling Conducted by Laboratory
Sampling method used IS : 3025 (Part-1) 1987, R-2003
Description/condition of sample Receipt sample(s) were fit for analysis.
Ref. of Sampling Plan EPIC/LAB/R/036
Sampling End (D/T) 12.09.2025/ 15:35
Sample collected by Mr. Pawan Deep Bhagat & Team

Environmental Condition during sampling

Weather condition Cloudy Temperature (°C) 26 Humidity % 64 Wind direction 0°-180°

Sampling Location(s) with GPS coordinate(s)

S. Location A Mines Near Quarry - 76
GPS coordinate 23° 20' 12.28" / 84° 15' 33.32"

Date(s) of performance of the laboratory activities

Test start date 15.09.2025/ 11:03
Test completion date 18.09.2025/ 15:10

--Test Result--

| Sl | Test Parameters | Method used | Unit | Results | Limits |
|---|------------------------------|---------------------|-----------------------------------|--------------|--------|
| 1. | pH value at 25°C | IS 3025 (P-11) 2022 | - | 6.21 | - |
| 2. | Total Dissolved Solids (TDS) | IS 3025 (P-16) 2023 | mg/l | 4270.00 | - |
| 3. | Calcium (as Ca) | IS 3025 (P-40) 1991 | mg/l | 28.00 | - |
| Group - Residues and Contaminants in Water, | | | Sub Group - Trace Metals Elements | | |
| 4. | Iron (as Fe) | APHA 3111 B 2023 | mg/l | BDL(MDL-0.1) | - |

--Test result End --

Operational Status Unit was Operational During sampling.

Analysed by - Pappu Kumar



Reviewed by
(R.K. Kumar)
Technical Head





EPIC LabTech Private Limited

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

☎ 0651 4866392
☎ 98357 86677
☎ 93049 71994
✉ epiclabtech@gmail.com

CIN - U74999JH2022PTC018685
PAN - AAMCE3611M
GST - 20AAMCE3611MT2X

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

Analytical Test Certificate

| | | | |
|-----------------------|------------------|------------|---------------|
| Unique Lab Report No. | N/A | Discipline | Chemical |
| Report Unique ID | RL02962538006 | Group | Water |
| Issue date/time | 18-09-2025/17:15 | Sub Group | Surface Water |

Report Issue to

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

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

References of Quality Management System (Steps of Traceability Chain)

| | | | |
|---------------------------|---------------|-----------------------|-------------------|
| Customer Registration No. | EPIC/OTH/0296 | Sample Booking Number | EPIC-2538006 |
| Sample(s) Code | 2538006 | Sample Receipt (D/T) | 15.09.2025/ 10:43 |

Sampling References

| | | | |
|---------------------------------|--|-----------------------|------------------------------|
| Type of Industry | Bauxite Mines | Ref. of Sampling Plan | EPIC/LAB/R/036 |
| Sampling Start (D/T) | 12.09.2025/ 15:25 | Sampling End (D/T) | 12.09.2025/ 15:35 |
| 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) | 26 | Humidity % | 64 | Wind direction | 0°-180° |
|-------------------|--------|------------------|----|------------|----|----------------|---------|

Sampling Location(s) with GPS coordinate(s)

| | | | |
|---------------|------------------------|----------------|---------------------------------|
| S. Location A | Mines Near Quarry - 76 | GPS coordinate | 23° 20' 12.28" / 84° 15' 33.32" |
|---------------|------------------------|----------------|---------------------------------|

Date(s) of performance of the laboratory activities

| | | | |
|-----------------|-------------------|----------------------|-------------------|
| Test start date | 15.09.2025/ 11:03 | Test completion date | 18.09.2025/ 15:10 |
|-----------------|-------------------|----------------------|-------------------|

--Test Result--

| Sl | Test Parameters | Method used | Unit | Results | Limits |
|----|------------------------------|---------------------|------|-------------|--------|
| 1. | Dissolve Oxygen (DO) | IS 3025 (P-38) 1989 | mg/l | 2.0 | - |
| 2. | Temperature | IS 3025 (P-00) 1986 | °C | 26.1 | - |
| 3. | BOD (3days at 27°C) | IS 3025 (P-44) 2000 | mg/l | 8.4 | - |
| 4. | COD | IS 3025 (P-58) 2006 | mg/l | 34.0 | - |
| 5. | Total Suspended Solids (TSS) | IS 3025 (P-17) 2022 | mg/l | 22.00 | - |
| 6. | Oil & Grease | IS 3025 (P39) 2021 | mg/l | BDL(MDL-04) | - |

Group - Residues and Contaminants in Water,

| | | | | | |
|----|-------------------|---------------------|------|--------------|---|
| 7. | Aluminium (as Al) | IS 3025 (P-55) 2003 | mg/l | BDL(MDL-0.1) | - |
|----|-------------------|---------------------|------|--------------|---|

Sub Group - Trace Metals Elements

--Test result End--

Operational Status

Unit was Operational During sampling.

Analysed by - Pappu Kumar



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





Annexure 3

Date – 01.11.2025

Office Order

Environmental Cell has been re-constituted for Amtipani Bauxite Mine (Area 190.95 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. Yogendra Lilhare (Coordinator)
2. Mr. Susovan Samanta (Geologist)
3. Mr. Girija Tamrakar (Environment Engineer)
4. Mr. Anand Prakash Tiwari (Environment Engineer)

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

Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)

Annexure 4

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

Annexure 4

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

*Static information about the mines included in the above table



Basudev Gangopadhyay
AVP (Planning, Environment and Compliance)

Annexure-5

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

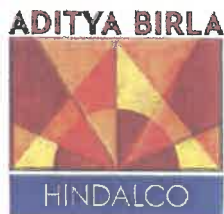
The composite cost during the year 2025-26 for environmental protection & pollution control by Jharkhand Mines division of M/s Hindalco Industries Ltd & M/s Minerals & Minerals Ltd for implementation of the suggested measures in EC at our all the operating mines in the state of Jharkhand-namely Bagru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

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

**Part of OB removed cost



Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)



D/C

Ref. No: HIL /LHD/ENV/JSPCB/262**Date:** 16.08.2025**To,****The Dy. Director General of Forest (C)**

Ministry of Environment, Forests and Climate Changes

Integrated Regional Office

2nd Floor, Headquarter-Jharkhand State Housing Board

Harmu Chowk, Ranchi, Jharkhand-834002

Sub.: Submission of Advertisement in Newspaper regarding Revalidated Environmental Clearance of Amtipani Bauxite Mine (Area 190.95 Ha).**Ref.:** Revalidated Environmental Clearance Identification No. EC25A001JH139944 dated 29.07.2025.

Dear Sir,

In compliance with Condition No. 1.7 of the statutory compliance section of the above Environmental Clearance, we have published the required advertisement in two local newspapers, **Hindustan** and **Hindustan Times**, on **03.08.2025**.

Copies of the published advertisements are enclosed herewith for your ready reference.

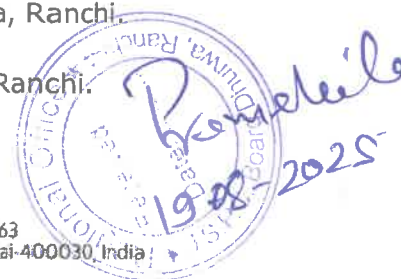
We kindly request you to acknowledge receipt of the same.

Thanking you,

Yours faithfully

For **M/s Hindalco Industries Ltd.****Anand Tiwari****Assistant Manager (Environment & Compliance)****Encl:** Copies of Advertisements in Newspaper regarding EC of Amtipani Bauxite Mine**CC:** The Member Secretary, Jharkhand State Pollution Board, Dhurwa, Ranchi.**CC:** The Regional Officer, Jharkhand State Pollution Board, Dhurwa, Ranchi.

Hindalco Industries Limited
 Mines Division, Court Road, Lohardaga 835302, Jharkhand, India | T: +91 6526 223163
 Corporate Office : 6th & 7th Floor, Birla Birla Centurion, Pandurang Budhakar Marg, Worli, Mumbai-400030, India |
 T: +91 22 66626666/626105555 | F: +91 22 62610400/62610500
 Registered Office : 21st Floor, One Unity Center, Senapati Bapat Marg, Prabhadevi, Mumbai - 400013, India
 T: +91 22 69477000/69477150 | F: +91 22 69477001/69477090
 W: www.hindalco.com | E: hilinvestors@adityabirla.com





Ref. No: HIL /LHD/ENV/GRAM-PANCHAYAT/271

Date: 21.08.2025

To,
The Gram Panchayat Mukhiya,
 Gram Panchayat- Amtipani,
 Village- Bahagara
 District- Gumla, Jharkhand

Sub.: Information regarding Grant of Revalidated Environmental Clearance (EC) for Amtipani Bauxite Mine (Area 190.95 Ha).

Ref.: Revalidated Environmental Clearance for Amtipani Bauxite Mine (190.95 Ha).

Dear Sir,

We would like to inform you that a revalidated Environmental Clearance (EC) has been granted for the Amtipani Bauxite Mine (Area: 190.95 Ha) of M/s Hindalco Industries Limited, located in District Gumla, Jharkhand. It has been issued by MoEF&CC, New Delhi, vide EC Identification No. EC25A001JH139944 dated 29.07.2025.

A copy of granted Environmental Clearance (EC) is attached herewith for your ready reference.

We request you to kindly acknowledge receipt of the same.

Thanking you,

Yours faithfully

(Signature)
 मुखिया
 ग्राम पंचायत-अमतीपानी
 प्रखण्ड-बिशुनपुर, गुमला

For **M/s Hindalco Industries Ltd.**

(Signature)
Anand Tiwari
Assistant Manager (Environment & Compliance)

Encl: Copy of Revalidated Environmental Clearance (EC) – Amtipani Bauxite Mine



Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

To,

The GENERALMANAGER
HINDALCO INDUSTRIES LTD JHARKHAND
MINES DIVISION, COURT ROAD, LOHARDAGA,
JHARKHAND, Lohardaga, Jharkhand-835302

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the Ministry vide proposal number IA/JH/MIN/409979/2022 dated 10 Jul 2023. The particulars of the environmental clearance granted to the project are as below.

| | |
|--|---|
| 1. EC Identification No. | EC25A001JH139944 |
| 2. File No. | J-11015/241/2005-IA-II(NCM) |
| 3. Project Type | New |
| 4. Category | A |
| 5. Project/Activity including Schedule No. | 1(a) Mining of minerals |
| 6. Name of Project | Revalidation of EC Under MoEF&CC Notification S.O 1530(E) dated 06th April, 2018 for Amtipani Bauxite Mine (ML Area- 190.95 ha) with Production Capacity of Bauxite 150000 TPA near Villages: Amtipani, Chirodih & Gurdari, Taluka: Bishunpur, District: Gumla, Jharkhand by M/s. Hindalco Industries Limited |
| 7. Name of Company/Organization | HINDALCO INDUSTRIES LTD JHARKHAND |
| 8. Location of Project | Jharkhand |
| 9. TOR Date | N/A |

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 29/07/2025

(e-signed)
Rajeev Ranjan
Scientist E
IA - (Non-Coal Mining sector)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH. Please quote identification number in all future correspondence.

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Ref. No: HIL /LHD/ENV/GRAM-PANCHAYAT/271

Date: 21.08.2025

To,
The Gram Panchayat Mukhiya,
Gram Panchayat- Gurdari
Village: Gurdari
District- Gumla, Jharkhand

Sub.: Information regarding Grant of Revalidated Environmental Clearance (EC) for Amtipani Bauxite Mine (Area 190.95 Ha).

Ref.: Revalidated Environmental Clearance for Amtipani Bauxite Mine (190.95 Ha).

Dear Sir,

We would like to inform you that a revalidated Environmental Clearance (EC) has been granted for the Amtipani Bauxite Mine (Area: 190.95 Ha) of M/s Hindalco Industries Limited, located in District Gumla, Jharkhand. It has been issued by MoEF&CC, New Delhi, vide EC Identification No. EC25A001JH139944 dated 29.07.2025.

A copy of granted Environmental Clearance (EC) is attached herewith for your ready reference.


We request you to kindly acknowledge receipt of the same.

Thanking you,

Yours faithfully

For **M/s Hindalco Industries Ltd.**


Anand Tiwari
Assistant Manager (Environment & Compliance)


मुखिया
पंचायत-गुरदरी
प्रखण्ड-बिशुनपुर, गुमला

Encl: Copy of Revalidated Environmental Clearance (EC) – Amtipani Bauxite Mine

ENVIRONMENTAL
CLEARANCE

PARIVESH

(Pro-Active and Responsive Facilitation by Interactive,
and Virtuous Environment Single-Window Hub)



Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

To,

The GENERALMANAGER
HINDALCO INDUSTRIES LTD JHARKHAND
MINES DIVISION, COURT ROAD, LOHARDAGA,
JHARKHAND, Lohardaga, Jharkhand-835302

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the Ministry vide proposal number IA/JH/MIN/409979/2022 dated, 10 Jul 2023. The particulars of the environmental clearance granted to the project are as below.

- | | |
|--|---|
| 1. EC Identification No. | EC25A001JH139944 |
| 2. File No. | J-11015/241/2005-IA-II(NCM) |
| 3. Project Type | New |
| 4. Category | A |
| 5. Project/Activity including Schedule No. | 1(a) Mining of minerals |
| 6. Name of Project | Revalidation of EC Under MoEF&CC Notification S.O 1530(E) dated 06th April, 2018 for Amtipani Bauxite Mine (ML Area- 190.95 ha) with Production Capacity of Bauxite 150000 TPA near Villages: Amtipani, Chirodih & Gurdari, Taluka: Bishunpur, District: Gumla, Jharkhand by M/s. Hindalco Industries Limited |
| 7. Name of Company/Organization | HINDALCO INDUSTRIES LTD JHARKHAND |
| 8. Location of Project | Jharkhand |
| 9. TOR Date | N/A |

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 29/07/2025

(e-signed)
Rajeev Ranjan
Scientist E
IA - (Non-Coal Mining sector)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH. Please quote identification number in all future correspondence.

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ENVIRONMENT POLICY

We, at Hindalco Industries Limited, operating across the process chain from mining to semi-fabricated products in non-ferrous metals, will strive to continually improve our environmental performance for sustainable operations and responsible growth globally, by integrating sound environmental systems & practices and Pollution Prevention approach.

To achieve this, we shall:

- Continue to comply with all applicable legal and other requirements on environment.
- Continually improve environmental performance by strengthening the Environmental Management System conforming to national /international standards, including setting up and reviewing targets and measuring, monitoring and reporting their progress.
- Allocate sufficient resources such as organisational structure, technology and funds for implementation of the policy and for regular monitoring of performance.
- Adopt pollution prevention approach for all our processes; enhance material efficiency and achieve high productivity.
- Conserve key resources like electricity, coal, water, oil, and raw materials, by promoting efficient technologies and manufacturing process improvements, water conservation programmes, and efficient use of raw materials.
- Adopt energy efficient and cleaner technologies based on techno-economic viability, appropriate to the region in which we operate, and in line with our growth and diversification plans.
- Promote the principles of waste prevention, reduction, reuse, recycling and recovery to minimize waste generation and strengthen the practices for management of wastes.
- Work in partnership with regulatory authorities, relevant suppliers, contractors, distributors and logistics partners and all other stakeholders, as applicable, to understand and initiate improvement actions.
- Engage with internal and external stakeholders including key business partners such as joint venture partners, licensees and outsourcing partners and wider communities, to broaden our understanding of environmental priorities and initiate actions on key environmental challenges.
- Adapt environmental performance over life cycle as an important input to the decision-making processes in the organization.
- Raise environmental awareness at all levels of our operations, through training and effective communication, participation and consultation.
- Communicate this Policy within the Organization. Develop and follow appropriate communication system to inform other stakeholders, as applicable, about our environmental commitment and performance.
- Conduct environmental, health and safety due diligence before undergoing any mergers and acquisitions.

This policy shall be made available to all employees, suppliers, customers, community and other stakeholders, as appropriate. The implementation of this policy is the responsibility of respective heads of units with the monitoring and tracking done by the Apex Sustainability Committee under the guidance of the Managing Director.

Satish Pai

MD, Hindalco Industries Limited

Date : 9th August, 2022

Date/Time MicL at 12:44:54 September 30, 2025
Trigger Source Geo: 0.500 mm/s, Mic: 2.000 pa.(L)
Range Geo: 254.0 mm/s
Record Time 4.251 sec (Auto=3Sec) at 1024 sps
Operator/Setup: Operator/Q AMTIPNI.MMB

Serial Number UM17407 V 10-90FB Micromate ISEE
Battery Level 3.7 Volts
Unit Calibration April 1, 2025 by UES New Delhi
File Name __TEMP.EVT

Notes

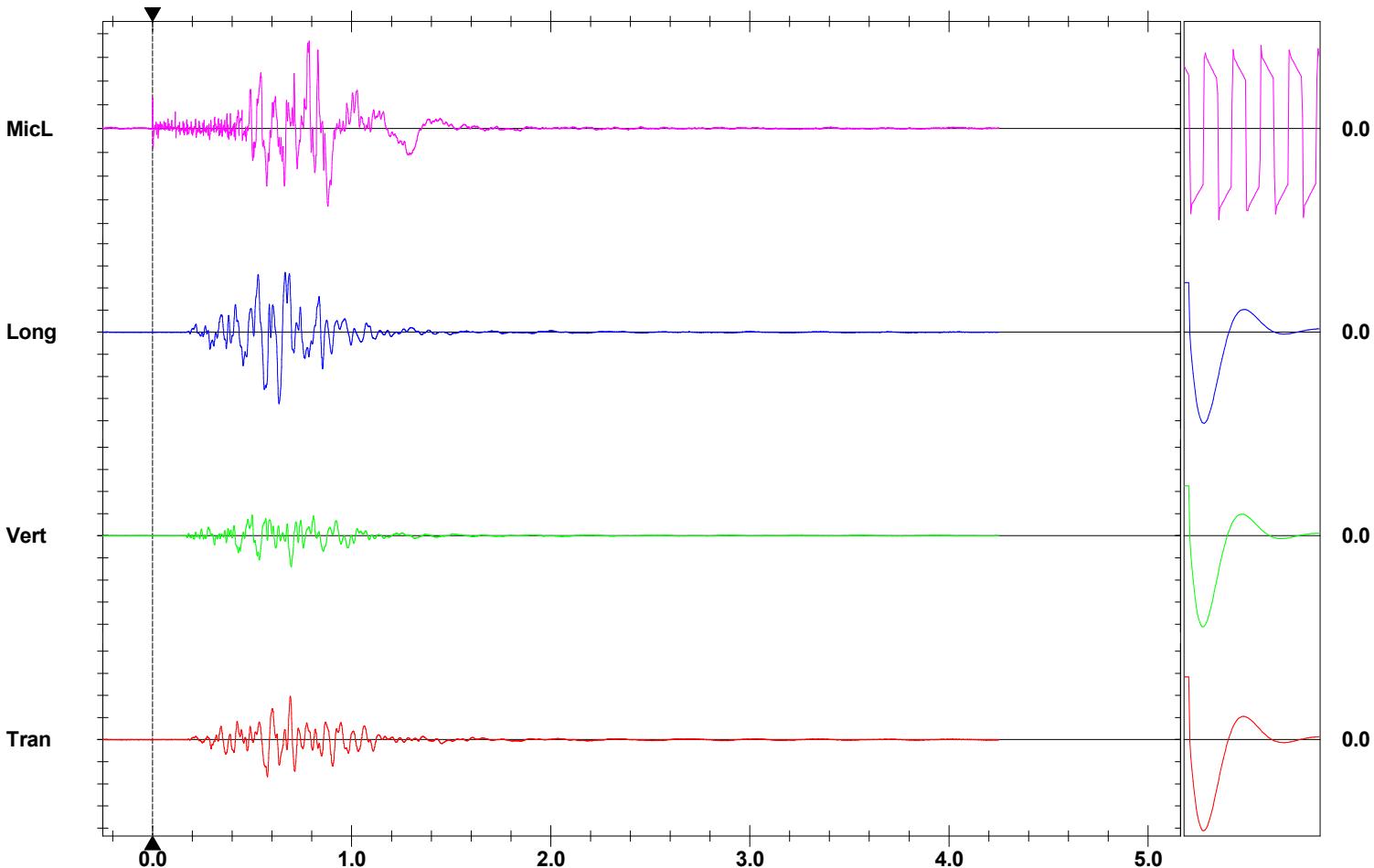
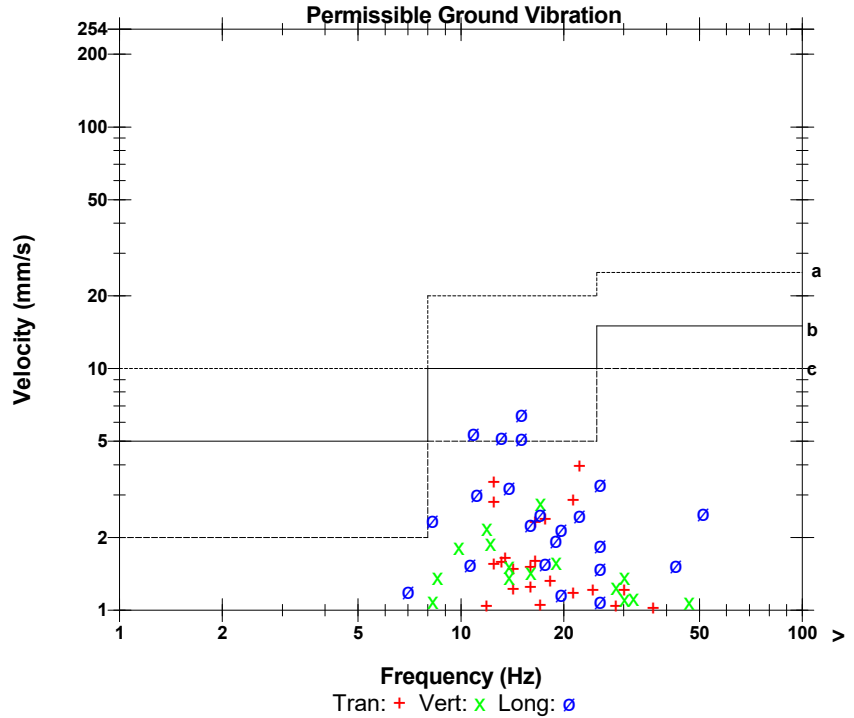
Location: AMTIPANI quarry 2b 30/9/25
 Client:
 User Name: HINDALCO INDUSTRIES LTD
 General:

Microphone Linear Weighting
PSPL 7.401 pa.(L) at 0.786 sec
ZC Freq 10 Hz
Channel Test Passed (Freq = 19.7 Hz Amp = 1180 mv)

| | Tran | Vert | Long | |
|---------------------|--------|--------|--------|------|
| PPV | 3.941 | 2.790 | 6.479 | mm/s |
| ZC Freq | 22 | 17 | 15 | Hz |
| Time (Rel. to Trig) | 0.692 | 0.696 | 0.636 | sec |
| Peak Acceleration | 0.093 | 0.044 | 0.106 | g |
| Peak Displacement | 0.039 | 0.026 | 0.086 | mm |
| Sensor Check | Passed | Passed | Passed | |
| Frequency | 7.3 | 7.5 | 7.1 | Hz |
| Overswing Ratio | 3.9 | 4.2 | 4.0 | |

Peak Vector Sum 6.887 mm/s at 0.635 sec

DGMS India (A)





Ref: HIL/JH/DFO-LOHARDAGA/WLCP Fees/143

Date: 27.06.2025

To,
Divisional Forest Officer,
Lohardaga, Jharkhand

Sub: Payment of Rs. 387.344 Lakhs (Rupees Three Hundred Eighty-Seven Lakhs Thirty-Four Thousand Four Hundred Only) towards Wildlife Conservation Plan fees as per sanctioned order by PCCF, Wildlife, Ranchi for our all-bauxite mines of Hindalco Industries Limited and Minerals & Minerals Limited in Lohardaga Forest Division, Jharkhand.

Ref: (i) Your Letter no. 597 dated 10.06.2025 (ii) Your Letter no. 598 dated 10.06.2025
(iii) Your Letter no. 599 dated 10.06.2025

Dear Sir,

The Wildlife Conservation Plans for following Bauxite mines of Hindalco Industries Ltd and Minerals & Minerals Limited have been approved by PCCF, Wildlife, Ranchi. Subsequently, we have received the demand notes from your good office as per the allocated fund mentioned in the sanctioned/approved documents.

As per the demand note received from your good office, a total amount of an amount of **Rs. 387.344 Lakhs (Rupees Three Hundred Eighty-Seven Lakhs Thirty-Four Thousand Four Hundred Only)** has to be paid to the Divisional Forest Officer, Lohardaga as per the sanctioned budget mentioned in the approved report according to the EC condition.

Therefore, we are submitting three demand drafts amounting to **Rs. 387.344 Lakhs (Rupees Three Hundred Eighty-Seven Lakhs Thirty-Four Thousand Four Hundred Only)** against the Wildlife Conservation Plan for the following bauxite mines of Hindalco Industries Ltd. and Minerals & Minerals Limited. The details of the bank drafts are as follows:

| S. No. | Your reference Letter No | Amount in Demand note | Mining Project | Demand Draft (DD) In Favour of | Amount (Rs) | DD No. dated |
|--------------|--------------------------|-----------------------|--|------------------------------------|----------------------|-------------------------|
| | 597 dated 10.06.2025 | 246.684 Lakhs | Bagru, Bhusar, Hisri New and Hisri Old, Pakhar (115.13 Ha), Pakhar (109.507 Ha), Pakhar (15.577 Ha) Shrengdag (155.81 Ha), Serengdag (140.07 Ha), Jalim & Sanai (12.14 Ha) | Range Officer of Forest, Lohardaga | 246.684 Lakhs | 567891 dated 19.06.2025 |
| | 599 dated 10.06.2025 | 124.560 Lakhs | Amtipani, Gurdari, Kujam-I and Kujam-II | Range Officer of Forest, Banari | 124.560 Lakhs | 567890 dated 19.06.2025 |
| 3 | 598 dated 10.06.2025 | 16.10 Lakhs | Amtipani Chirodih (130.01 Ha) | Range Officer of Forest, Banari | 16.10 Lakhs | 642410 dated 20.06.2025 |
| Total | | 387.344 Lakhs | - | | 387.344 Lakhs | - |

Please acknowledge the receipt.

Thanking You,
Sincerely Yours,

(Basudev Gangopadhyay)
AVP (Planning, Environment & Compliance)

Encl: As above

Hindalco Industries Limited

Mines Division, Court Road, Lohardaga 835302, Jharkhand, India | T: +91 6526 223163
Corporate Office: 6th & 7th Floor, Birla Birla Centurion, Pandurang Budhakar Marg, Worli, Mumbai-400030, India
T: +91 22 66626666/626105555 | F: +91 22 62610400/62610500
Registered Office: 21st Floor, One Unity Center, Senapati Bapat Marg, Prabhadevi, Mumbai - 400013, India
T: +91 22 69477000/69477150 | F: +91 22 69477001/69477090
W: www.hindalco.com | E: hilinvestors@adityabirla.com

FORM "O"

(See Rule 29 F(2) and 29L)

REPORT OF MEDICAL EXAMINATION UNDER RULE 29 B

(TO BE ISSUED IN TRIPLICATE)**

Certificate No:

HIL/AMT/PME/03/25

Certified that AMIT BENG employed as WORKMAN in AMTIPANI BAUXITE MINES, Form-A No. 145
 has been examined for an PERIODICAL medical He appears to be 35 years of age.
 The findings of the examining authority are given in the attached sheet. It is considered that AMIT BENG

✓ a. Is medically fit for any employment in mines.

✗ b. Is suffering from _____
 (i) Any employment in mines, or
 (ii) Any employment below ground, or
 (iii) Any employment or work _____

✗ c. Is suffering from _____
 examined within a period of _____ months. He appear for re-examination with the result
 of test of _____ and the opinion of _____
 specialist from _____ He may be permitted/not permitted to carry on
 his duties during this period.



AMIT BENG

Signature of the examining authority
 Name and designation in Block Letter

DR OMPRAKASH DUBEY
CONSULTANT
Reg-No-33297 BR2002

Dr. Omprakash Dubey
Sr. Consultant
Hindalco Mines Divi., Lohardaga
Reg No.-33297, BR-2002

Place Rajendra Hospital, Lohardaga
 10-07-2025

*Delete whatever not applicable.

**One copy of the certificate shall be handed over to the person concerned and another copy shall be sent to the Manager of the mine concerned by registered post and the third copy shall be retained by the examining authority.

Form 59

[See rules 115 (2)]

Pollution Under Control Certificate

Authorised By :
Government of Jharkhand

Date : 24/06/2025
Time : 09:25:41 AM
Validity upto : 23/12/2025



Certificate SL. No. : JH00700100013840
Registration No. : JH07E6831
Date of Registration : 20/May/2008
Month & Year of Manufacturing : April-2008
Valid Mobile Number : *****8309
Emission Norms : BHARAT STAGE II
Fuel : DIESEL
PUC Code : JH0070010
GSTIN :
Fees : Rs.300.00
MIL observation : No

Vehicle Photo with Registration plate
60 mm x 30 mm



| Sr. No. | Pollutant (as applicable) | Units (as applicable) | Emission limits | Measured Value (upto 2 decimal places) |
|-----------------------|------------------------------|-----------------------|-----------------|--|
| 1 | 2 | 3 | 4 | 5 |
| Idling Emissions | Carbon Monoxide (CO) | percentage (%) | | |
| | Hydrocarbon, (THC/HC) | ppm | | |
| High idling emissions | CO | percentage (%) | | |
| | RPM | RPM | 2500 ± 200 | |
| | Lambda | - | 1 ± 0.03 | |
| Smoke Density | Light absorption coefficient | 1/metre | 2.45 | 0.39 |

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

निकित

Raja

