

Date: 16th May 2025

HIL/LHD/ENV/MoEF&CC/061

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 Hisri New (14.55 Ha) Bauxite Mining Project of M/s Hindalco Industries Limited, Lohardaga Jharkhand for the period from October 2024 to March 2025.

Ref: Environmental Clearance Letter No. J-11015/531/2007-IA II (M), dated 17th June 2011.

Dear Sir,

With reference to the above, we are submitting herewith the Compliance status report of EC conditions for Hisri New (14.55 Ha) Bauxite Mining project of M/s Hindalco Industries Limited, Lohardaga Jharkhand for the period from October 2024 to March 2025 for your kind perusal please.

The lease details are below:

Lease area (ha)	Production Capacity (MT)	Lease Period
14.55	100000	19.07.1981 to 31.03.2030

Hope you will find the same in order.

Thanking You

Yours faithfully,

For Hindalco Industries Limited

Basudev Gangopadhyay

AVP (Planning, Environment & Compliance)

Enclosure: - As Above

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

Name of the Project : Hisri (New) Bauxite Mine (14.55 ha)

M/s Hindalco Industries Limited

Environment Clearance No & date : J-11015/531/2007-IA II (M), dated 17.06.2011

Period of compliance Report : From 1st October 2024 to 31st March 2025

Specific Conditions: -

Condition i: -The project proponent shall obtain Consent to Establish and Consent to Operate from the Jharkhand State Pollution Control Board and effectively implement all the conditions stipulated therein.

Reply: - Consent to establish and consent to operate have been obtained prior to start of Mining. Existing consent to operate (CTO) is valid till 31.12.2025. All the stipulated conditions of the CTE/CTO are being implemented effectively.

Condition ii: -The environmental clearance is subject to forestry clearance.

Reply: - Forest clearance is obtained.

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

Reply: - Noted. Entire land has been acquired for mining purposes as per applicable laws.

Condition iv: -The mining operation shall be restricted to above groundwater table and it should not intersect the ground water table. In case of working below ground water table, prior approval of the Ministry of Environment & Forests and Central Ground Water Authority shall be obtained, for which a detailed hydro – geological study shall be carried out.

Reply: - Shallow depth mining is being done and does not intersect the ground water. Working zones will be restricted to above ground water tables in future also. We undertake that no mining is/was carried out below ground water table and the same status will be maintained in future also.

Condition v: -The Project proponent shall ensure that no natural watercourse shall be obstructed due to any mining operations. The first order streams and the seasonal nallahs originating from the mining lease area shall be protected.

Reply: - There is no natural watercourse and / or water resources within the mining lease area. Shallow depth mining methodology is adopted for mining process. Hence, there is no impact of mining operation on natural water course.

Condition vi: -The topsoil, if any shall temporarily be stored at earmarked site (s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation.

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



Reclaimed Area

Condition vii: -The solid waste generated during the mining operation shall be backfilled and there shall be no external overburden dump left at the end of the mine life. The entire excavated area of 12.19 ha. shall be backfilled and reclaimed by plantation. The backfilling should be carried out in such a manner that it is restored to the normal ground level. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forest on six-month basis.

Reply: - Backfilling and reclamation are being done concurrently by overburden. There is no Overburden dump as of now in the mine lease area. Data pertaining to backfilling is enclosed as **Annexure 4.** Backfilling is a continuous process and is being done commensurate with the progress of mining. Monitoring and management of rehabilitated areas is continued through supervision.

Condition viii: -Catch drains and siltation ponds of appropriate size should be constructed around the working pit, sub-grade dump, soil and mineral dumps to arrest flow of silt and sediment directly into the agricultural fields, the Kisco Nadi, the Sukri Nadi, the Chungahat nallah, the Barki nallah and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted, particularly after monsoon and maintained properly.

Garland drain, settling tanks and check dams of appropriate size, gradient and length shall be constructed for both around the mine pit and sub grade dump to prevent run off of water

and flow sediments directly into the agricultural fields, the Kisco Nadi, the Sukri Nadi, the Chungahat nallah, the Barki nallah and other water bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper setting of silt material. Sedimentation pits should be constructed at the corners of the garland drains and desilted at regular intervals.

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



Garland drain

Condition ix: -Dimension of the retaining wall at the toe of the sub-grade, dump and OB benches within the mine to check run-off and siltation should be based on the rain fall data.

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

Condition x: -Plantation shall be raised in an area of 12.7 ha including a 7.5 m. wide green belt in the safety zone around the mining lease by planting the native species around ML area, backfilled and reclaimed area, around water body, roads etc. in consultation with the local DFO / Agriculture Department. At least 1500 trees per year shall be planted with a tree density of 1000 trees per hectare. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within first five years.

Reply: - Progressive plantation is being carried out with the progress of mining in and around the Mine lease area. During FY 2024-25, a total of 1730 nos. saplings have been planted within the mining lease. Cumulative 6.30 ha areas have been planted till date. In addition to this, agricultural activity is going on in reclaimed land as per the consent from landowners. The green belt development program is in progress with the progress of mining activities. Plantation photograph attached below:





Plantation at mine

Condition xi: - Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels to particulate matter such as around loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.

Reply: - Effective safeguard measures, such as regular water sprinkling, are being implemented in all critical areas prone to air pollution. Regular Ambient Air Quality (AAQ) monitoring is being carried out by NABL accredited Laboratory and all parameters are found within the prescribed limit. The Monitoring report is attached herewith as **Annexure-2**.

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

Reply: - Effective measures have already been implemented. A detailed rainwater harvesting plan to augment ground water has been prepared and suitable measures like water harvesting pond etc. are created for augmentation of ground water in the area (Bagru Plateau) in consultation with Central Ground Water Board.

Condition xiii: - Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometers during the mining operation. The periodic monitoring [(at least four times in a year – pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) once in each season)] shall be carried out in consultation with the State Ground Water Board/Central Ground water Authority and the data thus collected may be sent regularly to the Ministry of Environment and Forests and its Regional office Bhubaneshwar, The Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the ground water table is getting depleted due to the mining activity, necessary corrective measures shall be carried out.

Reply: - Since Shallow depth mining is being carried out, there is no intersection of ground water table during the mining operation at present and in future also. A Piezometer has been installed for monitoring of ground water level. Water level and Water quality Reports are being sent regularly to the regional office of Ministry, CGWA/CGWB and JSPCB. The same copy is attached as **Annexure 1 & 2**. Now, Regional office of MoEF&CC is in Ranchi.



Piezometer

Condition xiv: - Monitoring to the springs shall be carried out for the quality and quantity of water regularly so as to ensure that there is no adverse impact on the same due to the project. Records in this regard shall be maintained.

Reply: - Water Monitoring of Spring is being conducted regularly and the Analysis report is attached as **Annexure 2**.

Condition xv: - It shall be ensured that there is no change in the hydrology of the area due to the project.

Reply: -Noted. We regularly monitor the ground water level, and no adverse changes are observed.

Condition xvi: - The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and ground water) required for the project.

Reply: Rainwater is collected into the rainwater harvesting pond and being used for sprinkling on haul roads, mining activities, and raising plantation. No groundwater or water from natural surface water bodies is being used for mining purposes. However, we have already obtained NOC for extraction of ground water from CGWA/CGWB for drinking purposes only. The copy of the same is attached below:



NOC Ground Water

Condition xvii: - Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.

Reply: - Suitable rainwater harvesting measures on long term basis have been implemented via the creation of rainwater harvesting pond in consultation with the Central Ground Water Board.

Condition xviii: Appropriate mitigative measures shall be taken to prevent pollution of the Kisco Nadi, the Sukri Nadi and other rivers in the buffer zone of the mine, in consultation with the State Pollution Control Board.

Reply:- Appropriate mitigative measures have been taken to prevent pollution of nearby water bodies. The drainage system in the mining lease area is designed to collect all rainwater within the lease into the pit/ rainwater harvesting pond only and ensure that water does not flow outside the boundaries of the mine lease under any circumstances.

Condition xix:- Vehicular emissions should be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and transportation of mineral from mine face to the Beneficiation plant. The vehicles should be covered with a tarpaulin and shall not be overloaded.

Reply:- Minimum vehicles are being used for transport and all vehicles are covered with tarpaulin. Regular maintenance of vehicles is being done to minimize vehicular emission. Bauxite is also being transported by ropeway from mines to Lohardaga siding.



Ropeway transportation

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

Reply: - Blasting time is fixed between 1.00 PM - 2.00 PM. Controlled blasting method is in practice. Ground vibration study has been conducted periodically. All efforts and mitigative measures are being implemented to minimize the impact of blasting.

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

Reply: - Wet drilling is in practice.

Condition xxii: - Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.

Reply:- Water sprinkling is being carried out regularly at mineral handling area, loading and unloading areas to control the dust. The photographs are attached below.



Water sprinkling

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

Reply: - Sewage water for the working population is treated in a Sewage Treatment Plant (STP), and the treated water is utilized for plantation and gardening purposes only.

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

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





Sewage Treatment Plant (STP)



Effluent treatment plant (ETP)

Condition xxiii: - The project authorities should undertake sample survey to generate data on pre-project community health status within a radius of 1 Km. from proposed mine

Reply:- Being done through medical camp.

Condition xxiv: - Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.

Reply:- As a company, we are truly concerned about the health and safety of our on-site workers and in consideration to that, the health examination camps are being setup / scheduled on a regular basis.

Condition xxv: - Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of the temporary structures to be removed after the completion of the project.

Reply:- We believe that the wellbeing of all the labours working within the site should be taken care of on a priority basis, so that they can work in a stress-free environment. Therefore, all the necessary infrastructure and basic facilities mentioned above are being taken care of.

Condition xxvi: - The critical parameters such as RSPM (Particulate matter with size less than 10 μ m (i.e. PM_{10} , $PM_{2.5}$) and NO_x in the ambient air within the impact zone, peak particle velocity at 300 m. distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharge water shall also be monitored [(TDS, DO, PH and Total Suspended Solids (TSS)], The monitored data shall be uploaded on the website of the Company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in Public domain. The Circular no. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its compliance.

Reply: - Noted and being adhered. We have established four ambient air quality monitoring stations in the core zone as well as buffer zone. Monitoring of Ambient Air Quality and Treated Water is being carried out by NABL accredited Laboratory and reported to the concerned authorities. The Monitoring Report is attached herewith as **Annexure 2.** Half-yearly EC compliance along with Environmental monitoring reports is being uploaded on company website regularly.

A Display board is already installed in front of mine gate office. We have also installed an online PM10 analyzer at mine site.

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

Reply: - Noted. Progressive Mine Closure Plan duly approved by Indian Bureau of Mines is with us. FMCP (part) is approved by IBM. FMCP for entire lease will be prepared in due time as per applicable guidelines and timelines mentioned in MCDR/IBM guidelines who are competent authority to approve the same. Based on the present resource estimate, and peak rated production capacity mentioned in EC, Mining operation is being carried out.

General Conditions:

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

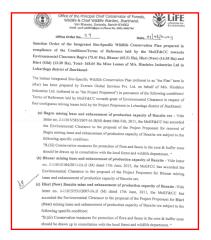
Reply:- Noted.

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

Reply:- Calendar plan including excavation, quantum of mineral bauxite and waste is being done as per IBM approved mining plan / mining scheme in scientific manner. Mine data detail is attached as **Annexure 4**.

Condition iii: - Conservation measures for protection of flora and fauna in the core & buffer zone should be drawn up in consultation with the local forest and wildlife department.

Reply:- Conservation measures for protection of flora and fauna in core & buffer zone has been drawn up in consultation with local forest and wildlife department. Also, we prepared Integrated Site-specific Wildlife Conservation Plan (WLCP) and obtained approval from by PCCF, Wildlife, Ranchi vide Office Order No.29 dated 01.06.2023. copy enclosed below:





Condition iv: - Four ambient air quality-monitoring station should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10 μ m (i.e. PM₁₀, PM_{2.5}) & NOx monitoring. Location of the stations should be decided based on the metrological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.

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

Condition v: - Data on ambient air quality RSPM (Particulate matter with size less than 10 μm i.e. PM_{10}) & NO_X should be regularly submitted to the Ministry including its Regional office located at Bhubneshwar and the State Pollution Control Board / Central pollution Control Board once in six months.

Reply: - The monitoring of Ambient Air Quality is conducted by an NABL-accredited Laboratory, and reports are regularly submitted to the MoEF&CC and JSPCB, Ranchi. The monitoring report is attached above. Now, Regional office of MoEF&CC is in Ranchi.

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

Reply:- Water spraying arrangements on haul roads, loading and unloading and at transfer points have been provided and properly maintained.

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

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

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

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

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



Effluent treatment Plant

Condition ix:- Personnel working in dusty areas should wear protective respiratory devices and they should also provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.

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

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

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

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

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

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

Reply: - It is an operational mine. Hence provisions related to financial closure is not applicable. Now, the Regional Office of MoEF&CC is in Ranchi.

Condition xiii: - The Regional Office of this Ministry located at Bhubaneshwar 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: - Agreed. Now, the Regional Office of MoEF&CC is in Ranchi.

Condition xiv: - The project proponent shall submit six monthly report on the status of the compliance of the stipulated environmental Clearance conditions including results of monitoring data (both in hard copies as well as by e-mail) to the Ministry of Environment and Forests, its Regional Officer, Bhubaneshwar, the respective Zonal office of Central Pollution Control Board the State Pollution Control Board. The proponent shall upload the status of compliance of the Environmental Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the Ministry of Environment and Forests, Bhubaneshwar, the respective Zonal Office of Central Pollution Control Board and State Pollution Control Board.

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

Condition xv: - A copy of clearance letter shall be sent by the proponent to concerned Panchyat, Zila Parisad/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.

Reply: - Complied. A copy of the clearance letter has already been submitted and uploaded on website of the Company.

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

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

Condition xvii:- The environmental statement for each financial year ending $31^{\rm st}$ March in Form – V as is mandated to be submitted by the project proponent to the concerned Stated pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of the compliance of environmental clearance conditions and shall also be sent to the Regional Office of the Ministry of Environment and Forests, Bhubneshwar by e-mail.

Reply: -Environment statement is being submitted regularly to Member Secretary, JSPCB. Also, the status of compliance with environmental clearance conditions is being sent to MoEF&CC and JSPCB, Ranchi on regular basis. Now, the Regional Office of MoEF&CC is in Ranchi.

Condition xviii:- The Company shall submit within 3 month their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standard operating process/ procedure to bring into focus any infringements/ deviation/ violation of environmental or forest norms/ conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance with environmental issues and ensuring compliance with Environment Clearance conditions and (iii) System of reporting of non compliance / violation of environmental norms to the Board of Directors of the Company and / or stakeholders or shareholders.

Reply: - Policy towards Corporate Environment Responsibility is part of Corporate Environment policy and in place. A copy of our Environmental Policy has already been submitted to the relevant statutory authorities. The company has implemented a system in line with the above policies which address the following points. (i) Standard operating process/procedure to bring into focus any infringements/ deviation/ violation of environmental or forest norms/conditions, (ii) Hierarchical system or administrative order of the company to deal with environmental issues and ensuring compliance EC conditions and (iii) System of reporting of noncompliance.

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

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

Piezometer Monitoring Report

Mine: Hisri New Bauxite Mine (14.55 Ha)

S No	Month	Ground Water Level (BGL) in meter
1	Oct-24	34.31
2	Nov-24	34.14
3	Dec-24	34.28
4	Jan-25	34.6
5	Feb-25	34.91
6	Mar-25	35.23

ENVIRONMENTAL LABORATORIES & ENGINEERING SERVICES PVT. LTD.

Plot No.30, Mansarovar Enclave, Tupudana, Hatia, Ranchi-834003, Jharkhand.

Hisri (New) Bauxite Mine-Environmental Monitoring Report

October 2024



CONTENT

	Hindalco Industries : Hisri (New) Bauxite Mine Environmental Monitoring	October 2024
	Hisri (New) Bauxite Mine	
	AMBIENT AIR QUALITY- CORE ZONE	
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2	Near Old Rest Shelter	
3	Near Old Plantation (North West Corner)	
412	Hisri New (Southern Area)	
	AMBIENT AIR QUALITY- BUFFER ZONE	
1	Near Daldaliya Village	
2	Aditya School Gangupara	
3	Ropeway unloading station	
4	Ropeway Angle Station	





PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D1Z4

ENGINEERING SERVICES PVT. LTD.

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Phone no.: 0651-2290103 Website: www.elespi.co.in



TO THEFT

TEST REPORT

Test Report No.	: ELES/RNC/2024/6205	Report Release Date	: 25.10.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
III.R No.	: TC135872400004096F		

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/7234 : Near Water Pump; Hisri (New) Bauxite Mine (14.55ha)
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 16.10.2024 to 17.10.2024 : 18.10.2024
Mines Status	: Operational	Sampling Procedure Sampling Done By	: Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt. Ltd.
Period of Analysis	: 18.10.2024 to 24.10.2024	Sample Condition	: Sealed & Preserved

MI	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (°C)	: 28	2	Barometric Pressure (mmHg)	: 742
	Relative Humidity (%)	: 59	4	Weather Condition	: Clear

Discipline : Chemic	al	Group:	Atmospheric l	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part- 23): 2022	53	100 (24hrs)
Particulate Matter (PM2.5)	µg/m³	IS 5182 (Part- 24): 2019	24	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	7.9	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	µg/m³	1S 5182 (Part- 6): 2022	19.3	80 (24hrs)
Ozone (O ₃)	µg/m³	1S 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₃)	µg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m³	1S 5182 (Part- 10); 2019 (NDIR Method)	<1.0	2 (8hrs)
Lead (Pb)	μg/m³	IS 5182 (Part- 22): 2019	< 0.002	1 (24hrs)
Nickel (Ni)	ng/m ³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)
Benzene (C ₆ H ₆)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)

Akasif Howell by **Quality Manager**

****End of Report****

Dr. Deependra Kumar Sinha Ph. D. Environmental Engg.

Technical Manager

Page Lof 1 The Decourse stand in Test Report, is bound by the Laboratory moke General Torrie and Conditions, only on Company letter bond in pro-approved former. The country shown in the Tast Report refer or relaxes only to the job analysis done by the Laboratory only. The information maint on the Test Report reflects the findings data by the Laboratory at the time of months and within the limits of client's monutaion. The Laboratory is responsible for all the information or data provided on the report, except the information which is precised by the about The Report cannot be expendented awards to full and are part of the report is not taken out of contest, within prior services approval of the Laboratory. The Report is full or to part shall see be published, advertise, used for any legal actions points prior permission has been secured from the Management of the Laboratory. Attention is drawn to the Invasions of Rability, competitution and jurisdiction issues. Any wouthercook alteration & full officerion of the content or appearance of the Test Separt is unlessful and officed easy be prospected to the failest extent of the low. All the samples are control for 30days from the Date of palametrious of the Too Supers. The samples from Regulatory budies any to be retained as specified. Any type of Observations of Complaints regarding the Reports shall be done within Abdays from the Date of Too Expert released/small. After the time parced stated before, no completely will be accepted. The among the accepted. The among the Report or in Advance Harmer, Abdressamen used. N.A.Dun Applicables, 1931. (Below Detection Limit). LDL (Lower Detection Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE971301Z4

ENGINEERING SERVICES PVT. LTD.

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Phone no.: 0651-2290103 Website: www.elespi.co.in



TEST REPORT

Test Report No.	: ELES/RNC/2024/6206	Report Release Date	: 25.10.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400004097F			

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2024/AA/7235	
		Location	: Near Old Rest Shelter; Hisri (New)	
		The second second	Bauxite Mine (14.55ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date	: 16.10.2024 to 17.10.2024	
Producess		Sample Received Date	: 18.10.2024	
		Type of Sample	: Ambient Air	
Mines Status	: Operational	Sampling Procedure	: ELES/DOC/SMPL/02	
noted of automic	: 18.10.2024 to 24.10.2024	Sampling Done By	: ELES Pvt. Ltd.	
Period of Analysis	1 18:10:2024 to 24:10:2024	Sample Condition	: Sealed & Preserved	

MI	TEOROLOGICAL INFOR	MATION			
1	Average Temperature (%C)	: 28	- 2	Barometric Pressure (mmHg)	: 742
3	Relative Hamidity (%)	: 59	4	Weather Condition	1 Clear

Discipline: Chemic	al	Group:	Group: Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	60	100 (24hrs)	
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	32	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part-2/Sec1); 2023	9.8	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m³	1S 5182 (Part- 6): 2022	22.4	80 (24hrs)	
Ozone (O ₃)	μg/m³	IS 5182 (Part- 9); 2019	<20.0	100 (8hrs)	
Ammonia (NH ₃)	µg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)	
Lend (Pb)	μg/m³	IS 5182 (Part- 22): 2019	0.012	1 (24hrs)	
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)	
Benzene (C _n H _n)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	< 0.5	01(Annual)	

Reviewed by Akash Kumar Quality Manager

****End of Report****

Authorised Signatory

Dr. Deependra Kumar Sinha

Page 1 of 1

To Decement stated as Test Report, is issued by the Laboratory under Connect Terms and Conditions, only an Company better head in proceedings down by the Laboratory with. The information stated on the Test Report reflects the Unitings down by the Laboratory of the rises of two-bernests solds and solds the information of closes; interactions. The Laboratory is responsible for all the information of the report, except the simulation which is provided by the closes. The Report nation has regardled except in that and any part of the report is not rober out of concest, without prior section approach of the Laboratory. The Report in full and any part of the report is not rober out of concest, without prior section approach of the Laboratory. The Report in full are part shall not be published, advenues, and for any legal actions as shown prior percentage of the Laboratory. Anomalous of discussions of fabrilla, companions and jurisdiction issues. Any sequelations of the fabrilla and or flavoration may be proceeded to the fabrilla control of the samples are returned for Malays from the Date of enhancement of the East Report. The samples from Regulatory budges are to be received as specified. Any type of Consequences in Compliants reporting the Report is sold to demonstrate with the samples from the fabrilla manifestion of the manufacture of the same from the fabrilla manifestion in Tast Report is a 18 fabrilla format. Althorisation used N/A (Not Applicable) 2001. (Before Detection Limit), LDL (Lower Detection Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834063 (JHARKHAND) GST NO:- 20A4ECE9713D1Z4

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Phone no.: 0651-2290103 Website: www.elespi.co.in



TG-13887

TEST REPORT

Test Report No.	: ELES/RNC/2024/6207	Report Release Date	: 25.10.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400004098F			

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2024/AA/7236	
	Land the control of t	Location	: Near Old Plantation	
			(North West Corner) Hisri (New)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date	: 16.10.2024 to 17.10.2024	
ruigi 633	- Detail and Franchisco	Sample Received Date	: 18.10.2024	
		Type of Sample	: Ambient Air	
Mines Status	: Operational	Sampling Procedure	: ELES/DOC/SMPL/02	
Period of Analysis	: 18.10.2024 to 24.10.2024	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved	

MI	TEOROLOGICAL INFOR	MATION			
1	Average Temperature (°C)	: 28	2	Barometric Pressure (mmHg)	: 742
	Relative Humidity (%)	: 59	4	Weather Condition	: Clear

Discipline : Chemic	al.	Group:	Group: Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	55	100 (24hrs)	
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24); 2019	30	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	6.3	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	µg/m³	IS 5182 (Part- 6): 2022	17.8	80 (24hrs)	
Ozone (O ₁)	μg/m³	1S 5182 (Part- 9): 2019	<20.0	100 (8hrs)	
Ammonia (NH ₃)	μg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)	
Lead (Pb)	µg/m³	IS 5182 (Purt- 22): 2019	< 0.002	1 (24hrs)	
Nickel (Ni)	ng/m³	IS 5182 (Part- 26); 2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)	
Benzene (C ₆ H ₆)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05; 2023	<0.5	01(Annual)	

Reviewed by
Akash Kumar

Coulity Manager

****End of Report****

Authorised Signatory Dr. Deependra Kumar Sinha

Ph. D. Environmental Engg.

Page 1 of 1

Technical Manager

The Document stead as Test Report, is nowed by the Laboratory under Comeral Torres and Combines, only on Company Jerns hand is pre-approved former. The canally shown as the Test Report reflects the findings done by the Laboratory at the time of involvement only and sential the limits of circul's instructions. The Laboratory is responsible for all the information or data provaled on the report, except the information which is provided by the Chert. The Report nation to improve a supplied and any part of the report is not interest on or set of the report, except the information of inhibits, companies on the improved of the Laboratory. The Report is full or in part about we be politically advertise, used for any legal actions achieve prior permission has been accounted from the Management of the Laboratory. Attention is deserous the Institution of Inhibits, companies and perindent on the Supplied Attention & Religious of the maintain or of the New All the Supplied for Report is undivided and offended within the following of the New All the samples from Regulatory because were to be unusual as apartified. Any type of Observations or Compliants regarding the Report as all the dates within Debugs from the Date of restaurance of the Test Report. The samples from Regulatory because we to be unusual as apartified. Any type of Observations or Compliants regarding the Report as all the dates within Debugs from the Date of Test Report The samples from Regulatory because were to be unusual as apartified. The outer Time schools mornismed in Test Report is a 2-Hours format. Advancement and Control of the Date of the Report of the Date of the D



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Phone no.: 0651-2290103 Website: www.elespl.co.in



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TEST REPORT

Test Report No.	: ELES/RNC/2024/6208	Report Release Date	: 25.10.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400004099F	11.10.000		

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/7237 : Hisri New (Southern Area)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date	Hisri (New) Bauxite Mine(14.55ha) : 16.10,2024 to 17.10.2024	
Address	. Londrenge, markinane-855502	Sample Received Date Type of Sample	: 18.10.2024 : Ambient Air	
Mines Status	: Operational	Sampling Procedure	: ELES/DOC/SMPL/02	
Period of Analysis	: 18.10.2024 to 24.10.2024	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved	

MI	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (*C)	: 28	2	Barometric Pressure (mmHg)	; 742
3	Relative Humidity (%)	: 59	4	Weather Condition	: Clear

Discipline : Chemic	al	Group:	Group: Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	58	100 (24hrs)	
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	32	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	µg/m³	1S 5182 (Part-2/Sec1): 2023	7.7	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	19.2	80 (24hrs)	
Ozone (O ₂)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)	
Ammonia (NH ₃)	µg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)	
Lead (Pb)	μg/m³	IS 5182 (Part- 22): 2019	< 0.002	1 (24hrs)	
Nickel (Ni)	ng/m¹	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m²	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)	
Benzene (C ₆ H ₆)	µg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	< 0.5	01(Annual)	

Reviewed by Akash Kumar

Quality Manager

****End of Report****

Authorised Signatory Dr. Deependra Kumar Sinha

Ph. D. Environmental Engg.

Page 1 of 1

Technical Manager

The Decement stored as Tast Report, to issued by the Laboratory tasher General Terms and Conditions, only in Company from board in pre-approved forms. The results shown in the Tast Report reflects the facilities done by the Laboratory only. The information stored on the Test Report reflects the facilities done by the Laboratory at the tasts of acceleration stored in the report reflects the facilities are reported by the Laboratory at the tasts of acceleration of the report of the Laboratory. The Report is the report of the report of the Laboratory and for any legal actions reduce prior permission has been accepted from the Management of the Laboratory. Attention in drawn to the Southern of Soliday, companishes and providence of the Soliday acceptance of the Content or approximate of the Test Report is unlessful and offenders may be processed to the fading extent of the law accepted for Report of the Report of the



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Phone no.: 0651-2290103 Webuffe / www.eleapl.co.in



TO-12885

TEST REPORT

Test Report No.	: ELES/RNC/2024/6189	Report Release Date	: 25.10.2024	
Work Order No.	: 13612312113	Work Order Date	: 28,03,2024	
ULR No.	: TC135872400004080F			

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/7218 : Near Daldaliya Village Bagru Bauxite Mine (75.41ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 14,10,2024 to 15,10,2024 : 18:10,2024 : Ambient Air	
Mines Status	: Non Operational	Sampling Procedure	: ELES/DOC/SMPL/02	
Period of Analysis	: 18.10.2024 to 24.10.2024	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Scaled & Preserved	

METEOROLOGICAL INFORMATION

	Average Temperature (*C)		2	Barometric Pressure (mmHg)	: 742
3	Relative Humidity (%)	65	4	Weather Condition	: Partly Cloudy

Discipline: Chemi	cul	Group:	Atmospherie :	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part- 23): 2022	60	100 (24hrs)
Particulate Matter (PM2.5)	μg/m³	1S 5182 (Part-24): 2019	30	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	µg/m²	IS 5182 (Pari- 2/Sec 1): 2023	10.9	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	20,2	80 (24hrs)
Ozone (O _t)	itili,im _a	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₂)	jug/m ³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m²	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)
Lead (Pb)	μg/m³	IS 5182 (Part- 22): 2019	0.065	1 (24hrs)
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	ELES/AIR/SOR/01: 2021	<2.0	06 (Annual)
Bonzene (C.H.)	iµg/to³	ELES/GC/SOP/06: 2023	<2.5	O5(Annual)
Bonzo-(a)-Pyrane	ng/m³	ELES/GC/SOP/05: 2023	<0.5	Ol(Annual)

Reviewed by Akush Kumur

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Dr. Dedpermarkulistar Binha Ph. D. Environmental Engg.

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PLOT NO-30, MANSAROVAN ENCLAVE, TUPUDUMA HETM, BANCH-REGOOD (MARKWAND) GST NO:- BUALABCES T180124

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TO-0368

TEST REPORT

Test Report No.	: ELES/RNC/2024/6190	Report Release Date	: 25.10.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400004081F	- Horacon American	D-D-WANGIN'	

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/7219 : Aditya School Gangupara Bagru Bauxite Mine (75.41ha)
Address	: I,ohardagu, Jharkhund-835302	Sampling Date Sample Received Date Type of Sample	: 14.10.2024 to 15.10.2024 : 18.10.2024 : Ambient Air
Mines Status	: Non Operational	Sampling Procedure	: ELES/DOC/SMPL/02
Period of Analysis	: 18.10.2024 to 24.10.2024	Sampling Done By Sample Condition	: ELES Pvz. Ltd. : Sealed & Preserved

MI	ETEOROLOGICAL INFORM	MATION			
1	Average Temperature ("C)	: 27	2	Barometric Pressure (mmHg)	1742
3	Relative Humidity (%)	65		Weather Condition	: Partly Cloudy

Discipline: Chemic	cal	Group: Atmospheric Pollution				
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Particulate Matter (PM10)	μg/m ³	15:5182 (Part- 23): 2022	64	100 (24hrs)		
Particulate Matter (PM2.5)	μg/m ⁷	IS 5182 (Part- 24): 2019	30	60 (24hrs)		
Sulphur Di-Oxide (SO ₃)	µg/m³	IS 5182 (Part- 2/Sec1): 2023	6.6	86 (24hrs)		
Nitrogen Di-Oxide (NO ₂)	μg/m ³	15 5182 (Part- 6): 2022	17.5	80 (24hrs)		
Ozunir (O ₁)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)		
Ammonia (NH ₃)	μg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)		
Carbon Monoxide (CO)	mg/m²	IS 5182 (Part- 10): 2019 (NDIR Method)	1.05	2 (8hrs)		
Lead (Pb)	pig/m²	IS 5182 (Part- 22): 2019	0.005	1 (24hrs)		
Nickel (Ni)	ng/m²	IS 5182 (Part-26): 2020	<6.0	20 (Annual)		
Arsenic (As)	ng/m²	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)		
Benzene (CaHa)	µg/m³	ELES/GC/SOR/06: 2023	Si.5	35(Annual)		
Benzo-(e)-Pyrene	ng/m³	ELES/GC/SOJV05: 2023	<0,5	D1(Annual)		

Reviewed by Akaish Kumar rappensM: valleries

****End of Report****

Authorised Signatory Dr. Deependra Kumar Sinha

Ph. D. Environmental Engo

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Technical Manager The Deciment result is The Report, is used by the Laboratory under Orient Terms and Conditions, only on Company better head in pre-approved Denset. The mouth choose is the Test Barnet The product of the product of the product of the product of the support of the su control for 10 days from the Den of references of the Den Superior Day Superior from Superior photos are to be remarked as qualified. Any type of Observations of Completing the Superior should be then written Diving Superior Sup Report is an Selection Communication used New Star Application, Will (Below Debugger Limit), LDL (Large Descript Limit)



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Phone no.: 0851-3290103 Websitz : www.nfanol.co.in



TEST REPORT

Test Report No.	: ELES/RNC/2024/6191	Report Release Date	: 25.10.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400004082F			

CUSTOMER DET		SAMPLE DETAILS		
Customer Name	: Hindulco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/7220 : Ropeway Unloading Station Bagru Bauxite Mine (75:41ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	± 14.10.2024 to 15.10.2024 ± 18.10.2024 ± Ambient Air	
Mines Status	: Non Operational	Sampling Procedure	: ELES/DOC/SMPL/02	
Period of Analysis	: 18.10.2024 to 24.10.2024	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved	

METEOROLOGICAL INFORMATION

1	Average Temperature (°C) : 27	2	Barometric Pressure (mmHg)	: 742
3	Relative Humidity (%) : 65		Weather Condition	: Partly Cloudy

Discipline: Chemi-	cal	Group :	Atmospheric	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m³	IS 5182 (Part+ 23): 2022	71	100 (24hrs)
Particulate Matter (PM2.5)	µg/m³	IS 5182 (Part- 24); 2019	33	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m ^T	15 5182 (Part- 2/Sec1); 2023	8.4	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	23.7	80 (24hrs)
Ozone (O ₃)	µg/m³	IS 5182 (Part- 9): 2019	<28.0	100 (8hrs)
Ammonia (NH ₃)	hB/m	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m ²	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)
Lead (Pb)	regrim ³	IS 5182 (Part- 22): 2019	0.027	1 (24hrs)
Nickel (Ni)	ng/m²	JS 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (Aa)	mg/m²	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)
Benzene (C.H.)	lig/m ²	ELES/GC/SOF/06: 2023	<2.5	05(Annual)
Bonno-(a)-Pycene	ng/m²	ELES/GC/SOP/05: 2023	<0.5	01(Annual)

Reviewed by Quality Manager

****End of Report****

Dr. Despelata Vernur sinha Ph. D. Environmental Engg.

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Phone no.: 0851-2290103 Website: www.sleapl.co.in



15-048

TEST REPORT

Test Report No.	: ELES/RNC/2024/6192	Report Release Date	: 25.10.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400004083F			

CUSTOMER DET	TAILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2024/AA/7221
		Location	: Ropeway Angle Station
			Bagru Bauxite Mine (75.41ha)
Address	: Lohardaga, Jharkhand-835302	Sampling Date	: 14.10.2024 to 15.10.2024
-AUTACON	S. C. Particular and C.	Sample Received Date	: 18.10.2024
		Type of Sample	: Ambient Air
Mines Status	: Non Operational	Sampling Procedure	: ELES/DOC/SMPL/02
Period of Analysis	: 18.16.2024 to 24:10:2024	Sampling Done By	ELES Pvt. Ltd.
Period of Analysis	: 18.10.2024 to 24.10.2024	Sample Condition	: Sealed & Preserved

Mi	ETEOROLOGICAL INFOR	MATION				
1	Average Temperature (4C)	:27	2	Barometric Pressure (mmHg)	742	
3	Relative Humidity (%)	: 65	4	Weather Condition	: Partly Cloudy	

Discipline: Chemic	al	Group:	Atmospheric	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m³	IS 5182 (Part- 23): 2022	66	100 (24hrs)
Particulate Matter (PM2.5)	µg/m³	IS 5182 (Part- 24): 2019	31	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	µg/m³	IS 5182 (Part- 2/Sec1): 2023	7.3	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	µg/m³	IS 5182 (Part- 6): 2022	20.9	80 (24hrs)
Ozone (O ₃)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₃)	jag/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part- 10): 2019 (NDIR Method)	1.02	2 (8hrs)
Lead (Pb)	ug/m ^T	IS 5182 (Part-22): 2019	<0.002	1 (24hrs)
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Animal)
Arsenio (As)	mg/m*	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)
Benzeoc (C ₄ H ₄)	μу/m³	ELES/GC/SO?V06: 2023	<4.5	05(Anoual)
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)

Reviewed by Akash Kumar Quality Managar

****End of Report****

Dr. Despublished Mariana

Ph. D. Environmental Engg.

Page Loft Igglinigal manager

The Personal species from Report is bound by the Laboratory under Granted Torons and Conditions, only on Company when head or pro-appeared forms. The conditionment is to the physical date to the Laboratory only to the information of the Laboratory only in the information of the Laboratory of the temperature for all the fractions of the Species of the Laboratory of the Laboratory of the Information of the Informa

ENVIRONMENTAL LABORATORIES & ENGINEERING SERVICES PVT. LTD.

Plot No.30, Mansarovar Enclave, Tupudana, Hatia, Ranchi-834003, Jharkhand

Hisri (New) Bauxite Mine-Environmental Monitoring Report

November 2024

CONTENT

	Hindalco Industries : Hisri (New) Bauxite Mine Environmental Monitoring	November 2024
	Hisri (New) Bauxite Mine	
	AMBIENT AIR QUALITY- CORE ZONE	
1	Near Water Pump	JUSTIN DE SA
2	Near Old Rest Shelter	
3	Near Old Plantation (North West Corner)	1,00
4	Hisri New (Southern Area)	
	AMBIENT AIR QUALITY-BUFFER ZONE	
1	Near Daldaliya Village	
2	Aditya School Gangupara	
3	Ropeway unloading station	18
4	Ropeway Angle Station	
	Drinking Water	





PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST ND:- 20AAECE9713D124

ENGINEERING SERVICES PVT. LTD.

Email: info@elespl.co.in , eles.ranchi@amail.com

Phone no.: 0651-2290103 Website: www.elespl.co.in



TEST REPORT

Test Report No.	: ELES/RNC/2024/6836	Report Release Date	: 26.11.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400004708F			

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2024/AA/8039	
		Location	: Near Water Pump; Hisri (New Bauxite Mine (14.55ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date	: 19.11.2024 to 20.11.2024	
r xumar una		Sample Received Date	: 21.11.2024	
		Type of Sample	: Ambient Air	
Mines Status	: Operational	Sampling Procedure	: ELES/DOC/SMPL/02	
ACT OF COLUMN ACT OF STREET	21 11 2021 27 11 2021	Sampling Done By	: ELES Pvt. Ltd.	
Period of Analysis	: 21.11.2024 to 26.11.2024	Sample Condition	: Sealed & Preserved	

MI	ETEOROLOGICAL INFORMATIO	N		
1	Average Temperature (°C) : 25	2	Barometric Pressure (mm)	Hg) : 742
3	Relative Humidity (%) : 51	-4	Weather Condition	: Clear

Discipline : Chemic	al	Group:	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	59	100 (24hrs)		
Particulate Matter (PM2.5)	µg/m³	IS 5182 (Part- 24): 2019	29	60 (24hrs)		
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	7.3	80 (24hrs)		
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	21.5	80 (24hrs)		
Ozone (O ₃)	μg/m²	IS 5182 (Part- 9); 2019	<20.0	100 (8hrs)		
Ammonia (NH ₃)	μg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)		
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)		
Lead (Pb)	μg/m³	IS 5182 (Part- 22): 2019	< 0.002	1 (24hrs)		
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)		
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)		
Benzene (C ₆ H ₆)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)		
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)		

Reviewed by

****End of Report****

Authorised Signatory Akash Kumar Consisty Managor

Page I of I

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PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D124

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Phone no.: 0651-2290103 Website: www.elespi.co.in



TEST REPORT

Test Report No.	: ELES/RNC/2024/6837	Report Release Date	: 26.11.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400004709F			

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2024/AA/8040	
		Location	: Near Old Rest Shelter; Hisri (New)	
			Bauxite Mine (14.55ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date	: 19.11.2024 to 20.11.2024	
		Sample Received Date	: 21,11,2024	
		Type of Sample	: Ambient Air	
Mines Status	: Operational	Sampling Procedure	: ELES/DOC/SMPL/02	
	- Control Control	Sampling Done By	: ELES Pvt. Ltd.	
Period of Analysis	: 21.11.2024 to 26.11.2024	Sample Condition	: Sealed & Preserved	

MI	METEOROLOGICAL INFORMATION					
1	Average Temperature (°C)	: 25	2	Barometric Pressure (mmHg)	: 742	
3	Relative Humidity (%)	:51	4	Weather Condition	: Clear	

Discipline : Chemic	al	Group:	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	71	100 (24hrs)		
Particulate Matter (PM2.5)	μg/m ³	IS 5182 (Part- 24): 2019	38	60 (24hrs)		
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	12.2	80 (24hrs)		
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6); 2022	25.7	80 (24hrs)		
Ozone (O ₃)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)		
Ammonia (NH ₃)	μg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)		
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)		
Lead (Pb)	μg/m³	1S 5182 (Part- 22): 2019	0.016	1 (24hrs)		
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)		
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)		
Benzene (C ₆ H ₆)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)		
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)		

Reviewed by

****End of Report****

Authorised Signatory

Akash Kumar

Quality Managar

Page 1 of 1

The Document stated to Test space, if instant I the Laboratory under General Terms and Conditions, only on Company Jones head to pre-approved former. The results shown in the Tast Report refer or relates only to the indicated persons by the Laboratory only. The information stated on the Tast Report reflects the feedings done by the Laboratory at the time of overlayers and and sector or telefact only or the photosteper sector. Sy the Laboratory only. The information stated on the Test Report reflects the feedings done by the Laboratory of the time of involvement only and section the fermion of client's instructions. The Laboratory is responsible for all the information or data provided on the report, except the information which is provided by the client. The Report cannot be reproduced except in full and any part of the report is not taken out of crimero, without prior section approach of the Laboratory. The Report is full in a part shall me be published, advertise, used for any logic actions unless prior permission has been received from the Managament of the Laboratory. Appearance of the limitation of fability, compensation and production issues. Any another such a fabrication of the common or appearance of the Tass Report is unlessful and offinition oney be presented to the failure amount of the law. All the complex are returned for Midays there the Data of retransvence of the Tass Report interpretation of beginning as performed as appearance of the Completion regarding the Report when we will be sometimed. Any type of Observations at Completion regarding the Report in the Data of Not Applicables BDL (Below Description Linear). LDL (Lower Description Linear).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D124

ENGINEERING SERVICES PVT. LTD.

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TEST REPORT

Test Report No.	: ELES/RNC/2024/6838	Report Release Date	: 26.11.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400004710F			

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/8041 : Near Old Plantation (North West Corner) Hisri (New)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 19.11.2024 to 20.11.2024 : 21.11.2024	
Mines Status	: Operational	Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02	
Period of Analysis	: 21.11.2024 to 26.11.2024	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved	

MI	ETEOROLOGICAL INFOR	MATION				
1	Average Temperature (°C)	: 25	2	Barometric Pressure (mmHg)	: 742	
3	Relative Humidity (%)	: 51	4	Weather Condition	: Clear	

Discipline : Chemic	al	Group:	Group: Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	58	100 (24hrs)	
Particulate Matter (PM2.5)	µg/m³	IS 5182 (Part- 24); 2019	27	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	7.3	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	17.8	80 (24hrs)	
Ozone (O ₃)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)	
Ammonia (NH ₂)	μg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	:mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)	
Lead (Pb)	µg/m³	IS 5182 (Part- 22): 2019	<0.002	1 (24hrs)	
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)	
Benzene (C ₆ H ₆)	µg/m³	ELES/GC/SOP/06; 2023	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)	

****End of Report****

Reviewed by

Authorised Signatory

Akash Kumar

Page 1 of 1

Page 1 of 1

The Discrement stated as Leading on the Laboratory under General Torris and Conditions, only on Company letter head in pre-approved format. The results shown in the Tast Report refer or relates only to the Johnston by the Laboratory only. The information stated on the Tast Report reflects the findings done by the Laboratory at the time of involvement only and some on price of cases a untraction. The Laboratory is responsible for all the information or data provided on the input, except the information which is provided by the client. The Report as not after our of cases, without price any legal actions online price permission has been secured from the Management of the Laboratory. Attention is the former or the Similarian of the content and provided by the client from the Management of the Laboratory. Attention is the former or the Similarian of the content and provided and effort the samples and extended and effort the provided and effort the side of the former of the samples from Regulatory bodies are to be retained as specified. Any type of Chorrottoms or Compliants regarding the Reports shall be done within 15days from the Date of Too Report released/record. After the time period stated before, we compliants will be accupied. The action I one schedule combined in Tail Report in its 25hours format. Abbuttures used St.A. (Not Applicable), 800. (Refer Detection Limit), LDL (Lower Detection Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D1Z4

ENGINEERING SERVICES PVT. LTD.

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TEST REPORT

Test Report No.	: ELES/RNC/2024/6839	Report Release Date	: 26.11.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400604711F			

CUSTOMER DET	CUSTOMER DETAILS		11. 5.46
Customer Name	: Hindaico Industries Limited	Sample Ref. No.	: ELES/RNC/2024/AA/8042
		Location	: Hisri New (Southern Area)
			Hisri (New) Bauxite Mine(14.55ha)
Address	: Lohardaga, Jharkhand-835302	Sampling Date	: 19.11.2024 to 20.11.2024
		Sample Received Date	: 21.11.2024
		Type of Sample	: Ambient Air
Mines Status	: Operational	Sampling Procedure	: ELES/DOC/SMPL/02
Bodied of Applicate	231 11 2024 46 26 TL 2024	Sampling Done By	: ELES Pvt. Ltd.
Period of Analysis	: 21.11.2024 to 26.11.2024	Sample Condition	: Sealed & Preserved

MI	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (°C)	: 25	2	Barometric Pressure (mmHg)	: 742
3	Relative Humidity (%)	: 51	4	Weather Condition	: Clear

Discipline : Chemic	al	Group:	Group: Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m ³	IS 5182 (Part- 23): 2022	64	100 (24hrs)	
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	38	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	μg/m ³	IS 5182 (Part-2/Sec1): 2023	10.3	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	22.7	80 (24hrs)	
Ozone (O ₂)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)	
Ammonia (NH ₃)	µg/m³	IS 5182 (Part-25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)	
Lead (Pb)	µg/m³	IS 5182 (Part- 22): 2019	0.011	1 (24hrs)	
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)	
Benzene (C ₆ H ₆)	µg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	< 0.5	01(Annual)	

Reviewed by

****End of Report****

Authorised Signatory Akash Kumar

Gestity Manager

Page I of I

Page 1 of 1

The Discount stated as Test frages, it issued by the Laboratory under General Terms and Conditions, only on Company latter head to pre-approved format. The results shown in the Test Report refer or velaces only to the jubilities. Since by the Laboratory only. The authoristics stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the latter of all out a morractions. The Laboratory is responsible for all the information or data provided on the report, except the information which is provided by the claim. The Report caused by reportant except in full and any part of the report is not taken our of contact, without prior written approval of the Laboratory. The Report is full in in part shall not be published, advertise, used for any legal actions unless gover permissions has been secured from the Management of the Laboratory. Attention is drawn to the horisation of faithfully, companions and jurisdiction. issues. Any sensitionand abstation it fabilitation of the number or approximate of the Test Report is enfaveful and effective may be proximated to the following of the Low. All the samples are research for follows from the Date of release issue of the Test Report. The samples from Registrey hodies are to be extend as equalified. Any type of Observations or Compliants regarding the Reports shall be stone within 15days from the Date of Test Report released based. After the stone period stated before, no compliants will be succepted. The states Time schoolie mentioned in Test Report is in 24hours format. Abbreviation used: S. A (Not Applicables, BDL (Molow Detection Lines), LDL (Lower Detection Lines).



PLOT NO-BO, MANSAROVAR ENGLAVE, TUPUDANA HATTA, RANCHI-834003 (HARICHAND) GST NO:- 20AASCE97130124



Empli: info@elespl.co.in , eles ranchi@amail.com

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TEST REPORT

Test Report No.	: ELES/RNC/2024/6820	Report Release Date	: 25.11.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400004692F			

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/7963 : Near Daldaliya Village Bagru Bauxite Mine (75.41ha)
Address	; Lohardaga, Jharkhand-#35302	Sampling Date Sample Received Date Type of Sample	: 17.11.2024 to 18.11.2024 : 19.11.2024 : Ambient Air
Mines Status	: Non Operational	Sampling Procedure	: ELES/DOC/SMPL/02
Period of Analysis	: 19.11.2024 to 25.11.2024	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved

MI	ETEOROLOGICAL INFOR	MATION				
-1	Average Temperature (*C)	: 25	2	Barometric Pressure (mmHg)	: 742	
3	Relative Humidity (%)	:51	4	Weather Condition	: Clear	14

Discipline: Chemic	ini.	Group : Atmospheric Pollution				
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Particulate Mance (PM15)	HB/m³	15.5182 (Part-23), 2011	0.9	100 (2403)		
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	32	60 (24hrs)		
Sulphur Di-Oxide (SO ₂)	µg/m³	IS 5182 (Part- 2/Sec1): 2023	11.4	80 (24hrs)		
Nitrogen Di-Oxide (NO2)	μg/m³:	1S 5182 (Part- 6): 2022	24.1	80 (24hrs)		
Ozone (O ₂)	µg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)		
Ammonia (NH ₂)	μg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)		
Carbon Monoxide (CO)	mg/m*	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)		
Lead (Pb)	µg/m²	IS 5182 (Part- 22): 2019	0.009	1 (24hrs)		
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)		
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)		
Benzene (C ₆ H ₆)	µg/m ³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)		
Benzo-(u)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	< 0.5	O1(Annual)		

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****End of Report****

Authorised Signatory Akash Kumar Quality Manager

Page Lof 1

The Decisional should be a Company on the Total Company on the Total Company of the Section of the Section of the Total Company of the Section of the Sectio abortion, and the any high across union principals has been exceed from the Management of the Laborary. Attention in free in the lamination of highest principal and administrated abundance of the full-state of the law. All the complete are remarked for Date of our analysis of the Text Reports the Date of our analysis of the Date of the Report of the Date of the Date of the Report of the Date of the Date of the Report of the Date of the Date of the Report of the Date of Date of The Da Parpertia in Selection Storman, Attractation used 16th Augustables, MDL, Horse Demograph Limits, LDL (Lower Democratical Louis)



PLOT MO-36, MANSAROVAR ENCLAVE, TEPUTOANA NATIA, RANCHE-834003 (PHARKHAND) 657 NO-20A4CEPT130124



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TEST REPORT

Test Report No.	: ELES/RNC/2024/6821	Report Release Date	: 25.11.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400004693F		

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/7964 : Aditye School Gangupara Bagru Banxite Mine (75.41ha)
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 17.11.2024 to 18.11.2024 : 19.11.2024 : Ambient Air
Mines Status	: Non Operational	Sampling Procedure	: ELES/DOC/SMPL/02
Period of Analysis	; 19.11.2024 to 25.11.2024	Sampling Done By Sample Condition	: ELES Pvr. Ltd. : Sealed & Preserved

MI	ETEOROLOGICAL INFORMATION			
1	Average Temperature (°C) : 25	2	Barometric Pressure (mmHg)	: 742
3	Relative Humidity (%) : 51	-4	Weather Condition	: Clear

Discipline: Chemic	al	Group:	Atmospherie	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PMT0)	hwm,	1S 5182 (Part+23): 2022	64	(00 (24hrs)
Particulate Matter (PM2.5)	pg/m³	IS 5182 (Part-24): 2019	33	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	µg/m³	IS 5182 (Part- 2/Sec1): 2023	9.1	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	1S 5182 (Part- 6): 2022	23.4	80 (24hrs)
Ozone (O ₃)	µg/m²	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₂)	μg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10); 2019 (NDIR Method)	1.05	2 (8hrs)
Lead (Pb)	µg/m³	IS 5182 (Part- 22): 2019	0.008	1 (24hrs)
Nickel (Ni)	ng/m²	IS 5182 (Part- 26): 2020	< 6.0	20 (Annual)
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)
Benzene (C ₄ H ₆)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)

Reviewed by 3

****End of Report****

Authorized Signatory

Akash Kumar

Genity Manager

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PLOT NO JEL MANASARDYAR ENCLAVE, TUPLICANA HATIA, RANCHI-834003 (JHARIO (AND) DIT NO: 202AFCFFF13DLIN



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Phone no.: 0651-2290105 Webilte : www.elespt.co.ln



TEST REPORT

Test Report No.	: ELES/RNC/2024/6822	Report Release Date	: 25.11.2924
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872460004694F		

CUSTOMER DET	CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/7965 : Ropeway Unloading Station Bagru Bauxite Mine (75.41ha)		
Address	: Lohardaga, Jhurkhund-835302	Sampling Date Sample Received Date Type of Sample	: 17.11.2024 to 18.11.2024 : 19.11.2024 : Ambient Air		
Mines Status	Non Operational	Sampling Procedure	: ELES/DOC/SMPL/02		
Period of Analysis	19.11.2024 to 25.11.2024	Sampling Done By Sample Condition	: ELES Put. Ltd. : Sealed & Preserved		

M	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature ("C)	: 25	2	Barometric Pressure (mmHg)	: 742
3	Relative Humidity (%)	:51	4	Weather Condition	; Clear

Discipline: Chemic	al	Group:	Atmospheric !	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Faniculate Matter (FM10)	µg/m"	15 5162 (Pars- 23); 2022	69	100 (24ius)
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	36	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	10.2	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	22.8	80 (24hrs)
Ozone (O ₁)	μg/m ⁵	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₃)	μg/m ¹	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)
Lend (Pb)	µg/m³	IS 5182 (Part- 22): 2019	0.012	1 (24hrs)
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Amual)
Benzene (C ₆ H ₆)	ug/m)	ELES/GC/SOP/06: 2023	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)

****End of Report****

Reviewed by

Authorised Signatory Akash Kumar Quality Manager

Page 1 of 1

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PLOT NO 30, MANSAROVAR UNCLAVE, TUPUDANA HATTA, RANCHI-834003 (HARKHAND) GST NO-204AETE97150354



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TEST REPORT

Test Report No.	: ELES/RNC/2024/6823	Report Release Date	125.11.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400004695F			

CUSTOMER DET	AILS	SAMPLE DETAILS		
Cautomer Name	: Hindulco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/7966 : Ropeway Angle Station Bagru Baccite Mine (75.41ha)	
Address	: Lohardage, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 17,11,2024 to 18,11,2024 : 19,11,2024 : Ambient Air	
Mines Status	: Non Operational	Sampling Procedure	: ELES/DOC/SMPL/02	
Period of Analysis	: 19.11.2024 to 25.11.2024	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved	

M	ETEOROLOGICAL INFOR	MATION				
1	Average Temperature (°C)	: 25	2	Barometric Pressure (mmHg)	; 742	
3	Relative Humidity (%)	:51	4.	Weather Condition	; Clear	G.

Discipline: Chemic	al	Group:	Group: Atmospheric Pollution				
Parameter	Unit	Test Protocol	Result	Regulatory Limit			
Farticulate Namer (FN110)	иулг	ES 5182 (Pain-23); 2022	00	700 (24hrs)			
Particulate Matter (PM2.5)	µg/m ¹	IS 5182 (Part- 24); 2019	35	60 (24hrs)			
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	13.3	80 (24hrs)			
Nitrogen Di-Oxide (NO2)	μg/m³	IS 5182 (Part- 6): 2022	25.7	80 (24hrs)			
Ozone (O ₁)	μg/m³	IS 5182 (Part- 9); 2019	<20,0	100 (8hrs)			
Ammonia (NH ₃)	μg/m³	IS 5182 (Part- 25); 2018	<10.0	400 (24hrs)			
Carbon Monoxide (CO)	mg/m [‡]	IS 5182 (Part- 10): 2019 (NEIR Method)	1.08	2 (8hrs)			
Lead (Pb)	μg/m¹	15 5182 (Part- 22): 2019	0.809	1 (24hrs)			
Nickel (Ni)	ng/m²	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)			
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)			
Benzene (C ₄ H ₄)	µg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)			
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	< 0.5	01(Annual)			

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****End of Report****

Authorised Signatory Akesh Kumar

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Page 1 of 1

Page 1 of 1

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TO-CHIAZ

TEST REPORT

Test Report No.	: ELES/RNC/2024/6951	Report Release Date	: 30.11.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400004820F		

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name Address	: Hindalco Industries Limited : Lohardaga, Jharkhand-835302	Sample Ref. No. Sampling Date Sample Received Date Type of Sample Source of Sample Location of Sample	: ELES/RNC/2024/DW/8103 : 20.11.2024 : 22.11.2024 : Drinking Water : Tap Water : Hisri New Mines	
Mines Status	: Operational	Sampling Procedure	(Hisri (New) Bauxite Mines : ELES/DOC/SMPL/01	
Period of Analysis	: 22.11.2024 to 30.11.2024	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved	

Discipline : Chemical Group :			Water	Regulatory Limit as per IS 10500:20	
Parameter	Unit	Test Protocol	Result	Acceptable Limit	Permissible Limit
pH (at 24.6 °C)	2	APHA 24th Ed.2023, 4500-H	6.65	6.5-8.5	No Relaxation
Turbidity	NTU	APHA 24th Ed.2023, 2130 B	0.92	1.0	5.0
Taste		APHA 24th Ed.2023, 2160 C	Agreeable	Agreeable	Agreeable
Odour	-	IS 3025 (Part-5) :2018	Agreeable	Agreeable	Agreeable
Colour	Hazen	APHA 24th Ed.2023, 2120B&D	1.8	5.0	15
Total Dissolved Solids (TDS)	mg/L	APHA 24th Ed.2023, 2540B,C&D	268	500	2000
Chloride (as CI)	mg/L	APHA 24th Ed.2023, 4500 Cl B	6.9	250	1000
Fluoride (as F)	mg/L	APHA 24 th Ed.2023, 4500 F-D	BDL (DL: 0.1)	1.0	1.5
Total Alkalinity (as CaCO ₃)	mg/L	APHA 24th Ed.2023, 2320 B	127	200	600
Total Hardness (as CaCO ₂)	mg/L	APHA 24th Ed.2023, 2340 C	106	200	600
Sulphate (as SO ₄)	mg/L	APHA 24 th Ed.2023, 4500 SO ₄ -2-E	BDL (DL: 1.0)	200	400
Nitrate (as NO ₃)	mg/L	APHA 24th Ed.2023, 4500 NO ₃ -B	BDL (DL: 0.5)	45	No Relaxation

Page 1 of 4

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TEST REPORT

Test Report No. : ELES/RNC/2024/6951 Report Release Date : 30.11.2024

Work Order No. : 13612312113 Work Order Date : 28.03.2024

ULR No. : TC135872400004820F

Discipline: Chemic	al	Grou	up: Water		ory Limit 10500:2012
Parameter	Unit	Test Protocol	Result	Acceptable Limit	Permissible Limit
Phenolic Compound (as C ₆ H ₅ OH)	mg/L	IS 3025 (Part 43/Sec1): 2022	BDL (DL: 0.001)	0.001	0.002
Free Residual Chlorine (RFC)	mg/L	IS 3025 (Part-26): 2021	BDL (DL: 0.1)	0.2(Min)	1.0(Min)
Calcium (as Ca)	mg/L	APHA 24th Ed.2023, 3500 Ca B	29.0	75	200
Anionic Surfactants (as MBAS)	mg/L	APHA 24th Ed.2023, 5540-C	BDL (DL: 0.025)	0.2	1.0
Discipline: Chemic	cal	Gre	oup: Residues i	n Water	
Aluminum (as Al)	mg/L	IS 3025 (Part-55) :2003; RA2019	BDL (DL: 0.02)	0.03	0.2
Arsenic (as As)	mg/L	IS 3025 (Part-37): 2022	BDL (DL: 0.005)	10.0	No Relaxation
Boron (as B)	mg/L	IS 3025 (Part-57): 2021	BDL (DL: 0.2)	0.5	1.0
Cadmium (as Cd)	mg/L	APHA 24th Ed.2023; 3111B	BDL (DL: 0.003)	0.003	No Relaxation
Total Chromium (as Cr)	mg/L	APHA 24 th Ed.2023; 3111B	BDL (DL: 0.03)	0.05	No Relaxation
Copper (as Cu)	mg/L	APHA 24th Ed.2023; 3111B	BDL (DL: 0.03)	0.05	1.5
Cyanide (as CN)	mg/L	APHA 24th Ed.2023, 4500 CN-E	BDL (DL: 0.012)	0.05	No Relaxation
Iron (as Fe)	mg/L	APHA 24th Ed.2023; 3111B	0.078	1.0	No Relaxation
Lead (as Pb)	mg/L	APHA 24th Ed.2023; 3111B	BDL (DL: 0.01)	0.01	No Relaxation
Manganese (as Mn)	mg/L	APHA 24 th Ed.2023; 3111B	BDL (DL: 0.05)	0.1	0.3
Mercury (as Hg)	mg/L	IS 3025 (Part-48): 2019	BDL (DL: 0.001)	0.001	No Relaxation
Selenium (as Se)	mg/L	IS 3025 (Part-56): 2019	BDL (DL: 0.01)	0.01	No Relaxation

Page 2 of 4

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TG-13587

TEST REPORT

Test Report No. : ELES/RNC/2024/6951 Report Release Date : 30.11.2024

Work Order No. : 13612312113 Work Order Date : 28.03.2024

ULR No. : TC135872400004820F

Discipline : Chemical		Group: Resid	lues in Water		ory Limit 0500:2012
Parameter	Unit	Test Protocol	Result	Acceptable Limit	Permissible Limit
Zinc (as Zn)	mg/L	APHA 24th Ed.2023; 3111B	BDL (DL: 0.1)	5.0	15
Polynuclear Aromatic Hydrocarbons (PAH)	μg/L	ELES/GC/SOP/04: 2023	BDL (DL: 0.05)	0.1	No Relaxation
Polychlorinated biphenyls (PCB)	μg/L	ELES/GC/SOP/03: 2023	BDL (DL; 0.1)	0.5	No Relaxation
Pesticides				Li	mit
Alachlor	μg/L	FLES/GC/SOP/01: 2023	BDL (DL; 0.5)	1	10
Atrazine	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	2	.0
Butachlor	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	1	25
Chlorpyriphos	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	3	30
Ethion	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	3	.0
Malathion	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	1	90
Methyl parathion	μg/L,	ELES/GC/SOP/01: 2023	BDL (DL: 0.1)	0	30
Monocrotophos	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	t	.0
Phorate	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	2	.0
Phorate Sulphone	µg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)		÷
Dieldrin	μg/L	ELES/GC/SOP/02: 2023	BDL (DL: 0.01)	0.	.03
Alpha HCH	μg/I	ELES/GC/SOP/02: 2023	BDL (DL: 0.006)	0	01
Beta HCH	μg/L	ELES/GC/SOP/02; 2023	BDL (DL: 0.02)	0	.04

Page 3 of 4

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TC-13687

TEST REPORT

Test Report No.	: ELES/RNC/2024/6951	Report Release Date	: 30.11,2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	

ULR No. : TC135872400004820F

Pesticides					
Parameter	Unit	Test Protocol	Result	Limit	
Delta HCH	µg/L	ELES/GC/SOP/02: 2023	BDL (DL: 0.02)	0.04	
Gamma HCH (Lindane)	µg/L	ELES/GC/SOP/02: 2023	BDL (DL: 0.02)	2.0	
Endosulfan (alpha, beta and sulphate)	μg/L	ELES/GC/SOP/02: 2023	BDL (DL: 0.05)	0.40	
DDT(o.p and p.p-isomers of DDT) (DDE and DDD)	μg/L	ELES/GC/SOP/02: 2023	BDL (DL: 0.05)	1:0	
Discipline : Biological		Group	: Water		
Total Coliform (Qualitative)	Per 100 mL	IS 15185: 2021	Not Detected	Shall not be detected	
Escherichia coli (Qualitative)	Per 100 mL	IS 15185: 2021	Not Detected	Shall not be detecte	

Reviewed by Akash Kumar Gustity Manager

****End of Report****

Dr. Despendra Kumar Sinha Ph. D. Environmental Engg. Technical Manager

Page 4 of 4

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PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D1Z4 ENGINEERING SERVICES PVT. LTD.

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Website: www.elespl.co.in

TEST REPORT

Test Report No.	: ELES/RNC/2024/6951	Report Release Date	: 30.11.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name Address	: Hindalco Industries Limited : Lohardaga, Jharkhand-835302	Sample Ref. No. Sampling Date Sample Received Date Type of Sample Source of Sample Location of Sample	: ELES/RNC/2024/DW/8103 : 20.11.2024 : 22.11.2024 : Drinking Water : Tap Water : Hisri New Mines (Hisri (New) Bauxite Mines)	
Mines Status	: Operational	Sampling Procedure	; ELES/DOC/SMPL/01	
Period of Analysis	: 22.11.2024 to 30.11.2024	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved	

Discipline : Chemical		Group: Water		Regulatory Limit as per IS 10500:2012	
Parameter	Unit	Test Protocol	Result	Acceptable Limit	Permissible Limit
Mineral Oil*	mg/L	IS 3025 (Part-39); 2021, Clause 6 Infrared Spectroscopic method,	BDL (DL: 0.01)	0.5	No Relaxation

Remarks: (*) Parameters are outsourced to other Lab.

Reviewed by

Akash Kumar Gwality Manager ****End of Report****

Authorised Signatory
Dr. Deependra Kumar Sinha
Ph. D. Environmental Engg.
Technical Manager

Page 1 of 1

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ENVIRONMENTAL LABORATORIES & ENGINEERING SERVICES PVT. LTD.

Plot No.30, Mansarovar Enclave, Tupudana, Hatia, Ranchi-834003, Jharkhand.

Hisri (New) Bauxite Mine-Environmental Monitoring Report

December 2024

CONTENT

	Hindalco Industries : Hisri (New) Bauxite Mine Environmental Monitoring Dece	ember 2024
	Hisri (New) Bauxite Mine	
	AMBIENT AIR QUALITY- CORE ZONE	
1	Near Water Pump	
2	Near Old Rest Shelter	
3	Near Old Plantation (North West Corner)	
4	Hisri New (Southern Area)	
	AMBIENT AIR QUALITY- BUFFER ZONE	
1	Near Daldaliya Village	
2	Aditya School Gangupara	
3	Ropeway unloading station	
4	Ropeway Angle Station	





PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D1Z4

ENGINEERING SERVICES PVT. LTD.

Email: info@elespl.co.in , eles.ranchi@gmail.com

Phone no.: 0651-2290103 Website: www.elespl.co.in



TC-135EF

TEST REPORT

Test Report No.	: ELES/RNC/2024/7586	Report Release Date	: 23.12.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400005440F			

AILS	SAMPLE DETAILS	
: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2024/AA/8873
Control of Service 1907 Anni Sales Tolk Service Service 1904 Anni Sales Servic	Location	: Near Water Pump; Hisri (New) Bauxite Mine (14.55ha)
: Lohardaga, Jharkhand-835302	Sampling Date	: 13.12.2024 to 14.12.2024
	Sample Received Date	: 16.12.2024
	Type of Sample	: Ambient Air
: Operational	Sampling Procedure	: ELES/DOC/SMPL/02
: 16.12.2024 to 23.12.2024	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved
	: Hindalco Industries Limited : Lohardaga, Jharkhand-835302 : Operational	: Hindalco Industries Limited Sample Ref. No. Location : Lohardaga, Jharkhand-835302 Sampling Date Sample Received Date Type of Sample Sampling Procedure Sampling Done By

MI	ETEOROLOGICAL INFORMATION				
1	Average Temperature (°C) : 20	2	Barometric Pressure (mml	lg) : 728	
3	Relative Humidity (%) : 47	4	Weather Condition	: Clear	

Discipline: Chemic	al	Group:	Group: Atmospheric Pollution		
Parameter Unit		Parameter Unit Test Protocol		Regulatory Limit	
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	67	100 (24hrs)	
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	33	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part-2/Sec1); 2023	9.2	80 (24hrs)	
Nitrogen Di-Oxide (NO2)	μg/m³	IS 5182 (Part- 6): 2022	24.8	80 (24hrs)	
Ozone (O ₃)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)	
Ammonia (NH ₂)	μg/m ²	IS 5182 (Part- 25); 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)	
Lead (Pb)	μg/m³	IS 5182 (Part- 22): 2019	< 0.002	1 (24hrs)	
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)	
Benzene (C ₅ H ₆)	µg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)	

Reviewed by Akash Kumar Quality Manager

****End of Report****

Dr. Oburbarian Simular

Dr. Deatherized Signator Sinha Ph. D. Environmental Engg.

reclinical Manager

Page 1 of 1

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PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D1Z4

ENGINEERING SERVICES PVT. LTD.

Email: info@elespl.co.in , eles.ranchi@gmail.com

Phone no.: 0651-2290103 Website: www.elespi.co.in



TEST REPORT

Test Report No.	: ELES/RNC/2024/7587	Report Release Date	: 23.12.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	

ULR No. : TC135872400005441F

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2024/AA/8874	
		Location	: Near Old Rest Shelter; Hisri (New	
		SAN 745	Bauxite Mine (14.55ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date	: 13.12.2024 to 14.12.2024	
a teacharter.	a manufacture and the same and a same a same and a same a sam	Sample Received Date	: 16.12.2024	
		Type of Sample	: Ambient Air	
Mines Status	: Operational	Sampling Procedure	: ELES/DOC/SMPL/02	
March 1997		Sampling Done By	: ELES Pvt. Ltd.	
Period of Analysis	: 16.12.2024 to 23.12.2024	Sample Condition	: Sealed & Preserved	

MI	ETEOROLOGICAL INFOR	RMATION			
1	Average Temperature (°C)	: 20	2	Barometric Pressure (mmHg)	: 728
3	Relative Humidity (%)	:47	4	Weather Condition	: Clear

Discipline : Chemic	al	Group:	Group: Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23); 2022	78	100 (24hrs)	
Particulate Matter (PM2,5)	μg/m³	IS 5182 (Part- 24); 2019	46	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	μg/m³	1S 5182 (Part- 2/Sec1): 2023	14.4	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m³	1S 5182 (Part- 6): 2022	27.2	80 (24hrs)	
Ozone (O ₃)	μg/m³	1S 5182 (Part- 9); 2019	<20.0	100 (8hrs)	
Ammonia (NH ₃)	μg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)	
Lead (Pb)	μg/m ¹	IS 5182 (Part- 22): 2019	0.022	1 (24hrs)	
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)	
Benzene (C _s H ₄)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0,5	01(Annual)	
			^	1	

Reviewed by Akash Kumar

Quality Manager

****End of Report****

Dr. detharised Signatory

Ph. D. Environmental Engg. recrimical manager

Page 1 of I

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PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D124

ENGINEERING SERVICES PVT. LTD.

Email: info@elespl.co.in , eles.ranchi@gmail.com

Phone no.: 0651-2290103 Website: www.elespl.co.in



IC-13161

TEST REPORT

Test Report No.	: ELES/RNC/2024/7588	Report Release Date	: 23.12.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400005442F			

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindaico Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/8875 : Near Old Plantation (North West Corner) Hisri (New)
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 13.12.2024 to 14.12.2024 : 16.12.2024
Mines Status	: Operational	Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02
Period of Analysis	: 16,12,2024 to 23,12,2024	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved

MI	ETEOROLOGICAL INFORMATION			
1	Average Temperature (°C) : 20	2	Barometric Pressure (mmHg)	: 728
3	Relative Humidity (%) : 47	4	Weather Condition	: Clear

Discipline : Chemic	al	Group:	Group: Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m²	IS 5182 (Part- 23); 2022	67	100 (24hrs)	
Particulate Matter (PM2.5)	μg/m ⁵	IS 5182 (Part- 24): 2019	33	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	μg/m³	1S 5182 (Part-2/Sec1): 2023	9.1	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	µg/m³	1S 5182 (Part- 6): 2022	22.5	80 (24hrs)	
Ozone (O ₃)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)	
Ammonia (NH ₃)	μg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10); 2019 (NDIR Method)	1.12	2 (8hrs)	
Lead (Pb)	μg/m³	IS 5182 (Part- 22): 2019	0.018	1 (24hrs)	
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	96 (Annual)	
Benzene (C ₆ H ₄)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)	
	-			1	

Reviewed by Akash Kumar

Quality Manager

****End of Report****

Authorised Signatory Dr. Deependra Kumar Sinha

Ph. D. Environmental Enco Technical Manager

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TC-13537

TEST REPORT

Test Report No.	: ELES/RNC/2024/7589	Report Release Date	: 23.12.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400005443F			

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindaico Industries Limited	Sample Ref. No.	: ELES/RNC/2024/AA/8876
		Location	: Hisri New (Southern Area)
			Hisri (New) Bauxite Mine(14.55ha)
Address	: Lohardaga, Jharkhand-835302	Sampling Date	: 13.12.2024 to 14.12.2024
TANKE WOOD	1 commence of the commence of	Sample Received Date	: 16.12.2024
		Type of Sample	: Ambient Air
Mines Status	: Operational	Sampling Procedure	: ELES/DOC/SMPL/02
Production and American	14 12 2024 - 22 12 2024	Sampling Done By	: ELES Pvt. Ltd.
Period of Analysis	: 16.12.2024 to 23.12.2024	Sample Condition	: Sealed & Preserved

MI	ETEOROLOGICAL INFORMAT	TON		
1	Average Temperature (*C) : 20	2	Barometric Pressure (mmHg)	: 728
3	Relative Humidity (%) : 47	4	Weather Condition	: Clear

Discipline : Chemic	al	Group:	Group : Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	73	100 (24hrs)	
Particulate Matter (PM2.5)	μg/m ⁵	IS 5182 (Part- 24): 2019	42	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	12.8	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m³	1S 5182 (Part- 6): 2022	24.3	80 (24hrs)	
Ozone (O ₁)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)	
Ammonia (NH ₂)	μg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	1.13	2 (8hrs)	
Lead (Pb)	μg/m³	JS 5182 (Part- 22): 2019	0.024	1 (24hrs)	
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m1	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)	
Benzene (C ₆ H ₆)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)	

Reviewed by Akauh Kumar Quality Manager

****End of Report****

Dr. Deependra Kumar Sinha Ph. D. Environmental Enug.

Technical Manager

Page I of 1

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ENGINEERING SERVICES PVT. LTD.

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Phone no.: 0651-2290103 Website: www.clespl.co.in



10-1310

TEST REPORT

Test Report No.	: ELES/RNC/2024/7523	Report Release Date	: 21.12.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400005378F			

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/8827 : Near Daldaliya Village Bagru Bauxite Mine (75.41ha)
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 12.12.2024 to 13.12.2024 : 14.12.2024
Mines Status	: Non Operational	Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02
Period of Analysis	: 14.12.2024 to 21.12.2024	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved

Mi	ETEOROLOGICAL INFOR	MATION				
1	Average Temperature (°C)	: 19	2	Barometric Pressure (mmHg)	: 728	
3	Relative Humidity (%)	:47	4	Weather Condition	: Clear	

Discipline: Chemic	al	Group:	Atmospheric	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	66	100 (24hrs)
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	34	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part-2/Sec1): 2023	10.2	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	22.8	80 (24hrs)
Ozone (O ₃)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₃)	µg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)
Lead (Pb)	μg/m³	1S 5182 (Part- 22): 2019	0.011	1 (24hrs)
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m"	ELES/AfR/SOP/01: 2021	<2.0	06 (Annual)
Benzene (C _s H _s)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	< 0.5	01(Annual)



****End of Report****

Authorized Signator

Dr. Deependra Rumar Sinha Ph. D. Environmental Engo.

Page 1 of 1

Technical Manager

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ENGINEERING SERVICES PVT. LTD.

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TEST REPORT

Test Report No.	: ELES/RNC/2024/7524	Report Release Date	: 21.12.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400005379F			

CUSTOMER DET	the state of the s	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/8828 : Aditya School Gangupara Bagru Bauxite Mine (75.41ha)
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 12.12.2024 to 13.12.2024 : 14.12.2024 : Ambient Air
Mines Status	: Non Operational	Sampling Procedure	: ELES/DOC/SMPL/02
Period of Analysis	: 14.12.2024 to 21.12.2024	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved

METEOROLOGICAL INFORMATION : 728 Average Temperature (°C) 2 Barometric Pressure (mmHg) Relative Humidity (%) :47 4 Weather Condition : Clear

Discipline : Chemic	inl	Group:	Atmospheric	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	62	100 (24hrs)
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	30	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	1S 5182 (Part- 2/Sec1): 2023	11.5	80 (24hrs)
Nitrogen Di-Oxide (NO2)	μg/m³	IS 5182 (Part- 6): 2022	20.8	80 (24hrs)
Ozone (O ₂)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₂)	μg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	1.09	2 (8hrs)
Lead (Pb)	µg/m³	IS 5182 (Part- 22): 2019	0.011	1 (24hrs)
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)
Benzene (C ₆ H ₆)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)

Reviewed by Akash Kumar

Quality Manager

****End of Report****

Dr. Authorized Signators inha Ph. D. Environmental Engg.

I SELECTION OF STREET

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refer or release only to the job analysis items by the Laboratory only. The information would not the Law Report or Residence for findings done by the Laboratory at the time of involvement only and within the limits of client's instructions. The Laboratory is required for all the information or then provided by the control of interpretation which is provided by the client. The Report cannot be expendenced except in full and any part of the report is not refer out of actions, without prior written approved of the Laboratory. The Report is full or as part shall not be published, subcetter, used for any legal actions unless prior permission would from the Management of the Laboratory. Attention to drawn to the limitation of kability, compensators and paradiction troops. Any manufactured aftergroup & false bearing of the content or appearance of the Tore Report to unlawful and offendors may be presented in the fallest extent of the low. All the samples are remarked for Milesys from the Dote of referentions of the Tori Report. The samples from Reports shall be done within 15-lays from the Dote of Tori Report released research after the period stated before, no completes within accepted. The same Time schedule mannimed in Tori Report is in 3 Shours former. Address intime most, N/A (Not Applicable), BER, Oblives Detection Limits, 1-19, (Lower Detection Limits).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (IHARKHAND) GST NO:- 201AECE9713D1Z4

ENGINEERING SERVICES PVT. LTD.

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TO CHARLE

TEST REPORT

Test Report No.	: ELES/RNC/2024/7526	Report Release Date	: 21.12.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400005381F			

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/8830 : Ropeway Angle Station Bagru Bauxite Mine (75.41ha)
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 11.12.2024 to 12.12.2024 : 14.12.2024
Mines Status	: Non Operational	Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02
Period of Analysis	: 14.12.2024 to 21.12.2024	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Scaled & Preserved

MI	ETEOROLOGICAL INFORMAT	ION		
1	Average Temperature (*C) : 18	2	Barometric Pressure (mmHg	1 728
3	Relative Humidity (%) : 45	4	Weather Condition	: Clear

Discipline : Chemic	al	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	70	100 (24hrs)	
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	38	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	µg/m³	IS 5182 (Part- 2/Sec1): 2023	15.1	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	27.4	80 (24hrs)	
Ozone (O ₃)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)	
Ammonia (NH ₁)	μg/m³	IS 5182 (Part-25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m³	15 5182 (Part- 10): 2019 (NDIR Method)	1.12	2 (8hrs)	
Lead (Pb)	µg/m³	1S 5182 (Part- 22): 2019	0.016	1 (24hrs)	
Nickel (Ni)	ng/m¹	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)	
Benzene (C ₆ H ₆)	µg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)	

Reviewed by
Akanh Kumar

****End of Report****

Authorised Signatory
Dr. Deependra Kumar Sinha
Ph. D. Environmental Engg.

Quality Magagor.

Page 1 of 1

Technical Manager

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10-1380

TEST REPORT

Test Report No.	: ELES/RNC/2024/7525	Report Release Date	: 21.12.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400005380F		A A Minimal Electrical Control	

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/8829 : Ropeway Unloading Station Bagru Bauxite Mine (75.41ha)	
Address	Sample Received Date Type of Sample es Status : Non Operational Sampling Procedure		: 11.12.2024 to 12.12.2024 : 14.12.2024	
Mines Status		: Ambient Air : ELES/DOC/SMPL/02		
Period of Analysis	: 14.12.2024 to 21.12.2024	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved	

METEOROLOGICAL INFORMATION 1 Average Temperature (°C) : 18 2 Barometric Pressure (mmHg) : 728 3 Relative Humidity (%) : 45 4 Weather Condition : Clear

Discipline : Chemic	cal	Group:	Group: Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m²	IS 5182 (Purt-23): 2022	73	100 (24hrs)	
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	41	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	12.8	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	24.3	80 (24hrs)	
Ozone (O ₃)	µg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)	
Ammonia (NH ₃)	μg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)	
Lead (Pb)	μg/m³	1S 5182 (Part- 22): 2019	0.016	1 (24hrs)	
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)	
Benzene (C _s H ₆)	μg/m ²	ELES/GC/SOP/06: 2023	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)	



****End of Report****

K ficher

Authorised Signatory Dr. Deependra Rumar Sinha Ph. D. Environmental Engg.

Page 1 of 1

Technical Manager

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ENVIRONMENTAL LABORATORIES & ENGINEERING SERVICES PVT. LTD.

Plot No.30, Mansarovar Enclave, Tupudana, Hatia, Ranchi-834003, Jharkhand.

Hisri (New) Bauxite Mine-Environmental Monitoring Report

January- 2025

CONTENT

	Hindalco Industries: Hisri (New) Bauxite Mine Environmental Monitoring January 2025
	Hisri (New) Bauxite Mine
	AMBIENT AIR QUALITY- CORE ZONE
1	Near Water Pump
2	Near Old Rest Shelter
3	Near Old Plantation (North West Corner)
4	Hisri New (Southern Area)
	AMBIENT AIR QUALITY- BUFFER ZONE
Ĭ.	Near Daldaliya Village
2	Aditya School Gangupara
3	Ropeway unloading station
4	Ropeway Angle Station
	Surface Water
	Soil





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10/13887

TEST REPORT

Test Report No.	: ELES/RNC/2025/0400	Report Release Date	: 18.01.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC1358725000000392F			

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2025/AA/0227 : Near Water Pump; Hisri (New Bauxite Mine (14.55ha)
Address	Sample Received Date		: 08.01,2025 to 09.01,2025 : 11.01,2025 : Ambient Air
Mines Status	: Operational	Type of Sample Sampling Procedure	: ELES/DOC/SMPL/02
Period of Analysis	: 11.01.2025 to 18.01.2025	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved

M	ETEOROLOGICAL INFORMA	TION	4	
1	Average Temperature (°C) : 1	7 2	Barometric Pressure (mmHg)	: 728
3	Relative Humidity (%) : 5	4 4	Weather Condition	: Clear

Discipline : Chemic	al	Group:	Atmospheric l	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	69	100 (24hrs)
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	28	60 (24hrs)
Sulphur Di-Oxide (SO ₇)	µg/m³	1S 5182 (Part- 2/Sec1): 2023	11.5	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	27.2	80 (24hrs)
Ozone (O ₃)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₂)	μg/m³	IS 5182 (Part- 25); 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (ND(R Method)	<1.0	2 (8hrs)
Lead (Pb)	μg/m³	IS 5182 (Part- 22); 2019	< 0.002	1 (24hrs)
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)
Benzene (C ₆ H ₆)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	< 0.5	01(Annual)

Reviewed by

Akash Kumar

****End of Report****

Dr. Deependra Rumar Sinha Ph. D. Environmental Engg.

Page I of 1

Technical Manager

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10/13567

TEST REPORT

Test Report No.	: ELES/RNC/2025/0401	Report Release Date	: 18.01.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC1358725000000393F			

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2025/AA/0228 : Near Old Rest Shelter; Hisri (New) Bauxite Mine (14.55ha)
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 08.01.2025 to 09.01.2025 : 11.01.2025
Mines Status	: Operational	Type of Sample Sampling Procedure Sampling Done By Sample Condition	: Ambient Air : ELES/DOC/SMPL/02
Period of Analysis	: 11.01.2025 to 18.01.2025		: ELES Pvt. Ltd. : Sealed & Preserved

METEOROLOGICAL INFORMATION				
1	Average Temperature (°C) : 17	2	Barometric Pressure (mm	Hg) : 728
3	Relative Humidity (%) : 54	4	Weather Condition	: Clear

Discipline : Chemic	al	Group:	Atmospheric !	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m³	15 5182 (Part- 23): 2022	73	100 (24hrs)
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	41	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	11.8	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	1S 5182 (Part- 6): 2022	29.2	80 (24hrs)
Ozone (O ₂)	µg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₃)	μg/m³	IS 5182 (Part- 25); 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)
Lead (Pb)	μg/m³	IS 5182 (Part- 22): 2019	0.028	1 (24hrs)
Nickel (Ni)	ng/m³	IS 5182 (Part-26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)
Benzene (C _s H _s)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)

Reviewed by Akash Kumar Quality Manager

****End of Report****

Authorised Signatory

Dr. Deependra Kumar Šinha Ph. D. Environmental Engg.

Page 1 of 1

Technical Manager

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TC-13HIT

TEST REPORT

Test Report No.	: ELES/RNC/2025/0402	Report Release Date	: 18.01,2025
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC1358725000000394F		

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2025/AA/0229 : Near Old Plantation (North West Corner) Hisri (New)
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 08.01.2025 to 09.01.2025 : 11.01.2025
Mines Status	: Operational	Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02
Period of Analysis	: 11.01.2025 to 18.01.2025	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved

M	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (°C)	:17	2	Barometric Pressure (mmHg)	728
3	Relative Humidity (%)	: 54	4	Weather Condition	: Clear

Discipline : Chemic	al	Group:	Atmospheric !	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	71	100 (24hrs)
Particulate Matter (PM2.5)	µg/m³	IS 5182 (Part- 24): 2019	30	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	µg/m³	IS 5182 (Part- 2/Sec1): 2023	11.6	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m ³	IS 5182 (Part- 6); 2022	24.3	80 (24hrs)
Ozone (O ₃)	μg/m³	IS 5182 (Part- 9); 2019	<20.0	100 (8hrs)
Ammonia (NH ₂)	μg/m ³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part- 10): 2019 (NDIR Method)	1.36	2 (8hrs)
Lead (Pb)	µg/m³	IS 5182 (Part- 22): 2019	0.024	I (24hrs)
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)
Benzene (C ₄ H ₆)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m*	ELES/GC/SOP/05: 2023	<0.5	01(Annual)

Reviewed by Quality Manager

****End of Report****

Authorised Signatory Dr. Deependra Rumar Sinha Ph. D. Environmental Engg.

Technical Manager

Page 1 of 1

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TC-13587

TEST REPORT

Test Report No.	: ELES/RNC/2025/0403	Report Release Date	: 18.01.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC1358725000000395F			

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindaico Industries Limited	Sample Ref. No. Location	: ELES/RNC/2025/AA/0230 : Hisri New (Southern Area) Hisri (New) Bauxite Mine(14.55ha)
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 08.01,2025 to 09.01,2025 : 11.01,2025
Mines Status	: Operational	Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02
Period of Analysis	: 11.01.2025 to 18.01.2025	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved

MI	ETEOROLOGICAL INFO	RMATION			
1	Average Temperature (°C)	: 17	.2	Barometric Pressure (mmHg)	; 728
3	Relative Humidity (%)	: 54	4	Weather Condition	: Clear

Discipline : Chemic	al	Group:	Atmospheric !	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	78	100 (24hrs)
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	47	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	14.4	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	28.1	80 (24hrs)
Ozone (O ₃)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₃)	µg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	1.24	2 (8hrs)
Lead (Pb)	μg/m³	IS 5182 (Part- 22): 2019	0.031	1 (24hrs)
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)
Benzene (C ₆ H ₆)	µg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)

Reviewed by Akash Kumar

Quality Manager

****End of Report****

Authorised Signatory Dr. Deependra Kumar Sinha Ph. D. Environmental Enga

Technical Manager

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TC-10087

TEST REPORT

Test Report No.	: ELES/RNC/2025/0319	Report Release Date	: 15.01.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC1358725000000311F			

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2025/AA/0122 : Near Daldaliya Village Bagru Bauxite Mine (75.41ha)
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 06.01.2025 to 07.01.2025 : 09.01.2025 : Ambient Air
Mines Status	: Non Operational	Sampling Procedure	: ELES/DOC/SMPL/02
Period of Analysis	: 09.01.2025 to 15.01.2025	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Scaled & Preserved

M	ETEOROLOGICAL INFORMATION				
1	Average Temperature (°C) : 19	2	Barometric Pressure (mm	Hg) : 727	
3	Relative Humidity (%) : 57	4	Weather Condition	: Clear	

Discipline: Chemic	cal	Group:	Atmospheric	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	71	100 (24hrs)
Particulate Matter (PM2.5)	μg/m ^A	1S 5182 (Part- 24): 2019	39	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	µg/m³	IS 5182 (Part- 2/Sec1): 2023	12.6	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	µg/m³	IS 5182 (Part- 6): 2022	25.3	80 (24hrs)
Ozone (O _i)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8lus)
Ammonia (NH ₂)	µg/m³	15 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)
Lend (Pb)	μg/m²	IS 5182 (Part- 22): 2019	0.014	I (24hrs)
Nickel (Ni)	ng/m ¹	15 5182 (Part- 26); 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)
Benzene (C ₆ H ₆)	µg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)
Benzu-(a)-Pyrene	ng/m ⁹	ELES/GC/SOP/05: 2023	<0.5	01(Annual)

Reviewed by

Akash Kumar Quality Manage

****End of Report****

(Company

Authorised Signatory Dr. Deependra Kumar Sinha

Ph. D. Environmental Engg.

Page I of I

Technical Manager

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TEST REPORT

Test Report No.	: ELES/RNC/2025/0320	Report Release Date	: 15.01.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC1358725000000312F	*	1100 10	

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2025/AA/0123 : Aditya School Gangupara Bagru Bauxite Mine (75.41ha)
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 06,01,2025 to 07.01,2025 : 09.01,2025
Mines Status	: Non Operational	Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02
Period of Analysis	: 09.01.2025 to 15.01.2025	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved

MI	ETEOROLOGICAL INFORM	MATION			
1	Average Temperature ("C)	: 19	2	Barometric Pressure (mmHg)	: 727
3	Relative Humidity (%)	: 57	4	Weather Condition	: Clear

Discipline: Chemic	ral .	Group:	Atmospheric :	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	67	100 (24hrs)
Particulate Matter (PM2.5)	µg/m³	IS 5182 (Part-24): 2019	35	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	13.1	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m ³	IS 5182 (Part- 6): 2022	24.4	80 (24hrs)
Ozone (O _t)	µg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₃)	µg/m³	1S 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	1.15	2 (8hrs)
Lead (Pb)	μg/m³	IS 5182 (Part- 22): 2019	0.018	1 (24hrs)
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)
Amenic (As)	ng/m [±]	ELES/AIR/SOP/01: 2021	<3.0	06 (Annual)
Benzene (C ₀ H ₄)	µg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m²	ELES/GC/SOP/05: 2023	<0.5	01(Annual)

Reviewed by

Akash Kumar Quality-Manager ****End of Report****

Dr. Deependra Kumar Sinha

Ph. D. Environmental Engg.

Technical Manager

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The Discount metal as Tear Report, is count by the Latercomy codes. General Terms and Conditions, only on Company letter hand in pre-approved forms. The results above in the Teat Report reflects the fleshings does by the Latercomy of the Latercomy only. The relience stand on the Teat Report reflects the fleshings does by the Latercomy at the time of involvement only and within the licens of does by the Latercomy. The Latercomy is responsible for all the information or date provided in the report, except the information which is provided by the allow. The Report results approved of the Latercomy. The Report in fall or to pure shall not be published, above to the flowing and address makes provided the later country of the Latercomy. Assumes to the flowing of flowing and published above to the flowing at the content or appearance of the Year Report is utilized and allowed on the fallowing country of the later count of the later count of the later country flow and the content of the formation of the later country flowing and the content of the later country flowing the latercomy of the Teat Report. The samples from the flowing team the Date of releasestance of the Teat Report. The samples from the flowing the Date of releasestance of the Teat Report. The samples from the flowing the latercomy of the Teat Report. The samples from the flowing the latercomy of the Teat Report. The samples from the flowing the latercomy of the Teat Report. The samples from the latercomy of the teather of the latercomy of the Teat Report. The samples from the latercomy of the Teat Report. The samples from the latercomy of the teather than the latercomy of the teather than the latercomy of the teather than the latercomy of the latercomy of the Teat Report. The samples from the latercomy of the latercomy of the Teat Report. The samples from the latercomy of the latercomy of the Teat Report. The samples from the latercomy of the latercomy of the Teat Report. The samples from the latercomy of the latercomy of the Teat Report. The samples fr

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TEST REPORT

Test Report No.	: ELES/RNC/2025/0321	Report Release Date	: 15.01.2025
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC1358725000000313F		

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2025/AA/0124 : Ropeway Unloading Station Bagru Bauxite Mine (75.41ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 06.01.2025 to 07.01.2025 : 09.01.2025 : Ambient Air	
Mines Status	: Non Operational	Sampling Procedure Sampling Done By Sample Condition	: ELES/DOC/SMPL/02 : ELES Pvt. Ltd. : Sealed & Preserved	
Period of Analysis	: 09.01.2025 to 15.01.2025			

MI	ETEOROLOGICAL INFORMAT	ION			
1	Average Temperature (°C) : 19	2	Barometric Pressure (mmHg)	: 727	
3	Relative Humidity (%) : 57	4	Weather Condition	: Clear	

Discipline: Chemie	rel	Group:	Atmospheric	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23); 2022	78	100 (24hrs)
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	45	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	13.4	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	25.1	80 (24hrs)
Ozone (O ₃)	µg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₁)	μg/m³	IS 5182 (Part- 25); 2018	<10.0	400 (24hrs)
Carban Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.8	2 (8hrs)
Lead (Pb)	μg/m³	IS 5182 (Part- 22): 2019	0.019	1 (24hrs)
Nickel (Ni)	ng/m³	IS 5182 (Part-26); 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)
Bennene (C ₄ H ₆)	µg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m²	ELES/GC/SOP/05: 2023	<0.5	01(Annual)

Reviewed by Akash Kumar Quality Manager

****End of Report****

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Authorised Signatury
Dr. Deependra Kumar Sinha

Ph. D. Environmental Enop

Page I of I

Technical Manager



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TO-KIMIT

TEST REPORT

Test Report No.	: ELES/RNC/2025/0322	Report Release Date	: 15.01.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC1358725000000314F			

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2025/AA/0125 : Ropeway Angle Station Bagru Bauxite Mine (75.41ha)
Address	: Lohardagu, Jharkhand-835302	Sampling Date Sample Received Date	: 06.01.2025 to 07.01.2025 : 09.01.2025
Mines Status	: Non Operational	Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02
Period of Analysis	: 09.01.2025 to 15.01.2025	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved

MI	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (°C)	: 19	2	Barometric Pressure (mmHg)	: 727
3	Relative Humidity (%)	: 57	4	Weather Condition	: Clear

Discipline: Chemic	ral .	Group:	Atmospheric l	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	74	100 (24hrs)
Particulate Matter (PM2.5)	µg/m³	IS 5182 (Part-24): 2019	41	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1); 2023	13.3	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	26.1	80 (24hrs)
Ozone (O ₃)	µg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₂)	µg/m²	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part- 10): 2019 (NDIR Method)	1.20	2 (8hrs)
Lead (Ph)	μg/π)	IS 5182 (Part- 22): 2019	0.018	1 (24hrs)
Nickel (Ni)	ng/m³	IS 5182 (Part- 26); 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m [®]	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)
Benzene (C ₆ H ₆)	µg/m³	ELES/GC/SOP/06; 2023	<2.5	05(Annuai)
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0,5	OI(Annual)

Reviewed by

Akash Kumar

Quality Manager

****End of Report****

Dr. Deependra Kumar Sinha

Ph. D. Environmental Engg

Page 1 of 1

Technical Manager

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TC-13581

TEST REPORT

Test Report No.	: ELES/RNC/2025/0426	Report Release Date	: 20.01.2025
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC1358725000000418F		

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Sampling Date Sample Received Date	: ELES/RNC/2025/SW/0234 : 08.01.2025 : 11.01.2025
Address	: Lohardaga, Jharkhand-835302	Type of Sample Location of Sample	: Surface Water : Near Water Pump- Hisri (New) Bauxite Mine (14.55ha)
Mines Status	: Operational	Sampling Procedure	: ELES/DOC/SMPL/01
Period of Analysis	: 11.01.2025 to 17.01.2025	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved

Discipline: Chemical		Group:	Water	Tolerance Limits
Parameter	Unit	Test Protocol	Result	as per IS 2296-1992 Class C (Inland Surface Water)
pH (at 24.6 °C)		IS 3025 (Part-11): 2022	6.57	6.5-8.5
Temperature	"C	IS 3025 (Part 9): 2023	19.0	(0)
Chemical Oxygen Demand (COD)	mg/L	IS 3025 (Part-58): 2023	5.2	-
Biochemical Oxygen Demand (BOD) (@ 20°C for 5 days)	mg/L	APHA 24th Ed.2023; 5210B	1.3	3.0
Total Dissolved Solids (TDS)	mg/L	IS 3025 (Part-16): 2023	85.0	1500
Total Suspended Solids (TSS)	mg/L	IS 3025 (Part-17): 2022	3.2	/=
Oil & Grease	mg/L	IS 3025 (Part-39): 2021	BDL (DL: 0.1)	0.1
Calcium (as Ca)	mg/L	IS 3025 (Part-40): 2019	4.9	Case

Page 1 of 2

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10-1388

TEST REPORT

Test Report No.	: ELES/RNC/2025/0426	Report Release Date	: 20.01.2025
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
III R No.	+ TC1358725000000418F		

Discipline : Chemical Group : Residues in Water			Tolerance Limits	
Parameter	Unit	Test Protocol	Result	as per 1S 2296-1992 Class C (Inland Surface Water)
Aluminum (as Al)	mg/L	IS 3025 (Part-55) :2003; RA2019	BDL (DL: 0.02)	
Iron (as Fe)	mg/L	APHA 24th Ed.2023; 3111B	0.091	50

Remarks: pH & Temperature done at site.

Reviewed by Akash Kumar

Quality Manager

****End of Report****

Authorised Signatory Dr. Deependra Kuffiar Sinha Ph. D. Environmental Engg.

Technical Manager

Page 2 of 2

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TC-1968T

TEST REPORT

Test Report No.	: ELES/RNC/2025/0429	Report Release Date	: 20.01.2025
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC1358725000000421F		

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Sampling Date Sample Received Date	: ELES/RNC/2025/SL/0237 : 09.01.2025 : 11.01.2025
Address	: Lohardaga, Jharkhand-835302	Type of Sample Location of Sample	: Soil : Near Mines, Hisri (New) Bauxite Mine (14.55ha)
Mines Status	; Operational	Sampling Procedure	: ELES/DOC/SMPL/05
Period of Analysis	: 11.01.2025 to 17.01.2025	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed

Discipline : Chemical		Group : Pollution &	Environment
Parameter	Unit	Test Protocol	Result
pH (1:2) at 24.5 °C		IS 2720 (Part-26): 2021	7.01
Conductivity (1:2) at 24.5 °C	μS/cm	IS 14767: 2021	182
Total Organic Carbon (TOC)	%	Soil Testing in India: 2011 (Walkley & Black Method)	0.45
Available Phosphorus (as P)	kg/ha	Soil Testing in India; 2011	4.56
Potassium (as K)	mg/kg	IS 9497: 2020	1050
Available Nitrogen	%	Soil Testing in India; 2011	7.56
Chloride (as Cl) (1:2)	%	ELES/SOIL/SOP/01: 2021	0.035
Arsenic (as As)	mg/kg	ELES/SOIL/SOP/28: 2023	BDL (DL: 0.01)
Cadmium (as Cd)	mg/kg	US EPA 3050 A&B: 1996	BDL (DL: 0.1)
Lead (as Pb)	mg/kg	US EPA 3050 A&B: 1996	BDL (DL: 0.1)

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TO/THEE

TEST REPORT

Test Report No.	: ELES/RNC/2025/0429	Report Release Date	: 20.01.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC1358725000000421F			

Discipline: Chemical		Group: Pollution & Environment	
Parameter	Unit	Test Protocol	Result
Magnesium (as Mg)	mg/kg	Soil Testing in India; 2011	1605
Mercury (as Hg)	mg/kg	US EPA 7473 : 2007	BDL (DL: 0.01)

Reviewed by Akash Kumar Quality Manager

****End of Report****

Authorised Signatory
Dr. Deependra Kumar Sinha
Ph. D. Environmental Engg.
Technical Manager

Page 2 of 2

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PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D1Z4 ENGINEERING SERVICES PVT. LTD.

Email: info@elespl.co.in , eles.ranchi@gmail.com Phone no.: 0651-2290103

Website: www.elespl.co.in

TEST REPORT

Test Report No.	: ELES/RNC/2025/0429	Report Release Date	: 20.01.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	

CUSTOMER DETAILS		SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2025/SL/0237
		Sampling Date	: 09.01.2025
		Sample Received Date	:11.01.2025
Address	: Lohardaga, Jharkhand-835302	Type of Sample	: Soil
		Location of Sample	: Near Mines, Hisri (New) Bauxite Mine (14.55ha)
Mines Status	: Operational	Sampling Procedure	: ELES/DOC/SMPL/05
Period of Analysis	: 11.01.2025 to 17.01.2025	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed
	1		

Discipline : Chemical		Group: Pollution & Environme	
Parameter	Unit	Test Protocol	Result
Selenium (as Se)	mg/kg	US EPA 3050 B: 1996	BDL (DL: 0.01)

Reviewed by

Akash Kumar Quality Manager ****End of Report****

Authorised Signatory
Dr. Deependra Kumar Sinha
Ph. D. Environmental Engg.
Technical Manager

Page 1 of 1

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ENVIRONMENTAL LABORATORIES & ENGINEERING SERVICES PVT. LTD.

Plot No.30, Mansarovar Enclave, Tupudana, Hatia, Ranchi-834003, Jharkhand.

Hisri (New) Bauxite Mine-Environmental Monitoring Report

February 2025



CONTENT

	Hindalco Industries : Hisri (New) Bauxite Mine Environmental Monitoring	February 2025
	Hisri (New) Bauxite Mine	
	AMBIENT AIR QUALITY- CORE ZONE	
1	Near Water Pump	
2	Near Old Rest Shelter	
3	Near Old Plantation (North West Corner)	
4	Hisri New (Southern Area)	
	AMBIENT AIR QUALITY- BUFFER ZONE	
1	Near Daldaliya Village	
2	Aditya School Gangupara	
3	Ropeway unloading station	
4	Ropeway Angle Station	
	Drinking Water	





PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D124



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TC-13587

TEST REPORT

Test Report No.	: ELES/RNC/2025/1210	Report Release Date	: 25.02.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC1358725000001181F			

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2025/AA/1238 : Near Water Pump; Hisri (New) Bauxite Mine (14.55ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 15.02.2025 to 16.02.2025 : 19.02.2025	
Mines Status	: Operational	Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt. Ltd. : Sealed & Preserved	
Period of Analysis	: 19.02.2025 to 25.02.2025	Sampling Done By Sample Condition		

M	ETEOROLOGICAL INFORMATION			
1	Average Temperature (°C) : 21	2	Barometric Pressure (mmHg)	: 725
3	Relative Humidity (%) : 57		Weather Condition	: Clear

Discipline: Chemic	cal	Group: Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	72	100 (24hrs)
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	36	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	13.1	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	32.6	80 (24hrs)
Ozone (O ₂)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₅)	μg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10); 2019 (NDIR Method)	1.25	2 (8hrs)
Lead (Pb)	μg/m³	IS 5182 (Part- 22): 2019	< 0.002	1 (24hrs)
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)
Benzene (C ₆ H ₆)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)

Reviewed by

****End of Report****

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Page I of I

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PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (INARKHAND) GST NO:- 20AAECE9713D124

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TC-13587

TEST REPORT

Test Report No.	: ELES/RNC/2025/1211	Report Release Date	: 25.02.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC1358725000001182F			

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2025/AA/1239	
		Location	: Near Old Rest Shelter, Hisri (New)	
			Bauxite Mine (14,55ha)	
Address	s Status : Operational	Sampling Date	: 15.02.2025 to 16.02.2025	
		Sample Received Date	: 19.02.2025	
		Type of Sample	: Ambient Air	
Mines Status		Sampling Procedure	: ELES/DOC/SMPL/02	
Period of Analysis		Sampling Done By	: ELES Pvt. Ltd.	
r error or amaryara	. 17.Va.2023 IV 23.02.2023	Sample Condition	: Sealed & Preserved	

MI	METEOROLOGICAL INFORMATION					
1	Average Temperature (°C) : 21	2	Barometric Pressure (mm	Hg) : 725		
3	Relative Humidity (%) : 57		Weather Condition	: Clear		

Discipline : Chemic	al	Group:	Atmospheric :	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	83	100 (24hrs)
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	47	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	12.4	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	38.3	80 (24hrs)
Ozone (O ₃)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₃)	μg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)
Lead (Pb)	μg/m³	1S 5182 (Part- 22): 2019	0.031	1 (24hrs)
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)
Benzene (C ₆ H ₆)	µg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)

MATTLA Reviewed by

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pully Manager

Page I of 1

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TEST REPORT

Test Report No.	: ELES/RNC/2025/1212	Report Release Date	: 25.02.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC1358725000001183F			

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2025/AA/1240 : Near Old Plantation (North West Corner) Hisri (New)	
Address	: Lohardaga, Jharkhand-835302 : Operational	Sampling Date Sample Received Date	: 15.02.2025 to 16.02.2025 : 19.02.2025	
Mines Status		Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02	
Period of Analysis	: 19.02.2025 to 25.02.2025	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved	

M	ETEOROLOGICAL INFORMATION			
1	Average Temperature (°C) : 21	2	Barometric Pressure (mm	Hg) : 725
3	Relative Humidity (%) : 57	4	Weather Condition	; Clear

Discipline : Chemic	cal	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	76	100 (24hrs)	
Particulate Matter (PM2.5)	μg/m ³	IS 5182 (Part- 24): 2019	40	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	10.2	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	27.8	80 (24hrs)	
Ozone (O ₃)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)	
Ammonia (NH ₂)	μg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	1.09	2 (8hrs)	
Lead (Pb)	µg/m³	IS 5182 (Part- 22): 2019	0.018	1 (24hrs)	
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)	
Benzene (C ₆ H ₆)	µg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	< 0.5	01(Annual)	

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****End of Report****

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Akash Kumar

Page 1 of 1

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PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D124

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TC-13587

TEST REPORT

Test Report No.	: ELES/RNC/2025/1213	Report Release Date	: 25.02.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC1358725000001184F			

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2025/AA/1241	
		Location	: Hisri New (Southern Area)	
			Hisri (New) Bauxite Mine(14.55ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date	: 15.02.2025 to 16.02.2025	
	SPORTS NO CONTROL SECTION OF THE SEC	Sample Received Date	: 19.02.2025	
		Type of Sample	: Ambient Air	
Mines Status	: Operational	Sampling Procedure	: ELES/DOC/SMPL/02	
Period of Analysis	: 19.02.2025 to 25.02.2025	Sampling Done By	: ELES Pvt. Ltd.	
remod on Analysis	. 17.06.2023 to 23.02.2023	Sample Condition	: Sealed & Preserved	

M	METEOROLOGICAL INFORMATION				
1	Average Temperature (°C) : 21	2	Barometric Pressure (mm	iHg) : 725	
3	Relative Humidity (%) : 57	4	Weather Condition	: Clear	

Discipline : Chemic	cal	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	71	100 (24hrs)	
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	37	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	13.3	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	24.5	80 (24hrs)	
Ozone (O ₃)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)	
Ammonia (NH ₃)	μg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	1.33	2 (8hrs)	
Lead (Pb)	µg/m³	IS 5182 (Part- 22); 2019	0.035	1 (24hrs)	
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)	
Benzene (C ₄ H ₆)	µg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)	

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****End of Report****

Authorised Signatory

Akash Kumar

Page 1 of 1

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PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANIA HATIA, RANCHI-834003 (JHARKHAND) GST NO: 20AAECE971301Z4



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TEST REPORT

Test Report No.	: ELES/RNC/2025/1122	Report Release Date	: 22.02.2025	1
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC1358725000001100F			

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2025/AA/1105 : Near Daldaliya Village Bagru Bauxite Mine (75.41ha)
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 12.02.2025 to 13.02.2025 : 15.02.2025
Mines Status	: Non Operational	Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02
Period of Analysis	: 15.02.2025 to 22.02.2025	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved

М	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (°C)	:22	2	Barometric Pressure (mmHg)	: 727
3	Relative Humidity (%)	: 58	4	Weather Condition	: Clear

Discipline: Chemi-	cal	Group : Atmospheric Pollution				
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Particulate Matter (PM10)	μg/m ³	IS 5182 (Part- 23): 2022	75	100 (24hrs)		
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part-24): 2019	42	60 (24hrs)		
Sulphur Di-Oxide (SO ₂)	μg/m ¹	IS 5182 (Part-2/Sec1): 2023	11.8	80 (24hrs)		
Nitrogen Di-Oxide (NO2)	μg/m ³	IS 5182 (Part- 6): 2022	27.1	80 (24hrs)		
Ozone (O ₃)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)		
Ammonia (NH ₃)	μg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)		
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)		
Lead (Pb)	µg/m³	IS 5182 (Part- 22): 2019	0.018	1 (24hrs)		
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)		
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)		
Benzene (C _s H ₆)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)		
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)		

Reviewed by

****End of Report****

Authorized Signatory Charley Manney

Page 1 of 1

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TC-11587

TEST REPORT

Test Report No.	: ELES/RNC/2025/1123	Report Release Date	: 22.02.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC1358725000001101F		HKF-ROOM(INDT)	

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2025/AA/1106 : Aditya School Gangupara Bagru Bauxite Mine (75.41ha	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 12.02.2025 to 13.02.2025 : 15.02.2025 : Ambient Air	
Mines Status	: Non Operational	Sampling Procedure	: ELES/DOC/SMPL/02	
Period of Analysis	: 15.02.2025 to 22.02.2025	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved	

M	METEOROLOGICAL INFORMATION					
1	Average Temperature (°C)	: 22	2	Barometric Pressure (mmHg)	: 727	
3	Relative Humidity (%)	: 58	-	Weather Condition	: Clear	

Discipline: Chemi	cal	Group:	Group: Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	71	100 (24hrs)	
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	38	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	12.2	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	26.4	80 (24hrs)	
Ozone (O ₃)	hã/m _j	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)	
Ammonia (NH ₃)	μg/m³	IS 5182 (Part- 25); 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	1,24	2 (8hrs)	
Lead (Pb)	μg/m³	IS 5182 (Part- 22): 2019	0.018	I (24hrs)	
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)	
Benzene (C ₆ H ₆)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	O1(Annual)	

oma Reviewed by

****End of Report****

Authorised Signatory Charles Strong

Page 1 of 1

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TC-13987

TEST REPORT

Test Report No.	: ELES/RNC/2025/1124	Report Release Date	: 22.02.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
III R No.	: TC1358725000001102F	1		

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2025/AA/1107	
		Location	: Ropeway Unloading Station Bagru Bauxite Mine (75.41ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date	: 12.02.2025 to 13.02.2025	
		Sample Received Date	: 15.02.2025	
		Type of Sample	: Ambient Air	
Mines Status	: Non Operational	Sampling Procedure	: ELES/DOC/SMPL/02	
Period of Analysis	: 15.02.2625 to 22.02.2025	Sampling Done By	: ELES Pvt. Ltd.	
	Trivellenas in asidelanas	Sample Condition	: Sealed & Preserved	

METEOROLOGICAL INFORMATION					
1	Average Temperature (°C) : 22	2	Barometric Pressure (mmHg	: 727	
3	Relative Humidity (%) : 56	4	Weather Condition	: Clear	

Discipline: Chemie	cal	Group:	Atmospheric !	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	74	100 (24hrs)
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	40	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1); 2023	12.9	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	23.8	80 (24hrs)
Ozone (O ₃)	µg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₃)	µg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)
Lead (Pb)	µg/m³	IS 5182 (Part- 22): 2019	0.014	I (24hrs)
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ne/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)
Benzene (C ₄ H ₆)	jīg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	< 0.5	01(Annual)

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****End of Report****

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TC-13557

TEST REPORT

Test Report No.	: ELES/RNC/2025/1125	Report Release Date	: 22.02.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC1358725000001103F			

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2025/AA/1108 : Ropeway Angle Station Bagru Bauxite Mine (75.41ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 12.02.2025 to 13.02.2025 : 15.02.2025	
Mines Status	: Non Operational	Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02	
Period of Analysis	: 15.02.2025 to 22.02.2025	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved	

MI	METEOROLOGICAL INFORMATION						
1	Average Temperature (°C) : 22	2	Barometric Pressure (mml	fg) : 727			
3	Relative Humidity (%) : 56	4	Weather Condition	: Clear			

Discipline : Chemi-	cal	Group:	Atmospheric	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	78	100 (24hrs)
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	45	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	13.6	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	µg/m³	IS 5182 (Part- 6): 2022	29.5	80 (24hrs)
Ozone (O ₃)	μg/m ³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₃)	μg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10); 2019 (NDIR Method)	1.23	2 (8hrs)
Lead (Pb)	µg/m³	IS 5182 (Part- 22): 2019	0.022	1 (24hrs)
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)
Benzene (C _e H ₆)	µg/m²	ELES/GC/SOP/06; 2023	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	< 0.5	01(Annual)

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****End of Report****

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TC-UNIT

TEST REPORT

Test Report No.	: ELES/RNC/2025/1301	Report Release Date	: 28.02,2025
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC1358725000001272F		

CUSTOMER DET	AILS	SAMPLE DETAILS			
Customer Name Address	: Hindalco Industries Limited : Lohardaga, Jharkhand-835302	Sample Ref. No. Sampling Date Sample Received Date Type of Sample Source of Sample Location of Sample	: ELES/RNC/2025/DW/1255 : 16.02.2025 : 19.02.2025 : Drinking Water : TAP Water : Hisri New Mines (Hisri (New) Bauxite Mines)		
Mines Status	: Operational	Sampling Procedure	: ELES/DOC/SMPL/01		
Period of Analysis	: 19.02.2025 to 27.02.2025	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved		

Discipline : Chemical		Group:	Water	Regulatory Limit as per IS 10500:2012	
Parameter	Unit	Test Protocol	Result	Acceptable Limit	Permissible Limit
pH (at 24.8 °C)	54	APHA 24th Ed 2023, 4500-H	7.02	6.5-8.5	No Relaxation
Turbidity	NTU	APHA 24th Ed.2023, 2130 B	0.13	1.0	5.0
Taste	3	APHA 24th Ed.2023, 2160 C	Agreeable	Agreeable	Agreeable
Odour	-	IS 3025 (Part-5) :2018	Agreeable	Agreeable	Agreeable
Colour	Hazen	APHA 24th Ed.2023, 2120B&D	1.0	5.0	15
Total Dissolved Solids (TDS)	mg/L	APHA 24th Ed.2023, 2540B,C&D	380	500	2000
Chloride (as CI)	mg/L	APHA 24th Ed.2023, 4500 CI B	14.3	250	1000
Fluoride (as F)	mg/L	APHA 24th Ed.2023, 4500 F-D	BDL (DL: 0.1)	1.0	1.5
Total Alkalinity (as CaCO ₂)	mg/L	APHA 24th Ed.2023, 2320 B	188	200	600
Total Hardness (as CaCO ₃)	mg/L	APHA 24th Ed.2023, 2340 C	172	200	600
Sulphate (as SO ₄)	mg/L	APHA 24th Ed.2023, 4500 SO ₄ -2-E	4.48	200	400
Nitrate (as NO ₃)	mg/L	APHA 24th Ed.2023, 4500 NO ₃ -B	BDL (DL: 0.5)	45	No Relaxation

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TEST REPORT

 Test Report No.
 : ELES/RNC/2025/1301
 Report Release Date
 : 28.02.2025

 Work Order No.
 : 13612312113
 Work Order Date
 : 28.03.2024

ULR No. : TC1358725000001272F

Discipline : Chemica	al	Grou	p: Water	the second secon	ory Limit 10500:2012
Parameter	Unit	Test Protocol	Result	Acceptable Limit	Permissible Limit
Phenolic Compound (as C _e H ₅ OH)	mg/L	IS 3025 (Part 43/Sec1): 2022	BDL (DL: 0.001)	0.001	0.002
Free Residual Chlorine (RFC)	mg/L	IS 3025 (Part-26): 2021	BDL (DL: 0.1)	0.2(Min)	L0(Min)
Calcium (as Ca)	mg/L	APHA 24th Ed.2023, 3500 Ca B	45.5	75	200
Anionic Surfactants (as MBAS)	mg/L	APHA 24th Ed.2023, 5540-C	BDL (DL: 0.025)	0.2	1.0
Discipline : Chemic	al	Gre	oup: Residues i	n Water	
Aluminum (as Al)	mg/L	IS 3025 (Part-55) :2003; RA2019	BDL (DL: 0.02)	0.03	0.2
Arsenie (as As)	mg/L	IS 3025 (Part-37): 2022	BDL (DL: 0.005)	0.01	No Relaxation
Boron (as B)	mg/L	IS 3025 (Part-57) ; 2021	BDL (DL: 0.2)	0.5	1,0
Cadmium (as Cd)	mg/L	APHA 24th Ed.2023; 3111B	BDL (DL: 0.003)	0.003	No Relaxation
Total Chromium (as Cr)	mg/L	APHA 24th Ed.2023; 3111B	BDL (DL: 0.03)	0.05	No Relaxation
Copper (as Cu)	mg/L	IS 3025 (Part 42): 2019	BDL (DL: 0.03)	0.05	1.5
Cyanide (as CN)	mg/L	APHA 24 th Ed.2023, 4500 CN-E	BDL (DL: 0.012)	0.05	No Relaxation
Iron (as Fe)	mg/L	APHA 24th Ed.2023; 3111B	0.041	1.0	No Relaxation
Lead (as Pb)	mg/L	APHA 24th Ed.2023; 3111B	BDL (DL: 0.01)	0.01	No Relaxation
Manganese (as Mn)	mg/L	APHA 24th Ed 2023; 3111B	BDL (DL: 0.05)	0,1	0.3
Mercury (as Hg)	mg/L	IS 3025 (Part-48): 2019	BDL (DL: 0.001)	0.001	No Relaxation
Selenium (as Se)	mg/L	IS 3025 (Part-56): 2019	BDL (DL: 0.01)	0.01	No Relaxation

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TG-YESST

TEST REPORT

Test Report No.	: ELES/RNC/2025/1301	Report Release Date	: 28.02.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	

ULR No. : TC1358725000001272F

Discipline: Chemical		Group : Resid	nes in Water		ory Limit 10500:2012
Parameter	Unit	Test Protocol	Result	Acceptable Limit	Permissible Limit
Zine (as Zn)	mg/L	APHA 24 th Ed.2023; 3111B	BDL (DL: 0.1)	5.0	15
Polynuclear Aromatic Hydrocarbons (PAH)	μg/L	ELES/GC/SOP/04: 2023	BDL (DL: 0.05)	0.1	No Relaxation
Polychlorinated biphenyls (PCB)	μg/L	ELES/GC/SOP/03: 2023	BDL (DL: 0.1)	0.5	No Relaxation
Pesticides				Li	mit
Alachlor	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	2	20
Atrazine	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	2	1.0
Butachlor	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	1	25
Chlorpyriphos	μg/L	ELES/GC/SOP/01: 2023	BDL (DL; 0.5)	3	30
Ethion	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	3	0.0
Malathion	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	1	90
Methyl parathion	µg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.1)	0	.30
Monocrotophos	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)		.0
Phorate	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	12	2.0
Phorate Sulphone	µg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)		
Dieldrin	μg/L	ELES/GC/SOP/02: 2023	BDL (DL: 0.01)	0	.03
Alpha HCH	μg/L.	ELES/GC/SOP/02: 2023	BDL (DL: 0.006)	0	.01
Beta HCH	μg/L	ELES/GC/SOP/02: 2023	BDL (DL: 0.02)	0	.04

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TC-(1/87

TEST REPORT

Test Report No.	: ELES/RNC/2025/1301	Report Release Date	: 28.02.2025
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC1358725000001272F		

Pesticides				4
Parameter	Unit	Test Protocol	Result	Limit
Delta HCH	μg/L	ELES/GC/SOP/02: 2023	BDL (DL: 0.02)	0.04
Gamma HCH (Lindane)	μg/L	ELES/GC/SOP/02: 2023	BDL (DL: 0.02)	2.0
Endosulfan (alpha, beta and sulphate)	μg/L	ELES/GC/SOP/02: 2023	BDL (DL: 0.05)	0.40
DDT(o,p and p,p-isomers of DDT) (DDE and DDD)	μg/L	ELES/GC/SOP/02: 2023	BDL (DL: 0.05)	1.0
Discipline : Biological		Grou	p: Water	
Total Coliform (Qualitative)	Per 100 mL	IS 15185: 2021	Not Detected	Shall not be detected
Escherichia coli (Qualitative)	Per 100 mL	IS 15185; 2021	Not Detected	Shall not be defected

Remarks: pH done at Site.

Reviewed by

Akesh Kumar Quality Manaco ****End of Report****

Authorised Signatory

Ph. D. Environmental Cong.
Technical Manager

Page 4 of 4

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PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D1Z4 ENGINEERING SERVICES PVT. LTD.

Email: info@elespl.co.in , eles.ranchi@gmail.com Phone no.: 0651-2290103 Website : www.elespl.ca.in

TEST REPORT

Test Report No.	: ELES/RNC/2025/1301	Report Release Date	: 28.02.2025
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024

CUSTOMER DET	TAILS	SAMPLE DETAILS		
Customer Name Address	: Hindalco Industries Limited : Lohardaga, Jharkhand-835302	Sample Ref. No. Sampling Date Sample Received Date Type of Sample Source of Sample Location of Sample	: ELES/RNC/2025/DW/1255 : 16.02.2025 : 19.02.2025 : Drinking Water : TAP Water : Hisri New Mines	
Mines Status	: Operational	Sampling Procedure	(Hisri (New) Bauxite Mines) : ELES/DOC/SMPL/01	
Period of Analysis	: 19.02.2025 to 28.02.2025	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved	

Discipline: Cher	mical	Group: Wa	ter	The second second	ory Limit 10500:2012
Parameter	Unit	Test Protocol	Result	Acceptable Limit	Permissible Limit
Mineral Oil*	mg/L	IS 3025 (Part-39): 2021, Clause 6 Infrared Spectroscopic method.	BDL (DL: 0.01)	0.5	No Relaxation

Remarks: (*) Parameters are outsourced to other Lab.

Reviewed by

Akesh Kumur Quelity Manegar ****End of Report****

Authorised Signatory

Dr. Deependra Kurrer Sinha Ph. D. Environmental Engg. Technical Manager

Page 1 of 1

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ENVIRONMENTAL LABORATORIES & ENGINEERING SERVICES PVT. LTD.

Plot No.30, Mansarovar Enclave, Tupudana, Hatia, Ranchi-834003, Jharkhand.

Hisri (New) Bauxite Mine-Environmental Monitoring Report

March 2025



CONTENT

	Hindalco Industries : Hisri (New) Bouxite Mine Environmental Monitoring	March 2025
	Hisri (New) Bauxite Mine	
	AMBIENT AIR QUALITY- CORE ZONE	
1	Near Water Pump	
2	Near Old Rest Shelter	
3	Near Old Plantation (North West Corner)	
4	Hisri New (Southern Area)	
	AMBIENT AIR QUALITY- BUFFER ZONE	
1	Near Daldaliya Village	
2	Aditya School Gangupara	
3	Ropeway unloading station	
4	Ropeway Angle Station	
	AMBIENT NOISE	
	WORKZONE NOISE	
	Spring Water Spring Water	
1	Daldaliya Village	



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATTA, RANCHI-834003 (JHARKHAND) GST NO: - 20AAECE9713D174

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TEST REPORT

Test Report No.	: ELES/RNC/2025/2001	Report Release Date	: 24.03.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	

ULR No. : TC1358725000001959F

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2025/AA/2143	
		Location	: Near Water Pump; Hisri (New)	
			Bauxite Mine (14.55ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date	: 12.03.2025 to 13.03.2025	
2 Address made		Sample Received Date	: 17.03.2025	
		Type of Sample	: Ambient Air	
Mines Status	: Operational	Sampling Procedure	: ELES/DOC/SMPL/02	
	17 01 707 1 74 01 7407	Sampling Done By	: ELES Pvt. Ltd.	
Period of Analysis	: 17.03.2025 to 24.03.2025	Sample Condition	: Sealed & Preserved	

MI	ETEOROLOGICAL INFOR	MATION				
1	Average Temperature (°C)	: 28	2	Barometric Pressure (mmHg)	: 720	
3	Relative Humidity (%)	: 60	4.	Weather Condition	: Clear	

Discipline: Chemic	Discipline: Chemical			Group: Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	67	100 (24hrs)		
Particulate Matter (PM2.5)	μg/m ³	IS 5182 (Part- 24): 2019.	34	60 (24hrs)		
Sulphur Di-Oxide (SO ₂)	μg/m ¹	IS 5182 (Part- 2/Sec1): 2023	11.9	80 (24hrs)		
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	30.1	80 (24hrs)		
Ozone (O ₂)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)		
Ammonia (NH ₃)	μg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)		
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	1.15	2 (8hrs)		
Lead (Pb)	μg/m³	IS 5182 (Part- 22): 2019	<0.002	1 (24hrs)		
Nickel (Ni)	ng/m³	1S 5182 (Part- 26): 2020	<6.0	20 (Annual)		
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)		
Benzene (C ₄ H ₆)	µg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)		
Benzo-(a)-Pyrene	ng/m ³	ELES/GC/SOP/05: 2023	< 0.5	01(Annual)		

Reviewed by

Akash Kumar

****End of Report****

Dr. Deependra Komar Sinha

Ph. D. Environmental Engo

The Document stated in Test Report, is issued by the Laboratory under Comerci Leons and Conditions, only on Company letter head in pre-approach format. The possible of the substantial conditions of the substantial conditions and Conditions. rafer or rations only to the pricessays done by the Laboratory only. The information attends on the Text Report reflects the findings done by the Laboratory at the time of involvement only and within the limits of allers's instructions. The Laboratory is responsible for all the information or data provided on the report, escapt the information which is provided by the client. The Report caused be reported or each in full and any part of the report is not taken out of context, without poor written appeared of the Laboratory. The Report in full or in part shall not be published, advertise, used for any legal actions unless prior permission has been smarted from the Management of the Laboratory. Attention is dissent to the introduction of liability, compensation and jurisdiction Any attachment alteration is falsification of the corners or appearance of the Tast Report is unlawful and affenders may be prosected to the follow expect of the law. All the samples are noticed for Blogs from the Date of release tonic of the Test Report. The samples from Bagedatory hodics are to be remined as specified. Any type of Observations or Compliants regarding the Report shall be done within 15days from the Date of Test Report released leased After the time period sensed before, no compliants will be accepted. The order Time schedule mannioned in Test Report is to 24hours forms. Abbreviation used: NA Chin Applicable); (IDI, (Below Describes Limit); LDI, (Lower Describes Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) G5T NO:- 20AAECE9713D124

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TEST REPORT

Test Report No.	: ELES/RNC/2025/2002	Report Release Date	: 24.03.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	

: TC1358725000001960F ULR No.

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2025/AA/2144	
		Location	: Near Old Rest Shelter; Hisri (New Bauxite Mine (14.55ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date	: 12.03.2025 to 13.03.2025	
r tour var	The state of the s	Sample Received Date	: 17.03.2025	
		Type of Sample	: Ambient Air	
Mines Status	: Operational	Sampling Procedure	: ELES/DOC/SMPL/02	
Period of Analysis	: 17.03.2025 to 24.03.2025		: ELES Pvt. Ltd. : Sealed & Preserved	

M	ETEOROLOGICAL INFOR	MATION				
1	Average Temperature (°C)	: 28	2	Barometric Pressure (mmHg)	: 720	
3	Relative Humidity (%)	≎60	4	Weather Condition	: Clear	

Discipline : Chemic	al	Group:	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	79	100 (24hrs)		
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24); 2019	45	60 (24hrs)		
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	13.2	80 (24hrs)		
Nitrogen Di-Oxide (NO ₂)	μg/m ³	IS 5182 (Part- 6); 2022	34.6	80 (24hrs)		
Ozone (O ₂)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)		
Ammonia (NH ₂)	µg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)		
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)		
Lead (Pb)	μg/m³	IS 5182 (Part- 22): 2019	0.025	1 (24hrs)		
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)		
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)		
Benzene (C ₄ H ₆)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)		
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)		

Reviewed by

****End of Report****

Authorised Signatory Dr. Deependra Kumar Sinha

Ph. D. Environmental Enga

Akash Kumar Quality manage

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PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D124

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TC-13587

TEST REPORT

Test Report No.	: ELES/RNC/2025/2003	Report Release Date	: 24.03.2025
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC1358725000001961F		

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2025/AA/2145 : Near Old Plantation (North West Corner) Hisri (New)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 12.03.2025 to 13.03.2025 : 17.03.2025	
Mines Status	: Operational	Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02	
Period of Analysis	: 17.03.2025 to 24.03.2025	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved	

MI	ETEOROLOGICAL INFOR	RMATION			
I	Average Temperature ("C)	: 28	2	Barometric Pressure (mmHg)	: 720
3	Relative Humidity (%)	: 60	4	Weather Condition	: Clear

Discipline : Chemic	al.	Group:	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	70	100 (24hrs)		
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	36	60 (24hrs)		
Sulphur Di-Oxide (SO ₂)	µg/m³	IS 5182 (Part- 2/Sec1): 2023	12.6	80 (24hrs)		
Nitrogen Di-Oxide (NO ₁)	μg/m³	IS 5182 (Part- 6): 2022	25.2	80 (24hrs)		
Ozone (O ₅)	μg/m³	IS 5182 (Part- 9); 2019	<20.0	100 (8hrs)		
Ammonia (NH ₃)	µg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)		
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	1.03	2 (8hrs)		
Lead (Pb)	μg/m³	IS 5182 (Part- 22): 2019	0.012	1 (24hrs)		
Nickel (Ni)	ng/m³	IS 5182 (Part- 26); 2020	<6.0	20 (Annual)		
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)		
Benzene (C ₆ H ₆)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)		
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)		

Reviewed by Akash Kumar

****End of Report****

Authorised Signatory

Dr. Deependra Kumar Sinha

Page 1 of 1

Ph. D. Environmental Engg.

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PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D1Z4

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TO:13587

TEST REPORT

Test Report No.	: ELES/RNC/2025/2004	Report Release Date	: 24.03.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC1358725000001962F			

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2025/AA/2146	
		Location	: Hisri New (Southern Area)	
		CONSTRUCTION OF THE PROPERTY O	Hisri (New) Bauxite Mine(14.55ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date	: 12.03.2025 to 13.03.2025	
1 1001 000		Sample Received Date	: 17.03,2025	
		Type of Sample	: Ambient Air	
Mines Status	: Operational	Sampling Procedure	: ELES/DOC/SMPL/02	
	12.02.2027	Sampling Done By	: ELES Pvt. Ltd.	
Period of Analysis	: 17.03.2025 to 24.03.2025	Sample Condition	: Sealed & Preserved	

MI	ETEOROLOGICAL INFO	RMATION			
1	Average Temperature (°C)	: 28	2	Barometric Pressure (mmHg)	: 720
3	Relative Humidity (%)	: 60	4	Weather Condition	: Clear

Discipline: Chemic	al	Group:	Group: Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	68	100 (24hrs)	
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	33	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part-2/Sec1): 2023	12.5	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6); 2022	27.3	80 (24hrs)	
Ozone (O ₂)	µg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)	
Ammonia (NH ₂)	µg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	1.28	2 (8hrs)	
Lead (Pb)	µg/m³	IS 5182 (Part- 22): 2019	0.026	1 (24hrs)	
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)	
Benzene (C ₆ H ₆)	µg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)	
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Reviewed by Akash Kumar

****End of Report****

Dr. Deepond A Wanter Sinha

Page 1 of 1

Technical Manager

The Decument stand as Test Report, is assertly the Laboratory under General Lerms and Conditions, only on Company better head in per-approved forms. The Laboratory or the Information stand on the Test Report sufficient the findings done by the Laboratory or the involuntian stand on the Test Report sufficient the findings done by the Laboratory or the involuntian stand on the report, except the information which is provided by the claim. The Report cannot be reporded so the report as some findings of the support of the support is not taken out of context, without prior women approved of the Laboratory. The Report in full or in part shall not be published, advertise, and for any legal actions arizes prior permission has been secured from the Management of the Laboratory. Attention is drawn to the laboratory compensation and partialletion names. Any assessment after a support of the Center of approximate of the Test Report is unfawful and offenders may be provided to the fallest extent of the law. All the samples no orthodox from the Data of release content of the Test Report is unfawful and offenders may be provided to the fallest extent of the law. All the samples no orthodox from the Data of release content of the Test Report the time period metal before, we compliants will be antispted. The entire Time schedule mentioned in Test Report is in 24thness forms. Alternation used N. A.U.Sei Applicabled, B.D.L. (Bellow Detection Limit), E.D.L. (Lower Detection Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (HARKHAND) GST NO:- 2044FCE97130124

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TEST REPORT

Test Report No.	: ELES/RNC/2025/1744	Report Release Date	: 19.03.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC1358725000001703F			

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2025/AA/1915	
		Location	: Near Daldaliya Village Bagru Bauxite Mine (75.41ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date	; 10.03,2025 to 11.03.2025	
	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Sample Received Date	: 12.03.2025	
		Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02	
Mines Status	: Non Operational		ELES Pvt. Ltd.	
Period of Analysis	: 12.03.2025 to 19.03.2025	Sampling Done By Sample Condition	Sealed & Preserved	

MI	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (%)	: 28	2	Barometric Pressure (mmHg)	: 720
3	Relative Humidity (%)	: 60	4	Weather Condition	: Clear

Discipline : Chemic	rai	Group:	Group: Atmospheric Pollution				
Parameter	Unit	Test Protocol	Result	Regulatory Limit			
Particulate Matter (PM10)	µg/m³	1S 5182 (Part- 23): 2022	70	100 (24hrs)			
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	35	60 (24hrs)			
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	12.2	80 (24hrs)			
Nitrogen Di-Oxide (NO ₂)	µg/m³	IS 5182 (Part- 6): 2022	26.5	80 (24hrs)			
Ozone (O ₃)	µg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)			
Ammonia (NH ₁)	µg/m³	IS 5182 (Part- 25); 2018	<10.0	400 (24hrs)			
Carbon Monoxide (CO)	mg/m³	IS-5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)			
Lead (Pb)	μg/m³	1S 5182 (Part- 22): 2019	0.022	1 (24hrs)			
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)			
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.6	06 (Annual)			
Benzene (C ₄ H ₄)	µg/m³	ELES/GC/SOP/06: 2023	<2.5	95(Annual)			
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)			

Reviewed by Akash Kumar

****End of Report****

Dr. Deependre Klangy Sinha Rh. D. Environmental Enga

Conflightmosco

Technical Manager Page 1 of 1 The Occurrent stand in Test Report, it issued by the Laboratory under Central Terms and Conditions, only on Company better head in pre-approved former. The results shown in the Test Report. ratio or relates only to the jet/membries them by the Lebestray only. The inflementer stated on the Test Report sellects the findings down by the Laboratory as the most of consistences with and a limite of client is unspections. The Laboratory is responsible for all the inflementation of data provided on the report, except the information which is provided by the effect. The Report cannot be reprehend recept as full and any part of the separate are at the context, within prior written approved of the Laboratory. The Report in full are in part shall not be published, whereas some for any logist accions refers per personal has been secured from the Laboratory. According to drawn to the lamination of balding, compression and personal from the Laboratory. According to drawn to the lamination of the laboratory of the context of approximate of the Test Report in ordered and officient stay be prescribed to the followed states of the Laboratory of the lamination of t Report is in Different Remain Admire turns and The A (Not Applicable), HOL (Below December Limit), LOL (Lower December Limit)



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D1Z4



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TEST REPORT

Test Report No.	; ELES/RNC/2025/1745	Report Release Date	: 19.03.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ET P No.	+ TC1358725000001704F			

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2025/AA/1916	
		Location	: Aditya School Gangupara Bagru Bauxite Mine (75.41ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date	: 10.03.2025 to 11.03.2025	
710011033		Sample Received Date	: 12.03:2025	
		Type of Sample	2 Ambient Air	
Mines Status	: Non Operational	Sampling Procedure	: ELES/DOC/SMPL/02	
Period of Analysis	: 12.03.2025 to 19.03.2025	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved	

M	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (°C)	: 28	2	Barometric Pressure (mmHg)	: 720
3	Relative Humidity (%)	: 60	4	Weather Condition	: Clear

Discipline: Chemic	al	Group:	Atmospheric !	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	76	100 (24hrs)
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	42	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	pg/m³	IS 5182 (Part- 2/Sec1): 2023	13.8	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	µg/m³	IS 5182 (Part- 6): 2022	28.1	80 (24hrs)
Ozone (O ₃)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₃)	µg/m³	IS 5182 (Part-25): 2018	<10.0	400 (24hrs)
Curbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	1.22	2 (8hrs)
Lead (Pb)	μg/m	IS 5182 (Part- 22): 2019	0.018	1 (24hrs)
Nickel (Ni)	ng/m²	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)
Benzene (C ₆ H ₆)	µg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)

Reviewed by Akash Kumar

Guglilla Standard

****End of Report****

Dr. Deependra Romar Sinha Ph. D. Environmental Engg.

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Page 1 of 1

The Donness stand as Tast Report, is assent by the Laboratory make Gornal Town and Configure, only on Company here hand as pre-approved factors. The results allowed to the Tast Report refer to colors the findings form by the Laboratory on the time of predictions and the findings form by the Laboratory of the time of predictions and within the limits of closes a contractions. The Laboratory is responsible for all the information or time provided on the report, compare the adventures which is provided by the closes according to the report of th Mayor is in Dilicone format. Additionation used, NVA (Not Applicable), MDL (Balow Demotion Limit), LDL (Lawre Demotion Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPLIDANA HATIA, RANCHI-8340G3 (JHARKHAND) GST NO:- 20AAECE971301Z4



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TEST REPORT

Test Report No.	: ELES/RNC/2025/1746	Report Release Date	: 19.03.2025
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
TIT TO ALL	- T/C12897580000017087		

ULR No.	: TC1358725000001705F
D/ D/49-17 Uhr.	4 まずまれたは、単の氏は長ればまっただす。

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2025/AA/1917 : Ropeway Unloading Station Bugru Bauxite Mine (75.41ha)	
Address	: Lohardaga, Jharkhand-835302 Sampling E Sample Rec		eived Date : 12.03.2025	
Mines Status	: Non Operational	Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02	
Period of Analysis	: 12.03.2025 to 19.03.2025	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved	

M	ETEOROLOGICAL INFOR	MATION				
1	Average Temperature (°C)	: 28	2	Barometric Pressure (mmHg)	: 720	
3	Relative Humidity (%)	: 60	4	Weather Condition	: Clear	

Discipline: Chemic	al	Group:	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Particulate Matter (PM10)	µg/m³	IS 5182 (Part-23); 2022	79	100 (24hrs)		
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24); 2019	44	60 (24hrs)		
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	11.5	80 (24hrs)		
Nitrogen Di-Oxide (NO ₂)	µg/m³	IS 5182 (Part- 6): 2022	25.5	80 (24hrs)		
Ozone (O ₃)	μg/m ³	IS 5182 (Part- 9); 2019	<20.0	100 (8hrs)		
Ammonia (NH ₃)	µg/m³	IS-5182 (Part- 25): 2018	<10.0	400 (24hrs)		
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)		
Lead (Pb)	μg/m³	IS 5182 (Part- 22); 2019	0.026	1 (24hrs)		
Nickel (Ni)	ng/m²	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)		
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)		
Benzane (C ₆ H ₆)	μg/m"	ELES/GC/SOP/06: 2023	<2.5	05(Annual)		
Benzo-(a)-Pyrene	ng/m ¹	ELES/GC/SOP/05: 2023	<0.5	01(Annual)		

Reviewed by Akoob Komar

Quality, Managar.

****End of Report****

Authorised Signatory Dr. Despendra Kumar Sinha

Ph. D. Environmental Engg.

Page 1 of 3

Technical Manager

The December stated as Two Report, to mixed by the Laboratory under General Terror and Conditions, only on Company letter hand to pre-approach forms. The results observed within the latest process of the process of the Laboratory only. The information stand on the Test Report reflects the following done by the Laboratory of the time of conditions are only and within the latest or increasing which is provided by the client. The Report caused by reportant descript or full and any part of the report is not an account of the control of the Laboratory. The Report is full and any part of the report is not fix any part of the report is not be politically and only a part of the report in the part in the part of the Laboratory. The Report is full and any part of the report in the part of the Laboratory. Attention is drawn to the Business of Belleting of the control of the control of the Laboratory. Attention is drawn to the Business of Belleting of the law. All the samples are remained for Midaya from the Date of volume forms of the Test Report is unlessful and offenders may be presented to the follow covers of the law. All the samples from Regulatory badies are to be regulated as secured. Also type of Observations of Compliants regarding the Report which has an account of the Laboratory and the Report in the Report of the Control Lawrell before, as compliants will be accounted. The same Time exhaulter marrianced in Test Report in a Midaya frame. Abbrevious most MA (Per Applicabilety December December Lawrell, Litt.) Leaves December Lawrell.



PLOT NO-30, MANSAROVAR ENCLAYE, TUPLIDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE97130124

ENGINEERING SERVICES PVT. LTD.

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TEST REPORT

Test Report No.	: ELES/RNC/2025/1747	Report Release Date	: 19.03.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC1358725000001706F			

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2025/AA/1918
		Location	: Ropeway Angle Station
			Bagru Bauxite Mine (75.41ha)
Address	: Lohardaga, Jharkhand-835302	Sampling Date	: 10:03:2025 to 11:03:2025
TARRESTO.		Sample Received Date	: 12.03.2025
		Type of Sample	- Ambient Air
Mines Status	: Non Operational	Sampling Procedure	: ELES/DOC/SMPL/02
95 (517) (517) (915)	Allega Street and the paper of	Sampling Done By	: ELES Pvt. Ltd.
Period of Analysis	: 12.03.2025 to 19.03.2025	Sample Condition	: Sealed & Preserved

М	METEOROLOGICAL INFORMATION					
1	Average Temperature (°C)	: 28	2	Barometric Pressure (mmHg)	: 720	
3	Relative Humidity (%)	: 60	4	Weather Condition	: Clear	

Discipline: Chemic	al	Group:	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Particulate Matter (PM10)	µg/m³	IS 5182 (Part- 23): 2022	83	100 (24hrs)		
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	48	60 (24hrs)		
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	12.9	80 (24hrs)		
Nitrogen Di-Oxide (NO ₂)	µg/m³	IS 5182 (Part- 6): 2022	27,3	80 (24hrs)		
Ozone (O ₃)	µg/m²	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)		
Ammonia (NH ₃)	µg/m³	IS 5182 (Part-25): 2018	<10.0	400 (24hrs)		
Carbon Monoxide (CO)	mg/m³	IS 5182 (Part- 10): 2019 (NDIR Method)	1.28	2 (8hrs)		
Lead (Pb)	µg/m³	IS 5182 (Part- 22); 2019	0.024	I (24hrs)		
Nickel (Ni)	ng/m*	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)		
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)		
Benzene (C ₄ H ₄)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)		
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)		

Reviewed by Alash Kumar

Qualityaliferen

****End of Report****

Authorised Signatory Dr. Deependra Kumar Sinha

Ptr. S. Environmental Enga

The Document most as Ton Report, is issued by the Laboratory under General Terror and Completes, only on Company School hard as DECEMBER Sound Annual School in the Terror Report. refer or referencing in the informative done by the Laboratory only. The information stated on the Taur Region reflects the findings done by the Laboratory or the stone of involvement only and within the lamp of chert's companies. The Laborator is responsible for all the information or date provided on the upper, except the information which is provided by the allors. The Report is not an analysis of the report in the support of the report in the provided by the allors be published, advantage, and for any larger actions achoes place parameters for the formation of the Laboratory. Another is described a formation of the following the beautiful and an action place parameters and provided the support of the responsibility of the respons Report and he does without 15 days from the Date of That Report retraced issued. After the same period around before, an completens will be accepted. The owner Year schools be well as Text Report in 2 Observations. After the period STA (Not Applicable), STA, (Not Applicable), STA, (Refers Detection Limit), LDC, (Lewes Detection Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D1Z4

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TC-135E

TEST REPORT

Test Report No.	: ELES/RNC/2025/2019	Report Release Date	: 24.03.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC1358725000001977F			

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name Address	: Hindalco Industries Limited : Lohardaga, Jharkhand-835302	Sampling Date Sampling Received Date Type of Sample Sampling procedure Sampling Done By	: 12.03.2025 to 13.03.2025 : 17.03.2025 : Ambient Noise : ELES/DOC/SMPL/03 : ELES Pvt. Ltd.	
Mines Status	: Operational	Period of Analysis	: 17.03.2025 to 22.03.2025	

METEOROLOGICAL INFORMATION					
1	Average Temperature (°C)	28	2	Barometric Pressure (mmHg)	: 720
3	Relative Humidity (%) : 0	60	-4	Weather Condition	: Clear

Discipline : Chemical			Group: Atn	nospheric l	Pollution
Location	Unit	Test Protocol	Rest	ılt	Regulatory Limit (Industrial Zone)
TENERAL BRIDGES CONTROL OF THE STATE OF THE			Time	Leg	
Hisri (New) Bauxite Mines (14.55ha)	dB(A)	IS 9089: 2020	Day Time	68	75 dB(A) Day Time &
Sample ID: ELES/RNC/2025/AN/2161	20000	IS 9989: 2020	Night Time	46	70 dB(A) Night Time

Reviewed by Alcash Kumar Quality Managor

****End of Report****

Authorised Signatory
Dr. Deependra Kumar Sinha
Ph. D. Environmental Engg.
Technical Manager

Page 1 of 1

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PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D1Z4

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TEST REPORT

Test Report No.	: ELES/RNC/2025/2049	Report Release Date	: 25.03.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC1358725000002006F			

SAMPLE DETAILS CUSTOMER DETAILS Customer Name : Hindalco Industries Limited Sample Ref. No. : FLES/RNC/2025/SW/2169 : 12.03.2025 Sampling Date : 17.03.2025 Sample Received Date : Surface Water Type of Sample : Lohardaga, Jharkhand-835302 Address : Spring Water Source of Sample : Daldaliya Village, Hisri (New) Location of Sample Bauxite Mine (14.55ha) : ELES/DOC/SMPL/01 Sampling Procedure Mines Status : Operational Sampling Done By : ELES Pvt. Ltd. Period of Analysis : 17.03.2025 to 24.03.2025 Sample Condition : Sealed & Preserved

Discipline : Chemical		Gr	oup: Water	Tolerance Limits
Parameter	Unit	Test Protocol	Result	as per IS 2296-1992 Class C (Inland Surface Water)
pH (at 24.9 °C)	100	IS 3025 (Part-11): 2022	6.79	6,5-8.5
Colour	Hazen	IS 3025 (Part -4): 2021	1.8	300
Odour	121	IS 3025 (Part-5): 2018	Unobjectionable	
Turbidity	NTU	IS 3025 (Part-10): 2023	1.18	in the
Total Dissolved Solids (TDS)	mg/L	IS 3025 (Part-16): 2023	148	1500
Total Alkalinity (as CaCO ₃)	mg/L	IS 3025 (Part-23): 2023	59.1	22
Total Hardness (as CaCO ₃)	mg/L	IS 3025 (Part-21): 2019	64.6	22
Sulphate (as SO ₄)	mg/L	IS 3025 (Part-24/Sec1): 2022	6.4	400
Chloride (as Cl)	mg/L	IS 3025 (Part-32): 2019	12.6	600
Fluoride (as F)	mg/L	IS 3025 (Part-60): 2019	BDL (DL: 0.1)	1.5
Nitrate (as NO ₂)	mg/L	APHA 24th Ed.2023, 4500 NO ₃ -B	2.32	50

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PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D1Z4

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TEST REPORT

 Test Report No.
 : ELES/RNC/2025/2049
 Report Release Date
 : 25.03.2025

 Work Order No.
 : 13612312113
 Work Order Date
 : 28.03.2024

ULR No. : TC1358725000002006F

Discipline : Chemical		Group: Wa	ter	Tolerance Limits
Parameter	Unit	Test Protocol	Result	as per IS 2296-1992 Class C (Inland Surface Water)
Free Residual Chlorine (RFC)	mg/L	1S 3025 (Part-26): 2021	BDL (DL: 0.1)	*
Phenols Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025 (Part-43/Sec1): 2022	BDL (DL: 0.001)	0.005
Calcium (as Ca)	mg/L	1S 3025 (Part-40); 2019	17.2	-
Discipline : Cher	nical	Gre	oup : Residues	in Water
Aluminum (as Al)	mg/L	IS 3025 (Part-55): 2003;RA2019	BDL (DL: 0.02)	***
Arsenic (as As)	mg/L	IS 3025 (Part 37):2022	BDL (DL: 0.005)	0.2
Boron (as B)	mg/L	IS 3025 (Part-57): 2021	BDL (DL: 0.2)	***
Cadmium (as Cd)	mg/L	APHA 24th Ed.2023; 3111B	BDL (DL: 0.003)	0.01
Total Chromium (as Cr)	mg/L	APHA 24th Ed.2023; 3111B	BDL (DL: 0.03)	0.05
Copper (as Cu)	mg/L	IS 3025 (Part 42): 2019	BDL (DL: 0.03)	1.5
Iron (as Fe)	mg/L	APHA 24 th Ed.2023; 3111B	0.161	50
Lead (as Pb)	mg/L	APHA 24 th Ed,2023; 3111B	BDL (DL: 0.01)	0.1
Manganese (as Mn)	mg/L	APHA 24 th Ed.2023; 3111B	BDL (DL: 0.05)	20
Mercury (as Hg)	mg/L	IS 3025 (Part-48): 2019	BDL (DL: 0.001)	A .:
Selenium (as Se)	mg/L	IS 3025(Part-56); 2019	BDL (DL: 0.01)	0.05
Zinc (as Zn)	mg/L	APHA 24th Ed.2023; 3111B	BDL (DL: 0.1)	15

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PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D1Z4

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TEST REPORT

Test Report No. : ELES/RNC/2025/2049 Report Release Date : 25.03.2025

Work Order No. : 13612312113 Work Order Date : 28.03.2024

ULR No. : TC1358725000002006F

Discipline : Chemie	cal	Group: Residue	in Water	Tolerance Limits	
Parameter Unit		Test Protocol	Result	as per IS 2296-1992 Class C (Inland Surface Water	
Cyanide (as CN)	mg/L	APHA 24th Ed.2023, 4500 CN-E	BDL (DL: 0.012)	0.05	
Polynuclear Aromatic Hydrocarbons (PAH)	μg/L	ELES/GC/SOP/04: 2023	BDL (DL: 0.05)	**	
Pesticides					
Alachior	μg/L,	ELES/GC/SOP/01: 2023	BDL (DL: 0,5)	**	
Atrazine	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	**	
Butachlor	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	**	
Chlorpyriphos	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	**	
Ethion	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)		
Malathion	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	99	
Methyl parathion	μg/1.	ELES/GC/SOP/01: 2023	BDL (DL: 0.1)	#	
Monocrotophos	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	**	
Phorate	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	-	
Phorate Sulphone	µg/L	ELES/GC/SOP/01: 2023	BD1. (DL: 0.5)	**	
Dieldrin	μg/L	ELES/GC/SOP/02: 2023	BDL (DL: 0.01)	77	

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PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D124

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TC-1560

TEST REPORT

Test Report No.	: ELES/RNC/2025/2049	Report Release Date	: 25.03.2025
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC1358725000002006F		

Pesticides				Tolerance Limits
Parameter	Unit	Test Protocol	Result	as per IS 2296-1992 Class C (Inland Surface Water)
Alpha HCH	μg/L	ELES/GC/SOP/02: 2023	BDL (DL: 0.006)	S
Beta HCH	μg/L	ELES/GC/SOP/02: 2023	BDL (DL: 0.02)	41
Delta HCH	μg/L	ELES/GC/SOP/02: 2023	BDL (DL: 0.02)	
Gamma HCH (Lindane)	μg/L	ELES/GC/SOP/02: 2023	BDL (DL: 0.02)	94):
Endosulfan (alpha, beta and sulphate)	μg/L	ELES/GC/SOP/02: 2023	BDL (DL: 0.05)	30 7
DDT(o,p and p,p-isomers of DDT) (DDE and DDD)	μg/L	ELES/GC/SOP/02: 2023	BDL (DL: 0.05)	
Discipline: Biolo	ogical	Gre	oup: Water	
Total Coliform	CFU/100 mL	IS 15185; 2021	3.36×10 ²	5000
Escherichia coli	CFU/100 mL	IS 15185: 2021	BDL (DL: 1.0)	

Remarks: pH & RFC done at site.

Reviewed by Akash Kumar Quality Manager

****End of Report****

Authorised Signatory

Dr. Deependra Kumar Sinha Ph. D. Environmental Engg. Technical Manager

Page 4 of 4

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PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D1Z4

VGINEERING SERVICES PVT. LTD.

Email: info@elespl.co.in , eles.ranchi@gmail.com

Phone no.: 0651-2290103 Website: www.elespl.co.in

TEST REPORT

Test Report No.	: ELES/RNC/2025/2049	Report Release Date	: 25.03.2025	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name Address	: Hindalco Industries Limited : Lohardaga, Jharkhand-835302	Sample Ref. No. Sampling Date Sample Received Date Type of Sample Source of Sample Location of Sample	: ELES/RNC/2025/SW/2169 : 12.03.2025 : 17.03.2025 : Surface Water : Spring Water : Daldaliya Village, Hisri (New) Bauxite Mine (14.55ha)	
Mines Status	: Operational	Sampling Procedure	: ELES/DOC/SMPL/01	
Period of Analysis	: 17.03.2025 to 25.03.2025	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved	

Discipline: Chemic	al	Gro	up: Water	Tolerance Limits
Parameter	Unit	Test Protocol	Result	as per IS 2296-1992 Class C (Inland Surface Water)
Taste	1	APHA 24th Ed.2023, 2160C	N/A	
Anionic Surfactants (as MBAS)	mg/L	APHA 24th Ed.2023, 5540-C	BDL (DL: 0.025)	1.0
Mineral Oil*	mg/L	IS 3025 (Part-39):2021 (Clause 6 Infrared Spectroscopic Method)	BDL (DL: 0.05)	-

Remarks: 1. (*) Parameters are outsourced to other Lab.

Reviewed by Quality Manager

****End of Report****

Authorised Signatory Dr. Deependra Kumar Sinha

Ph. D. Environmental Engg. Technical Manager

Page 1 of 1

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PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D124

ENGINEERING SERVICES PVT. LTD.

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Phone no.: 0651-2290103 Website : www.elespl.co.in



TC-13587

TEST REPORT

Test Report No.	: ELES/RNC/2025/2024	Report Release Date	: 24.03.2025	
Work Order No.	: 13612312113	Work Order Date	: 28,03,2024	
ULR No.	: TC1358725000001982F			

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	Hindalco Industries Limited	Sampling Date Sampling Received Date	: 13.03.2025 : 17.03.2025	
Address	: Lohardaga, Jharkhand-835302	Type of Sample Sampling procedure Sample Drawn By	: Workzone Noise : ELES/DOC/SMPL/03 : ELES Pvt, Ltd.	
Mines Status	: Operational	Period of Analysis	: 17,03,2025 to 22,03,2025	

MI	ETEOROLOGICAL INFOR	MATION			
I	Average Temperature ("C)	29	2	Barometric Pressure (mmHg)	: 720
3	Relative Humidity (%)	60	4	Weather Condition	: Clear

Location	Unit	Test Protocol	Result		Regulatory Limit (Industrial Zone)	
South Area -			Time	L_{eq}	90 dB(A)	
Hisri (New) Bauxite Mine (14.55ha)	dB(A)	IS 4758; 2017	D	73		
Sample ID: ELES/RNC/2025/WN/2166			Day Time	73		

Reviewed by Akash Kumar Quality Manager

****End of Report****

Authorised Signatory
Dr. Deependra Kumar Sinha
Ph. D. Environmental Engg.
Technical Manager

Page 1 of 1

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Annexure 3

Date - 01.05.2025

Office Order

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

- 1. Mr. Raj Sinha (Coordinator)
- 2. Mr. Malaya Prusty (Geologist)
- 3. Mr. Girija Tamrakar (Environment Engineer)
- 4. Mr. Anand Prakash Tiwari (Environment Engineer)

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

Basudev Gangopadhyay AVP (Planning, Environment & Compliance)

Annexure 4

	Production, Mined Out, Back Filled and Over Burden removal from October'24 to March'25							
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	86061	1.53	0.695	88218.66
3	Hisri (New) Bauxite Mine	14.55	100000	19.07.1981 to 31.03.2030	25362	0.345	0.10	30825.23
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	109753	2.12	7.6	332929.81
7	Sherangdag-A Bauxite Mine	155.81	260000	16.10.1974 to 31.03.2030	2989	0.02	0.02	2110.0
8	Serangdag-B Bauxite Mine	77.89	100000	04.10.1978 to 31.03.2030	35253	0.756	0.35	38119.67
9	Jalim & Sanai Bauxite Mine	12.14	50000	16.10.1974 to 31.03.2030	24760	0.13	0.08	12444.82
10	Gurdari Bauxite Mine	584.19	325000	23.03.1985 to 22.03.2035	105401	4.42	3.76	185747.47
11	Kujam - I Bauxite Mine	80.87	150000	13.03.2006 to 12.03.2056	NIL	NIL	2.54	NIL
12	Kujam - II Bauxite Mine	157.38	300000	24.03.2006 to 23.03.2056	61250	2.40	4.72	136798.61
13	Amtipani Bauxite Mine	190.95	150000	13.03.2006 to 12.03.2056	62240	4.047	6.423	255249.72

	Minerals & Minerals Limited							
14	Pakhar (109.507) Bauxite Mine	109.507	280000	26.07.2008 to 25.07.2058	112559	0.44	3.62	255124.1
15	Pakhar (15.58) Bauxite Mine	15.58	60000	28.04.1965 to 31.03.2030	5015	0.26	0.42	11644.5
16	Bimarla Bauxite Mine	134.526	300000	18.07.2009 to 17.07.2059	93500	3.956	5.37	156892.41
17	Amtipani Chirodih Bauxite Mine	130.01	450000	11.01.2017 to 10.01.2067	114100	5.43	5.133	233823.46

^{*}Static information about the mines included in the above table

Basudev Gangopadhyay
AVP (Planning, Environment and Compliance)

BREAK UP THE COST OF ENVIRONMENTAL MEASURES DURING THE YEAR 2024-25

The composite cost during the year 2024-25 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 2024-25 (From Oct'24 to Mar'25)	Actual (in Rupees) FY 2024-25 (From Oct'24 to Mar'25)	
1	Pollution Control and Environmental Monitoring	61,35,000.00	42,08,879.10	
2	Reclamation/ Back filing & Rehabilitation**	5,62,80,000.00	5,32,33,879.71	
3	Green belt, Plantation & Water sprinkling arrangement	73,42,000.00	43,51,560.28	
4	Rural Development	2,75,00,000.00	3,13,06,810.81	

^{**}Part of OB removed cost

Basudev Gangopadhyay

AVP (Planning, Environment & Compliance)