

Date: 20.11.2024

HIL/LHD/ENV/MoEF/982

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: Compliance Report of EC conditions for Pakhar (8.09 ha) Bauxite Mining project of M/s Hindalco Industries Limited located in Lohardaga, Jharkhand for the period April'24 to September'24.

Ref: Environmental Clearance letter no J-11015/135/2006-IA II (M) dated 24th January 2007 Sir,

With reference to the above, we are submitting herewith the Compliance status report of EC conditions for **Pakhar (8.09 ha) Bauxite Mining project of M/s Hindalco Industries Limited** located in Lohardaga, Jharkhand for the period April'24 to September'24.

The lease details are below:

Lease area (ha)	Production Capacity (MT)	Lease Period
8.09	80000	16.05.1973 to 31.03.2030

Hope you will find the same in order.

Thanking You

Yours Sincerely

FOR HINDALCO INDUSTRIES LIMITED

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

Enclosure: - As Above

CC: <u>ro.ranchi-mef@gov.in</u>, <u>mef@ori.nic.in</u>, <u>mef@nic.in</u>, <u>mef.or@nic.in</u>, <u>mscb.cpcb@nic.in</u>, <u>zokolkatta.cpcb@nic.in</u>, <u>ranchijspcb@qmail.com</u>, <u>roranchi47@qmail.com</u>

: Pakhar Bauxite Mine (8.09 ha) Name of the Project

M/s Hindalco Industries Limited

Environment Clearance No. & date : J-11015/135/2006-IA.II(M), dated 24.01.2007

Period of Compliance Report : From 1st April'24 to 30th September'24

Specific Conditions: -

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

Reply: - Implementation of the stipulated conditions in the NOC was fulfilled, after which consent to operate was obtained from time to time while the mine was operational.

Presently, the mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

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

Reply: - Presently, the mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. The final mine closure plan has been submitted and approved by Indian Bureau of Mines.

The entire land was acquired in accordance with applicable laws while the mine was operational.

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

Reply: - Presently, the mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. The final mine closure plan has been submitted and approved by Indian Bureau of Mines.

Shallow depth mining was carried out in the past; therefore, groundwater was not intersected during mining operations while the mine was operational.

Condition iv: - The project proponent shall ensure that no natural watercourse shall be obstructed due to any mining operation.

Reply: - No natural water course was obstructed during mining operations in past. Presently, the mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. The final mine closure plan has been submitted and approved by Indian Bureau of Mines.

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

Reply: - The mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve.

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

Reply: - The mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. There is no external OB dump in mine lease area.

The final mine closure plan has been submitted and approved by Indian Bureau of Mines.

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

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

Reply: - The mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. There is no external OB dump in mine lease area

The final mine closure plan has been submitted and approved by Indian Bureau of Mines.

Condition viii:- Plantation shall be raised in an area of 6.35 ha including a green belt of adequate width by planting the native species around the ML area, roads, reclaimed area etc. in consultation with the local DFO / Agriculture Department. The density of the trees should be around 1500 plants per ha.

Reply: - The mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. All voids are reclaimed and rehabilitated. Water body is also created. Plantation is already done. The entire land is utilized for meaningful purpose. Also, the final mine closure plan has been submitted and approved by Indian Bureau of Mines.

Condition ix: - 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: - The mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. All voids are reclaimed and rehabilitated. Water

body is also created. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

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

Reply: - The mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

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

Reply: - Winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation.

The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

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

Reply: - Winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation.

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

Reply: - Winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation.

Condition xiv: - 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: - Winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation.

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

Reply: - The mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

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

Reply: - The mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

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

Reply: - The mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

Condition xviii: - 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: - Approval letter of Final Mine closure plan duly approved by Indian Bureau of Mines is hereby attached as **Annexure-1**.

General Conditions: -

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

Reply: - The mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

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

Reply: - The mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines. Data of the same are enclosed herewith as **Annexure 4.**

Condition iii: - Four ambient air quality-monitoring station should be established in the core zone as well as in the buffer zone for RPM, SPM, SO₂, NO_x monitoring. Location of the stations should be decided based on the metrological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.

Reply: - Monitoring Reports of Pakhar Plateau is enclosed as Annexure-2.

Condition iv: - Data on ambient air quality (RPM, SPM, SO₂, and 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: - Monitoring Reports of Pakhar Plateau is enclosed in **Annexure-2**.

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

Reply: - The mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

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

Reply: - Winning of bauxite is closed due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation since Nov 2014. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

Condition vii: - 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: - Winning of bauxite is closed due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation since Nov 2014. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

Condition viii: - 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: - Winning of bauxite is closed due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation since Nov 2014. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

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

Reply: - Winning of bauxite is closed due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation since Nov 2014. We have Environment Management Cell for our Pakhar Group of Mines. This cell is looking after Environment issues of this Mine. The copy of

the same is attached herewith as **Annexure-3**. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

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

Reply: - Winning of bauxite is closed due to the exhaustion of mineral reserve. Therefore, the mine has not been in operation since Nov 2014. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines.

Approval letter of Final Mine closure plan duly approved by IBM is hereby attached as **Annexure-1**.

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

Reply: - Statement of budgetary provision and actual expenses for environmental protection measure is enclosed as **Annexure-5**. The final mine closure plan (FMCP) has been submitted and approved by Indian Bureau of Mines. Now, the Regional Office of MoEFC&CC is in Ranchi.

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

Reply: - Agreed. However, the mine has not been in operation as the winning of bauxite is closed w.e.f November 2014 due to the exhaustion of mineral reserve. Now, the Regional Office of MoEFC&CC is in Ranchi.

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

Reply: - Already complied. A copy of clearance letter has already been submitted.

Condition xiv: - 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: - Already complied. The EC Letter has been submitted to JSPCB for display of same at its Regional office and other government offices.

Condition xv: - The project authorities should advertise at least in two local newspapers widely circulated, one of which locality concerned, within 7days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site

of the Ministry of Environment and Forests at http://envfor.nic.in and a copy of the same should be forwarded to the Regional Office of this Ministry located Bhubneshwar.

Reply: - Already 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 MoEFCC. Now, the Regional office of MoEF&CC is in Ranchi.

Registered Parcel



GOVERNMENT OF INDIA MINISTRY OF MINES INDIAN BUREAU OF MINES OFFICE OF THE REGIONAL CONTROLLER OF MINES

Telephone: (0651) 2242889 (0651) 2242903 Fax: (0651) 2242903

E-mail: ro.ranchi@ibm.gov.in

RAN/LOH/BX/FMCP-03/2014-15

318-B, Road No.- 3, Ashok Nagar, Ranchi - 834 002, Date: 15/05/2015

Shri A. K. Agarwal, To:

Director cum Nominated Owner M/s HINDALCO Industries Ltd., Court Road, Lohardaga - 835 302 (Jharkhand).

Sub: Approval of Final Mine Closure Plan in respect of PAKHAR Bauxite Mines of M/s HINDALCO Industries Ltd. over an area of 8.09 hectares in village-Pakhar, Lohardaga district of Jharkhand State submitted under Rule 23C of MCDR, 1988.

Ref: Your A.G.M. (Geology) letters no.(1) HIL/LHD/BX/IBM/926(I) Dated 25/09/2014 (2) HIL/LHD/BX/IBM/ Dated 06/04/2015

This office letter no. रांची/लोहरदगा/बाक्साइट/एफ.एम.सी पी.-03/2014-15,दिनांक:13/03/2015

Sir,

In exercise of the powers conferred by the sub-rule 2 of Rule 23C of Mineral Conservation & Development Rules, 1988; I hereby approve the above said Final Mine Closure Plan in respect of PAKHAR Bauxite mines of M/s HINDALCO Industries Ltd. over an area of 8.09 hectares in village-Pakhar, Lohardaga district of Jharkhand State, submitted under Rule 23C of MCDR, 1988. This approval is subject to the following conditions: -

- that the Final Mine Closure Plan is approved without prejudice to any other (i) laws applicable to the mine/lease area from time to time whether made by the Central Government, State Government or any other Authority.
- that this approval of the Final Mine Closure Plan does not, in any way, (ii) imply the approval of the Government in terms of any other provisions of the Mines & Minerals (Development & Regulation) Act, 1957 or the Mineral and any other laws including Forest Concession Rules, 1960 (Conservation) Act, 1980, Environment (Protection) Act, 1986 and the rules made there under.

that the Final Mine Closure Plan is approved without prejudice to any order (iii) or direction from any court of competent jurisdiction.

- that the Regional Office, Indian Bureau of Mines, Ranchi shall be informed (iv) after completion of activities of final mine closure as per proposal of the Final Mine Closure Plan.
- that the Yearly report as required under Rule 23E(2) of MCDR,1988 setting (v) forth the extent of protection and rehabilitation works carried out as envisaged in the approved final mine closure plan and if there is any deviations, reasons thereof shall be submitted before 1st July of every year to the Regional office, Indian Bureau of Mines, Ranchi.

No.: RAN/LOH/BX/FMCP-03/2014-15.

(iv) The financial assurance submitted for Rs.2,00,000/-(Two lacs only) is valid up to 31/03/2017.A new bank guarantee is to be submitted on or before its expiryi.e. 31/03/2017, if the rehabilitation proposal not completed by the time.

Encl.: One copy of approved Final Mine Closure Plan.

Yours faithfully

R. Purohit)

Regional Controller of Mines

Copy forwarded for information to: -

1. The Director (Mines),
Directorate of Mines and Geology,
Government of Jharkhand,
Nepal House Area, Doranda,
Ranchi - 834 002.(Jharkhand), along with a copy of approved Final Mine
Closure Plan. It is requested to ensure that the determination of aforesaid
lease is not accepted unless and until a certificate issued by the Indian Bureau
of Mines under Rule 29A (2) of Mineral Concession Rules, 1960 to the effect
that protective, reclamation and rehabilitative works as envisaged in the
approved Final Mine Closure Plan are carried out.

- 2. The Director of Mines Safety
 Ranchi Region
 CMPDIL-Campus
 3rd Floor, Old Building
 Kanke Road, Ranchi-834008
 along with a copy of approved Final Mine Closure Plan.
 - 3. Shri B.K.Mahapatra, RQP, HINDALCO Industries Ltd. Court Road LOHARDAGA 835 302.

(R. Purohit) Regional Controller of Mines

ENVIROCHECK

Lab: MIG, R-3 Housing Colony, Dhanbad, Pin-826001, State- Jharkhand.

Pakhar (115.13) Bauxite Mine-Environmental Monitoring Report

April 2024





TEST REPORT

Test Report No.	: ENVJK/1173/APR/TR(W)24-25	Report Release Date	: 22.04.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	

CUSTOMER DETA	ULS	SAMPLE DETAILS	
Customer Name	:Hindalco Industries Limited	Sample Ref. No. Location	: ENVJK/2024/AA/1698 : Near Mine Block-B, Quarry No.3 PakharBauxite Mine (115.13 ha)
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 12.04.2024 to 13.04.2024 : 15.04.2024
Mines Status	Operational	Type of Sample Sampling Procedure Sampling Done By	: Ambient Air : ELES/DOC/SMPL/02 : ELES Pvl. Ltd.
Period of Analysis	: 15.04.2024 to 22.04.2024	Sample Condition	: Sealed &Preserved

MI	ETEOROLOGICAL INFORMATIO)N			
1	Average Temperature (°C) : 31	2	Barometric Pressure (mm	Hg) : 734	
3	Relative Humidity (%) : 58	4	Weather Condition	; Clear	

	Disciplin	ne: ChemicalGroup: Atmospheric Pollu	tion	
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m³	IS 5182 (Part 23): 2006	67	100 (24hrs)
Particulate Matter (PM2.5)	μg/m ³	USEPA 1997a,40 CFR Part 50, Appendix L: 2006	38	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	µg/m³	IS 5182 (Part 2): 2001	10.5	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	1S 5182 (Part 6): 2006	23.2	80 (24hrs)
Ozone (O ₃)	µg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₃)	jig/in 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)
Lead (Ph)	µg/m ⁵	IS 5182 (Part- 22): 2019	0.015	1 (24hrs)
Nickel (Ni)	ng/m³	15 5182 (Part- 26); 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	USEPA Method – IO-3.5 (ICP-MS Method)	<2.0	06 (Annual)
Benzene (C ₆ H ₆)	ρg/m ³	USEPA Method - TO-3 (GC-MS Method)	<1.0	05(Annual)
Benzo-(a)-Pyrene	ng/m³	USEPA Method - TO-3A (GC-MS Method)	<0,5	Of(Amual)

Reviewed by :

Code !

(Saswata Burman Roy, Dy. Quality Manager)

Authorised Signatory:

(Bapan Das, Dy. Technical Manager)

Page | of |

Aharkhand

826001

Housing





TEST REPORT

Test Report No.	: ENVJK/1174/APR/TR(W)24-25	Report Release Date	: 22.04.2024	
Work Order No.	÷ 13612312113	Work Order Date	: 28.03.2024	

CUSTOMER DETA	AILS	SAMPLE DETAILS	
Customer Name	:Hindalco Industries Limited	Sample Ref. No.	: ENVJK/2024/AA/1699
		Location	: Near Mine Block-B, Quarry No4 Paklur Bauxite Mine (115.13 ha)
		Sampling Date	: 12.04.2024 to 13.04.2024
Address	: Lohardaga, Jharkhand-835302	Sample Received Date	: 15.04.2024
		Type of Sample	: Ambient Air
		Sampling Procedure	: ELES/DOC/SMPL/02
Mines Status	Operational	Sampling Done By	: ELES Pyt. Ltd.
Period of Analysis	±15.04.2024 to 22.04.2024	Sample Condition	: Sealed & Preserved

MI	ETEOROLOGICAL INFORMATION			
1	Average Temperature (°C) 31	2	Barometric Pressure (mm)	lg) ±734
3	Relative Humidity (%) 159	- 4	Weather Condition	Clear

	Disciplin	ne: ChemicalGroup: Atmospheric Pollu	tion	
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m³	1S 5182 (Part 23): 2006	69	100 (24hrs)
Particulate Matter (PM2.5)	μg/m³	USEPA 1997a,40 CFR Part 50, Appendix L; 2006	38	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part 2): 2001	10.2	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part 6): 2006	26.4	80 (24hrs)
Ozone (O ₁)	µg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonía (NH ₁)	µg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m ⁷	IS 5182 (Part- 10); 2019 (NDIR Method)	<1.0	2 (8hrs)
Lead (Pb)	μg/m³	IS 5182 (Part- 22): 2019	0.012	1 (24hrs)
Nickel (Ni)	ng/m1	1S 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	USEPA Method – IO-3,5 (ICP-MS Method)	<2.0	06 (Annual)
Benzene (C ₆ H _e)	μg/m³	USEPA Method – TO-3 (GC-MS Method)	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m)	USEPA Method - TQ-3A (GC-MS Method)	< 0.5	01(Annual)

Reviewed by :

79000

(Saswata Burman Roy, Dy. Quality Manager)

Authorised Signatory:

Part.

(Bapan Das, Dy. Technical Manager)

Page 1 of 1

Tharkhand

Housital



₩ 10-11501

Lab | MHG, R-5 Housing Collins; Disselbad, Pin - 826003), State - Barkhand \$ 9830067044 / \$ 9304513737

TEST REPORT

Test Report No.	: ENVJK/1175/APR/TR(W)24-25	Report Release Date	: 22.04.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	

CUSTOMER DETA	AILS	SAMPLE DETAILS	
Customer Name	:Hindalco Industries Limited	Sample Ref. No.	: ENVJK/2024/AA/1700
	The second secon	Location	: Near Mine Block B, Quarry No6
			Pakhar Bauxite Mine (115.13 ha)
		Sampling Date	: 12,04,2024 to 13.04,2024
Address	: Lohardaga, Jharkhand-835302	Sample Received Date	: 15.04,2024
	A STATE OF THE STA	Type of Sample	: Ambient Air
		Sampling Procedure	: ELES/DOC/SMPL/02
Mines Status	: Operational	Sampling Done By	: ELES Pvt. Ltd.
Period of Analysis	: 15.04.2024 to 22.04.2024	Sample Condition	: Sealed & Preserved

M	ETEOROLOGICAL INFORMAT	TON		
1	Average Temperature (°C) : 31	2	Barometric Pressure (mmHg	g) : 734
3	Relative Humidity (%) : 59	4	Weather Condition	: Clear

	Disciplin	ne: ChemicalGroup: Atmospheric Pollu	tion	
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m³	IS 5182 (Part 23): 2006	67	100 (24hrs)
Particulate Matter (PM2.5)	μg/m³	USEPA 1997a,40 CFR Part 50, Appendix L: 2006	35	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	µg/m³	IS 5182 (Part 2): 2001	7.8	80 (24hrs)
Nitrogen Di-Oxide (NO2)	µg/m³	15 5182 (Part 6): 2006	23.7	80 (24hrs)
Ozone (O ₅)	μg/m ¹	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	1S 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)
Lead (Ph)	μy/m³	IS 5182 (Part- 22): 2019	0.010	1 (24hrs)
Nickel (Ni)	ng/m1	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	USEPA Method – IO-3.5 (ICP-MS Method)	<2.0	06 (Annual)
Benzene (CaH ₆)	μg/m ^s	USEPA Method – TO-3 (GC-MS Method)	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m³	USEPA Method – TO-3A (GC-MS Method)	< 0.5	01(Annual)

Reviewed by :

897.00 -

(Saswata Burman Roy, Dy. Quality Manager)

Authorised Signatory:

(Bapan Das, Dy. Technical Manager)

Page 1 of 1





TEST REPORT

Test Report No.	: ENVJK/1176/APR/TR(W)24-25	Report Release Date	: 22.04.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03,2024	

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	:Hindalco Industries Limited	Sample Ref. No. Location	: ENVJK/2024/AA/1701 : Near Mine Block-B, Quarry No7 Pakhar Bauxite Mine (115.13 ha)
Address	: Lohardaun, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	. 12.04.2024 to 13.04.2024 : 15.04.2024 : Ambient Air
Mines Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02 : ELES Pvt, Ltd.
Period of Analysis	: 15.04.2024 to 22.04.2024	Sample Condition	: Scaled & Preserved

MI	ETEOROLOGICAL INFO	RMATION			
1	Average Temperature (°C)	:31	2	Barometric Pressure (mmHg)	: 734
3	Relative Humidity (%).	: 59	.4	Weather Condition	: Clear

	Disciplin	ne: ChemicalGroup: Atmospheric Pollo	tion	
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part 23): 2006	60	100 (24hrs)
Particulate Matter (PM2.5)	μg/m³	USEPA 1997a,40 CFR Part 50, Appendix L: 2006	35	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	µg/m³	IS 5182 (Part 2): 2001	8.9	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m ³	IS 5182 (Part 6): 2006	26.1	80 (24hrs)
Ozone (O ₁)	μg/m²	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₁)	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)
Lead (Pb)	µg/m ³	IS 5182 (Part- 22): 2019	0.015	1 (24hrs)
Nickel (Ni)	ng/m ³	1S 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	USEPA Method - IO-3.5 (ICP-MS Method)	<2.0	06 (Annual)
Benzene (C ₆ H ₆)	pg/m ²	USEPA Method – TO-3 (GC-MS Method)	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m³	USEPA Method – TO-3A (GC-MS Method)	< 0.5	01(Annual)

Reviewed by:

Burg

(Saswata Burman Roy, Dy. Quality Manager

Authorised Signatory:

- Barris

(Bapan Das, Dy. Technical Manager)

Page | of |

826001

Housing &





TEST REPORT

Test Report No.	: ENVJK/1169/APR/TR(W)24-25	Report Release Date	: 23.04.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	

CUSTOMER DET.	AILS	SAMPLE DETAILS	
Customer Name	:Hindalco Industries Limited	Sample Ref. No. Location	: ENVJK/2024/AA/1694 : Near Bunglapart Village PakharBauxite Mine
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure	: 12.04.2024 to 13.04.2024 : 15.04.2024 : Ambient Air : ELES/DOC/SMPL/02
Mines Status	: Operational	Sampling Done By	: ELES Pvt. Ltd.
Period of Analysis	: 15.04.2024 to 23.04.2024	Sample Condition	: Sealed & Preserved

M	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (°C)	: 32	2	Barometric Pressure (mmHg)	: 734
3	Relative Humidity (%)	: 61	4.	Weather Condition	: Clear

	Discipli	ne: ChemicalGroup: Atmospheric Pollu	tion	
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m³	IS 5182 (Part 23); 2006	56	100 (24hrs)
Particulate Matter (PM2.5)	µg/m³	USEPA 1997a,40 CFR Part 50, Appendix L: 2006	32	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	µg/m³	1S 5182 (Part 2): 2001	7.0	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	µg/m³	IS 5182 (Part 6): 2006	19.4	80 (24hrs)
Ozone (O ₁)	µg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₁)	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/m ⁵	IS 5182 (Part- 22): 2019	< 0.002	1 (24hrs)
Nickel (Ni)	ng/m ³	1S 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	USEPA Method – IO-3.5 (ICP-MS Method)	<2.0	06 (Annual)
Benzene (C ₆ H ₉)	µg/m³	USEPA Method – TO-3 (GC-MS Method)	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m²	USEPA Method - TO-3A (GC-MS Method)	<0,5	01(Annual)

Reviewed by:

1000

(Saswata Burman Roy, Dy. Quality Manager)

Authorised Signatory:

Thomas

(Bapan Das. Dy. Technical Manager)

Page 1 of 1

Jharkhand 826001

****End of Report



Petronico - RECEBE (2022-2017) HABI La Lorentzia bi PUNT Petronic 201 - 1771 Annie 1 2017 (1917-1917)





TEST REPORT

Test Report No.	: ENVJK/1170/APR/TR(W)24-25	Report Release Date	: 23.04.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	

CUSTOMER DETA	AILS	SAMPLE DETAILS	
Customer Name	:Hindalco Industries Limited	Sample Ref. No. Location	: ENVJK/2024/AA/1695 : Yatri Shed (Near K-10) Pakhar Bauxite Mine
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 12.04.2024 to 13.04.2024 : 15.04.2024 : Ambient Air : ELES/DOC/SMPL/02
Mines Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02
Period of Analysis	= 15.04.2024 to 23.03.2024	Sample Condition	Sealed & Preserved

MI	ETEOROLOGICAL INFORMATION				
1.	Average Temperature (°C) : 32	2	Barometric Pressure (mn	iHg) : 734	
3	Relative Humidity (%) : 61	4	Weather Condition	: Clear	

	Disciplin	ne: ChemicalGroup: Atmospheric Pollu	tion	
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m ³	IS 5182 (Part 23): 2006	60	100 (24hrs)
Particulate Matter (PM2.5)	μg/m³	USEPA 1997a,40 CFR Part 50, Appendix L: 2006	35	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part 2): 2001	8.7	80 (24hrs)
Nitrogen Di-Oxide (NO2)	μg/m³	IS 5182 (Part 6): 2006	22.1	80 (24hrs)
Ozone (O ₂)	µg/m ¹	1S 5182 (Part+ 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₂)	µg/m ²	1S 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/m ³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m²	USEPA Method – IO-3.5 (ICP-MS Method)	<2.0	06 (Annual)
Benzene (CsH ₀)	μg/m³	USEPA Method – TO-3 (GC-MS Method)	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m³	USEPA Method – TO-3A (GC-MS Method)	<0.5	01(Annual)

Reviewed by z

****End of Report****

VIROCA

Jharkhand

826001

Authorised Signatory:

(Saswata Burman Roy, Dy. Quality Manager) (Bapan

(Bapan Das, Dy. Technical Manager)

Page 1 of 1

Keikata Office : 63/8, Rastraguru Avenue 201245 - 700028 [033-25792891/25497490 Email envirocheck50@igmail.com



TEST REPORT

Test Report No.	: ENVJK/1171/APR/TR(W)24-25	Report Release Date	; 23.04.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	:Hindalco Industries Limited	Sample Ref. No. Location	: ENVJK/2024/AA/1696 : Near UtkurmitRajkiyaPrathmik VidyalayaBunglapart Village PakharBauxite Mine	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure	: 12.04.2024 to 13.04.2024 : 15.04.2024 : Ambient Air : ELES/DOC/SMPL/02	
Mines Status	: Operational	Sampling Done By	: ELES Pvt. Ltd.	
Period of Analysis	: 15.04.2024 to 23.04,2024	Sample Condition	: Sealed & Preserved	

MI	ETEOROLOGICAL INFORMATION			
1	Average Temperature ("C) : 32	2	Barometric Pressure (mml-	lg) : 734
3	Relative Humidity (%) : 61	.4	Weather Condition	: Clear

	Discin	line: ChemicalGroup: Atmospheric Pol	lution	
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m ³	IS 5182 (Part 23): 2006	59	100 (24hrs)
Particulate Matter (PM2,5)	μg/m ³	USEPA 1997a,40 CFR Part 50, Appendix L: 2006	34	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m ³	1S 5182 (Part 2): 2001	8.2	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	1S 5182 (Part 6): 2006	24.5	80 (24hrs)
Ozone (O ₃)	μg/m)	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH)	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/m [†]	IS 5182 (Part- 22): 2019	< 0.002	l (24hrs)
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m ⁱ	USEPA Method – IO-3.5 (ICP-MS Method)	<2.0	06 (Annual)
Benzene (C ₆ H ₆)	μg/m ³	USEPA Method – TO-3 (GC-MS Method)	<2.5	05(Annial)
Benzo-(a)-Pyrene	ng/m³	USEPA Method – TO-3A (GC-MS Method)	< 0.5	01(Annual)

Reviewed by ?

many)

(Saswata Burman Roy, Dy. Quality Manager)

Authorised Signatory:

San.

(Bapan Das, Dy. Technical Manager)

Page Lof L

Tharkhand





TEST REPORT

Test Report No.	: ENVJK/1172/APR/TR(W)24-25	Report Release Date	: 23.04.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	

CUSTOMER DETA	AILS	SAMPLE DETAILS	
Customer Name	:Hindalco Industries Limited	Sample Ref. No. Location	: ENVJK/2024/AA/1697 : Near UtkarmitRajkiyaPrathmik VidyalayaDumrapari Village PakharBauxite Mine
Address Mines Status	: Lobardaga, Jharkhand-835302 : Operational	Sampling Date Sample Received Date Type of Sample Sampling Procedure Sampling Done By	: 12.04.2024 to 13.04.2024 : 15.04.2024 : Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt. Ltd.
Period of Analysis	: 15.04.2024 to 23.04.2024	Sample Condition	: Sealed & Preserved

M	ETEOROLOGICAL INFORM	MATION			
1	Average Temperature (°C)	: 32	2	Barometric Pressure (mmHg)	: 734
3	Relative Humidity (%)	: 61	4	Weather Condition	: Clear

	Discip	line: ChemicalGroup: Atmospheric Poll	lution	
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m³	IS 5182 (Part 23): 2006	59	100 (24hrs)
Particulate Matter (PM2,5)	μg/m ³	USEPA 1997a,40 CFR Part 50, Appendix L: 2006	33	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	µg/m³	1S 5182 (Part 2): 2001	7.1	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m ³	IS 5182 (Part 6): 2006	22.7	80 (24hrs)
Ozone (O _i)	µg/m³	IS 5182 (Part- 9): 2019	<20.	100 (8hrs)
Ammonia (NH ₃)	µg/m³	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)	µg/m ³	IS 5182 (Part- 22): 2019	0.005	1 (24hrs)
Nickel (Ni)	ng/m³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m²	USEPA Method – IO-3.5 (ICP-MS Method)	<2.0	06 (Annual)
Benzene (C ₆ H ₆)	μg/m³	USEPA Method – TO-3 (GC-MS Method)	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m ³	USEPA Method - TO-3A (GC-MS Method)	< 0.5	01(Annual)

Reviewed by :

19200

(Saswata Burman Roy, Dy. Quality Manager) &

Authorised Signatory:

Edwa"

(Bapan Das, Dy. Technical Manager)

Page 1 of 1

House's

835007

CONTENT

	Hindalco Industries: Pakhar (115.13)Environmental Monitoring Report May2024
	Pakhar (115.13)
	AMBIENT AIR QUALITY- CORE ZONE
1	Near Mine Block-B, Quarry No.3
2	Near Mine Block-B, Quarry No.4
3	Near Mine Block B, Quarry No - 6
4	Near Mine Block-B, Quarry No.7
	AMBIENT AIR QUALITY- BUFFER ZONE
1	Near Bunglapart Village
2	Yatri Shed (Near K-10)
3	Near UtkarmitRajkiyaPrathmikVidyalayaBunglapart Village
4	Near UtkarmitRajkiyaPrathmikVidyalayaDumrapart Village
	Drinking Water
	Effluent Water



PEOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECES7130124



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

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



TEST REPORT

Test Report No.	: ELES/RNC/2024/2668	Report Release Date	: 18,05,2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03,2024	
ULR No.	: TC135872400000637F			

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/2959 : Near Mine Block-B, Quarry No.3 Pakhar Bauxite Mine (115.13 ba)	
Address	: 1,ohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 10.05.2024 to 11.05.2024 : 13.05.2024	
Missas Status	(Assertional)	Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02	
Mines Status	; Operational	Sampling Done By	: ELES PVL Ltd.	
Period of Analysis	: 13.05.2024 to 18.05.2024	Sample Condition	: Sealed & Preserved	

M	ETEOROLOGICAL INFORMATION			
1	Average Temperature (°C) : 33	2	Barometric Pressure (mmHg)	:742
3	Relative Humidity (%) : 59	4	Weather Condition	: Clear

Discipline: Chemical		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	34	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part-11/Sec-1): 2023	7.2	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	26.5	80 (24hrs)
Ozone (O ₃)	μg/m³	1S 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₃)	mg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m¹	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)
Lead (Pb)	µg/m³	IS 5182 (Part- 22): 2019	0.017	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)

Page 1 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved forms. The results above in the Test Report reflects the findings done by the Laboratory at the time of involvement only and waters the limits of citem'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 cartool be reproduced except in full and any part of the report is not taken out of centext, without price written approval of the Laboratory. The Report is full or in part shall not be guidajined advertise, used for any legal actions interes price permission has been recursed from the Management of the Laboratory. Attention is drawn to the limitation of the distility, compensation and jurisdiction tonses. Any unauthorized alteration of the consent or appearance of the Test Report is unlawful and refereders may be prosecuted in the fullest event of the laboratory or compliance required in the Test Report in unlawful and refereders may be prosecuted in the fullest event of the laboratory or Compliance requiring the Reports shall be done within 15days from the Date of Test Report released/ssates. After the time period made before, no compliants will be accepted. The entire Time schedule mentioned in Test Report in in 24hours format. Abbreviation used: N/A (Not Applicable), HDI. (Below Description Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 200AECE9713D124

NGINEERING SERVICES PVT. LTD.

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



\$E-1888

TEST REPORT

Test Report No.	: ELES/RNC/2024/2668	Report Release Date	: 18.05.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	

ULR No. : TC135872400000637F

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C ₆ H ₆)	μg/m*	ELES/GC/SOP/06: 2023	<2.5	05(Annual)	
Велго-(а)-Рутепе	ng/m³	ELES/GC/SOP/05: 2023	< 0.5	01(Annual)	

AKASH KUMAR Quality Managur ELES PVT, LTD.

****End of Report****

Ph. D Environmental Engg.

ELES Pvt. Ltd. Technical Menantal

Page 2 of 2

The Document stated as Test Report, to issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-appeared format. The results shown in the Test Report reflects the findings done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the lamps 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 cument he reproduced except in full and any peri of the report is not taken out of context, without prior written approval of the Laboratory. The Report is full on the particular has periodiced afvertise, used for any legal actions orders prior permission has been secured from the Management of the Laboratory. Attention is drawn as the limitation of liability, compensation and jurisdiction issues. Any simultaneous alternation of the content or appearance of the Test Report is unfawful and offenders may be prosecuted to the fullest extent of the law. All the samples are returned for Midays from the Date of Test Report released/issued. After the time period stated before, no compliants will be accepted. The entire Time schedule mentioned in Test Report is in 24hours format. Abbreviation used. N/A (Not Applicable), BDI. (Below Detection Limit); LDI. (Lower Detection Limit).



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

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/2024/2669	Report Release Date	: 18.05,2024
Work Order No.	: 13612312113	Work Order Date	: 28.03,2024
ULR No.	: TC135872400000638F		

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/2960 : Near Mine Block-B, Quarry No4 Pakhar Bauxite Mine (115.13 ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 10.05.2024 to 11.05.2024 : 13.05.2024 : Ambient Air	
Mines Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02 : ELES Pvt. Ltd.	
Period of Analysis	: 13.05.2024 to 18.05.2024	Sample Condition	: Sealed & Preserved	

MI	ETEOROLOGICAL INFORMATION			
1	Average Temperature (°C) : 33	2	Barometric Pressure (mmHg)	: 742
3	Relative Humidity (%) : 59	4	Weather Condition	Clear

Discipline: Chemical		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)	μg/m³	IS 5182 (Part- II/Sec- 1): 2023	13.5	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m ³	IS 5182 (Part- 6): 2022	22.2	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	0.007	1 (24hrs)
Nickel (Ni)	ng/m ⁷	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)

Page 1 of 2

The Document stated as Test Report, is asseed by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shows in the Test Report refer or relates only in the job/analysis done by the Laboratory only. The information mated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits of client's instruction. The Laboratory is responsible for all the information or data provided on the report, except the inflammation 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 context, without prior written approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and paradiction usuals. Any unauthorized alteration & falsification of the contem or appearance of the Test Report is unliveful and offenders may be prosecuted to the fallest extent of the law. All the samples are retained for 30days from the Date of release/assue of the Test Report. The samples from Regulatory bodies are to be remined as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15days from the Dane of Test Report rolessed/essued. After the time period stated before, no complaints will be accepted. The entire Time schoolale mentioned in Test Report is in 24hours forms: Abbreviation used: N/A (New Applicable), BOL (Relow Detection Limit); LDI. (Lower Detection Limit)



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND). G5T NO:- 20AAECE9713D1Z4

Website: www.elespi.co.in

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



TEST REPORT

Test Report No.	: ELES/RNC/2024/2669	Report Release Date	: 18.05.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ATR 45 AT	THE STREET CONTRACTORS			

ULR No.	: TC135872400000638F

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C ₆ H ₆)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)	
Вепго-(а)-Рутепе	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)	

Reviewed by AKASH KUMAR Quality Managar ELES PVT. LTD.

End of Report**

Authorised Signatory

Dr. Deependra Kumar Sinhu Ph. D Enveronmental Forgo. ELES Pvt. Ltd. Technical Manta

Page 2 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the julyanalysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 context, without prior scritten approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alteration & full-lighting of the content of appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for Endays from the Disc of release issue of the Test Report. The samples from Regulatory bedies are to be retained as specified. Any type of Observations as Complaints regarding the Reports shall be done within 15days from the Date of Test Report released/issued. After the time period stated before, no complaints will be accepted. The entire Teste schedule membraned in Test Report is in 24hours format. Affects suion used. N/A (Not Applicable); BOL (Below Detection Limit). 1.01. (Lower Detection Limit).



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

ENGINEERING SERVICES PYT, LTD.

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

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



TEST REPORT

Test Report No.	: ELES/RNC/2024/2670	Report Release Date	: 18.05.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400000639F		

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/2961 : Near Mine Block B, Quarry No6 Pakhar Bauxite Mine (115.13 ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 10.05.2024 to 11.05.2024 : 13.05.2024 : Ambient Air	
Mines Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02 : ELES Pvt, Ltd.	
Period of Analysis	: 13.05.2024 to 18.05.2024	Sample Condition	: Sealed & Preserved	

MI	TEOROLOGICAL INFORM	MATION			
1	Average Temperature (°C)	: 33	2	Barometric Pressure (mmHg)	: 742
3	Relative Humidity (%)	: 59	4	Weather Condition	: Clear

Discipline: 0	Chemical	Group: Atm	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Particulate Matter (PM10)	μg/m³	1S 5182 (Part- 23): 2022	74	100 (24hrs)		
Particulate Matter (PM2.5)	μg/m ¹	IS 5182 (Part- 24): 2019	39	60 (24hrs)		
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- II/Sec- 1): 2023	9.3	80 (24hrs)		
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	25.1	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	18 5182 (Part- 22): 2019	0.013	1 (24hrs)		
Nickel (Nī)	uñ/w,	1S 5182 (Part- 26): 2020	<6.0	20 (Annual)		
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)		

Page 1 of 2

The Document stated as Test Report, is immed by the Laboratory under General Terms and Conditions, only in Company letter head in pre-approved formal. The results shown in the Test Report refer or relates only in the jubications done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory of the time of involvement only and within the limits 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 context, without prior written approval 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 secured from the Management of the Laboratory. Aftention is drawn to the limitation of liability compensation and jurisdiction issues. Any unauthorized alteration & fabrication of the content of the Test Report is unlawful and offenders may be prosecuted to the fallest examt of the law. All the samples are retained in foldays from the Date of release/issue of the Test Report. The samples flow Regulatory bodies are in the training as specified. Any type of Observations of Complaints regarding the Reports shall be dated within 15days from the Date of Test Report and Report released/issued. After the time period stated before, no complaints will be accepted. The entire Limit mentalized in Test Report is in 24hours formal. Not required in the Limit. DDL (I nover Detection Limit).



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

ENGINEERING SERVICES PVT. LTD.

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

Phone na.: 0651-2290103 Website: www.elespl.co.in



TEST REPORT

Test Report No.	: ELES/RNC/2024/2670	Report Release Date	: 18.05.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400000639F			

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C ₅ 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 Managur ELES PVT LTD ****End of Report***

Authorised Signatory

Dr. Deependra Kumar Sinlia Ph. D Environmental Eags. ELES Pvt. Ltd. Technical Manner

Page 2 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the job/analysis done by the Laboratory only. The information stated on the Test Report refers the findings done by the Laboratory at the time of involvement only and within the limits 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 context, without prior written approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alteration & Test Report is unlawful and offenders may be presected to the fullest extent of the law. All the samples are retained for 30 days from the Date of release/sissue of the Test Report. The samples from Regulatory bedies are to be retained as specified. Any type of Observations or Compitants regarding the Reports shall be done within 15 days from the Date of Test Report released/instead. After the time period stated before, no campiants will be accepted. The entire Time schedule mentioned in Test Report is in 24 hours format. Abbreviation used: N/A (Not Applicable): BDL (Below Detection Limit). LDL (Lower Detection Limit)



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



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

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



TEST REPORT

Test Report No.	: ELES/RNC/2024/2671	Report Release Date	; 18.05.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400000640F		

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/2962 : Near Mine Block-B, Quarry No7 Pakhar Bauxite Mine (115.13 ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 10.05.2024 to 11.05.2024 : 13.05.2024	
		Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02	
Mines Status	: Operational	Sampling Done By	: ELES Pvt. Ltd.	
Period of Analysis	13.05.2024 to 18.05,2024	Sample Condition	: Sealed & Preserved	

MI	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature ("C)	: 33	2	Barometric Pressure (mmHg)	: 742
3	Relative Humidity (%)	: 59	4	Weather Condition	: Clear

Discipline: 0	Chemical	Group: Atm	ospheric Pollu	tion
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/m ¹	IS 5182 (Part- 24); 2019	43	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- II/Sec- 1): 2023	11.5	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	µg/m³	IS 5182 (Part- 6): 2022	21.9	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	0.011	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)

Page 1 of 2

The Gocument stated as Test Report is essued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the judy job done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory in the time of involvement only and within the limits 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 in our taken out of context, without prior written approval of the Laboratory. The Report in full or in part shall not be published, advertise, used for any legal across series prior permission has been secured from the Management of the Laboratory. Afternoon is drawn to the limitation of liability, contention and juriodiction issues. Any amanthorized ulteration & full-infection of the content or appearance of the Test Report is unlawful and offeriders may be prosecuted to the fullest extent of the law. All the samples are retained for 30days from the Date of release/issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints will be accepted. The entire Time schallole mentanted in Test Report is in 24hours format. Abbreviation used: N/A (Not Applicable), BDL (Below Desection Limity, LDL (Lower Detection Limit).

San Erromanno Leo Filton



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/2024/2671	Report Release Date	; 18.05.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400000640F		

Discipline: Chemical		Group: Atmospheric Pollution				
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Benzene (C ₆ H ₆)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)		
Benzo-(a)-Pyrene	ng/m ⁵	ELES/GC/SOP/05: 2023	<0.5	01(Annual)		

AKASH KUMAR Quality Managur ELES PVT LTD

****End of Report****

Authorised Signatory

Dr. Deependra Kumar Sinha Ph. D Environmental Engg. ELES Pvt. Ltd. Technical Mentill

Page 2 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only in Company letter head in pre-approved liarnat. The results shown in the Test Report reflect or relates only to the job/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 fail and any part of the report is not taken out of ornical, without prior written approval of the Laboratory. The Report is full or in part shall not be published, advertise, used for any legal nations unless prior permission has been secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alteration of the official results of the Test Report is unlawful and offenders may be prosecuted to the fallest extent of the law. All the samples are retained for 30days from the Date of felease issue of the Test Report. The samples from Regulatory bodies are to be returned as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15 days from the Date of Test Report reflects to the samples from the Date of the Septiman Complaints regarding the Reports shall be done within 15 days from the Date of Test Report reflects to the samples from the Date of Test Report and Abbreviation used. N/A (Noe Applicable), BDL (Below Detection Limit), LDL (Lower Detection Limit).



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

NGINEERING SERVICES PVT, LTD.

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

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



TEST REPORT

Test Report No.	; ELES/RNC/2024/2672	Report Release Date	: 18.05.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	; TC135872400000641F		

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/2963 : Near Bunglapart Village Pakhar Bauxite Mine
Address	Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure	: 10.05,2024 to 11.05,2024 : 13.05,2024 : Ambient Air : ELES/DOC/SMPL/02
Mines Status	: Operational	Sampling Done By	: ELES Pyt. Ltd.
Period of Analysis	= 13.05.2024 to 18.05.2024	Sample Condition	: Sealed & Preserved

METEOROLOGICAL INFORMATION					
1	Average Temperature (°C) : 33	2	Barometric Pressure (mmH)	g) : 742	
3	Relative Humidity (%) : 59	4	Weather Condition	: Clear	

Discipline: 0	Chemical	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	63	100 (24hrs)	
Particulate Matter (PM2.5)	μg/m ²	IS 5182 (Part- 24): 2019	36	60 (24lus)	
Sulphur Di-Oxide (SO ₂)	μg/m ³	IS 5182 (Part- II/Sec- 1): 2023	9.1	80 (24hrs)	
Nitrogen Di-Oxide (NO ₁)	μg/m³	1S 5182 (Part- 6): 2022	23.3	80 (24hrs)	
Ozone (O ₃)	ug/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)	
Ammonia (NH ₃)	μg/m¹	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)	
Arsenie (As)	ng/m ³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)	

Page 1 of 2

The Incurrent stated as Test Report, is recard by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the job/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the since of involvement only and within the limits of client's instruction. The Laboratory is responsible for all the information or data provided by the client. The Report cannot be reproduced except in full and any part of the report in on taken out of comest, without prior written approval 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 secured from the Management of the Laboratory. Attention is drawn to the immution of liability, compensation and jurisdiction ossies. Any unauthorized alternation & falsification of the content or appearance of the Test Report is unlowful and offenders may be prosected to the fullest extent of the law. All the complex are setumed for 30days from the Date of release/inside of the Test Report. The samples from Reports shall be done within 15 days from the Date of Test Report released/inside. After the time period stated before, no complaints will be accepted. The entire Time schedule manufactor is 124fours format. Other cutting used 16/4 (Net Applicable), BDL (Below Detection Limit), LDL (Lower Detection Limit).



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

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



TEST REPORT

: ELES/RNC/2024/2672 Report Release Date : 18,05,2024 Test Report No. Work Order Date : 28.03,2024 Work Order No. : 13612312113

: TC135872400000641F ULR No.

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
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 Managar ELES PVT. LTD. End of Report****

Authorised Signatory Sinis Dr. Deependra Kum Ph. D Environmental Eng. ELES Pvt. Ltd. Technical Liannon

Page 2 of 2 The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the job/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 connot be reproduced except in full and any part of the report is not taken out of context, without prior written approval of the Laboratory. The Report in fall or in part shall not be published, advenue, used for any legal actions unless prior permission has been secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unsubstrived alteration & Babiliteation of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for 30days from the Date of release issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall he done within 15days from the Date of Test Report released/issued. After the time persod stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is in 24hours farmat. Abbreviation used: N/A (Not Applicable), BDI. (Below Detection Limit). LDL (Lower Detection Limit)



PLDT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARRHAND) GST NO:- 2014ECE3713D124

ENGINEERING SERVICES PUT, LTD.

Emoll: Info@elespl.co.in , eles.ranchi@gmall.com Phone no.: 0651-2290103

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



TEST REPORT

Test Report No.	: ELES/RNC/2024/2673	Report Release Date	: 18.05.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	; TC135872400000642F		

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/2964 : Yatri Shed (Near K-10) Pakhar Bauxite Mine
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 10.05.2024 to 11.05.2024 : 13.05.2024 : Ambient Air
Mines Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02 : ELES Pvl. Ltd.
Period of Analysis	: 13.05.2024 to 18.05.2024	Sample Condition	: Sealed & Preserved

METEOROLOGICAL INFORMATION					
1	Average Temperature (°C)	33	2	Barometric Pressure (mmHg)	: 742
3	Relative Humidity (%)	59	4	Weather Condition	: Clear

Discipline: 0	Chemical	Group: Atm	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/m ³	IS 5182 (Part- 24): 2019	36	60 (24hrs)		
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part-II/Sec- 1): 2023	11.9	80 (24hrs)		
Nitrogen Di-Oxide (NO ₂)	μg/m ³	18 5182 (Part- 6): 2022	25.1	80 (24hrs)		
Ozone (O ₃)	μg/m³-	1S 5182 (Part- 9): 2019	<20.0	100 (8hrs)		
Ammonia (NH ₂)	µg/m³	1S 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	0.005	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)		

Page 1 of 2

The Document stated at Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the soft-analyse done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 contest, without prior written approval of the Laboratory. The Report in full or in part shall not be published, advertise, used for any legal assums unless prior permission has been secured from the Management of the Laboratory. Attention is drawn to the limitation of habitary, compensation and permission and purpose and interest of the Test Report is included and offendary may be processed in the laborator in the samples are retained for 30 days from the Date of release issue of the Test Report is in Test Report in Regulatory bodies are to be recained as specified. Any type of Observations in Complaints regarding the Reports shall be done within 15 days from the Date of Test Report released/based. After the time permission December Limit LDL (Lower December Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (IHARKHAND) GST NO:- 20AAECE97130124

NGINEERING SERVICES PVT. LTD.

Emoil: info@eiespl.co.in , eles.ranchl@gmail.com

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



TEST REPORT

Test Report No. ; ELES/RNC/2024/2673 Report Release Date : 18.05,2024

Work Order No. : 13612312113 Work Order Date : 28.03,2024

ULR No. : TC135872400000642F

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
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)	

AKASH KUMAR Quality Managar ELES PVT. LTD.

****End of Report****

Authorised Signatory

Dr. Deependra Kumar Sinhu Ph. D Environmentsi Enga. ELES Pvt. Ltd. Technical Mammuni

Page 2 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-appeared format. The results shown in the Test Report refer or refer on the judy and within the limits 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 fall and any part of the report is not taken out of croticst, without prior written approval of the Laboratory. The Report in fall not be published, advertise, used for any legal actions unless prior permission has been secured from the Management of the Laboratory Attention is drawn to the limitation of liability, compensation and particulation source. Any installaborated alteration & failed estation of the centers or appearance of the Test Report is unlawful and offenders may be prosecuted to the follows extent of the law. All the samples are retained for 30 days from the Date of releases source of the Test Report. The samples from Regulatory bodies are to be retained as specified, Any type of Observations or Complaints regarding the Reports shall be dear within 15 days from the Date of Test Report released/issued. After the time period stated before, no complaints will be accepted. The entire Time schedule memocod in Test Report is in 24 hours Serman. Abbreviation used: N/A (Not Applicable), BIOL (Below Detection Limit), LDL (Lower Desection Limit).



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 I www.elespi.co.in



TEST REPORT

Test Report No.	: ELES/RNC/2024/2674	Report Release Date	: 18.05.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400000643F			

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2024/AA/2965
		Location	: Near Utkarmit Rajkiya Prathmik
		100	Vidyalaya Bunglapart Village
			Pakhar Bauxite Mine
Address	: Lohardaga, Jharkhand-835302	Sampling Date	: 10.05.2024 to 11.05.2024
		Sample Received Date	: 13.05.2024
		Type of Sample	: Ambient Air
		Sampling Procedure	: ELES/DOC/SMPL/02
Mines Status	: Operational	Sampling Done By	: ELES Pvt. Ltd.
Period of Analysis	= 13.05.2024 to 18.05,2024	Sample Condition	: Sealed & Preserved

MI	ETEOROLOGICAL INFORM	IATION			
1	Average Temperature ("C")	33	2	Barometric Pressure (mmHg)	±742
3	Relative Humidity (%)	59	4	Weather Condition	Clear

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m ³	IS 5182 (Part- 23): 2022	67	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- II/Sec- 1): 2023	8.1	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	22.5	80 (24hrs)	
Ozone (O ₃)	µg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)	
Ammonia (NH ₂)	μg/m [*]	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	0.01	1 (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)	

Page I of 2

The Discussess stated as Test Report is asseed by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report reflect or relates only in the job analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory as the issue of involvement only and within the limits of client's test-action. 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 in context, within a provided in the Laboratory. The Report in full or in part shall not be published, advertise, used for any lingal actions unless provides promission has been secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compression and jurisdiction issues. Any unsucherized alteration & felsification of the content of appropriate of the Test Report is unlessful and offenders may be prosecuted to the fallest extent of the law. All the samples are retained for Medicas from the Date of telesure/issue of the Test Report. The samples from the Date of telesure/issue of the Test Report. The samples from the Content shall be done within 15days from the Date in Test Report released/lissued. After the time period stated before, no complaints will be accepted. The antire Time substable mentioned in Test Report is in 24bours format. Abbreviation used: N/A (Not Applicable), BDI. (Below Deportion Limit), UDI. (Lower Detection Limit).



PLOT NO-30; MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20A4ECE97130174

ENGINEERING SERVICES PUT. 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/2024/2674 Report Release Date : 18.05.2024

Work Order No. : 13612312113 Work Order Date : 28.03.2024

ULR No. : TC135872400000643F

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
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)	

AKASIM MUMAR Quality Manager

ELES PVT. LTD.

****End of Report***

Authorised Signatory

Dr. Deependra Kumar Sinha Ph. D Environments Engg. ELES Pvt. Ltd. Technical Manning

Page 2 of 2

The Document stated as Test Report, is essued by the Laboratory under General Torms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the individual done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits of chern'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 caused be reproduced except in full and any part of the report is not taken out of context, without prior written approval of the Laboratory. The Report is full or in part shall not be published, advertise, used for any legal senses unless grior permission has been secured from the Management of the Laboratory. Attention is drawn to the finitiation of liability, compensation and jurisdiction issues. Any unauthorized alteration & thistification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the full-set extent of the law. All the samples are retained for 30days from the Data of release/issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15days from the Data of Test Report release/issue of the time period stand before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is in 24hours format. Afterculation used NA (Not Applicable), BDI. (Below Detection Limit). LDI. (Lower Detection Limit)



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



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/2024/2675	Report Release Date	: 18.05.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400000644F			

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/2966 : Near Utkarmit Rajkiya Prathmil Vidyalaya Dumrapart Village Pakhar Bauxite Mine	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure	: 10,05,2024 to 11,05,2024 : 13,05,2024 : Ambient Air : ELES/DOC/SMPL/02	
Mines Status	: Operational	Sampling Done By	: ELES Pvt, Ltd.	
Period of Analysis	: 13.05.2024 to 18.05.2024	Sample Condition	: Sealed & Preserved	

MI	ETEOROLOGICAL INFORMATION			
1	Average Temperature (°C) : 33	2	Barometric Pressure (mmHg)	: 742
3	Relative Humidity (%) : 59	4	Weather Condition	: Clear

Discipline: Chemical		Group: Atmospheric 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	35	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	μg/m ³	IS 5182 (Part- II/Sec- 1): 2023	8.6	80 (24hrs)	
Nitrogen Di-Oxide (NOz)	µg/m³	IS 5182 (Part- 6): 2022	22.4	80 (24hrs)	
Ozone (O ₁)	μg/m³	1S 5182 (Part- 9): 2019	<20.0	100 (8hrs)	
Ammonia (NH ₁)	μg/m³	1S 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/m²	IS 5182 (Part- 22): 2019	0.009	1 (24hrs)	
Nickel (Ni)	ng/m	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m ⁷	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)	

Page | of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter helid in pre-approved format. The results above to the Test Report refer or returns only to the job/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 reported except in full and any part of the report is not return out of context, subject prior written approval of the Laboratory. The Report in full or in part thail not be published, advertise, used for any legal actions unless prior permission has been secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation used jurisdiction issues. Any unauthorized alteration & faintheations of the content of appearance of the Test Report in unlawful and offenders may be prosecuted to the failest extent of the law. All the samples are returned for 30days from the Date of release/issue of the Test Report. The samples from Regulatory bodies are to be related as specified. Any type of Observations or Compliants regarding the Reports shall be done within 15days from the Date of Test Report released/issued. After the time period stated before, no compliants will be accepted. The entire Tone schooling mentanted in Test Report is in 24 lower Detection Limit). LDL (Lewer Detection Limit)

Save Europeanum Save Films



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (IHARKHAND) GST NO:- 70AAECE9713D1Z4

Unit

µg/m^a

ng/m'

GINEERING SERVICES PVT. LTD.

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

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



TEST REPORT

Test Report No. : ELES/RNC/2024/2675 Report Release Date : 18.05.2024 : 28.03.2024 Work Order Date Work Order No. : 13612312113

: TC135872400000644F ULR No.

Parameter

Benzene (C_uH_h)

Benzo-(a)-Pyrene

Discipline: Chemical

Group: Atmospheric Pollution Test Protocol Result Regulatory Limit

<2.5 ELES/GC/SOP/06: 2023 05(Annual) ELES/GC/SOP/05: 2023

< 0.5 OI(Annual)

Reviewed by

AKASH KUMAR Quality Manager ELES PVT LTD

****End of Report****

Authorised Signatory

Dr. Deependra Kumar Sinha Ph D Environmental Finag ELES Pvt. Ltd. Technical Manager

Page 2 of 2

The Document stated us Test Report, is assed by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the subfanilysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 context, without prior writen approval of the Laboratory. The Report in full or in gain shall not be published, advertise, used for any legal actions unless prior permission has been secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alteration & falsafication of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for 30days from the Date of release/rose of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15days from the Date of Test Report released/insted. After the time period stated before, no complaints will be accepted. The entire Time schedule meminined in Test Report is in 24hours format. Abbreviation used: N/A (Not Applicable); BDI. (Below Detection Limit); LDI. (Lower Detection Limit).



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

ENGINEERING SERVICES PYT. LTD.

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

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



with the second second

TEST REPORT

Test Report No.	: ELES/RNC/2024/2890	Report Release Date	: 28.05.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400000850F			

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Sampling Date Sample Received Date	: ELES/RNC/2024/DW/2977 : 11.05.2024 : 13.05.2024	
Address	: Lohardaga, Jharkhand-835302	Type of Sample Source/Location of Sample Sampling Procedure	: Drinking Water : Pakhar-115.13 (Bauxite Mine) : ELES/DOC/SMPL/01	
Mines Status	: Operational	Sampling Done By	: ELES Pvt, Ltd.	
Period of Analysis	: 13.05.2024 to 20.05.2024	Sample Condition	: Sealed & Preserved	

Discipline : Chemical		Group:	Water		ory Limit
Discipline, Caemicai		Group.	- STATES	AND DESCRIPTION OF THE PERSON	10500:2012
Parameter	Unit	Test Protocol	Result	Acceptable Limit	Permissible Limit
pH (at 25,3 °C)	2	APHA 24th Ed.2023, 4500-H	6.51	6.5-8.5	No Relaxation
Turbidity	NTU	APHA 24th Ed,2023, 2130 B	0.89	1.0	5.0
Taste	9	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	15
Total Dissolved Solids (TDS)	mg/L	APHA 24th Ed.2023, 2540B,C&D	48	500	2000
Chloride (as Cl)	mg/L	APHA 24 th Ed.2023, 4500 CI B	5.7	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 24 th Ed.2023, 2320 B	8.2	200	600
Total Hardness (as CaCO ₅)	mg/L	APHA 24th Ed.2023, 2340 C	6.1	200	600
Sulphate (as SO ₄)	mg/L	APHA 24th Ed.2023, 4500 SO _€ 2-E	1.22	200	400
Nitrate (as NO ₃)	mg/L	APHA 24 th Ed,2023, 4500 NO ₂ -B	1.24	45	No Relaxation

Page 1 of 4

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the job/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits of olient'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 caused be reproduced except in full and any part of the report is not taken out of context, without prior written approval of the Laboratory. The Report is full or in part shall not be published, advertise, used for any legal actions unless prior permitted has been secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any onatable/sized alteration & falsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the time. All the samples are retained for 3-0days from the Date of release/issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15 days from the Date of Test Report released issued. After the time period stated before, no complaints will be accepted. The names of the first Report is in 24 hours format. Abbreviation used N/A (Non Applicable), BDL (Below Detection Limit), LDL (Lower Detection Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 208AECE97130124

ENGINEERING SERVICES PVT. LTD

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

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



CIN: U749991H201BFTC011125

TEST REPORT

Test Report No. : ELES/RNC/2024/2890 Report Release Date : 28.05.2024

Work Order No. : 13612312113 Work Order Date : 28.03.2024

ULR No. : TC135872400000850F

Discipline : Chemic	at	Grou	ip: 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	1.0
Calcium (as Ca)	mg/L	APHA 24th Ed.2023, 3500 Ca B	1.6	75	200
Anionic Surfactants (as MBAS)	mg/L	APHA 24 th Ed.2023, 5540-C	BDL (DL: 0.025)	0.2	1.0
Discipline : Chemi	cal	Gre	oup : Residues i	n Water	
Aluminum (as AI)	mg/L	1S 3025 (Part-55) :2003; RA2019	BDL (DL: 0.02)	0.03	0.2
Arsenic (as As)	mg/L	1S 3025 (Part-37): 2022	BDL (DL: 0.005)	0,01	No Relaxation
Boron (as B)	mg/L	1S 3025 (Part-57) : 2021	BDL (DL; 0.2)	0.5	2.4
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	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	0.083	1.0	1.0
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

Page 2 of 4

The Document stated as Test Report, is issued by the Laboratory under General Tents and Conditions, only on Company legter head in pre-approved format. The results shown in the Test Report refer or relates only to the job analysis done by the Laboratory only. The information stated on the Test Report reflects the limiting done by the Laboratory at the time of involvement only and within the limits 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 consext, without prior written approval of the Laboratory. The Report in full or in part shall not be published, advertise, used for any legid actions unless prior permission has been secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alteration & falsification of the corness or appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for 30days from the Date of release/issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15days from the Date of Test Report released/issued. After the time period stated before, no complaints will by accepted. The entire Tend schedule mentioned in Test Report is in 24hours format. Abbreviation used. N/A (Not Applicable): BDL (Below Detection Limit): LDL (Lower Detection Limit).



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

ENGINEERING SERVICES PVT. LTD.

Email: Info@elespi.co.in , eles.ranchi@gmail.com

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



CAN: U74999JH2018FTC011125

TEST REPORT

Test Report No. : ELES/RNC/2024/2890 Report Release Date : 28.05.2024

Work Order No. : 13612312113 Work Order Date : 28.03.2024

ULR No. : TC135872400000850F

Discipline : Chemical		Group: Resid	ues in Water	The state of the s	ory Limit 10500:2012
Parameter Unit		Test Protocol	Result	Acceptable Limit	Permissible Limit
Zinc (as Zn)	mg/L	APHA 24 th Ed.2023; 3111B	BDL (DL: 0.1)	5	1.5
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)		20
Atrazine	µg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	2	0.0
Butachlor	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	125	
Chlorpyriphos	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	30	
Ethion	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	3.11	
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	.0
Phorate	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	. 2	2.0
Phorate Sulphone	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	10	
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

Page 3 of 4

The Document stated as Test Report is usued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only in the july-analyses done by the Laboratory only. The information stated on the Test Report referent the findings done by the Laboratory at the time of involvement only and within the limits 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 reposluced except in full and any part of the report is not taken out of confect, without prior written approved 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any smantherized absention & falsification of the content or appearance of the Test Report is unlimital and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for 30days from the Date of release/issue of the Test Report. The samples from Regulatory hodies are to be retained as specified. Any type of Observations or Compliants regarding the Reports shall be done within 15days from the Date of Test Report released/issued. After the time person stated before, no compliants will be accepted. The entire time schedule mentioned in Test Report is in 24hours format. Abbreviation used: N/A (Non Applicable): BDL (Below Detection Limit). LDL (Lower Detection Limit).



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

ENGINEERING SERVICES PVT. LTD.

Email: info@elespl.co.in , eles_ranchi@gmall.com

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



CN: U74999JH2018PTC011125

TEST REPORT

Test Report No.	: ELES/RNC/2024/2890	Report Release Date	: 28.05.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400000850F		

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,DDEand 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 detected

Remarks: 1. pH and RFC done at Lab.

Reviewed by AKASH KUMAR Quality Managor ELES PVT LTD

****End of Report****

Authorised Signatory

Ph. Deependra Kumar Sinha Ph. D Environmental Engg. ELES Pvt. Ltd. Technical Manager.

Page 4 of 4

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer of relates only to the job/analysis done by the Laboratory only. The information stated in the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 fall and any part of the report is not taken out of context, without prior written approved of the Laboratory. The Report in fall or in part shall not be published, intvertice, used for any legal actions unless prior permission has been recorred from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alteration & labsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for 30days from the Date of release/issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Compliants regulating the Reports shall be done within 15 days from the Date of Test Report released/issued. After the time period stated before, no compliants will be accepted. The entire Time schedule mentioned in Test Report is in 24hours format. Abstraction used. N/A (Not Applicable), BDL (Below Detection Limit). LDL (Lower Detection Limit)



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

ERING 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/2024/2890	Report Release Date	: 28.05.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2024/DW/2977	
		Sampling Date	: 11.05.2024	
	T	Sample Received Date	13.05.2024	
Address	: Lohardaga, Jharkhand-835302	Type of Sample	: Drinking Water	
		Source/Location of Sample	: Pakhar-115.13 (Bauxite Mine)	
		Sampling Procedure	: ELES/DOC/SMPL/01	
Mines Status	: Operational	Sampling Done By	: ELES Pvt. Ltd.	
Period of Analysis	: 13.05.2024 to 20.05.2024	Sample Condition	: Sealed & Preserved	

Discipline : Ch	emical	Group : Wate	r		tory Limit 10500;2012
Parameter	Unit	Test Protocol	Result	Acceptable Limit	Permissible Limit
Mineral Oil*	mg/L	CL-6, IS: 3025 (P-39)	BDL (DL: 0.1)	1.0	No Relaxation

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

AKASH KUMAR Quality Managur ELES PVT LTD

****End of Report****

Authorised Signatory Dr. Deependra Kumar Sintra Ph. D Environmental Engig PLES Pvt. Ltd. Technical Man

Page I of I

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the job analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 context. without prior written approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any anauthorized attention & Talsification of the coment or appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for foldays from the Date of release issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15days from the Date of Test Report released issued. After the time period stated before, an complaints will be accepted. The entire Time schedule mentioned in Test Report is in 24hours formu. Abbreviation used N/A (Not Applicable): BDL (Below Detection Limit); LDL (Lower Detection Limit



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:-20A4ECE9713D124

ENGINEERING SERVICES PVT. LTD.

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

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



TEST REPORT

Test Report No.	: ELES/RNC/2024/2906	Report Release Date	: 28.05.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400000866F		

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2024/EF/2979	
		Sampling Date	:11.05.2024	
		Sample Received Date	: 13.05.2024	
NAC TO	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Type of Sample	: Effluent Water	
Address	: Lohardaga, Jharkhand-835302	Source of Sample	: Near Mine Block-B, Quarry No.3 Pakhar Bauxite Mine (115.13 ha)	
		Sampling Procedure	: ELES/DOC/SMPL/01	
Mines Status	: Operational	Sample Collected By	: ELES Pvt. Ltd.	
Period of Analysis	: 13.05.2024 to 20.05.2024	Sample Condition	: Sealed & Preserved	

Discipline : Chemical		Group: Pollution & F	Group: Pollution & Environment		
Parameter	Unit	Test Protocol	Result	Inland Surface Water	Land for Irrigation
pH (at 25.3°C)	~	APHA 24th Ed,2023,4500-H	8.59	5.5-9.0	5.5-9.0
Total Dissolved Solids (TDS)	mg/L	IS 3025 (Part-16); 2023	163		**
Total Suspended Solids (TSS)	mg/L	IS 3025 (Part-17): 2022	50	100	200
Dissolved Oxygen (DO)	mg/L	IS 3025 (Part-38): 2019	5,4	44	**
Biochemical Oxygen Demand (BOD) (at 27 °C for 3 days)	mg/L	1S 3025 (Part-44): 2023	24.8	30	100
Chemical Oxygen Demand (COD)	mg/L	IS 3025 (Part-58): 2023	294	250	=
Dissolved Phosphate (as P)	mg/L	15 3025 (Part-31/Sec-1): 2022	2.0	5.0	-
Fluoride (as F)	mg/L	(\$ 3025 (Part-60): 2019	BDL (DL: 0.1)	2.0	1.5
Sulphide (as S)	mg/L	IS 3025 (Part-29) ; 2019	BDL (DL: 0.04)	2.0	-
Oil & Grease	mg/L	1S 3025 (Part-39): 2021	3.4	10	10

Page 1 of 2

The Document stated as Test Report, as issued by the Laboratory under General Terms and Conditions, only on Company letter head in per-approved format. The results shown in the Test Report refer or relates only to the job/analyses done by the Laboratory only. The information whited on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 context, without prior written approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compressition and jurisdiction issues. Any unauthorized afternion & fabrication of the costent of appearance of the Test Report is unlawful and offenders may be proceeded to the fullest extent of the law. All the samples are retained for Jüdays from the Date of release/issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Osservations or Complaints regarding the Reports shall be done within 15days from the Date of Test Report referred/issued. After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is in 24hours format. Abbreviation used: N/A (Not Applicable), BDL (Below Detection Limit). LDL (Lower Detection Limit).



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



TC-13887

TEST REPORT

Test Report No.	; ELES/RNC/2024/2906	Report Release Date	: 28.05.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400000866F		

Discipline : Chemical		Group: Residues in Water		Discharge Limits – CPCB EPR, 1986 Schedule VI	
Parameter	Unit	Test Protocol	Result	Inland Surface Water	Land for Irrigation
Lead (as Pb)	mg/L	APHA 24 th Ed.2023, 3111 B	BDL (DL: 0.01)	0.1	J#-
Manganese (as Mn)	mg/L	APHA 24th Ed.2023, 3111 B	0.196	2.0	+
Mercury (as Hg)	mg/L	IS 3025(Part-48): 1994; RA2019	BDL (DL; 0.001)	0.01	
Nickel (as Ni)	mg/L	APHA 24th Ed.2023, 3111 B	BDL (DL: 0.01)	3,0	-
Zinc (as Zn)	mg/L	APHA 24th Ed.2023, 3111 B	BDL. (DL: 0.1)	5,0	-

Remarks: pH done at Lab.

Reviewed by AKASH KUMAR Quality Managar

ELES PVT LTD.

****End of Report****

Authorised Signatory

Ph. Diependra Kumar Sinha Ph. Dienvironmental Engg. ELES Pvt. Ltd. Technical Manar

Page 2 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the jub/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of provident only and within the limits of client's instructions. The Laboratory is responsible for all the miformation or data provided on the report, except the information which is provided by the client. The Report cannot be reproduced except in ball and any part of the report is not laken out of confest, without prior written approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alteration & falsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for Biddays from the Date of release/issue of the Test Report. The samples from Regulatory bedies are to be resulted as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15days from the Date of Test Report released/seated. After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is in 24bours format. Abbreviation used: N/A (Not Applicable), BDL (Below Detection Limit); LDL (Lower Detection Limit).

CONTENT

	Hindalco Industries: Pakhar (115.13) Environmental Monitoring Report June2024
	Pakhar (115,13)
	AMBIENT AIR QUALITY- CORE ZONE
1	Near Mine Block-B, Quarry No.3
2	Near Mine Block-B, Quarry No.4
3	Near Mine Block B, Quarry No - 6
4	Near Mine Block-B, Quarry No.7
	AMBIENT AIR QUALITY- BUFFER ZONE
1	Near Bunglapart Village
2	Yatri Shed (Near K-10)
3	Near UtkarmitRajkiyaPrathmikVidyalayaBunglapart Village
4	Near UtkarmitRajkiyaPrathmikVidyalayaDumrapart Village







PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 2GAAECE9713D124

ENGINEERING SERVICES PV7. LTD.

Website I www.elespl.co.in

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



TEST REPORT

Test Report No.	: ELES/RNC/2024/3339	Report Release Date	: 22,06,2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400001291F			

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/3696 : Near Mine Block-B, Quarry No.3 Pakhar Bauxite Mine (115.13 hn)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 15.06,2024 to 16.06,2024 : 17.06,2024	
Mines Status	: Operational	Type of Sample Sampling Procedure Sampling Done By	: Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt. Ltd.	
Period of Analysis	: 17.06.2024 to 22.06.2024	Sample Condition	: Sealed & Preserved	

M	ETEOROLOGICAL INFOR	MATION				
1	Average Temperature (°C)	:39	2	Barometric Pressure (mmHg)	: 742	
3	Relative Humidity (%)	: 57	4	Weather Condition	: Clear	

Discipline: Chemical		Group: Atm	ospheric Pollu	ition
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	38	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part-II/Sec-1): 2023	12.6	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	µg/m³	IS 5182 (Part- 6): 2022	20.2	80 (24hrs)
Ozone (O ₂)	μg/m³	15 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/m²	IS 5182 (Part- 22): 2019	0.011	1 (24hrs)
Nickel (Ni)	ng/m ⁴	15 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)

Page 1 of 2

The Decement united to Test Report, is usual by the Laboratory under General Terms and Conditions, only on Company letter head to pre-approved format. The results shown in the Test Report reter to relates unly to the prevantly swider by the Laborators only. The inflimination stated on the Test Report reflects the lindings done by the Laboratory at the time of involvement only and within the limits 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 estates be reproduced except in full and any part of the report is not taken out of context, without prior written approval of the Laboratory. The Report in full or in part shall me be published, advertise, used for any legal actions unless prior permission has been secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alteration & fabrilication of liability. control or appearance of the Test Report is unlawful and offenders may be prosecuted to the follest extent of the law. All the samples are returned for 30days from the Date of release/same of the Tess Report. The samples their Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall he done within 15days from the Data of Test Report released/issued. After the time period stated before, no complaints will be accepted. The entire Time achedule magnitude in Test Report is in 24hours format. Afterwanton used: SVA (Not Applicable); BDL (Below Detection Limit). LDL (Lower Detection Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9733D124

ENGINEERING SERVICES PVT. LED

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

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



TEST REPORT

Test Report No.	: ELES/RNC/2024/3339	Report Release Date	: 22.06.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400001291F			

Discipline: Chemical		Group: Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (CsHn)	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)

AKASH KUMAR Quality Manager ELES PVT. LTD.

****End of Report****

Authorised Signatory

Dr. Deependra Kumar Sinha Ph. D Environmental Engg. ELES Pvt. Ltd. Technical Manager

Page 2 of 2

The Document straid as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the jub/analysis done by the Laboratory at the time of involvement only and within the limits of elsent'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 fall and any part of the report is not taken out of context, without provident approval of the Laboratory. The Report is full or in part shall not be published, advertise, used for any legal actions unless prior permission has been secured from the Management of the Laboratory. Attention is drawn to the limitation of liability compensation and jurisdiction issues. Any anauthorized alternation & falsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for altitudes from the Date of release/issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Report shall be done within 15days from the Date of Test Report released/issued. After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is in 24hours format. Abbreviation used N/A (Not Applicable), BDL (Below Detection Limit), LDL (Lower Detection Limit).



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

ENGINEERING SERVICES PVT. LTD.

Email: Info@elespl.co.in , eles.runchi@gmail.com

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



TEST REPORT

Test Report No.	: ELES/RNC/2024/3340	Report Release Date	: 22.06.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400001292F			

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	ELES/RNC/2024/AA/3697 Near Mine Block-B, Quarry No4 Pakhar Bauxite Mine (115.13 ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 15.06.2024 to 16.06.2024 : 17.06.2024	
Mines Status	: Operational	Type of Sample Sampling Procedure Sampling Done By	: Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt, Ltd.	
Period of Analysis	: 17.06,2024 to 22,06,2024	Sample Condition	: Sealed & Preserved	

MI	ETEOROLOGICAL INFO	RMATION			
1	Average Temperature (°C)	: 39	2	Barometric Pressure (mmHg)	: 742
3	Relative Humidity (%)	:57	4	Weather Condition	: Clear

Discipline:	Chemical	Group: Atm	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	33	60 (24hrs)		
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- II/Sec- 1): 2023	8.8	80 (24hrs)		
Nitrogen Di-Oxide (NOz)	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/m³	1S 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)		
Lead (Pb)	μg/m¹	1S 5182 (Part- 22): 2019	0.0012	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)		

Page 1 of 2

The Document stated as Test Report, a issued by the Laborators under General Terms and Conditions, only on Company letter hand in pre-approved format. The results shown in the Test Report refler or relates only to the jubications done by the Laboratory and the information of an all the information or data provided on the report, except the information which is provided by the client. The Report cannot be reported discept in full and any part of the report is not taken out of contest, without prior written approval of the Laboratory. The Report in full in in part shall not be published, advertise, used for any legal actions unless grior permission has been sequend from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and sursidiction issues. Any untuitation of client and offenders may be prosecuted to the fullest extent of the law. All the samples are rectained for allowand for allowing the Report in the Date of release/times of the Test Report in unleavail and offenders may be prosecuted to the fullest extent of the law. All the samples are rectained for 30days from the Date of release/times of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15days from the Date of Test Report released/issued. After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is in 14boars format. Abbreviation used. WA (Not Applicable), BDL (Below Detection Limit), LDL (Lower Detection Limit).



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

ENGINEERING SERVICES PVT. LTD.

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

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



TEST REPORT

Test Report No. : ELES/RNC/2024/3340 Report Release Date : 22.06.2024

Work Order No. : 13612312113 Work Order Date : 28.03.2024

ULR No. : TC135872400001292F

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C ₀ H ₀)	µg/m³	ELES/GC/SOP/06; 2023	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m'	ELES/GC/SOP/05: 2023	<0.5	O1(Annual)	

AKASH KUMAR Quality Manager ELES PVT, LTD.

****End of Report****

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

Page 2 of 2

The Doctiment stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The resease shown as the Test Report refer or relates only to the jub/analysis done by the Laboratory only. The information stated on the Test Report reflects the findengs done by the Laboratory at the taste of involvement only and within the limits 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 context, without prior written approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisation issues. Any unauthorized alteration & fabrification of the content or appealtance of the Test Report is unitability and offenders may be prosecuted to the fabric state. Any unauthorized alteration 30days from the Date of release/issue of the Test Report. The samples from Regulatory bodies are to be retained to specified. Any type of Observations or Complaints regarding the Reports stall be done within 15days from the Date of Test Report released issued. After the time period stated before, no complaints will be accepted. The estate Time schedule mentioned in Test Report is in 24hours format. Abbreviation used: N/A (Not Applicable), BDI, (Below Detection Limit), LDI, (Limited Limit), LDI, (Limited Limit), LDI, (Limited Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 104AECE9713D124

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/2024/3341	Report Release Date	: 22.06.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400001293F		

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/3698 : Near Mine Block B, Quarry No6 Pakhar Bauxite Mine (115.13 ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 15.06.2024 to 16.06.2024 : 17.06.2024 : Ambient Air	
Mines Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02 : ELES Pvl. Ltd.	
Period of Analysis	: 17.06.2024 to 22.06.2024	Sample Condition	Sealed & Preserved	

MI	ETEOROLOGICAL INFORMATION				
1	Average Temperature (°C) : 39	2	Barometric Pressure (mml-	fg) : 742	
3	Relative Humidity (%) : 57	4	Weather Condition	: Clear	

Discipline:	Chemical	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m ⁵	IS 5182 (Part- 23): 2022	69	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-II/Sec- 1): 2023	11.5	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m ³	IS 5182 (Part- 6): 2022	28.3	80 (24hrs)	
Ozone (O ₃)	μg/m³	15 5182 (Part- 9): 2019	<20.0	100 (8hrs)	
Ammonia (NH ₃)	μg/m ³	1S 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)	μg/m³	IS 5182 (Part- 22): 2019	0.008	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)	

Page 1 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Combitions, only on Company letter head in pre-approved somms. The results shown in the Test Report series or relates only to the jub analysis done by the Laboratory only. The information or aid on the Test Report reflects the findings done by the Laboratory as the time of involvement only and within the limits 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 context, without prior written approval of the Laboratory. The Report is full or in part shall not be published, advertise, used for any legal actions unless prior permission has been secured from the Managetness of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unsurformed advertision & Intelligitation of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fallest extent of the law. All the samples are retained for iddays from the Date of relaxecissis of the Test Report. The samples from Regulatory budges are to be recained as specified. Any type of Observations of Complaints regarding the Reports shall be done within 15days from the Date of Test Report released/useed. After the time period stated before, no complaints will be accepted. The entire Time schedule maniform Detection Limit), LDL (Lower Detection Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20446CE9713D124

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/2024/3341	Report Release Date	: 22.06.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400001293F			

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
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 ELES PVT. LTD.

****End of Report****

Authorised Signatory

Dr. Deependra Kumar Sinha Ph. D Environmental Engg. ELES Pvt. Ltd. Technical Manager

Page 2 of 2

The Document stated as Test Report, is insued by the Laboratory under General Terms and Conditions, only on Company letter head as pre-approved format. The results shown in the Test Report reflects the findings done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 inken out of cention, without print written appearant 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any insurfacional alternation & falsification of the content or appearance of the Test Report is unlawful and officienders may be prosecuted to the fullest extent of the law. All the samples are retained for 30days from the Date of release/issue of the Test Report the samples from Regulatory basis are to be retained as specified. Any type of Observations or Complaints regulating the Reports shall be done within 15days from the Date of Text Report released/issued. After the time period stated before, no complaints will be accepted. The online Time schedule mentioned in Test Report is in 24bours format. Abbreviation used. N/A (Not Applicable), BDJ. (Below Desceion Limit), LDt. (Lower Detection Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (IHARKHAND) GST NO:- 20AAECE9713D324

ENGINEERING SERVICES PVT, LTD.

**

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

TG-7258

TEST REPORT

Test Report No.	: ELES/RNC/2024/3342	Report Release Date	: 22.06.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400001294F		

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/3699 : Near Mine Block-B, Quarry No7 Pakhar Bauxite Mine (115.13 ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 15.06.2024 to 16.06.2024 ; 17.06.2024 : Ambient Air	
Mines Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02 : ELES Pvt. Ltd.	
Period of Analysis	± 17,06.2024 to 22.06.2024	Sample Condition	: Sealed & Preserved	

METEOROLOGICAL INFORMATION					
1	Average Temperature (°C) ± 39	2	Barometric Pressure (mmHg)	: 742	
3	Relative Humidity (%) : 57	4	Weather Condition	; Clear	

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23); 2022	63	100 (24hrs)	
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	33	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	μg/m¹	IS 5182 (Part- II/Sec- 1): 2023	8.1	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	µg/m³	IS 5182 (Part- 6): 2022	24,4	80 (24hrs)	
Ozone (O ₃)	μg/m³	1S 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/m ³	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)	
Lead (Pb)	μg/m*	IS 5182 (Part- 22): 2019	0.007	1 (24hrs)	
Nickel (Ni)	ng/m²	1S 5182 (Part- 26): 2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m²	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)	

Page 1 of 2

The frocument stated as Test Report, is moved by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report reflects the findings done by the Laboratory at the immediate on the Test Report reflects the findings done by the Laboratory at the immediate of involvement only and within the limits of client, 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 context, without prior wratern approval 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 secured from the Managiment of the Laboratory. Attention is drawn to the testistion of liability, compensation and jurisdiction results. Also simples are reliaised alteration & falseligation of the Original Properties unliability and offenders may be prosecuted in the falsels extent of the law. All the samples are reliaised for 30days from the Date of release/usea of the Test Report. The samples from Reports shall be come within 15days from the Date of Test Report released/issued. After the time period shall before, no complaints will be accepted. The entire Time schedule ment send in Test Report is in 24hours format. Abbreviation used N/A (Not Applicable), BDL (Below Descaum Limit), LDL (Linver Detection Limit).



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

RING 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/2024/3342 Report Release Date : 22.06.2024 Work Order No. : 13612312113

ULR No. : TC135872400001294F Work Order Date : 28.03.2024

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
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)	

Quality Manager FLES PVT. LTD.

****End of Report****

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

Page 2 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the job/analysis done by the Laboratory only. The information stand on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 cliem. The Report cannot be reproduced except in full and any part of the report is not taken out of context, without prior wreten approved 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and parisdiction essees. Any unauthorized alteration & fidelification of the content of appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for 30days from the Date of rejease/assee of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Compliants regarding the Reports shall he done within 15days from the Date of Text Report released/issued. After the time period stand before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is in 24hours formal. Abbreviation used. N/A (Not Applicable); BDI. (Below Detection Limit). LDI. (Lower Detection Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:-20A4ECE9713D124

ENGINEERING SERVICES POT. LTD.

Email: Infa@elespl.co.in , eles.ranchi@amaii.com Phone no.: 0651-2290103 Website : www.elespl.co.in



TEST REPORT

Test Report No.	: ELES/RNC/2024/3343	Report Release Date	: 22.06.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400001295F			

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELFS/RNC/2024/AA/3700 : Near Bunglapart Village Pakhar Bauxite Mine
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 15.06.2024 to 16.06.2024 : 17.06.2024 : Ambient Air
Mines Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02 : ELES Pvt. Ltd.
Period of Analysis	: 17.06.2024 to 22.06.2024	Sample Condition	: Sealed & Preserved

MI	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (°C)	: 39	2	Barometric Pressure (mmHg)	: 742
3	Relative Humidity (%)	: 57	4	Weather Condition	: Clear

Discipline:	Chemical	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	56	100 (24hrs)	
Particulate Matter (PM2,5)	μg/m³	1S 5182 (Part- 24): 2019	31	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part-11/Sec-1): 2023	11.5	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m [†]	IS 5182 (Part- 6): 2022	19.1	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/m'	IS 5182 (Part- 22); 2019	0.007	1 (24hrs)	
Nickel (Ni)	ng/m ³	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m ⁷	ELES/AIR/SOP/01: 2021	<2.0	96 (Annual)	

Page 1 of 2

The Document stated as Test Report, is assed by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report reflects the findings done by the Laboratory in the time of involvement only and within the limits of closer's instructions. The Laboratory is responsible for all the information or data provided on the report, everythe 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 context, without prior written approved 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 secured from the Managament of the Laboratory. Attention is drawn to the lamination of Tubility, compensation and jurisdiction issues. Any senitherized alteration & falsification of the content or appearance of the Test Report is unlastified and offenders may be pressecuted in the fullent extent of the law. All the samples are retained for Sklays from the Data of releases/sage of the Test Report. The samples from Regulatory bodies are to be termined as specified. Any type of Observations or Complianto regarding the Reports shall be done within 15data from the Data of Test Report tricisal/issued. After the time period stated before, in compliants will be accepted. The entire Time schedule mentioned in Test Report in a 24hours format. Abbreviation used. N/A (Not Applicable), BDR. (Below Detection Limit).



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.eiespl.co.in



TEST REPORT

Test Report No. : ELES/RNC/2024/3343 Report Release Date : 22.06.2024
Work Order No. : 13612312113 Work Order Date : 28.03.2024

ULR No. : TC135872400001295F

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C ₆ H ₆)	μg/m ³	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 ELES PVT. LTD.

**** End of Report****

Authorised Signatory
Dr. Deependra Kurnar Sinha
Ph. D Environmental Engg
ELES Pvt. Ltd. Technical Manager

Page 2 of 2

The Document stated at Test Report, is oscill by the Laboratory under General Terms and Conditions, only in Company letter head in pre-approved format. The resolts shown in the Test Report refer or relates only to the job/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 in not taken out of context, without prior written approval 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 sectored from the Management of the Laboratory. Amountain to the limitation of liability, compensation and jurisdiction assues. Any simulatorized alteration & falsification of the contern or appearance of the Test Report is unlikeful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for Middays from the Date of Peta Report. The samples from Regulatory hodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15days from the Date of Test Report released/usued. After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report in 24hours format. Abbreviation used. N/A (Not Applicable), BDL (Below Detection Limit): LDL (Lower Detection Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-934003 (JHARKHAND) GST NO:- 20A46CE9713D124

ENGINEERING SERVICES PYT. 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/2024/3344	Report Release Date	: 22.06.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400001296F			

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/3701 : Yatri Shed (Near K-10) Pakhar Bauxite Mine
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 15.06.2024 to 16.06.2024 : 17.06.2024
Mines Status	: Operational	Type of Sample Sampling Procedure Sampling Done By	: Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt. Ltd.
Period of Analysis	: 17.06.2024 to 22.06.2024	Sample Condition	: Sealed & Preserved

MI	ETEOROLOGICAL INFOR	RMATION			
1	Average Temperature (%C)	: 39	2	Barometric Pressure (mmHg)	: 742
3	Relative Humidity (%)	: 57	4	Weather Condition	: Clear

Discipline:	Chemical	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	31	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part-11/Sec-1): 2023	13.3	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	22.7	80 (24hrs)	
Ozone (O ₃)	pg/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	0.005	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)	

Page 1 of 2

The Document united as Test Report is insued by the Laboratory under General Terms and Coridinous, only on Company letter head in pre-approved format. The results shown in the Test Report reflects the findings done by the Laboratory only. The information stated on the Test Report reflects the findings done by the laboratory in the time of involvement only and within the limits of closen'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 connect, without prior written approval of the Laboratory. The Report in full or in part shall am be published, advertise, used the any legal actions unless prior permission has been accured from the Management of the Laboratory. Amonition is drawn to the limitation of liability, compensation and jurisdiction issues. Any satisfactory of the Laboratory Amonition is drawn to the limitation of liability, compensation and jurisdiction issues. Any satisfactory of the Test Report is unlawful and offenders may be prosecuted to the fullent extent of the line. All the samples are retained for Sklays from the Direction English from the Test Report. The samples from Regulatory hodies are to be retained as specified. Any type of Observatoris or Complaints regarding the Reports shall be done within United Schools from the Direction Limit. (Lower Detection Limit)



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

ENGINEERING SERVICES PVT. LTD.

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

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



TEST REPORT

: ELES/RNC/2024/3344	Report Release Date	: 22.06.2024	
: 13612312113	Work Order Date	: 28.03.2024	

ULR No. : TC135872400001296F

Discipline: Chemical		Group: Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (C _s H _n)	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)

AKASH KUMAR Quality Managar ELES PVT. LTD

****End of Report****

Authorised Signatory
Dr. Deependra Kurnar Sinha
Ph. D Environmental Engg.
ELES Pvt. Ltd. Technical Manager

Page 2 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only in Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the jub/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 caused by representation of the Laboratory on the Laboratory and the Laboratory. The Report in full or in part shall not be published, advertise, used for any legal actions unless prior permission has been accurately from the Management of the Laboratory. Attention is drawn in the limitation of liability, compensation and jurisdiction issues. Any unauthorized alteration & falsification of the content or appearance of the Test Report is unlawful and offenders may be princeded to the fullest extent of the law. All the samples are retained for Hullary from the Date of reference/issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15days from the Date of Test Report relaxed/issued. After the time period stated before, no complaints will be accepted. The error Time schedule mentioned in Test Report is in 24boars format. Abbreviation used. N/A (Not Applicable), BEL (Below Detection Limit), LDE, (Lower Desection Limit).



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

ENGINEERING SERVICES PVT. LTD.

*

Email: Info@elespi.co.in , eies.ranchi@gmail.com Phone no.: 0651-2290103 Website : www.elespi.co.in

TEST REPORT

Test Report No.	: ELES/RNC/2024/3345	Report Release Date	: 22.06.2024
Work Order No.	: 13612312113	Work Order Date	; 28.03,2024
ULR No.	: TC135872400001297F		

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2024/AA/3702
		Location	: Near Utkarmit Rajkiya Prathmik Vidyalaya Bunglapart Village Pakhar Bauxite Mine
Address	: Lohardaga, Jharkhand-835302	Sampling Date	: 15.06.2024 to 16.06.2024
		Sample Received Date	: 17.06.2024
		Type of Sample	: Ambient Air
	1 A . T . A	Sampling Procedure	: ELES/DOC/SMPL/02
Mines Status	: Operational	Sampling Done By	: ELES Pvt. Ltd.
Period of Analysis	± 17.06.2024 to 22.06.2024	Sample Condition	: Sealed & Preserved

MI	ETEOROLOGICAL INFORMATION			
1	Average Temperature (*C') : 39	2	Barometric Pressure (mmHg)	: 742
3	Relative Hamidity (%) : 57	4	Weather Condition	Clear

Discipline: Chemical		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	29	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m ³	IS 5182 (Part- II/Sec- 1): 2023	7.8	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m ³	IS 5182 (Part- 6): 2022	17.2	80 (24hrs)
Ozone (O ₃)	µg/m¹	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₃)	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)
Lead (Pb)	μg/m³	IS 5182 (Part- 22): 2019	0.01	1 (24hrs)
Nickel (Ni)	ng/m³	15 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m ¹	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)

Page 1 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, unly on Company Jones head in pre-approved format. The remains above in the Test Report reflect or relates only to the information with the fladings those by the Laboratory at the time of involvement only and within the limits 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 context, without prior written approval in the Laboratory. The Report in full or in part shall not be published devertise, used for any legal actions attless grior permission has been secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any simultaneous distinctions of the content of appearance of the Test Report is unlawful and offenders may be prosecuted to the fulless extent of the line. All the samples are returned for Hodges from the Date is release/course of the Test Report. The samples from Regulatory bodies are to be returned an appealant of the line. All the samples are trained in the Report shall be done within 15days from the Date of Test Report released/assued. After the time period stated before, no compliants will be accepted. The entire Time schedule mentioned in Test Report is in 24bours format. Abbreviation used, W/A (Not Applicable), BDI. (Below Desection Limit); LDI. (Lower Detection Limit)



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

ENGINEERING SERVICES PUT. 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/2024/3345 Report Release Date : 22.06.2024 Work Order No. : 13612312113 Work Order Date : 28.03.2024

ULR No. : TC135872400001297F

Discipline	:: Chemical	Group: Att	mospheric Pollu	ition
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (C ₆ H ₆)	μg/m [®]	ELES/GC/SOP/06: 2023	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m	ELES/GC/SOP/05: 2023	<0.5	01(Annual)

AKASH KUMAR Quality Manager ELES PVT LTD

****End of Report****

Authorised Signatory
Dr. Deependra Kurnar Sinha
Ph. D Environmental Engg.
ELES Pvt. Ltd. Technical Manager

Page 2 of 2

The Document stated as Test Report, is asseed by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved farmat. The results above as the Test Report reflects the finding done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory as the time of involvement only and within the limits of client's assistancests. The Laboratory is responsible for all the information of data provided on the report, except the information which is provided by the client. The Report earning be reproduced except in full and any part of the report is not taken out of centers, without provided in the Laboratory. The Report is full or to part shall not be published, advertise, used for any legal actions unless prior permission has been occured from the Management of the Laboratory. Attention is drawn in the limitation of liability, compensation and particular assistances. Any unauthorized abstration & falsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the failest extent of the law. All the samples are returned for 30days forms the Date of released/second of the Test Report. The samples from Regulatory bodies are to be returned as specified. Any type of Observations or Complaints regarding the Report is thall be done within 15days from the Date of Test Report released/second. After the time period stated before, no complaints will be accepted. The owner Time schedule mentioned in Test Report is in 24boars format. Abbreviation used. N/A (Not Applicable), BDL (Below Detection Limit), LDL (Linver Detection Limit).



PLOT NO-30, MANSAHOVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 2044ECE97130174

ENGINEERING SERVICES PVF. LTD

Website: www.elespl.ca.in

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

Terman

TEST REPORT

Test Report No.	: ELES/RNC/2024/3346	Report Release Date	: 22.06.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	; TC135872400001298F			

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/3703 : Near Utkarmit Rajkiya Prathmik Vidyalaya Dumrapart Village Pakhar Bauxite Mine
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 15.06.2024 to 16.06,2024 : 17.06.2024 : Ambient Air
Mines Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02 : ELES Pvt. Ltd.
Period of Analysis	: 17.06.2024 to 22.06.2024	Sample Condition	: Sealed & Preserved

MI	TEOROLOGICAL INFORMATION			
1	Average Temperature (°C) : 39	2	Barometric Pressure (mmHg)	±742
3	Relative Humidity (%) : 57	4	Weather Condition	: Clear

Discipline: Chemical		Group: Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23); 2022	64	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-11/Sec- 1): 2023	10.5	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	18.1	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)
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	0,011	1 (24hrs)
Nickel (Ni)	ng/m ^a	IS 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)

Page 1 of 2

The Document stated in Ten Report, it issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results about in the Ten Report rolls or relates only to the job/analysis done by the Laboratory at the line of dividences of the following only and within the letters 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 cuerns) be reproduced except in full and any part of the report is not taken out of context, without prior written approval of the Laboratory. The Report in full or in part isfall not be published, advertise, used for any legal serious unless prior permission has been second from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any anauthorood alteration & liability compensation and jurisdiction less. Any anauthorood alteration & liability compensation of the least of the laboratory by the limitation of liability, compensation and jurisdiction less. Any anauthorood alteration & liability compensation of the report of the Ten Report is unlikely from Regulatory bodies are to be related as specified. Any type of Observations or Compliants regarding the Reports stall be done within 15days from the Date of Test Report released/issued. After the time period smoot before, no compliants will be scripted. The entire Time schedule manufaced in Test Report is in 24boars format. Abbreviation used: N/A (Not Applicable), BDI. (Below Description Limit), LDI. (Lesses Detection Limit)



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

ENGINEERING SERVICES PVT. LTD

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

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



TEST REPORT

Test Report No. : ELES/RNC/2024/3346 Report Release Date : 22.06.2024
Work Order No. : 13612312113 Work Order Date : 28.03.2024

ULR No. : TC135872400001298F

Discipline: Chemical		Group: Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit
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)

AKASYPYCOMAR Quality Manager FLES PVT. LTD

****End of Report****

Authorised Signatory

Dr. Deependra Kumar Sinha Ph. D Environmental Engg. ELES Pvt. Ltd. Technical Manager

Page 2 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relocate only in the jubilitation done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the lines 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 context, without proving approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction assets. Any anautherized alternation of the content or appearance of the Test Report is unlowful and offerables may be prosecuted to the fullest extent of the line. All the samples are retained for Mahora from the Date of relative from Regulatory bolics are to be retained an specified. Any type of Observations or Compliants regarding the Reports shall be done within 15days from the Date of Test Report released issued. After the time period stated before, no compliants will be accepted. The entire Time schedule mentioned in Test Report is in 24bours format. Abbreviation used N/A (Not Applicable), BDI. (Below Detection Limit).

CONTENT

	Hindalco Industries: Pakhar (115.13) Environmental Monitoring Report July2024
	Pakhar (115.13)
	AMBIENT AIR QUALITY- CORE ZONE
1	Near Mine Block-B, Quarry No.3
2	Near Mine Block-B, Quarry No.4
3	Near Mine Block B, Quarry No - 6
4	Near Mine Block-B, Quarry No.7
	AMBIENT AIR QUALITY- BUFFER ZONE
1	Near Bunglapart Village
2	Yatri Shed (Near K-10)
3	Near UtkarmitRajkiyaPrathmikVidyalayaBunglapart Village
4:	Near UtkarmitRajkiyaPrathmikVidyalayaDumrapart Village





PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (IHARKHAND) 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/2024/4082	Report Release Date	: 22.07.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400002017F			

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/4677 : Near Mine Block-B, Quarry No.3 Pakhar Bauxite Mine (115.13 ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 14.07.2024 to 15.07.2024 : 17.07.2024	
Mines Status	; Operational	Type of Sample Sampling Procedure Sampling Done By	: Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt. Ltd.	
Period of Analysis	: 17.07.2024 to 22.07.2024	Sample Condition	: Sealed & Preserved	

MI	ETEOROLOGICAL INFORMATION			
1	Average Temperature (°C) : 30	2	Barometric Pressure (mmHg)	: 742
3	Relative Humidity (%) : 63	4	Weather Condition	: Partly Cloudy

Discipline:	Chemical	Group: Atm	ospheric Pollu	ition
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- II/Sec- 1): 2023	10.1	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	22.8	80 (24hrs)
Ozone (O ₃)	μg/m³	1S 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₁)	μg/m³	1S 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)	μ <u>υ</u> /m*	1S 5182 (Part- 22): 2019	0.011	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)

Page 1 of 2

The Document stated as Test Report, in must by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The testals shown in the Test Report refer or relates only to the jubianalysis done by the Laboratory only. The information-stated on the Test Report reflects the findams done by the Laboratory of the time of involvement only and wints the limits 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 regardated except in full and any part of the report is not taken out of context, without prior willow approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alternation & Catalitation in the Company of the Test Report is unlawful and offensions may be prosecuted to the follows extent of the law. All the samples are retained for 30 days from the Date of relates from the Date of Test Report. The uniques from Regulatory bedies not in the time period stead before, no complaints will be accepted. The order Time achedite mentioned in Test Report is in 24 years format. Abbreviation used N/A (Not Applicable), HDL (Below Detection Lamit). LDL (Lower Detection Lamit)



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

ENGINEERING SERVICES PVT. LTD.

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

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



TEST REPORT

Test Report No.	: ELES/RNC/2024/4082	Report Release Date	: 22.07.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
	The second secon			

ULR No. : TC135872400002017F

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
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)	

AKASH KUMAR Quality Manager ELES PVT LTD

****End of Report****

Dr. Deependra Kumar Sinha
Ph. D Environmental Engg.

ELES Pvt. Ltd. Technical Manager

Page 2 of 2

The Discussess stated as Test Report is ossied by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved familia. The results shown in the Test Report refer or critates only to the jobinnalysis done by the Laboratory only. The information mated on the Test Report reflects the findings alone by the Laboratory at the time of involvement only and within the limits of client's instruction. 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 context, without provided in the Laboratory. The Report in full or in part shall not be published, advertise, used for any legal actions unless prox permission has been secured from the Management of the Laboratory. Attention is derived to the limitation of liability, compensation and jurisdiction issues. Any unuaritative alternation & full-information of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fulliest extent of the law. All the samples are retained for 30days from the Date of refrasse/issue of the Test Report. The samples from Regulatory bodies are to be returned as specified. Any type of Observations or Compilarios regarding the Reports shall be done within 15days from the Date of Test Report and the Content of the law. All the samples are retained in Test Report in all the done within 15days from the Date of Test Report and the Content of the law and the Date of Test Report and the Content of the law. All the samples are retained in Test Report in all the done within 15days from the Date of Test Report from the Date of Report and the law and the Date of Test Report from the Date of Test Report from the Date of Test Report is in 24hours format. Abbreviation would N/A (Not Applicable) BDE (Below Desection Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPLIDANA HATIA, RANCHI-834003 (JHARKHAND) G57 NO:- 20AAECE9713D1Z4

GINEERING 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/2024/4083	Report Release Date	± 22.07.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03,2024
ULR No.	: TC135872400002018F		

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/4678 : Near Mine Block-B, Quarry No4 Pakhar Bauxite Mine (115.13 ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	; 14.07.2024 to 15.07,2024 ; 17.07.2024	
Mines Status	: Operational	Type of Sample Sampling Procedure Sampling Done By	: Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt. Ltd.	
Period of Analysis	: 17.07.2024 to 22.07.2024	Sample Condition	: Sealed & Preserved	

M	ETEOROLOGICAL INFORMATION			
1	Average Temperature (°C) : 30	2	Barometric Pressure (mmHg)	: 742
3	Relative Humidity (%) : 63	4	Weather Condition	: Partly Cloudy

Discipline: (Chemical	Group: Atm	ospheric Pollu	rtion
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μy/m³	IS 5182 (Part- 23): 2022	59	100 (24hrs)
Particulate Matter (PM2.5)	µg/m ¹	IS 5182 (Part- 24): 2019	30	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μμ/m³	IS 5182 (Part-II/Sec-1): 2023	7.3	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	22.8	80 (24hrs)
Ozone (Ox)	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	1S 5182 (Part- 10); 2019 (NDIR Method)	<1.0	2 (8hrs)
Lead (Pb)	μg/m³	JS 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)

Page 1 of 2

The Discussion stated as Test Report, in mused by the Laboratory under General Terms and Conductors, only on Company letter head in pre-approved format. The results shows in the Test Report refer of relates only to the job/analysis dose by the Laboratory only. The information stated on the Test Report reflects the findings dose by the Laboratory in the time of involvement only and within the limits of client's restrictions. 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 context, without prior written appeared of the Luberston. The Report in full or in part shall not be published, advertise, used fire my legal actions unless price permission has been secured from the Management of the Laboratory. Attention is drawn to the limitation of flability, compensation and jurisdiction states. Any unauthorized alteration & flabilitation of the content of appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law. All the samples are returned for 30 days from the Date of referencessue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall he done within 15days from the Date of Test Report released/issued. After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is in 24bears forest. Athreviation used N/A (Not Applicable), BDJ. (Below Detection Limit). LDI. (Lower Detection Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 28AAECE9713D124

ENGINEERING SERVICES PVT. LTD.

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

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



TG-13981

TEST REPORT

ULR No.	: TC135872400002018F		() () () () () () () () () () () () () (
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
Test Report No.	: ELES/RNC/2024/4083	Report Release Date	: 22.07.2024	

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C ₄ H ₆)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Amual)	
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)	

Reviewed by AKASH KUMAR Quality Manag: ELES PVT_LTD

****End of Report****

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

Page 2 of 2

The Document stated as Test Report, a issued by the Laboratory under General Terms and Conditions, only on Company lener head in pre-approved format. The results above in the Test Report refer or relaces only to the job/analysis done by the Laboratory only. The unformation stated on the Test Report reflects the findings done by the Laboratory is responsible for all the information or data provided on the report, assemble in findings which is provided by the client. The Report names be reproduced except in full and any part of the report is not asken out of context, without providing approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compromision and presidention issues. Any unauthorized alteration & follows from the Date of released and offenders may be presented to the fullest extent of the law. All the samples are retained in 36days from the Date of released/issued. After the time period stated before, no complaints of Compliants regarding the Report shall be done within 15days from the Date of Test Report is in 24hours format. Abbreviation used: N/A (Not Applicable), RDL (Below Detection Limit), LDL (Lawer Detection Limit).



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

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/2024/4084	Report Release Date	: 22.07.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400002019F			

CUSTOMER DET	CUSTOMER DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/4679 : Near Mine Block B, Quarry No6 Pakhar Bauxite Mine (115.13 ha)
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 14.07.2024 to 15.07.2024 : 17.07.2024 : Ambient Air
Mines Status	; Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02 : ELES Pvt. Ltd.
Period of Analysis	: 17.07.2024 to 22.07.2024	Sample Condition	: Sealed & Preserved

MI	ETEOROLOGICAL INFORMATION			
1	Average Temperature (*C) : 30	2	Barometric Pressure (mmHg)	: 742
3	Relative Humidity (%) : 63	4	Weather Condition	: Partly Cloudy

Discipline: 0	Chemical	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	63	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-11/Sec-1): 2023	10.1	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m³	(S 5182 (Part- 6): 2022	23.4	80 (24hrs)	
Ozone (O ₃)	µg/m³	1S 5182 (Part- 9): 2019	<20.0	100 (8hrs)	
Ammonia (NH ₁)	μg/m¹	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	0.005	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)	

Page 1 of 2

The Document stand as Test Report, is asseed by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report reflect we related unly to the jub/worky of one by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the raine of involvement ently and within the limits of client's ensurement. 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 temporated except in full and any port of the report is not taken out of context, without price written approval of the Laboratory. The Report in full or in part shall not be published, advertise, used for any legal schools unless price permission has been recorded from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction usues. Any unauthorized alterations & falsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the lab. All the samples are retained for Midays from the Date of felicuse osses of the Test Report. The samples from Regulatory bodies are so be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15days from the Date of Test Report released/samed. After the time period stated before, no complaints will be accepted. The entire Term schedule mentioned in Test Report is in 24hours linear. Abbreviation used: N/A (Not Applicable), BDL (Below Detection Limit). LDL (Leower Detection Limit)



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

ENGINEERING SERVICES PVT. LTD

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

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



TC-UMBT

TEST REPORT

III.R No.	: TC135872400002019F	TOTAL COLUMN TOTAL	A SOUTHWAY	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
Test Report No.	: ELES/RNC/2024/4084	Report Release Date	; 22.07.2024	

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C _s H _s)	µg/m ³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)	

AKASHI KUMAR Quality Manager ELES PVT LTD

****End of Report****

Authorised Signatory

Dr. Deependra Kumar Sinha Ph. D Environmental Engg.

ELES Pvt. Ltd. Technical Manager

Page 2 of 2

The Discurrent stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in geo-approved format. The results shown in the Test Report refer or relates only to the polyamalysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 context, without prior written approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alteration & falsification of the content or the Test Report is unlessful and offenders may be prosecuted to the falliest extent of the law. All the samples are retained for 30days from the Date of release/issue of the Test Report. The samples from Regulatory before are to be retained as specified. Any type of Observations of Complaints regarding the Reports shall be done within 15days from the Date of Test Report release/spect at the time period stated before, no complaints will be accepted. The entire Time achievale mentioned in Test Report is in 24hours format. Abbreviation used: NA (No) Applicable), HDL (Below Detection Limit); LDL (Lower Detection Limit)



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.elespi.co.in



TEST REPORT

Test Report No.	: ELES/RNC/2024/4085	Report Release Date	: 22.07.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400002020F		

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/4680 : Near Mine Block-B, Quarry No7 Pakhar Bauxite Mine (115.13 ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 14.07.2024 to 15.07.2024 : 17.07.2024 : Ambient Air	
Mines Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02 : ELES Pvt. Ltd.	
Period of Analysis	: 17.07.2024 to 22.07.2024	Sample Condition	: Sealed & Preserved	

MI	ETEOROLOGICAL INFORMATION			
1	Average Temperature (°C) : 30	2	Barometric Pressure (mmH	(g) : 742
3	Relative Humidity (%) : 63	4	Weather Condition	: Partly Cloudy

Discipline: 0	Chemical	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/m ³	IS 5182 (Part-24): 2019	30	60 (24hrs)	
Sulphur Di-Oxide (\$O ₂)	µg/m ³	IS 5182 (Part- II/Sec- 1): 2023	7.3	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m³	1S 5182 (Part- 6): 2022	20.8	80 (24hrs)	
Ozone (O ₅)	µg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)	
Ammonia (NH ₁)	μg/m³	1S 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 ³	IS 5182 (Part- 22): 2019	0.005	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)	

Page I of 2

The Document stated as Test Report, it issued by the Laboratory under General Terms and Conditions, only on Company tener head in pre-approved format. The results shown in the Test Report reflects the findings done by the Laboratory of the information or date provided on the report, except the information which is provided by the client. The Report canoni be reproduced except in full and any part of the report is not taken out of context, without prior written approval of the Laboratory. The Report is full in part shall not be published, advertise, used for any legal actions unless prior permission has been secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and pursolation is such a full and of information of the content of the Test Report is unliastic and offenders may be pronocuted to the laboratory of the Test Report is unliasted and offenders may be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 185ays from the Dute of Test Report. The samples from Regulatory budges are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 185ays from the Dute of Test Report is in 24hours format. Abbreviation used: N/A (Not Applicable): IRM (Delow Done) in Limits LDL (Lower Denetion Limit).

Aco Escalement San Estate



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

ENGINEERING SERVICES PVT. LTD.

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

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



12-1302

TEST REPORT

Test Report No.	: ELES/RNC/2024/4085	Report Release Date	: 22.07.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400002020F			

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (CsHs)	µg/m ¹	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 AKASH KUMAR Quality Manager ELES PVT_LTD

****End of Report****

Dr. Deependra Kumar Sinha
Ph. D Environmental Engg.

ELES Pvt. Ltd. Technical Manager

Page 2 of 2

The Ducument stated as Test Report, is essent by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown at the Test Report or relates only to the jobianalysis done by the Laboratory only. The information stated on the Test Report reflects the firetings done by the Laboratory at the terms of involvement only and within the limits of client's instruction. 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 context, without provided appearance within the Laboratory. The Report in full or in part shall not be published, advertise, used for any legal actions unless price permission has been secured from the Management of the Laboratory. Attention is drewn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alternation & falsification of the content or appearance of the Test Report is unlineful and offenders may be prosecuted to the fullest extent of the law. All the samples are rotated for Bidays from the Date of Test Report is unlineful and offenders near both to the fullest extent of the law. Complaints regarding the Reports shall be done within 15days from the Date of Test Report The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15days from the Date of Test Report The samples from Segulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15days from the Date of Test Report Telessed/issued. After the time period stated before, no complaints will be accepted. The entire Teme selectable memories for Test Report is in 24beurs forms. Abhreviation used: N/A (Not Applicable) BiDL (Below Detection Limit). LDL (Lover Detection Limit)



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D12A

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/2024/4086	Report Release Date	: 22.07.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400002021F			

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2024/AA/4681	
		Location	: Near Bungiapart Village Pakhar Bauxite Mine	
		Sampling Date	: (4.07.2024 to 15.07.2024	
Address	: Lohardaga, Jharkhand-835302	Sample Received Date	: 17,07,2024	
		Type of Sample	: Ambient Air	
	And the same of th	Sampling Procedure	: ELES/DOC/SMPL/02	
Mines Status	: Operational	Sampling Done By	: ELES Pvt. Ltd.	
Period of Analysis	: 17,07.2024 to 22,07.2024	Sample Condition	: Sealed & Preserved	

M	ETEOROLOGICAL INFORMATION			
1	Average Temperature (°C) : 30	2	Barometric Pressure (mmHg	;) : 742
3	Relative Humidity (%) : 63	4	Weather Condition	: Partly Cloudy

Discipline: 0	Chemical	Group: Atm	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	52	100 (24hrs)		
Particulate Matter (PM2.5)	μg/m³	15 5182 (Part- 24): 2019	27	60 (24hrs)		
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part-11/Sec-1): 2023	8.9	80 (24hrs)		
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	17.5	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	0.009	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)		

Page 1 of 2

The Document stated as Test Report, is insued by the Laboratory under General Terms and Conditions, only on Company tener head in pre-approved format. The results shown in the Test Report reflects the findings done by the Laboratory of the time of involvement only and within the limits of clean's instruction. 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 fell and any part of the report is not taken out of context, without prior written approval of the Laboratory. The Report in full or in part shall not be published, advertise, used for any legal scients unless prior permission has been secured from the Mattagement of the Laboratory. Attention is drawn to the immittee of liability, compensated and provided to unserve a distribution & Cilialication of the content or appearance of the Test Report is unlowful and offenders may be prosecuted in the full set secure of the Test Report. The samples can Regulatory bodies are to be returned as specified. Any type of Observations of Complaints regarding the Reports shall be about within 15 days from the Date of Test Report. The samples can Regulatory bodies are to be returned as specified. Any type of Observations of Complaints regarding the Reports shall be about within 15 days from the Date of Test Report. The enter Time schedule mentioned in Lesi Report in a 24 hours format. Abbreviation and N/A (Not Applicable) BDL (Below Descrips Limit). 101 (Linear Description Limit).



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

ENGINEERING SERVICES PVT. LTD.

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

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



TEST REPORT

Test Report No. : ELES/RNC/2024/4086 Report Release Date : 22.07,2024

Work Order No. : 13612312113 Work Order Date : 28.03.2024

ULR No. : TC135872400002021F

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C ₆ H ₆)	μg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m ¹	ELES/GC/SOP/05: 2023	< 0.5	01(Annual)	

AKASH KUMAR Quality Managar ELES PVT, LTD

****End of Report****

Dr. Deependra Kumar Sinha
Ph. D Environmental Engg.

ELES Pvt. Ltd. Technical Manager

Page 2 of 2

The Document stated on Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report reflects the findings done by the Laboratory of the time of involvement only and within the limits of client's instructions. The Laboratory is responsible for all the information of data provided on the report, except the information which is provided by the client. The Report cannot be reproduced except in that and any part of the report is not taken out of context, without print written approval 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 secured from the Management of the Laboratory. Amendment of the laminator of limitity, compensation and jurisdiction usues. Any unauthorized alteration of the content of appearance of the Test Report is unlawful and officiality may be presecuted to the failest extent of the lab. All the samples are retained for Eddays from the Date of pulproceiosus of the Test Report. The samples from Regulatory boddes are to be retained as specified. Any type of Observances or Complaints regarding the Reports shall be done within 15days from the Date of Test Report released/instead. After the time period instead before, no complaints will be accepted. The entire Time schedule frantisened in Test Report is in 24hours format. Abbreviation used. N/A (Not Applicable): BDL (Below Detection Limity), LDL (Lewer Detection Limity).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) G5T NO: 20AAECE9713D1Z4

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



TC-13587

TEST REPORT

Test Report No.	: ELES/RNC/2024/4087	Report Release Date	: 22.07.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400002022F	***	

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/4682 : Yatri Shed (Near K-10) Pakhar Bauxite Mine	
Address	: Lohardaga, Jharkhand-835302	The second secon	: 14.07.2024 to 15.07.2024 : 17.07.2024 : Ambient Air	
Mines Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02 : ELES Pvt. Ltd.	
Period of Analysis	= 17.07.2024 to 22.07.2024	Sample Condition	: Sealed & Preserved	

MI	ETEOROLOGICAL INFORMATION			
1	Average Temperature (°C) : 30	2	Barometric Pressure (mmF	lg) : 742
3	Relative Humidity (%) : 63	4	Weather Condition	: Partly Cloudy

Discipline:	Chemical	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	57	100 (24hrs)	
Particulate Matter (PM2,5)	μg/m³	IS 5182 (Part- 24): 2019	26	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	µg/m³	IS 5182 (Part- II/Sec- 1): 2023	8.9	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	20.1	80 (24hrs)	
Ozone (O ₂)	µg/m³	IS 5182 (Part- 9); 2019	<20.0	100 (8hrs)	
Ammonia (NH ₇)	µg/m³	IS 5182 (Part- 25); 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m ^X	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)	
Lead (Pb)	µg/m²	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)	

Page 1 of 2

The Document stated as Test Report, is usued by the Liabourory under General Terms and Conditions, only on Company letter head in pro-approved format. The resulteshown in the Test Report refer or relates only to the job/analysis done by the Laboratory unity. The unformation stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits of client's instructions. The Laboratory is responsible for all the information or data provided on the repoinexcept 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 comest, without prior written approval of the Laboratory. The Report in full or in part shall not be published, advertise, used for any logal actions unless prior permission has been secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction assess. Any unauthorized alteration & Edisofication of the content or appearance of the Text Report is unfawful and offenders may be prosecuted to the fullest extent of the law. All the samples are rotated for fidness than the Date of release scale of the Test Report. The samples from Regulatory budges are to be retained as specialed. Any type of Observations or Complaints regarding the Reports shall the dense within 15days from the Date of Text Report released/assued. After the time period stated before, no complaints will be accepted. The come Time schedule. mentioned in Ton Report is in 24boars format. Abbreviation used: N/A (Not Applicable), BDL (Below Detection Limit). LDL (Larver Detection Limit).



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

ENGINEERING SERVICES PVT. LTD.

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

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



TEST REPORT

Test Report No. : ELES/RNC/2024/4087 Report Release Date : 22.07.2024

Work Order No. : 13612312113 Work Order Date : 28.03.2024

ULR No. : TC135872400002022F

Discipline: Chemical Group: Atm		mospheric Pollu	ition	
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (C _t H _t)	irg/m ^E	ELES/GC/SOP/06: 2023	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	<0.5	01(Annual)

AKASH KUMAR Quality Managur ELES PVT LTD

****End of Report***

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

Page 2 of 2

The Document stated at Test Report, at issued by the Laboratory under General Terms and Conditions, unity on Company letter head in pre-approved format. The results shown in the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 contaxt, without prior stritten approval 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 second from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and participation sesses. Any unauthorized alteration & laborators of the contant or appearance of the Test Report is unlawful and offenders may be prosecuted to the full extent of the law. All the samples are retained for 3fidays from the Date of released stated in the date within 15 days from the Date of Test Report. The samples from Regulatory bodies are to be estimated as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15 days from the Date of Test Report in a 24hours format. Abbreviation used: N/A (Not Applicable). BDL (Below Detection Limit). LDL (Liever Detection Limit)



PLOT NO-30, MANSAROYAR ENCLAYE, TUPUDANA HATIA, RANCHI-834003 (IHARKHAND) GST NO:-20A46CE9713D124

ENGINEERING SERVICES PVT. LTD

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

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



TEST REPORT

Test Report No.	: ELES/RNC/2024/4088	Report Release Date	: 22.07.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400002023F		

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/4683 : Near Utkarmit Rajkiya Prathmik Vidyalaya Bunglapart Village Pakhar Bauxite Mine
Address Mines Status	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure Sampling Done By	: 14.07.2024 to 15.07.2024 : 17.07.2024 : Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt. Ltd.
Period of Analysis	: 17.07.2024 to 22.07.2024	Sample Condition	: Sealed & Preserved

MI	ETEOROLOGICAL INFORMATION			
1	Average Temperature (°C) : 30	2	Barometric Pressure (mmHg)	: 742
3	Relative Humidity (%) : 63	4	Weather Condition	; Partly Cloudy

Discipline: 0	Chemical	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	1S 5182 (Part- 24): 2019	24	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- II/Sec- 1): 2023	6.9	80 (24hrs)
Nitrogen Di-Oxide (NO ₁)	μg/m³	IS 5182 (Part- 6): 2022	18.4	80 (24hrs)
Ozone (O ₁)	μg/m³	1S 5182 (Part- 9); 2019	<20.0	100 (8hrs)
Ammonia (NH ₃)	μg/m ⁶	IS 5182 (Part- 25); 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m ⁴	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)
Lead (Pb)	μg/m³	1S 5182 (Part- 22): 2019	0.007	1 (24hrs)
Nickel (Ni)	ng/m³	1S 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m²	ELES/AIR/SOP/01: 2021	55	06 (Annual)

Page 1 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results above in the Test Report reflects that findings done by the Laboratory at the time of involvement only and within the limits 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 fall and any part of the report is not taken out of consext, without prior written approval of the Laboratory. The Report is full or in part shall not be published, advertise, used for any legal actions unless prior permission has been required from the Management of the Laboratory. Attention is drawn so the limitation of flability, compensation and jurisdiction assues. Any unauthorized alternation & liabilization of the content or appearance of the Test Report is unlowful and offenders may be prosecuted to the failest extent of the law. All the samples are retained for flows from the Date of release/issue of the Test Report. The samples from Regulatory better are betterful. Any type of Observations or Complaints regarding the Reports shall be done within 13days from the Date of Test Report in an Abbreviation need N/A (Not Applicable), IEEE (Report Limit), LDL (Lower Detection Limit).

Santan Baraga communication fraction fractions



PLOT NO-30, MANSAROVAR ENCLAVE, TUPLIDANA HATIA, RANCHI-834003 (IHARKHAND) GST NO:- 2004ECE9713D124

ENGINEERING SERVICES PVT. LTD.

Email: infa@elespl.co.in , eles.runchi@gmail.com

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



TEST REPORT

Test Report No. : ELES/RNC/2024/4088 Report Release Date : 22.07.2024

Work Order No. : 13612312113 Work Order Date : 28.03.2024

ULR No. : TC135872400002023F

Discipline: Chemical		Group: Atmospheric Po		tion
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (C ₆ H ₆)	µg/m²	ELES/GC/SOP/06: 2023	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m [∓]	ELES/GC/SOP/05: 2023	< 0.5	01(Annual)

AKASH KUMAR Quality Manager FLES PVT LTD

****End of Report***

Anthorised Signatory
Dr. Deependra Kumar Sinha
Ph. D Environmental Engg.
ELES Pvt. Ltd. Technical Manager

Page 2 of 2

The Disciment stated as Test Report, is issued by the Laboratory under General Torms and Condissons, only on Company letter head in pre-upproved format. The results shown in the Test Report refer or relates only in the postunaty is shown by the Laboratory with. The information stated on the Test Report reflects the findings done by the Laboratory of the time of involvement only and within the limits 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 caused by reproduced except in full and any part of the report is not taken out of context, without prior written approval of the Laboratory. The Report in full or up part shall not be published, advertise, used for any legal actions unless prior permission has been secured from the Management of the Laboratory. Attention is drawn to the funition of liability, compensation and jurisdiction issues. Any unauthorized alteration & falsification of the Content of appearance of the Test Report is unlawful and offenders may be prosecuted to the falsification of the kin. All the samples are retained for 30 days from the Date of release/issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations of Complaints segarding the Reports shall be done within (5 days from the Date of Test Report released/esseed. After the time period stand before, no compilants will be accepted. The entire Time schedule martinued in Test Report is in 24 inour format. Abbreviation used: N.A. (Not Applicable), BOL (Below Detection Limit), LDE (Lower Detection Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (IHARKHAND) GST NO:- 20AAECE97130124

ENGINEERING SERVICES PVT. LTD

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

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



TC-12587

TEST REPORT

Test Report No.	; ELES/RNC/2024/4089	Report Release Date	: 22.07.2024
Work Order No.	: 13612312113	Work Order Date	± 28.03.2024
ULR No.	: TC135872400002024F		

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/4684 : Near Urkarmit Rajkiya Prathmik Vidyalaya Dumrapart Village Pakhar Bauxite Mine
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure	: 14.07.2024 to 15.07.2024 : 17.07.2024 : Ambient Air : ELES/DOC/SMPL/02
Mines Status	: Operational	Sampling Done By	: ELES Pvt. Ltd.
Period of Analysis	: 17.07.2024 to 22.07.2024	Sample Condition	; Sealed & Preserved

M	ETEOROLOGICAL INFORMATION			
1	Average Temperature (°C) : 30	2	Barometric Pressure (mmHg	(1) : 742
3	Relative Humidity (%) : 63	4	Weather Condition	Partly Cloudy

Discipline: (hemical	Group: Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	57	100 (24hrs)
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	25	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part-II/Sec- 1): 2023	7.2	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	µg/m ¹	IS 5182 (Part- 6): 2022	16.8	80 (24hrs)
Ozone (O2)	μg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₁)	µg/m³	15 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m1	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)
Lend (Pb)	μg/m³	IS 5182 (Part- 22): 2019	0.015	1 (24hrs)
Nickel (Ni)	ng/m²	1S 5182 (Part- 26); 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Armual)

Page 1 of 2

The Document stated as Tost Report, is asseed by the Laboratory under General Terms and Conditions, only no Company letter head in pre-approved docum. The results shown in the Test Report refer or relates only to the job/analysis done by the Laboratory at the time of involvement only and within the limits of client's measurement. 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 context, without provided any logist actions unless price partnesses has been secured from the Management of the Laboratory. Attention in drawn to the limitation of lightlity, pumperature and jurisdiction issues. Any unautherized alternation of the content or appearance of the Test Report is unlawful and infrenders may be prosecuted to the follows extent of the limit. All the samples are retained in Follows from the Date of release mane of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Compilarus regarding the Reports shall be done within 15 days from the Date of Test Report released from All the time period stated before, no compilarus will be accepted. The uniter Time subsidies exerctional or Test Report is in 24 toxes format. Abbreviation quest N/A (Not Applicable), BDL (Below Description Issue), DDL (I once Detection Limit).



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

ENGINEERING SERVICES PVT. LTD.

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

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



10.1400

TEST REPORT

Test Report No.	: ELES/RNC/2024/4089	Report Release Date	: 22.07.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400002024F			

Discipline	Discipline: Chemical Group: Atm		ne: Chemical Group: Atmospheric Pollution		ition
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C ₆ 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

AKASH KUMAR Quality Managar

ELES PVT LTD

****End of Report**

Dr. Deependra Kumar Sinha Ph. D Environmental Engg.

ELES Pvt. Ltd. Technical Manager

Page 2 of 2

The Document stated as Test Report, it issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits of client's assentation. 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 context, without prior written approval of the Laboratory. The Report in full in part shall not be published, advertise, used for any legal actions unless prior permission has been secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alternion & falsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for Sidays from the Date of reliance issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Report shall be seen evident. If the samples from the Date of Test Report released issued. After the time period stated before, no complaints will be accepted. The among Time schedule mentioned in Test Report is in Libbary format. Abbrevious used. N/A (Not Applicable), BER (Below Detection Limit), LDL (Lower Detection Limit).

CONTENT

	Hindalco Industries: Pakhar (115.13) Environmental Monitoring Report	August 2024
	Pakhar (115.13)	
	AMBIENT AIR QUALITY- CORE ZONE	
I.	Near Mine Block-B, Quarry No.3	
2	Near Mine Block-B, Quarry No.4	
3	Near Mine Block B, Quarry No - 6	
4	Near Mine Block-B, Quarry No.7	
	AMBIENT AIR QUALITY- BUFFER ZONE	
1	Near Bunglapart Village	
2	Yatri Shed (Near K-10)	
3	Near Utkarmit Rajkiya Prathmik Vidyalaya Bunglapart Village	
4	Near Utkarmit Rajkiya Pratnmik Vidyalaya Dumrapart Village	
	Drinking Water	
	Effluent Water	





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

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

Phone na.: 0651-2290103 Website: www.elespl.co.in

TEST REPORT

Test Report No.	: ELES/RNC/2024/4609	Report Release Date	: 16.08.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400002534F		

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/5288 : Near Mine Block-B, Quarry No.3 Pakhar Bauxite Mine (115.13 ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure	: 07.08.2024 to 08.08.2024 : 09.08.2024 : Ambient Air : ELES/DOC/SMPL/02	
Mines Status	: Operational	Sampling Done By	: ELES Pvt. Ltd.	
Period of Analysis	: 09.08.2024 to 16.08.2024	Sample Condition	: Sealed & Preserved	

MI	ETEOROLOGICAL INFORM	IATION			
1	Average Temperature (°C)	28	2	Barometric Pressure (mmHg)	: 742
3	Relative Humidity (%)	67	4	Weather Condition	: Cloudy

Discipline: 0	Chemical	Group: Atm	ospheric Pollu	ition
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	28	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	µg/m³	IS 5182 (Part- II/Sec- 1): 2023	8.2	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	19.3	80 (24hrs)
Ozone (O ₃)	μg/m ⁴	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/m	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)

Page 1 of 2

The Document stated as Test Report, is usued by the Laboratory under General Terms and Conditions, unly on Company letter bend in pre-approved format. The results shows in the Test Report refer or relates only to the jobianalysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory in the time of involvement only and within the limits 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 context, without prior written approval 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 secured from the Management of the Laboratory. Amention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alteration & falsification of the consent or appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for 30 days from the Date of release osme of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall he done within 15days from the Date of Test Report released/issued. After the time period stated before, no complaints will be accepted. The entire Time schedule mensioned in Test Report is in 24hours format. Abbreviation used: N/V (Not Applicable); BDL (Below Desection Limit); LDL (Lower Detection Limit).



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/2024/4609 Report Release Date : 16.08.2024

Work Order No. : 13612312113 Work Order Date : 28.03.2024

ULR No. : TC135872400002534F

Discipline: Chemical		Group: At	mospheric Pollu	ition
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (C ₆ H ₆)	µg/m ¹	ELES/GC/SOP/06: 2023	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m	ELES/GC/SOP/05: 2023	<0.5	01(Annual)

AKASH KUMAR Quality Managor ELES PVT LTD.

****End of Report***

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

Page 2 of 2

The Discurrent stated as Test Report, is issued by the Laboratory under General Turns and Conditions, only in Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the jub/analysis done by the Laboratory only. The information stated on the Test Report reflects the fundings done by the Laboratory at the time of evolvement only and within the limits 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 testors is not taken out of cornext, without prior winten approval 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 secured from the Management of the Laboratory. Artention is drawn to the limitation of linking, compensation in all prediction issues. Any unauthorized alteration & falsification of the content of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for 30days from the Date of release/assue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15days from the Date of Test Report released/assued. After the time period stated before, no complaints will be accepted. The entire Time schedule memanied in Test Report is in 24bours format. Abbreviation used N/A (Not Applicable). BDL (Below Detection Limit), LDL (Lower Detection Limit).



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

ENGINEERING SERVICES PVT. LTB.

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

TC-1980

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

TEST REPORT

Test Report No.	: ELES/RNC/2024/4610	Report Release Date	: 16.08.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400002535F		

CUSTOMER DET	CUSTOMER DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/5289 : Near Mine Block-B, Quarry No4 Pakhar Bauxite Mine (115.13 ha)
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure	: 07.08.2024 to 08.08.2024 : 09.08.2024 : Ambient Air : ELES/DOC/SMPL/02
Mines Status	: Operational	Sampling Done By	: ELES Pvt. Ltd.
Period of Analysis	: 09.08.2024 to 16.08.2024	Sample Condition	: Sealed & Preserved

MI	ETEOROLOGICAL INFO	RMATION	-		
1	Average Temperature (°C)	: 28	2	Barometric Pressure (mmHg)	: 742
3	Relative Humidity (%)	: 67	4	Weather Condition	: Cloudy

Discipline: (Chemical	Group: Atm	ospheric Pollu	tion
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m³	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-11/Sec- 1); 2023	6.5	80 (24hrs)
Nitrogen Di-Oxide (NO ₃)	μg/m³	IS 5182 (Part- 6): 2022	20.3	80 (24hrs)
Ozone (O ₃)	μg/m³	1S 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	IS 5182 (Part- 22): 2019	0.009	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)

Page 1 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results above in the Test Report refer or relates only to the job/analysis, done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 repredicted except in full and any part of the report is not taken out of context, without prior intrition approval of the Laboratory. The Report is full or in part shall not be published, advertises, used for any legal actions unless prior permission has been the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alternion & falsefication of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law. All the samples are returned for Midays from the Date of release/issue of the Test Report The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15 days from the Date of Test Report released/issued. After the time period stated before, no complaints will be accepted. The control Time schedule mentioned is Test Report to an 24hours format. Abbreviation used: N/A (Non Applicable), BDL (Below Descripe Limit), LDL (Lower Detection Limit).



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

ENGINEERING SERVICES PUT. LTD.

Website: www.elespl.co.in

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

**

TC-19567

TEST REPORT

Test Report No.	: ELES/RNC/2024/4610	Report Release Date	: 16.08.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400002535F			

Discipline: Chemical		Group: Att	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
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)		

AKASH KUMAR Quality Manager ELES PVT, LTD.

****End of Report****

Dr. Deependra Kumar Sinha
Ph. D Environmental Engg

ELES Pvt. Ltd. Technical Manager

Page 2 of 2

The Document stated as Test Report, is musted by the Laboratory under General Terms and Conditions, only on Company letter head or pre-approved format. The results shown in the Test Report reflect or relates only to the job/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 mannot be reproduced except in full and any part of the report is not taken out of consect, without prior written approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of limbility, compensation and jurisdiction issues. Any unauthorized alteration of the content of appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for 30days from the Date of release issue of the Test Report. The samples from Regulatory bodies are in the retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within Udays from the Date of Test Report released/sessed. After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is in 24hours format. Abbreviation used. N.A. (Not Applicable), BDL. (Below Detection Limit). (LDL. (Lower Detection Limit)



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) 65T NO:- 20AAECE97130124

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/2024/4611	Report Release Date	: 16.08.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400002536F		

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	# Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/5290 : Near Mine Block B, Quarry No6 Pakhar Bauxite Mine (115.13 ha)
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 07.08.2024 to 08.08.2024 : 09.08.2024 : Ambient Air
Mines Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02 : ELES Pvt. Ltd.
Period of Analysis	: 09.08.2024 to 16.08.2024	Sample Condition	: Sealed & Preserved

MI	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (°C)	: 28	2	Barometric Pressure (mmHg)	: 742
3	Relative Humidity (%)	: 67	4	Weather Condition	: Cloudy

Discipline: (Chemical	Group: Atm	ospheric Pollu	ition
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	57	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- II/Sec- 1): 2023	7.6	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6); 2022	20.8	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/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)

Page 1 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter bead in pre-approved format. The results shown in the Test Report refer or relates only to the job/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory is the time of involvement only and within the limits 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 context, without prior written approval of the Laboratory. The Report in full of in part shall not be published, advertise, used for any legal actions unless price permission has been secured from the Management of the Laboratory. Attention is drawn to the lamination of liability, compensation and jurisdiction issues. Any unauthorized alteration & falsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fidlest extent of the law. All the samples are retained for Malays from the Date of relausarissue of the Tast Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations of Complaints regarding the Reports shall be done within 15days from the Date of Test Report released/issued. After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is in 24hours format. Abbreviation used: N/A (Not Applicable), BDI. (Below Detection Limit), LDI. (Lower Desection Limit).



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

ENGINEERING SERVICES PVT. LTD.

Emall: info@elespl.ca.in , eles.ranchi@gmail.com

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



TEST REPORT

Test Report No. : ELES/RNC/2024/4611 Report Release Date : 16.08.2024

Work Order No. : 13612312113 Work Order Date : 28.03.2024

ULR No. : TC135872400002536F

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C ₀ 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 ELES PVT_LTD.

****End of Report****

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

Page 2 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the job/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 context, without prior written approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alternation & falsification of the content or appearance of the Test Report is unlawful and offenders may be presented to the falses extent of the law. All the samples are retained for 30 days from the Date of release/issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regulating the Reports shall be done within 15 days from the Date of Test Report released/issued. After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is in 24hours format. Abhreviation used. N/A (Not Applicable); BIDL (Below Detection Limit); LDL (Lower Detection Limit).



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

ENGINEERING SERVICES PUT. L'ED.

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

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



TEST REPORT

Test Report No.	: ELES/RNC/2024/4612	Report Release Date	: 16.08.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400002537F		

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/5291 : Near Mine Block-B, Quarry No7 Pakhar Bauxite Mine (115.13 ha)
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 07,08.2024 to 08.08.2024 : 09,08.2024
Mines Status	: Operational	Type of Sample Sampling Procedure Sampling Done By	: Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt, Ltd,
Period of Analysis	: 09.08.2024 to 16.08,2024	Sample Condition	: Sealed & Preserved

MI	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (°C)	: 28	2	Barometric Pressure (minHg)	3 742
3	Relative Humidity (%)	: 67	-4	Weather Condition	: Cloudy

Discipline: 0	bemical	Group: Atm	ospheric Pollu	ition
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	28	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part-II/Sec-1): 2023	6.5	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	17.1	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/m ³	IS 5182 (Part- 22): 2019	0.009	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)

Page 1 of 2

The Document stated as Test Report, is imaged by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates unly to the jobianalysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the sine of involvement only and within the limits of client's instructions. The Laboratory is responsible for all the information or data provided on the seport, 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 context, without prior written approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensations and jurisdiction ossues. Any unsufficient extention of the Laboratory is unlessful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for 30days from the Date of release/issue of the Test Report The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Report shall be done within 15days from the Date of Test Report released/issued. After the time period stated before, no complaints will be accepted. The entire Time schedule national in Test Report is in 24hours format. Abbreviation used. N/A (Not Applicable). BDL (Below Detection Limit) LTL (Linver Detection Limit)



Work Order No.

ENVIRONMENTAL LABORATORIES &

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

ING SERVICES PVT. LTD.

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

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

TEST REPORT

Work Order Date

: 16.08.2024 Test Report No. : ELES/RNC/2024/4612 Report Release Date : 28.03.2024

ULR No. : TC135872400002537F

: 13612312113

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
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)	

AKASH KUMAR Quality Manager ELES PVT LTD

****End of Report****

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

Page 2 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, unly an Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the job/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 current be reproduced except in full and any part of the report is not taken out of context, without prior writter, approval of the Laboratory. The Report in full or in part shall not be published, advertise, used for any logal actions unless prior permission has been secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and parisdiction issues. Any unauthorized alteration & falsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the follest extent of the law. All the samples are retained for 30 days from the Date of releasalissue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15days from the Date of Test Report released/issued. After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned by Ten Report is in 24hours format. Abbreviation used. N/A (Not Applicable), BDI. (Below Detection Limit); LDI. (Lower Detection Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:-2014ECE57130124

ENUMERRING 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/2024/4613	Report Release Date	: 16.08.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400002538F		

CUSTOMER DETAILS		SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/5292 : Near Bunglapart Village Pakhar Bauxite Mine
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 07.08.2024 to 08.08.2024 : 09.08.2024 : Ambient Air
Mines Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02 : ELES Pvt. Ltd.
Period of Analysis	: 09,08.2024 to 16.08.2024	Sample Condition	: Sealed & Preserved

MI	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (°C')	: 28	2	Barometric Pressure (mmHg)	≎742
3	Relative Humidity (%)	±67	4	Weather Condition	: Cloudy

Discipline: 0	Chemical	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23); 2022	46	100 (24hrs)	
Particulate Matter (PM2,5)	μg/m³	1S 5182 (Part- 24): 2019	22	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part-Il/Sec-1): 2023	6.3	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	µg/m³	IS 5182 (Part- 6); 2022	15.8	80 (24hrs)	
Ozone (O ₃)	μg/m ¹	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/m ³	IS 5182 (Part- 22): 2019	0.005	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)	

Page 1 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only in Company letter head in pre-approved format. The results shown in the Test Report reflect or relates only to the joblanalysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 context, without prior written approval of the Laboratory. The Report in full or in part shall not be published, advertise, used for any legal actions tracks prior permission has been secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alternion & falsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fallest extent of the law. All the samples are retained for 30days from the Date of Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Compilants regarding the Reports shall be date within 15days from the Date of Test Report reflected issued. After the time period stated before, no compilants will be accepted. The crime Time schedule mentioned in Test Report is in 24hours forms. Abbreviation used. N/A (Not Applicable), BDL (Below Detection Limit), LDL (I ower Detection Limit).



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

ENGINEERING SERVICES PUT. 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/2024/4613
 Report Release Date
 : 16,08,2024

 Work Order No.
 : 13612312113
 Work Order Date
 : 28,03,2024

ULR No. : TC135872400002538F

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C _t H _t)	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 ELES PVT, LTD. ****End of Report****

Authorised Signatory

Dr. Deependra Kumar Sinha Ph. D Environmental Engg.

ELES Pvt. Ltd. Technical Manager

Page 2 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the job/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits of client's instructions. The Laboratory is responsible for all the information in data provided on the report, except the information which is provided by the client. The Report carnot be reproduced except in full and any part of the report is not taken on of context, without prior or time approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of lability, compensation and jurisdiction issues. Any unpublicated alteration & falsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for 10days from the Date of referee/result of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15days from the Date of Test Report released/issued. After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is in 24hours format. Abbreviation used: N/A (Not Applicable), BDI. (Below Desection Limit); LDI. (Lower Detection Limit).



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

ENGINEERING SERVICES PUT, LTD



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

TEST REPORT

Test Report No.	: ELES/RNC/2024/4614	Report Release Date	: 16.08,2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400002539F		

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/5293 : Yatri Shed (Near K-10) Pakhar Bauxite Mine	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure	: 07.08.2024 to 08.08.2024 : 09.08.2024 : Ambient Air : ELES/DOC/SMPL/02	
Mines Status	: Operational	Sampling Done By	: ELES Pvt. Ltd.	
Period of Analysis	: 09.08,2024 to 16,08.2024	Sample Condition	: Sealed & Preserved	

MI	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (°C)	: 28	2	Barometric Pressure (mmHg)	≎742
3	Relative Humidity (%)	: 67	A	Weather Condition	3 Cloudy

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	53	100 (24hrs)	
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	20	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- II/Sec- 1): 2023	6.4	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m ³	IS 5182 (Part- 6): 2022	17.5	80 (24hrs)	
Ozone (O ₃)	μg/m³	1S 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)	pg/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)	

Page 1 of 2

The Document stand in Test Report, is usuad by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the job/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 caution be reproduced except in full and any part of the report is not taken out of context, without prior written approval 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 secured from the Management of the Laboratory. Attention in drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alternation & falsification of the commit or appearance of the Test Report is unlawful and offenders may be prosecuted to the fulliest extent of the law. All the samples are retained for Jodays from the Date of infrasterious of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15 days from the Line of Test Report released/issued. After the time period stated before, no complaints will be accepted. The entire Time survailable international in Test Report to in 24 hours format. Abbreviation used: NA (Not Applicable), BDL (Below Detection Limit).



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



TC-13587

TEST REPORT

Test Report No.	: ELES/RNC/2024/4614	Report Release Date	: 16.08,2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
III.R No.	: TC135872400002539F			

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C ₁ H ₄)	µg/m³	ELES/GC/SOP/06: 2023	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m¹	ELES/GC/SOP/05: 2023	<0.5	01(Annual)	

AKASH KUMAR Quality Manager ELES PVT. LTD

****End of Report****

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

Page 2 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the job/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory is the time of involvement only and within the limits of client, a material state of 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 coatest, without prior written approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alteration & falsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for 30days from the Date of release/issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15days from the Date of Test Report released/issued. After the time period stated before, no complaints will be accepted. The infine Time schedule mentioned in Test Report is in 24hours format. Abbreviation used: N/A (Not Applicable), BDL (Below Detection Limit), LDL (Lower Detection Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 2011 AECE 97130124

ENGINEERING SERVICES PIT 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/2024/4615	Report Release Date	: 16.08.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400002540F		

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/5294 : Near Utkarmit Rajkiya Prathmik Vidyalaya Bunglapart Village Pakhar Bauxite Mine	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure	: 07.08.2024 to 08.08.2024 : 09.08.2024 : Ambient Air : ELES/DOC/SMPL/02	
Mines Status	: Operational	Sampling Done By	: ELES Pvt. Ltd.	
Period of Analysis	: 09.08.2024 to 16.08.2024	Sample Condition	: Sealed & Preserved	

MU	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (°C)	: 28	2	Barometric Pressure (mmHg)	: 742
3	Relative Humidity (%)	: 67	4	Weather Condition	: Cloudy

Discipline: 0	Chemical	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	48	100 (24hrs)	
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24); 2019	21	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part-II/Sec-1): 2023	5.5	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	16.1	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/m ¹	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)	
Lead (Pb)	µg/m³	IS 5182 (Part- 22): 2019	0.009	1 (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)	

Page 1 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter bead in pre-approved format. The results shown in the Test Report refer or relates only to the job/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits of chern's instructions. The Laboratory is responsible for all the information or data provided on the report, except the information which is provided by the cliem. The Report cannot be reproduced except in full and any part of the report is not taken out of context, without prior writer, approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alteration & falsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for 30days from the Date of release/issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15days from the Disc of Test Report released/sessed. After the time period stated before, no complaints will be accepted. The entiry Time schedule mentanted in Ten Report is in 24hours format. Abbreviation used: N.A.(Not Applicable); BDL (Below Detection Limit); LDL (Linver Detection Limit).



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

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/2024/4615 Report Release Date : 16.08.2024

Work Order No. : 13612312113 Work Order Date : 28.03.2024

ULR No. : TC135872400002540F

Discipline	: Chemical	Group: Atmospheric Pollution				
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Berzene (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)		

AKASH KUMAR Quality Manager ELES PVT. LTD.

****End of Report****

Dr. Deependra Kumar Sinha
Ph. D Environmental Engg.
ELES Pvt. Ltd. Technical Manager

Page 2 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the job/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 repredated except in full and any part of the report is not taken out of cornext, without prior written approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alternation & falsefucation of the cortext of appearance of the Test Report is untiawful and offenders may be prosecuted to the fallest extent of the law. All the samples are retained for 30 days from the Date of release/issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports while done within 15 days from the Date of Test Report release/issued. After the time period stated before, no complaints will be accepted. The entire Time schedule terminounced in Test Report is in 24hours format. Abbreviation used: N/A (Not Applicable); RDI. (Relow Detection Limit). LDI. (Lower Detection Limit)



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

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/2024/4616	Report Release Date	: 16.08.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400002541F		

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/5295 : Near Utkarmit Rajkiya Prathmik Vidyalaya Dumrapart Village Pakhar Bauxite Mine	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure	: 07.08.2024 to 08.08.2024 : 09.08.2024 : Ambient Air : ELES/DOC/SMPL/02	
Mines Status	: Operational	Sampling Done By	: ELES Pvt. Ltd.	
Period of Analysis	: 09.08,2024 to 16,08,2024	Sample Condition	: Sealed & Preserved	

MI	ETEOROLOGICAL INFO	RMATION			
1	Average Temperature (°C)	: 28	2	Barometric Pressure (mmHg)	: 742
3	Relative Humidity (%)	: 67	4.	Weather Condition	:: Cloudy

Discipline: 0	Chemical	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	μg/m ³	1S 5182 (Part- 23): 2022	46	100 (24hrs)	
Particulate Matter (PM2.5)	μg/m³	1S 5182 (Part- 24); 2019	20	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part-11/Sec-1): 2023	6.7	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	15.3	80 (24hrs)	
Ozone (O ₃)	µg/m³	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)	
Ammonia (NH ₁)	ρg/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	0.010	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)	

Page 1 of 2

The Document stated as Test Report, is usued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved formal. The results shown in the Test Report refer or relates only to the jobanulysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 repredicted except in full and any part of the report is not taken out of context, without prior written approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alteration & fulsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest execut of the law. All the samples are retained for 30 days from the Date of release/issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Report shall be done written (5 days from the Date of Test Report release/issued After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is in 24hours format. Abbreviation used: N/A (Not Applicable), BDL (Below Detection Limit), LDk (Linver Detection Limit).



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/2024/4616 Report Release Date : 16,08,2024

Work Order No. : 13612312113 Work Order Date : 28.03.2024

ULR No. : TC135872400002541F

Discipline: Chemical		Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C ₆ 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)	

AKASH KUMAR
Quality Manager
ELES PVT, LTD.

****End of Report****

Authorised Signatory

Dr. Deependra Kumar Sinha Ph. D Environmental Engg ELES Pvt. Ltd. Technical Manager

Page 2 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the Job/analysis done by the Laboratory unly. The information stated on the Test Report reflects the lindings done by the Laboratory at the time of involvement only and within the limits 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 repudiced except in full and any part of the report is not taken out of context, without prior written approval of the Laboratory. The Report in fall or in part shall not be published, advertise, used for any legal actions unless prior permission has been secured from the Managoment of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any smallboard alternation & falsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fallest extent of the law. All the samples are retained for 30 laws form the Date of release/issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15 lays; from the Date of Test Report released/issued. After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is in 24 hours format. Abbreviation used: N/A (Not Applicable), BDI. (Below Detection Limit), LDI. (Lower Detection Limit)



PLOT NO-30, MANSAROVAN ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE97130124

ENGINEERING SERVICES PYT. LYD

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/2024/4744 Report Release Date : 22.08.2024

Work Order No. : 13612312113 Work Order Date : 28.03.2024

ULR No. : TC135872400002663F

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Sampling Date Sample Received Date Type of Sample	: ELES/RNC/2024/DW/5302 : 08.08.2024 : 09.08.2024 : Drinking Water	
Address	: Lohardaga, Jharkhand-835302	Source of Sample Location of Sample	: Tap Water : Mines Site (Pakhar-115.13 Bauxite Mine)	
Mines Status	: Operational	Sampling Procedure	: ELES/DOC/SMPL/01	
Period of Analysis	: 09.08.2024 to 17.08.2024	Sampling Done By Sample Condition	: ELES Pvi. Ltd. : Sealed & Preserved	

Discipline : Chemical		Group :	Water	Regulatory I as per IS 1050	
Parameter	Unit	Test Protocol	Result	Acceptable Limit	Permissible Limit
pH (at 24.8 °C)	-	APHA 24th Ed.2023, 4500-H	6.68	6.5-8.5	No Relaxation
Turbidity	NTU	APHA 24th Ed.2023, 2130 B	0.70	1.0	5.0
Taste	-	APHA 24th Ed.2023, 2160 C	Agreeable	Agreeable	Agrecable
Odour		IS 3025 (Part-5) :2018	Agreeable	Agrecable	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	62	500	2000
Chloride (as Cl)	mg/L	APHA 24th Ed.2023, 4500 Cl B	13.4	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 24 th Ed.2023, 2320 B	15.4	200	600
Total Hardness (as CaCO ₂)	mg/L	APHA 24th Ed.2023, 2340 C	25.1	200	600
Sulphate (as SO ₄)	mg/L	APHA 24th Ed.2023, 4500 SO ₄ ⁻² -E	1.98	200	400
Nitrate (as NO ₃)	mg/L	APHA 24 th Ed.2023, 4500 NO ₃ -B	1.66	45	No Relaxation

Page 1 of 4

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter bead in pre-approved format. The results shown in the Test Report refer or relates only to the job/analysts done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 context, without prior written approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alteration & falsification of the content or appearance of the Test Report is unlawful offenders may be prosecuted to the fullest extent of the law. All the samples are retained for 30days from the Date of releases issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations of Compilaints regarding the Reports shall be done within 15days from the Date of Test Report released issued. After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is in 24hinus format. Abbreviation used. N/A (Net Applicable): BDI. (Below Detection Limit), LDL (Lower Detection Limit).



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



TEST REPORT

Test Report No. : ELES/RNC/2024/4744 Report Release Date : 22.08.2024

Work Order No. : 13612312113 Work Order Date : 28.03.2024

ULR No. : TC135872400002663F

Discipline: Chemic	al	Grou	ip: Water	The second secon	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	0.35	0.2(Min)	1.0(Min)
Calcium (as Ca)	mg/L	APHA 24th Ed.2023, 3500 Ca B	6.2	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
Arsenic (as As)	mg/L	IS 3025 (Part-37): 2022	BDL (DL: 0.005)	0.01	No Relaxation
Boron (as B)	mg/L	1S 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	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 24 th Ed.2023; 3111B	0.079	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)	100.0	No Relaxation
Selenium (as Se)	mg/L	IS 3025 (Part-56): 2019	BDL (DL: 0.01)	0.01	No Relaxation

Page 2 of 4

The Document stated as Test Report refer or relates only to the jobianalysis done by the Laboratory only. The information stated on the Test Report refer or relates only to the jobianalysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the laboratory at the time of involvement only and within the limits 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 context, without prior written approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alteration & falsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for 30days from the Due of release issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Compilaints regarding the Reports shall be done within 15days from the Date of Test Report released/issued. After the time period stated before, no compilators will be accepted. The entire Time schedule mentioned in Test Report is in 24hours format. Abbreviation used: N/A (Not Applicable); BDL (Below Detection Limit); LDL (Lower Detection Limit).



CIN: U74999JH2018PTC011125

ENVIRONMENTAL LABORATORIES &

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

ENGINEERING SERVICES PVT. LTD

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



Website: www.elespl.co.in

TEST REPORT

 Test Report No.
 : ELES/RNC/2024/4744
 Report Release Date
 : 22.08.2024

 Work Order No.
 : 13612312113
 Work Order Date
 : 28.03.2024

ULR No. : TC135872400002663F

Discipline : Chemical		Group: Resid	ues 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	pg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	- 3	20
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)	125	
Chlorpyriphos	μg/L	ELES/GC/SOP/01: 2023	BDL (DL: 0.5)	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)	190	
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)		0.0
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/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)	C	.04

Page 3 of 4

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report reflects or relates only to the jub/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 context, without prior written approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alteration & falsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fallest extent of the law. All the samples are retained & Boldays from the Date of released from the Ballest extent of the law. All the samples are retained in Boldays from the Date of Test Report released/issued. After the time period stated before, no complaints will be accepted. The entire Time schoolule mentationed in Test Report is in 24hours format. Abbreviation used: N/A (Not Applicable), BDL (Below Detection Limit): LDL (Linver Detection Limit).



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

ENGINEERING SERVICES PVT. LTD.

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

: 28.03.2024

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



TEST REPORT

: ELES/RNC/2024/4744 Report Release Date : 22.08.2024 Test Report No.

: TC135872400002663F ULR No.

: 13612312113

Work Order Date

Posticides

Work Order No.

resucides				
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) (o,p DDE and p,p DDD)	µg/L	ELES/GC/SOP/02: 2023	BDL (DL: 0.05)	1.0
Discipline : Biological		Group	p: Water	
- 1 m 1.1		1	1 31.4	

Total Coliform Not Per 100 mL IS 15185: 2021 (Qualitative) Detected

Shall not be detected Not Escherichia coli Per 100 mL 15 15185: 2021 Detected (Qualitative)

Remarks: 1. pH and RFC done at Lab.

AKASH KUMAR Quality Manager ELES PVT LTD

****End of Report****

Dr. Deependra Kumar Sinha Ph. D Environmental Engr. ELES Pyt. Ltd. Technical Manne

Page 4 of 4

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the job analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory as the time of involvement only and within the limits 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 context, without prior written approval of the Laboratory. The Report in fall or in part shall not be published, advertise, used for any legal actions unless prior permission has been secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alteration & falsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for 30days from the Date of release/issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15days from the Date of Test Report released/issued. After the time period stated before, no complaints will be accepted. The entire. Time schedule mentioned in Test Report is in 24hours format. Abbreviation used: N/A (Not Applicable): BDL (Below Detection Limit): LDL (Lower Detection Limit)



PLOT NO-30, MANSARDVAR 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/2024/4744	Report Release Date	: 22.08.2024
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	: ELES/RNC/2024/DW/5302 : 08.08.2024 : 09.08.2024 : Drinking Water : Tap Water	
Mines Status Period of Analysis	: Operational : 09.08.2024 to 22.08.2024	Sampling Procedure Sampling Done By Sample Condition	: Mines Site (Pakhar-115.13 Bauxite Mine) : ELES/DOC/SMPL/01 : 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.

AKASH KUMAR Quality Manager ELES PVT_LTD

****End of Report****

Authorised Signatory
Dr. Deependra Kumar Sinha
Ph. D Environmental Engg.
ELES Pvt. Ltd. Technical Management

Page I of I

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report reflects only to the job/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 context, without prior written approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, conspensation and jurisdiction issues. Any unauthorized alteration & fullsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for 30days from the Date of release/issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15days from the Date of Test Report released/issued. After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is in 24hours format. Abbreviation used: N/A (Not Applicable); BDL (Below Detection Limit): LDL (Lower Detection Limit).



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

ENGINEERING SERVICES PVT. LTD.

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

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



TC-13587

TEST REPORT

Test Report No.	: ELES/RNC/2024/4745	Report Release Date	: 22.08.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400002664F		

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	: ELES/RNC/2024/EF/5303 : 08.08.2024 : 09.08.2024 : Effluent Water : Near Mine Block-B, Quarry No.3	
Mines Status Period of Analysis	: Operational : 09.08.2024 to 17.08.2024	Sampling Procedure Sampling Done By Sample Condition	Pakhar Bauxite Mine (115.13 ha) : ELES/DOC/SMPL/01 : ELES Pvt. Ltd. : Sealed & Preserved	

Discipline : Chemical		Group: Pollution & E	Group: Pollution & Environment		its - CPCB hedule VI
Parameter	Unit	Test Protocol	Result	Inland Surface Water	Land for Irrigation
pH (at 24.8°C)		APHA 24 th Ed.2023,4500-H	8.02	5.5-9.0	5.5-9.0
Total Dissolved Solids (TDS)	mg/L	IS 3025 (Part-16): 2023	248	-	[++]
Total Suspended Solids (TSS)	mg/L	1S 3025 (Part-17): 2022	38.6	100	200
Dissolved Oxygen (DO)	mg/L	IS 3025 (Part-38); 2019	6.8	142	**
Biochemical Oxygen Demand (BOD) (at 27 °C for 3 days)	mg/L	IS 3025 (Part-44): 2023	23.8	30	100
Chemical Oxygen Demand (COD)	mg/L	IS 3025 (Part-58); 2023	165	250	144
Dissolved Phosphate (as P)	mg/L	IS 3025 (Part-31/Sec-1): 2022	3.2	5.0	
Fluoride (as F)	mg/L	1S 3025 (Part-60): 2019	0.486	2.0	1.5
Sulphide (as S)	mg/L	IS 3025 (Part-29): 2019	BDL (DL: 0.04)	2.0	,air
Oil & Grease	mg/L	IS 3025 (Part-39): 2021	3.8	10	10

Page 1 of 2

The Document stated as Lest Report is issued by the Laboratory under General Terms and Combinions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the job/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 context, without prior written approval of the Laboratory. The Report in full or in part shall not be published, adventise, used for any legal actions unless prior permission has been secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and persulaction issues. Any unauthorized alteration & falsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fallest extent of the law. All the samples are retained for 30 days from the Date of release/issue of the Test Report. The samples from Regulmory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15 days from the Date of Test Report released issued. After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is in 24 hours format. Abbreviation used N/A (Not Applicable): BDL (Below Detection Limit): LDL (Lower Detection Limit).



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



TC-13587

TEST REPORT

Test Report No. : ELES/RNC/2024/4745 Report Release Date : 22.08.2024

Work Order No. : 13612312113 Work Order Date : 28.03.2024

ULR No. : TC135872400002664F

Discipline : Chemi	cal	Group : Resid	Group : Residues in Water		
Parameter	Unit	Test Protocol	Result	Inland Surface Water	Land for Irrigation
Lead (as Pb)	mg/L	APHA 24 th Ed,2023, 3111 B	BDL (DL; 0.01)	9.1	-
Manganese (as Mn)	mg/L	APHA 24th Ed.2023, 3111 B	0.120	2.0	
Mercury (as Hg)	mg/L	1S 3025(Part-48): 1994; RA2019	BDL (DL: 0.001)	0.01	+-
Nickel (as Ni)	mg/L	APHA 24th Ed.2023, 3111 B	BDL (DL: 0.01)	3.0	-
Zinc (as Zn)	mg/L	APHA 24th Ed.2023, 3111 B	0.101	5.0	

Remarks: pH done at Lab.

AKASH KUMAR Quality Manager ELES PVT, LTD.

****End of Report****

Authorised Signatory

Dr. Deependra Kumar Sinha Ph. D Environmental Enga ELES Pvt. Ltd. Technical Mannin

Page 2 of 2

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the job/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the limits 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 context, without prior written approval 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 secured from the Management of the Laboratory. Attention is drawn to the limitation of flubflity, compensation and jurisdiction issues. Any senauthorized alteration & falsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for 30days from the Date of release/issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15days from the Date of Test Report released/issued. After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is in 24bours format. Abbreviation used. N/A (Not Applicable): BDI. (Below Detection Limit), LDL (Lower Detection Limit).

CONTENT

	Hindalco Industries : Pakhar (115.13) Environmental Monitoring Report	September 2024
	Pakhar (115,13)	
	AMBIENT AIR QUALITY- CORE ZONE	
[Near Mine Block-B, Quarry No.3	
2	Near Mine Block-B, Quarry No.4	
3	Near Mine Block B, Quarry No - 6	
4	Near Mine Block-B, Quarry No.7	
	AMBIENT AIR QUALITY- BUFFER ZONE	
1	Near Bunglapart Village	
2	Yatri Shed (Near K-10)	
3	Near Utkarmit Rajkiya Prathmik Vidyalaya Bunglapart Village	
4	Near Utkarmit Rajkiya Prathmik Vioyalaya Dumrapart Village	
	AMBIENT NOISE	
	WORKZONE NOISE	





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

ENGINEERING SERVICES PVT. LTD.

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

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



TO-63587

TEST REPORT

Test Report No.	: ELES/RNC/2024/5335	Report Release Date	; 23.09.2024
Work Order No.	: 13612312113	Work Order Date	; 28.03.2024
ULR No.	: TC135872400003248F		

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/6169 : Near Mine Block-B, Quarry No.3 Pakhar Bauxite Mine (115.13 ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 12.09.2024 to 13.09.2024 : 16.09.2024 : Ambient Air	
Mines Status	: Operational	Sampling Procedure	: ELES/DOC/SMPL/02 : ELES PVL Ltd.	
Period of Analysis	: 16.09,2024 to 23,09,2024	Sampling Done By Sample Condition	: Sealed & Preserved	

MI	TEOROLOGICAL INFOR	MATION			
1	Average Temperature (°C)	: 26	2	Barometric Pressure (mmHg)	: 740
3	Relative Humidity (%)	: 72	4	Weather Condition	; Rainy

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	38	100 (24hrs)
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	15	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	µg/m³	IS 5182 (Part- 2/Sec1): 2023	<5.0	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	µg/m³	IS 5182 (Part- 6): 2022	17.2	80 (24hrs)
Ozone (O ₂)	µg/m³	1S 5182 (Part- 9); 2019	<20.0	100 (8hrs)
Ammonia (NH ₃)	μg/m ³	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	1S 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 ₄)	µg/m	ELES/GC/SOP/06; 2023	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m ⁷	ELES/GC/SOP/05: 2023	<0.5	01(Annual)

Reviewed by
Akash Kumar

**** End of Report****

Dr. dellyerised Signators inha

Dr. Deepend/a Komar Sinha Ph. D. Environmental Engg.

Page Lof 1 Technical Manager

The Decomes maked at Fast Report, is impossible the Laboratory under General Terms and Consistence, only on Company lease should be pre-approved General The results shown in the Leab Report reflects the feedings done by the Laboratory at the time of involvement only and arrive the financial structure. The Laboratory is corporable for all the information or time provided on the report, except the reformation or fast in provided by the client. The Report makes the regardless except the reformation of fast and are part of the tapon or not taken on a course, without prior women approval of the Laboratory. The Report in full or is part shall not be published. Whether, total for my legal across enters posit permission has been externed from the Management of the Laboratory. Attentions to drawn to the furthers of liability, compressions and parents the influence of the fact of the laboratory of the Laboratory and the following the first structure of the find of the laboratory and the first structure of the find of the laboratory and the first structure of the find of the laboratory of the first structure of the find of the laboratory of the first structure of the find of the laboratory of the first structure of the find of the laboratory of the first structure of the find of the laboratory of the first structure of the find of the laboratory of the first structure of the find of the laboratory of the first structure of the first st



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20A4ECE9713D124

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/2024/5336	Report Release Date	: 23.09.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400003249F		

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/6170 : Near Mine Block-B, Quarry No.4 Pakhar Bauxite Mine (115.13 ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 12.09.2024 to 13.09.2024 : 16.09.2024 : Ambient Air	
Mines Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02 : ELES Pvt. Ltd.	
Period of Analysis	· 16.09.2024 to 23.09.2024	Sample Condition	: Sealed & Preserved	

METEOROLOGICAL INFORMATION						
	Average Temperature (°C)		2	Barometric Pressure (mmHg)	: 740	
_	Relative Humidity (%)	: 72	14	Weather Condition	; Rainy	

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	44	100 (24hrs)	
Particulate Matter (PM2.5)	μg/m ³	IS 5182 (Part- 24): 2019	22	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	μg/m ⁵	1S 5182 (Part- 2/Sec1): 2023	5.5	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	μg/m ³	1S 5182 (Part- 6): 2022	23.5	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 (Ph)	μg/m³	IS 5182 (Part- 22): 2019	0.008	1 (24hrs)	
Nickel (NI)	ng/m ³	1S 5182 (Part- 26): 2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m²	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)	
Benzene (C ₄ H ₄)	μg/m ¹	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

Quality Manager

****End of Report****

Dr. Deeplender & Sisse Stoha Ph. D. Environmental Engg.

Technical Manager

Page 1 of 1

The Decement stated in Two Report, is issued by the Laboratory under General Terms and Conditions, only for Company letter hand in pre-approved Jonnas. The results closes on the Fast Report refers to relates only to the jet-complyate done by the Laboratory and the Intervention of the Report refers to relates only to the jet-complyate done by the Laboratory in temporalists for all the information or data provided on the report, except the information which is prevailed by the Caloratory in temporalists for all the information or data provided on the report, except the information which is prevailed by the Caloratory in the Report of the Laboratory in the Report of Information in the Information of Laboratory in the Information in Information in the Information in Information Informatio



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-R34003 (JHARKHAND) GST NO:- 10AAECE9713D124

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/2024/5337	Report Release Date	: 23.09.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400003250F			

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/6171 : Near Mine Block-B, Quarry No.6 Pakhar Bauxite Mine (115.13 ha)
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 12,09,2024 to 13,09,2024 : 16,09,2024
Mines Status	: Operational	Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02
Period of Analysis	: 16.09,2024 to 23.09.2024	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved

MI	ETEOROLOGICAL INFOR	MATION			
T	Average Temperature (°C)	: 26	2	Barometric Pressure (mmHg)	: 740
3	Relative Humidity (%)	: 72	4	Weather Condition	Rainy

Discipline : Chemic	al	Group:	Atmospheric l	Pollution
Parameter	Unit	Unit Test Protocol		Regulatory Limit
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	41	100 (24hrs)
Particulate Matter (PM2.5)	μg/m ¹	1S 5182 (Part- 24): 2019	20	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	<5.0	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	µg/m³	IS 5182 (Part- 6): 2022	17.1	80 (24hrs)
Ozone (O _i)	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	< 0.002	(24hrs)
Nickel (Ni)	ng/m	1S 5182 (Part- 26): 2020	<6.0	20 (Annual)
Arsenic (As)	ng/m³	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)
Benzene (CsHs)	μg/m ⁷	ELES/GC/SOP/06: 2023	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	< 0.5	01(Annual)

Akas Reviewed by Quality Managar

****End of Report****

Dr. Weependri Kullist Sinha Ph. D. Environmental Engg.

recimical manager

Page 1 of 1

The Document would as East Report, is issued by the Laboratory under Constant Ferms and Conditions, only on Company some base by the Laboratory is the street of the Majoration stated on the Test Report suffaces the findings done by the Laboratory is the street of involvement and so the findings done by the Laboratory is responsible for all the enforcement or data provided on the report, except the information which is provided by the claim. The Report among the report of the information of the Laboratory. The Report in full and use part of the report is too taken and if excitant, without power women approved of the Laboratory. The Report in full or as part shall not be provided advertor, used for any legal accurate subsequent provided on the first subsequent of the Laboratory. Attention to the Institute of the Laboratory of the Institute of the Control of the Institute of the I



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/2024/5338	Report Release Date	: 23.09.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400003251F		

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/6172 : Near Mine Block-B, Quarry No.7 Pakhar Bauxite Mine (115.13 ha)	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 12.09.2024 to 13.09.2024 : 16.09.2024	
Mines Status	: Operational	Type of Sample Sampling Procedure Sampling Done By	: Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt. Ltd.	
Period of Analysis	16.09.2024 to 23.09.2024	Sample Condition	: Sealed & Preserved	

MI	ETEOROLOGICAL INFOR	MATION				
1	Average Temperature (°C)	: 26	2	Barometric Pressure (mmHg)	: 740	
3	Relative Humidity (%)	: 72	4	Weather Condition	: Rainy	

Discipline : Chemic	al	Group :	Atmospheric	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part- 23): 2022	48	100 (24hrs)
Particulate Matter (PM2.5)	µg/m ³	(S 5182 (Part- 24): 2019	21	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	1S 5182 (Part- 2/Sec1): 2023	5.3	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	15 5182 (Part- 6): 2022	15.5	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/m ²	IS 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)
Lead (Pb)	µg/m³	1\$ 5182 (Part- 22): 2019	0.005	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 Akash Kumar

Quality Manager

****End of Report****

Authorised Signatory

Dr. Deependra Kumar Sinha Ph. D. Environmental En

Page 1 of I

Technical Manager The Discorpens stated or Test Report, to issued by the Labourousy under Countries and Conditions, such on Company Series head in pre-opposited The Discorpers stated or Test Report, or issued by the Laboratory under German Terms and Conditions, only on Company Sette hand to pre-approved German Test Report refer or relates only to the job behalves dense by the Laboratory and the information or stated on the Test Report reflects to behalves drove by the Laboratory or the tested or the Condition or data provided on the report, except the information which is printed by the clean. The Report reflects the upper dural of the port of the state in the clean The Report reflects the upper dural or the port of the first the state in the clean the clean the clean The Report in field or any topic dural or part of the report in the Condition of the clean the cle Report is to Misses Homes, Aldresianan cond. N.A. (Nos Applicable), 1001. (Below Detection Limit). LDL (Lower Detection Lond)



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

TC:13587

TEST REPORT

Test Report No.	: ELES/RNC/2024/5339	Report Release Date	: 23.09.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400003252F			

CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/6173 : Near Bunglapart Village Pakhar Bauxite Mine
Address	Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 12.09.2024 to 13.09.2024 : 16.09.2024 : Ambient Air
Mines Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02 : ELES Pv. Ltd.
Period of Analysis	: 16.09.2024 to 23.09.2024	Sample Condition	: Sealed & Preserved

MI	ETEOROLOGICAL INFOR	MALION				
1	Average Temperature ("C)	: 26	2	Barometric Pressure (mmHg)	: 740	
_	Relative Humidity (%)	: 72	4	Weather Condition	; Rainy	

Discipline : Chemic	al	Group:	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Particulate Matter (PM10)	μg/m³	IS 5182 (Part- 23): 2022	42	100 (24hrs)		
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	19	60 (24hrs)		
Sulphur Di-Oxide (SO ₂)	µg/m³	1S 5182 (Part-2/Sec1): 2023	5.5	80 (24hrs)		
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	16.3	80 (24hrs)		
Ozone (O ₁)	μg/m²	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)		
Ammonia (NH ₃)	μg/m ⁵	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 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 Akash Kumar Quality Manager

****End of Report****

Dr. Duburitur Sixtaur Sinha Ph. D. Environmental Engg.

Page | of |

The Decument unter on Last Support, as sound to the Laboratory ander General Terms and Combinions, only on Company latter head in pre-apparated forms. The cavalla shown in the Tent Report The Deciminal stated in Tail Report, is bound by the Laboratory angler General Torius and Combitions, only on Company latter hand in pre-apparent forms. The covario aboves in the Tean Report refers to the produced of the Laboratory as the term of introducement analysms which the Immie of Course, except the information which is previously for a part of the report is not faithful for all the information of Jan provided on the report, except the information which is provided contained as the report of the Laboratory. The Report is faithful for a part of the report is made after most of coverage, without apparent of the Laboratory. The Report is faithful for it part is all and any part of the report is made after the Laboratory. Attachment of the laboratory is faithful for a part of the published after the angle actions to the part performs the begin increased from the Management of the Laboratory. Attachment is the faithful for any part of the laboratory and particularly increased absorption in the faithful form of the laboratory and the laboratory and particularly increased from the Management of the Laboratory. Attachment is the faithful for the faithful form the Management of the Laboratory. Attachment is the faithful form of the laboratory of the labo



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

ENGINEERING SERVICES PVT. LTD.

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

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



TEST REPORT

Test Report No.	: ELES/RNC/2024/5340	Report Release Date	: 23.09.2624
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400003253F		

CUSTOMER DET	CUSTOMER DETAILS		and the second second
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/6174 : Yatri Shed (Near K-10) Pakhar Bauxite Mine
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 12.09.2024 to 13.09.2024 : 16.09.2024
Mines Status	: Operational	Type of Sample Sampling Procedure Sampling Done By	: Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt. Ltd.
Period of Analysis	16.09.2024 to 23.09.2024	Sample Condition	: Sealed & Preserved

METEOROLOGICAL INFORMATION						
1	Average Temperature (°C)	: 26	2	Barometric Pressure (mmHg)	: 740	
3	Relative Humidity (%)	: 72	4	Weather Condition	; Rainy	

Discipline : Chemic	al	Group:	Atmospheric l	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m³	IS 5182 (Part- 23): 2022	43	100 (24hrs)
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24); 2019	20	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	µg/m³	IS 5182 (Part- 2/Sec1): 2023	<5.0	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	15 5182 (Part- 6): 2022	14.8	80 (24hrs)
Ozone (O ₁)	µg/m [†]	IS 5182 (Part- 9): 2019	<20.0	100 (8hrs)
Ammonia (NH ₃)	μg/m²	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 (Ph)	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/m ¹	ELES/AIR/SOP/01: 2021	<2.0	06 (Annual)
Benzene (C _k H _k)	μg/m ¹	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 Managar

****End of Report****

Authorised Signatory Dr. Deependra Rumar Sinha

Ph. D. Environmental Engg.

Page I of 1

Technical Manager

The Discount stated in Test Report is around by the Laboratory order General Tomas and Conditions, only on Company Innov boal is pro-approved format. The results shown in the Fest Report refers to relate control to the job analysis done by the Laboratory order. The information separated on the Laboratory at the time of provided by the client. The Report is reported except at full and any part of the report is not also prior permanent in reported except at full and any part of the report is not for some approved of the Laboratory. The Report is not full and any part of the report is not for the source of the Assistance of the Continuency of the Laboratory at the continuence of the Continu



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

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/2024/5341	Report Release Date	: 23.09.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400003254F			

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/6175 : Near Utkarmit Rajkiya Prathmik Vidyalaya Bunglapart Village Pakhar Bauxite Mine	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 12.09,2024 to 13.09.2024 : 16.09.2024 : Ambient Air	
Mines Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02 : ELES Pvt, Ltd.	
Period of Analysis	: 16.09.2024 to 23.09.2024	Sample Condition	: Sealed & Preserved	

MI	ETEOROLOGICAL INFORMATION			
1	Average Temperature (°C) : 26	2	Barometric Pressure (mml	Ig) (740
3	Relative Humidity (%) : 72	-4	Weather Condition	: Rainy

Discipline : Chemic	al	Group:	Atmospheric I	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	μg/m ³	IS 5182 (Part- 23): 2022	40	100 (24hrs)
Particulate Matter (PM2,5)	µg/m³	IS 5182 (Part-24): 2019	18	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	μg/m³	[S 5182 (Part- 2/Sec1): 2023	5.1	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	μg/m³	IS 5182 (Part- 6): 2022	14.5	80 (24hrs)
Ozone (O ₃)	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	1S 5182 (Part- 10): 2019 (NDIR Method)	<1.0	2 (8hrs)
Lead (Pb)	μg/m ¹	1S 5182 (Part- 22): 2019	< 0.002	1 (24hrs)
Nickel (Ni)	ng/m¹	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/m¹	ELES/GC/SOP/05: 2023	<0.5	01(Annual)

Reviewed by

****End of Report****

Dr. Deependra Kumar Sinha

Alexsh Kumar Quality Managor

Page 1 of 1

The December stated of Test Region to council by the Laboratory studie General Terms and Conditions, only on Company latter head in pre- Jechnical Managers on the Yest Region refer or relates unity to the job analysis done by the Laboratory code. The automatem stand on the Test Report refrequents the findings done by the Laboratory at the time of involvement only and senior the lands of video's memoritation. The Laboratory is expensible for all the adventors or data provided on the report, except the information which to provided by the citient. The Report current for expressional average to fail and say part of the report is not taken one of content, prior normal approval of the Laboratory. The Happert on fail or in part shall not be published. adverted used for any triplinations on the principal term of the been account from the blandarment of the Laboratory. Afternoon is term to the immerse of inhelity components and production more than account of the beautiful terms of the laboratory and the component of the laboratory and labo informed for Makeys from the Date of submissionar of the Test Report. The manufactions begins are so be returned as openified. Any type of Observations or Compliants regarding the Reports shall be done within 17-birst from the Cost of Test Report educated would. After the true period stated before an acompliant with its excepted. The critic Time schoolab manuscool of Test Report of the Sillerine France Miller nation used. No. A. (Mar Applicable), BEH. (Halass Datestion Land), 2.06. (Levers Detection Land)



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

ING SERVICES PVT. LTD.

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

Website: www.elespl.co.in



TC-13587

TEST REPORT

Test Report No.	: ELES/RNC/2024/5342	Report Release Date	: 23.09.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400003255F		

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/6176 : Near Utkarmit Rajkiya Prathmik Vidyalaya Dumrapart Village Pakhar Bauxite Mine	
Address Mines Status	: Lohardaga, Jharkhand-835302 : Operational	Sampling Date Sample Received Date Type of Sample Sampling Procedure Sampling Done By	: 12.09,2024 to 13.09,2024 : 16.09,2024 : Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt. Ltd.	
Period of Analysis	= 16.09,2024 to 23.09,2024	Sample Condition	: Sealed & Preserved	

MI	ETEOROLOGICAL INFOR	MATION				
1	Average Temperature (°C)	: 26	2	Barometric Pressure (mmHg)	: 740	
3	Relative Humidity (%)	:72	4	Weather Condition	: Rainy	

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	44	100 (24hrs)		
Particulate Matter (PM2.5)	μg/m³	IS 5182 (Part- 24): 2019	20	60 (24hrs)		
Sulphur Di-Oxide (SO ₂)	μg/m³	IS 5182 (Part- 2/Sec1): 2023	5.3	80 (24hrs)		
Nitrogen Di-Oxide (NO ₂)	µg/m³	1S 5182 (Part- 6): 2022	13.9	80 (24hrs)		
Ozone (O ₁)	μg/m ^t	IS 5182 (Part- 9); 2019	<20.0	100 (8hrs)		
Ammonia (NH _s)	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	0.005	1 (24hrs)		
Nickel (Ni)	ng/m³	1S 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(Annual)		
Benzo-(a)-Pyrene	ng/m³	ELES/GC/SOP/05: 2023	< 0.5	DI(Annual)		

Reviewed by

****End of Report****

Dr. Deependra Kumar Sinha

Page 1 of 1

The Uncommendated or Ten Report, or mand by the Laboratory under Ground Terms and Conditions, only on Company letter hand in Technical Managers, chosen as the East Report The incurrent expert or the polymetric drive by the Laboratory under Control of the Tain Report reflects the findance by the Laboratory of the time of creative and the Tain Report reflects the findance by the Laboratory of the time of creative and south the least of the report reflects the findance by the Laboratory of the time of creative and south the least of the report reflects the advantage of the advantage to responsible the all the information of data provided in the report receipt the advantage of the Laboratory. The Report research is reported to the report of the laboratory of the Report in the published extension of the report of the laboratory of the Report in the published extension of the report of the laboratory of the Report in the laboratory of the laboratory of the Report in the laboratory of the laborato trace. Top smouthers, of absention & false fraction of the content of appearance of the Test Report is unlessful and offenders may be processed to the falsest extent of the low. All the complete my externed for Notice from the Date of Indicate was of the Tast Report. The samples from Regulatory bedies out to be retained as specified. Any type of Chargottens or Completen regarding that Reports shall be done sollers 15days from the Date of Test Report released wasted. After the time period stated before, the complaints will be accepted. The array Tener schedule maniformed in Test Report is no 2 florage format. Alchievement cond. N.A. (Son Applicable), 1901. (Hadrow Destection Limit). 1.01. (Lower Destection Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATTA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE97130124

ENGINEERING SERVICES PVT. LTD.

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

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



TC-13587

TEST REPORT

Test Report No.	: ELES/RNC/2024/5356	Report Release Date	: 23.09.2024
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024
ULR No.	: TC135872400003269F		

CUSTOMER DE	TAILS	SAMPLE DETAILS		
Customer Name Address	: Hindalco Industries Limited : Lohardaga, Jharkhand-835302	Sampling Date Sampling Received Date Type of Sample Sampling procedure Sampling Done By	: 12.09.2024 to 13.09.2024 : 16.09.2024 : Ambient Noise : ELES/DOC/SMPL/03 : ELES Pvt. Ltd.	
Mines Status	: Operational	Period of Analysis	: 16.09.2024 to 23.09.2024	

M	ETEOROLOGICAL INFO	RMATION			
1	Average Temperature (°C)	: 26	2	Barometric Pressure (mmHg	740
3	Relative Humidity (%)	: 72	4	Weather Condition	: Rainy

Discipline: Chemical		Group: Atmospheric Pollution			
Location	Unit	Test Protocol	Resu	ilt	Regulatory Limit (Industrial Zone)
Quarry Mines Pit Pakhar Bauxite Mine (115.13 ha)	dB(A)	1S 9989: 2020	Time	Luq	
			Day Time	65	75 dB(A) Day Time &:
Sample ID: ELES/RNC/2024/AN/6190			Night Time	47	70 dB(A) Night Time



****End of Report****

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

Page 1 of 1

The Document stated as Test Report is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only to the jobtanalysis done by the Laboratory only. The information stated on the Test Report reflects the finding-done by the Laboratory as the time of involvement only and within the limits of client's enstructions. 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 context, without prior written approval of the Laboratory. The Report in full or in part shall not be published, advertive cosed for any legal actions unless prior permission has been secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any manufactured alteration & falsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the lart. All the samples are retained for 30 days from the Date of release/issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15 days from the Date of Test Report released/issued. After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is a 24hours format. Abbreviation used: N/A (Not Applicable), HOR, (Relow Detection Limit), LO: Convert Detection Limit).



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



TEST REPORT

Test Report No.	: ELES/RNC/2024/5361	Report Release Date	: 23.09.2024	
Work Order No.	: 13612312113	Work Order Date	: 28.03.2024	
ULR No.	: TC135872400003274F			

CUSTOMER DE	TAILS	SAMPLE DETAILS		
Customer Name Address	: Hindalco Industries Limited : Lohardaga, Jharkhand-835302	Sampling Date Sampling Received Date Type of Sample Sampling procedure Sample Drawn By	: 13.09.2024 : 16.09.2024 : Workzone Noise : ELES/DOC/SMPL/03 : ELES Pvt, Ltd.	
Mines Status	: Operational	Period of Analysis	: 16.09.2024 to 23.09.2024	

METEOROLOGICAL INFORMATION					
1	Average Temperature (°C) : 27	2	Barometric Pressure (mml	(g) : 740	
3	Relative Humidity (%) : 70	4	Weather Condition	: Rainy	

Location	Unit	Test Protocol	Res	ult	Regulatory Limit (Industrial Zone)
Quarry No.7 -			Time.	L_{eq}	
Pakhar Bauxite Mine (115.13 ha) Sample ID: ELES/RNC/2024/WN/6195	dB(A)	IS 4758: 2017	Day Time	73	90 dB (A)

Reviewed hus

****End of Report****

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

Page 1 of 1

The fasciment stated as Test Report is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved format. The testits shown in the Test Report order or relates only to the judicially in done by the Laboratory only. The information stated in the Test Report reflects the findings done by the Laboratory in the time of involvement only and within the limits of client's instructions. The Laboratory is responsible for all the information or dark provided on the report, except the information which is provided by the client. The Report cannot be reproduced except in full and any pain of the report is not taken out of consext, without prior written approval of the Laboratory. The Report in full or in part shall not be published, advertise, used for any legal actions unless prior persussion has been secured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alteration & Inhaffication of the content or appearance of the Lett Report is unfairful and offenders may be prosecuted to the fullest extern of the law. All the number are retained for Bulays from the Date of release/using of the Lett Report. The samples from Regulmory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done within 15 days from the Date of Test Report released/issual. After the time period stated before, in complaints will be accepted. The either Time schedule mentioned in Test Report is in 24 hours format. Abbreviation used. N/A (Not Applicable). IEEE (Flelow Descention Limits).



Annexure 3

Date - 22.11.2024

Office Order

Environmental Cell has been re-constituted at Pakhar Bauxite Mine (Area 115.13 ha) comprising below mentioned team members. The team will ensure compliance of Environment Act, Regulation & Rule in respect of the said mines of Hindalco Industries Limited.

- 1. Mr. Abhishek Pradhan(Coordinator)
- 2. Mr. Chandan Kumar- Geologist
- 3. Ms. Abhilasha Singh- 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 act rule and regulation for the above mine.

Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)

Annexure 4

Production, Mined Out, Back Filled and Over Burden removal from April'24 to September'24								
S No	Name of the Mines	Mining lease area (ha)	Production Capacity (MT)*	Lease Period*	Production (MT)	Mined out area (ha)	Back filled 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	82481	0.25	0.57	191521.65
3	Hisri (New) Bauxite Mine	14.55	100000	19.07.1981 to 31.03.2030	63197	0.45	0.35	26905.95
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	96744	4.29	8.89	365249.34
7	Sherangdag-A Bauxite Mine	155.81	260000	16.10.1974 to 31.03.2030	6200	0.23	0.2	10200.00
8	Serangdag-B Bauxite Mine	77.89	100000	04.10.1978 to 31.03.2030	49850	0.96	0.85	104303.82
9	Jalim & Sanai Bauxite Mine	12.14	50000	16.10.1974 to 31.03.2030	12450	0.14	0.12	13050.63
10	Gurdari Bauxite Mine	584.19	325000	23.03.1985 to 22.03.2035	96115	4.69	2.46	185023.98
11	Kujam - I Bauxite Mine	80.87	150000	13.03.2006 to 12.03.2056	7175	0.97	0.43	21377.24
12	Kujam - II Bauxite Mine	157.38	300000	24.03.2006 to 23.03.2056	49120	5.28	3.56	137098.55
13	Amtipani Bauxite Mine	190.95	150000	13.03.2006 to 12.03.2056	87109	2.153	0.987	225462.85

	Minerals & Minerals Limited							
14	Pakhar (109.507) Bauxite Mine	109.507	280000	26.07.2008 to 25.07.2058	147714.95	2.06	2.60	160334.49
15	Pakhar (15.58) Bauxite Mine	15.58	60000	28.04.1965 to 31.03.2030	NIL	NIL	NIL	NIL
16	Bimarla Bauxite Mine	134.526	300000	18.07.2009 to 17.07.2059	78750	4.44	7.35	116233.81
17	Amtipani Chirodih Bauxite Mine	130.01	450000	11.01.2017 to 10.01.2067	140900	4.25	1.50	235195.494

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

Basudev Cangopadhyay
AVP (Planning, Environment and Compliance)

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

The composite cost during the year 2023-24 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 Apr'24 to Sep'24)	Actual (in Rupees) FY 2024-25 (From Apr'24 to Sep'24)
1	Pollution Control & Environment monitoring	61,35,000.00	53,47,442.83
2	Reclamation/ Back filing & Rehabilitation**	5,62,80,000.00	5,60,24,564.93
3	Green belt, Plantation & Water sprinkling arrangement	73,42,000.00	69,41,114.17
4	Rural Development	2,75,00,000.00	2,05,55,592.67

^{**}Part of OB removed cost.

Basudev Gangopadhyay
AVP (Planning, Environment & Compliance)