MINERALS & MINERALS LIMITED

Regd. Office- Court Road, P.O. & Distt.-Lohardaga, Jharkhand-835302

Tel.-06526-223163

CIN NO. U26990JH1970PLC000875

Ref.: M&M/LHD/ENV/MoEF/711

Date- 23.05.2024

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 (109.507 ha) Bauxite Mining project of M/s Minerals & Minerals Limited located in the District of Lohardaga, Jharkhand for the period October'23 to March'24.

Ref: Environmental Clearance letter no J-11015/518/2008-IA II (M) dated 21st Oct 2010.

Sir,

With reference to the above, we are submitting herewith the Compliance status report of EC conditions for **Pakhar (109.507 ha)** Bauxite Mining project of **M/s Minerals & Minerals Limited**, located in Lohardaga, Jharkhand for the period October'23 to March'24

The lease detail is as below.

Lease area (ha)	Production Capacity (MT)	Lease Period
109.507	280000	26.07.2008 to 25.07.2058

Hope you will find the same in order.

Thanking You

Yours Sincerely FOR Minerals & Minerals Limited

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

Enclosure: - As Above

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

Name of the Project	:	Pakhar Bauxite Mine (109.507 ha) M/s Minerals & Minerals Ltd
Environment Clearance No. & date	:	J-11015/518/2008-IA.II(M), dated 21.10.2010
Period of compliance Report	:	From 1 st October'23 to 31 st March'24

Specific Conditions

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

Reply: - Implementations of stipulated conditions in NOC are fulfilled post which consent to operate has been granted by SPCB from time to time. The existing consent to operate is valid up to 31.03.2025. Productions of bauxite are within limits specified in consent to operate.

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

Reply: - Land acquisition is being done with permission of competent authority of State Government i.e. concerned Deputy Commissioner (D.C.) under CNT Act. The land lease agreement is being done with raiyat (Landowner) after permission of State Govt with provision of returning the land as per the norms set by D.C. The compensation and facilities are being provided as per norms set in agreement. Thus, land acquisition has the approval of State Government.

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

Reply: - Since shallow depth mining is being carried out, hence there is no intersection with the groundwater table. In future also, working zones will be restricted to above ground water table. We undertake that no mining is/was carried out below ground water table and the same status will be maintain in future also.

Moreover, we are regularly monitoring the groundwater table through the installation of a piezometer. A copy of the water level report is attached herewith as **Annexure-1**.

As the water table is not intersected during mining operations, a detailed hydro-geological study is not applicable for this mine.

Condition iv: - The project proponent shall ensure that no natural watercourse and/or water resources are obstructed due to any mining operations. Adequate measures shall be taken for protection of seasonal channels, if any emanating from the mine lease, during the course of mining operation.

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

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

Reply: - Topsoil is being stacked temporally properly with proper slope as and when required. Sequential backfilling and reclamation of mined out area are being exercised for which topsoil is being spread on backfilled area for reclamation of area. The mining is being carried out as per the approved mining plan. Monitoring and management of rehabilitated areas is being done through effective supervision.

Condition vi: - The over burden (OB) generated shall be temporarily stacked in the earmarked area for a period of one year and thereafter concurrently backfilled. There shall be no external overburden dump. The backfilled area shall be progressively afforested. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional Office located at Bhubaneshwar on six monthly basis.

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

Condition vii: - The void left unfilled in an area of 0.41 ha shall be converted into water body. The higher benches of excavated void/ mining pits shall be terraced and plantation done to stabilize the slopes. The slopes of higher benches shall be made gentler for easy accessibility by local people to use the water body. Peripheral fencing shall be carried out along the excavated area.

Reply: - Implementation of condition is in progress. Mining is being carried out in a scientific manner. Rainwater harvesting pond of 1.26 ha has been constructed and proper fencing provided. Necessary measures have been implemented for easy accessibility by local people to use this harvested water.



Rainwater Harvesting Pond

Condition viii: - Catch drains and siltation ponds of appropriate size should be constructed around the mine working, soil and mineral dumps to prevent run off of water and flow of sediments directly into the agricultural fields, the Kisko Nadi, the Sankh Nadi, the Surang River, the Chaupat Nadi and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted, particularly after monsoon and maintained properly. Garland drain, settling tanks and check dams of appropriate size, gradient and length shall be constructed around the mine pit, topsoil, dumps and the mineral dumps to prevent runoff water and flow sediments directly into the agricultural fields, the Kisko Nadi, the Sankh Nadi, the Surang River, the Chaupat Nadi and other water bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper setting of silt material. Sedimentation pits should be constructed at the corners of the garland drains and desilted at regular intervals.

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



Garland drains

Condition ix: - Dimension of the retaining wall at the toe of the OB benches within the mine to check run-off and siltation should be based on the rainfall data.

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

Condition x: - Plantation shall be raised in an area of 6.3 ha including a 7.5 m. wide statutory barrier all around the mining lease, reclaimed and rehabilitated areas, around water body, etc. by planting the native species in consultation with the local DFO / Agriculture Department. The density of the trees should be around 2000 plants per ha. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within first five years.

Reply: - Progressive plantation is being carried out in consultation with local forest department. Total 12.68 ha has been covered with plantation till March'2024. Green belt development program is in progress with progress of mining activities. Nos. of sapling planted for the FY 2023-24 is 4350 nos. In addition to these agricultural activities is going on reclaimed land as per consent from landowners.



Plantation at mines

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

Reply:- Regular water sprinkling is being carried out on haul road and in critical areas prone to air pollution. Regular Ambient Air Quality (AAQ) monitoring is being carried out by NABL accredited Laboratory and all parameters are found within the prescribed limit. Monitoring report of AAQ is attached herewith as Annexure-2. Photographs of Water Tanker is attached below.



Water sprinkling through tanker.

Condition xii: - Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintained.

Reply: - Spring water is being monitored regularly and Analysis report is attached as **Annexure 2**.

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

Reply: - Effective measures have already been implemented. A detailed rainwater harvesting plan to augment ground water has been prepared and suitable measures like water harvesting pond etc. are created for augmentation of ground water in the area in consultation with Central Ground Water Board. Photograph of Rainwater Harvesting Pond is already attached in Specific condition vii.

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

Reply: - We are not using ground water for any mining purpose. Since, Shallow depth mining is being carried out, hence there is no intersection of ground water table during the mining operation at present and in future also. A Piezometer has been installed for monitoring of ground water level. Water level and water quality reports are being sent regular to regional office of Ministry, CGWA/CGWB and JSPCB. The

same is attached herewith as **Annexure 1 & 2**. Now, Regional office of MoEF&CC is in Ranchi.



Piezometer

Condition xv: - Appropriate mitigative measures shall be taken to prevent pollution of the Kisko Nadi, the Sankh Nadi, the Surang River, the Chaupat Nadi in consultation with the State Pollution Control Board.

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

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

Reply: - We are not using any water from natural streams/ ground water for mining operation. Rainwater harvesting ponds with proper fencing have been already constructed in the mine premises. Rainwater harvested during rainy season is being used for sprinkling on haul roads and raising plantation.

However, we have already obtained NOC for extraction of ground water from CGWA/ CGWB for drinking purpose only. The copy of same NOC and photograph of rainwater harvesting pond are attached below.

ug Well; DC		n-Bore Well; BW raction/Resto	ration C	harge	s paid ((Rs.):		overlea		489	2.50		
ug Well; DC							ne Pit;MP	u-Mine Pu	mps	489	2.50		
	B-Dug-cun	n-Bore Well; BW	-Bore We	sl; TW-T	ube We	II; MP-Mir	ne Pit,MP	u-Mine Pu	mps				
					-	-	-		•				-
etraction	Structure		0	1	0	0	0	0	0	0	0	0	0
			-		TW	MP	MPu	DW/					MP
etails of g	round wa			1.1.1	g struc	tures		-	7-	al Dec.	or of h	0.0	
			in Daile	0	_					_			
Vday			/day	m	%year	1	m³/day	m ³ /year		m	/day	m³	year
	Toron					1				-	Total		
		raction Permi				22							
alid from:		11/09/2022					7.	7. Valid up to: 10/09/2024					
roject Stat	us:	Existing Gro	und Wa	ater			5.	NOC Type: Renewal					
pplication	No.:	21-4/492/JH	/MIN/20	019			3.	GWRE 2020) Safe					
OC No.:					2022/73	277		$\langle \vee \rangle$					
ess of CG	WB Reg	gional Office											
			Lohar	rdaga,	Jharkh	and - 8	35302		0				
Code:													
ict:			Lohar	rdaga				State:	Jhar	khand			
ge:			Pakhar			Block:	Kisk	D I					
ect Addres	s:		Pakha	ar Bau	xite Mir	ning Pro	oject, Vi	ill - Pakh	ar, Tehsi	il - Kisko	0		
ect Name:			Pakha	ar Bau	xite Mir	ning Pro	oject (10	09.507 H	la)			<	
	ct Name: ct Addres je: ct: code: municatio ess of CG DC No.: oplication oject Stat alid from: round Wa Fresh V /day .50 etails of gr	ct Name: ct Address: le: ct: dode: munication Addre ass of CGWB Reg DC No.: oplication No.: oplicat	ct Name: ct Address: le: ct Address: ct: code: munication Address: ass of CGWB Regional Office : DC No.: CGWA/NOC oplication No.: 21-4/492/JH oplication No.: 21-4/492/JH oplication No.: 21-4/492/JH oplication No.: 21-4/492/JH oplication No.: 21-4/492/JH oplication No.: 21-4/492/JH oplication No.: 21-4/492/JH Office : CGWA/NOC 21-4/492/JH Office : 21-4/492/JH Office : 21-4/492/JH	NO OBJECTION CERTIFIC ct Name: Pakh tc Address: Pakh te: Pakh ct. Lohar cde: Pakh cd: CGWB Regional Office Cent Name CGWA/NOC/MI/NE/ polication No.: 21-4/492/JH/IN/2/ polication No.	NO OBJECTION CERTIFICATE Ct Name: Pakhar Bau ct Address: Pakhar Bau le: Pakhar Bau le: Pakhar Bau le: Pakhar Bau lode: Pakhar Bau lode: Data Bau lode: Pakhar Bau Lohardaga ass of CGWB Regional Office : Central Gro Nayak Jai P OC No.: CGWANOC/MIN/REN/1/2 plication No.: 21-4/492/JH/MIN/2019 oject Status: Existing Ground Water lide from: 11/09/202 round Water Abstraction Permitted: Fresh Water Saline Water fay m ³ /year m ³ /day m 50 3467.50 tails of ground water abstraction /Dewaferin Total Existing No.:1 DW DCB BW	NO OBJECTION CERTIFICATE (NOC ct Name: Pakhar Bauxite Mi ct Address: Pakhar Bauxite Mi le: Pakhar Bauxite Mi le: Pakhar Bauxite Mi loid: Lohardaga munication Address: Pakhar Bauxite Mi loid: Lohardaga munication Address: Pakhar Bauxite Mi loid: CGWAINOC/MIN/REN/1/2022/72 poject Status: Existing Ground Water lifform: 11/09/2022 round Water Abstraction Permitted: Fresh Water fday m?lyear m?lyear fold: Saline Water<	NO OBJECTION CERTIFICATE (NOC) FOF Pakhar Bauxite Mining Pr. ct Adress: Pakhar Bauxite Mining Pr. re: Pakhar Bauxite Mining Pr. re: Pakhar ct: Lohardaga iode: Pakhar munication Address: Pakhar Pakhar Pauxite Mining Pr. Lohardaga Lohardaga bode: Pakhar pictore Pakhar pictore Pakhar pictore Pakhar pictore Certral Ground Water Boo No: 21-4/492/JH/MIN/2019 oject Status: Existing Ground Water Lidf from: 11/09/2022 round Water Abstraction Permitted: Fresh Water Fresh Water Salis of ground water sabstraction /Dewatering structures fooi 3467.50 stalls of ground water sabstraction /Dewatering structures Total Existing No.:1 TW	NO OBJECTION CERTIFICATE (NOC) FOR GRO ct Name: Pakhar Bauxite Mining Project (11 ct Address: Pakhar Bauxite Mining Project, V re: Pakhar Bauxite Mining Project, V re: Pakhar ct Lohardaga iode: Pakhar nunication Address: Pakhar Bauxite Mining Project, V pakhar Bauxite Mining Project, V Chardaga, Jharkhand - 835302 ass of CGWB Regional Office: Central Ground Water Board Mid nyak Jai Prakash Bhawan, Fraz DC poject Status: Existing Ground Water 5. poject Status: Existing Ground Water 5. Fresh Water Saline Water De fday m ³ year m ³ year stalls of ground water abstraction /Dewatering structures Total Existing No::1 DW DCB BW TW	ct Name: Pakhar Bauxite Mining Project (109.507 H ct Address: Pakhar Bauxite Mining Project, Vill - Pakh e: Pakhar Bauxite Mining Project, Vill - Pakh e: Pakhar Bauxite Mining Project, Vill - Pakh ct Lohardaga Bauxite Mining Project, Vill - Pakh cohardaga, Jharkhand - 835302 ess of CGWB Regional Office : Central Ground Water Board Mid Eastern Nayak Jai Prakash Bhawan, Frazer Road DC No.: CGWAINOC/MIN/REN/1/202/7277 pplication No.: 21-4/492/JH/MIN/2019 CGWRE oject Status: Existing Ground Water Sin NoC Tr ill/09/2022 7. Valid u ound Water Abstraction Permitted: Fresh Water Saline Water Dewatering fog 3467.50 tails of ground water abstraction /Dewatering structures Total Existing No.:1 DW DCB BW TW MP MPu DW	NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ct Name: Pakhar Bauxite Mining Project (109.507 Ha) ct Address: Pakhar Bauxite Mining Project (109.507 Ha) le: Pakhar Bauxite Mining Project VIII - Pakhar, Tehsi le: Pakhar Bauxite Mining Project, VIII - Pakhar, Tehsi loide: Uchardaga unication Address: Pakhar Bauxite Mining Project, VIII - Pakhar, Tehsi loide: Uchardaga, Jharkhand - 835302 ass of CGWB Regional Office : Central Ground Water Board Mid Eastern Region, Nayak Jai Prakash Bhawan, Frazer Road Dak Bar OC No.: CGWA/NOC/MIN/REN1/12022/7277 polication No.: 21-4/492/JH/MIN/2019 3. Category: (GWRE 2020) ojdet Status: Existing Ground Water 5. NOC Type: lidf from: 11/09/2022 7. Valid up to: cound Water Abstraction Permitted: Eventering Fresh Water Saleme Water Dewatering fday m?/day m?/year 50 3467.50 Jatising No.:1 Tool bails of ground water abstraction /Dewatering structures Toolal Existing No.:1 Tool	NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABST Pakhar Bauxite Mining Project (109.507 Ha) ct Address: Pakhar Bauxite Mining Project (109.507 Ha) ct Address: Pakhar Bauxite Mining Project (109.507 Ha) bid Pakhar Bauxite Mining Project (109.507 Ha) ct: Lohardaga bidoc: Kisko ct: Lohardaga bidoc: Pakhar Bauxite Mining Project, VII - Pakhar, Tehsil - Kisko cd: Lohardaga, Jharkhand - 835302 ass of CGWB Regional Office: Central Ground Water Board Mid Eastern Region, 6th &ar Nayak Jai Prakash Bhawan, Frazer Road Dak Banglow, P DC No.: 214.4/492/JH/MIN/2019 3. Category: (GWRE 2020) Sa oject Status: Existing Ground Water 5. NOC Type: Ra lid from: 11/09/2022 7. Valid up to: 10 cound Water Abstraction Permitted: Eresh Water Dewatering m ¹ / year fday m ³ /year m ³ /year m ³ / year m ³ / year m ³ / year fday M24 Dewatering structures Total Prop DW DW <td>NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACT ct Name: Pakhar Bauxite Mining Project (109.507 Ha) ct Adress: Pakhar Bauxite Mining Project (109.507 Ha) ideress: Pakhar Bauxite Mining Project, VIII - Pakhar, Tehsil - Kisko ie: Pakhar ideress: Pakhar ideress: Pakhar ideress: Pakhar ideress: Pakhar Pakhar Biock: ideress: Pakhar Pakhar Biock: ideress: Pakhar, Tehsil - Kisko, Lohar ideress: Pakhar Pakhar Pakhar, Tehsil - Kisko, Lohar ideress: Pakhar Pakhar Pakhar, Tehsil - Kisko, Lohar ideress: Pakhar Pakhar Pakhar Pakhar Pakhar, Tehsil - Kisko, Lohar ideress: Pakhar Pakhar Pakhar Pakhar Pakhar Pakhar Pakhar, Tehsil - Kisko, Lohar iode: CGWAR Pakhar Pakhar Pakhar Safar Office:<td>NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION ct Name: Pakhar Bauxite Mining Project (199.507 Ha) ct Address: Pakhar Bauxite Mining Project (199.507 Ha) ict Address: Pakhar Bauxite Mining Project, VIII - Pakhar, Tehsil - Kisko ict Lohardaga ict: Lohardaga ict: Lohardaga, Jharkhand - 835302 ess of CGWB Regional Office : Pakhar Bauxite Mining Project, VIII - Pakhar, Tehsil - Kisko, Lohardaga, Lohardaga, Jharkhand - 835302 ess of CGWB Regional Office : Central Ground Water Board Mid Eastern Region, 6th & amp; amp; 7th Flo Nayak Jai Prakash Bhawan, Frazer Road Dak Banglow, Patna, Bihar - 80 Dok MiNREN1/12022/7277 pilcation No.: 21-4/492/JH/INI/2019 3. Category: (GWRE 2020) Safe oject Status: Existing Ground Water 5. NOC Type: Renewal lidf from: 11/09/2022 7. Valid up to: 10/09/2024 fresh Water Saline Water Dewatering Total fday m³year m³year m³year m³year fday M³year m³year Total Proposed No:0 DW fday M³year M³year Total Proposed No:0</td></td>	NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACT ct Name: Pakhar Bauxite Mining Project (109.507 Ha) ct Adress: Pakhar Bauxite Mining Project (109.507 Ha) ideress: Pakhar Bauxite Mining Project, VIII - Pakhar, Tehsil - Kisko ie: Pakhar ideress: Pakhar ideress: Pakhar ideress: Pakhar ideress: Pakhar Pakhar Biock: ideress: Pakhar Pakhar Biock: ideress: Pakhar, Tehsil - Kisko, Lohar ideress: Pakhar Pakhar Pakhar, Tehsil - Kisko, Lohar ideress: Pakhar Pakhar Pakhar, Tehsil - Kisko, Lohar ideress: Pakhar Pakhar Pakhar Pakhar Pakhar, Tehsil - Kisko, Lohar ideress: Pakhar Pakhar Pakhar Pakhar Pakhar Pakhar Pakhar, Tehsil - Kisko, Lohar iode: CGWAR Pakhar Pakhar Pakhar Safar Office: <td>NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION ct Name: Pakhar Bauxite Mining Project (199.507 Ha) ct Address: Pakhar Bauxite Mining Project (199.507 Ha) ict Address: Pakhar Bauxite Mining Project, VIII - Pakhar, Tehsil - Kisko ict Lohardaga ict: Lohardaga ict: Lohardaga, Jharkhand - 835302 ess of CGWB Regional Office : Pakhar Bauxite Mining Project, VIII - Pakhar, Tehsil - Kisko, Lohardaga, Lohardaga, Jharkhand - 835302 ess of CGWB Regional Office : Central Ground Water Board Mid Eastern Region, 6th & amp; amp; 7th Flo Nayak Jai Prakash Bhawan, Frazer Road Dak Banglow, Patna, Bihar - 80 Dok MiNREN1/12022/7277 pilcation No.: 21-4/492/JH/INI/2019 3. Category: (GWRE 2020) Safe oject Status: Existing Ground Water 5. NOC Type: Renewal lidf from: 11/09/2022 7. Valid up to: 10/09/2024 fresh Water Saline Water Dewatering Total fday m³year m³year m³year m³year fday M³year m³year Total Proposed No:0 DW fday M³year M³year Total Proposed No:0</td>	NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION ct Name: Pakhar Bauxite Mining Project (199.507 Ha) ct Address: Pakhar Bauxite Mining Project (199.507 Ha) ict Address: Pakhar Bauxite Mining Project, VIII - Pakhar, Tehsil - Kisko ict Lohardaga ict: Lohardaga ict: Lohardaga, Jharkhand - 835302 ess of CGWB Regional Office : Pakhar Bauxite Mining Project, VIII - Pakhar, Tehsil - Kisko, Lohardaga, Lohardaga, Jharkhand - 835302 ess of CGWB Regional Office : Central Ground Water Board Mid Eastern Region, 6th & amp; amp; 7th Flo Nayak Jai Prakash Bhawan, Frazer Road Dak Banglow, Patna, Bihar - 80 Dok MiNREN1/12022/7277 pilcation No.: 21-4/492/JH/INI/2019 3. Category: (GWRE 2020) Safe oject Status: Existing Ground Water 5. NOC Type: Renewal lidf from: 11/09/2022 7. Valid up to: 10/09/2024 fresh Water Saline Water Dewatering Total fday m ³ year m ³ year m ³ year m ³ year fday M ³ year m ³ year Total Proposed No:0 DW fday M ³ year M ³ year Total Proposed No:0



Condition xvii: - Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board. **Reply:** - Suitable rainwater harvesting measures like harvesting pond have been constructed on long term basis for augmentation of ground water in the area, in consultation with Central Ground Water Board. Photograph of Rainwater Harvesting Pond is already attached in reply to above condition xvi.

Condition xviii: - Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral within the mine lease up to the stock yard. The mineral transportation within the mine lease shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.

Reply: - To keep vehicular emissions under control, vehicles are periodically checked & repaired. All measures are being taken to control vehicular emission. All vehicles are covered with tarpaulins, and non-overloading guidelines are being followed during transportation of mineral.



Tarpaulin covered Vehicle

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

Reply: - Blasting time is fixed during Lunch Time i.e. 1.00 PM-2.00 PM. We have control blasting permission. Controlled blasting method is in practice. Ground vibration study has been conducted periodically. Efforts and mitigative measures are being taken to mitigate the impact of the blast.

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

Reply: - Wet drilling is in practice.



Wet drilling

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

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

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

Reply: - As of now there is no colony within the lease hold. However, Domestic Wastewater generated from mine office area is being collected through individual Septic Tank and followed by Soak Pit.

No wastewater is generated from our mining operation. However, only negligible amount of effluent is being generated from workshop and Oil & grease trap system is already installed for Pakhar group of mines to treat this effluent. The treated water is in close circuit and being reused for washing of vehicle in the workshop. We are not discharging any wastewater outside the mine lease area.

Furthermore, the quality of this treated water is being monitored regularly and the monitoring report is attached herewith as **Annexure 2**.

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

Reply: - As a part of Community Health status check we regularly conduct medical camp in nearby areas since inception of Mine.

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

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

Condition xxv: - The land Outsees and land losers/ affected people shall be compensated/ rehabilitation as per the National Policy of Resettlement and Rehabilitation of project Affected Families (NPRR)

Reply: - Land acquisition is being done with the permission of competent authority of State Government i.e. concerned Deputy Commissioner (D.C.) under CNT Act. The land lease agreement is being done with raiyat (Landowner) after permission of State Govt with provision of returning the land as per the norms set by D.C. The compensation and facilities are being provided as per norms set in agreement. Thus, land acquisition has the approval of the State Government.

Condition xxvi: - Door to door sample survey should be undertaken within the impact zone to assess the family-based need of the tribals and it should be appropriately addressed in the CSR activities to be undertaken in the area. An action plan in this regard should be prepared and submitted.

Reply: - As a company, we are deeply committed to enhancing the quality of life for people living in the impact zone area. Therefore, the company's CSR team conducts regular assessments of the family-based needs of the tribals and ensures that their problems are properly addressed.

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

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

Condition xxviii: - The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered flora and fauna (python etc.) found in the study area. Action plan for conservation of flora and fauna prepared shall be implemented in consultation with the State Forest and Wildlife Department. All the safeguard measured brought out in the Wildlife conservation plan prepared specific to this project site shall be effectively implemented. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be

included in the project cost. A copy of action plan shall be submitted to the Regional Office of the Ministry of Environment and Forests, Bhubaneswar.

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

- 1. Minimum level of Noise during Mining.
- 2. Permanent pillars are established within in the mine lease area at 7.5m from the forest boundary.
- 3. Daily water sprinkling on haul road.
- 4. Transportation is carried out during daytime only.
- 5. Maintenance of mineral transportation road is being done regularly.
- 6. Social activities are being undertaken in nearby areas etc.

We have also prepared Integrated Site-specific Wildlife Conservation in consultation with State Forest Department and obtained approval letter from Principal Chief Conservator of Forest, Wildlife & Chief Wildlife Warden, Jharkhand via Office Order No.27 dated 26.05.2023 for conservation and protection of flora and fauna in the core and buffer zone for Pakhar Group of Mines.



Integrated Site-specific Wildlife Conservation for Pakhar Group of Mines

Condition xxix: - The critical parameters such as RSPM (Particulate matter with size less than 10 μ m (i.e. PM₁₀) and NO_x in the ambient air within the impact zone, peak particle velocity at 300 m. distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharge water shall also be monitored [(TDS, DO, PH and Total Suspended Solids (TSS)], The monitored data shall be uploaded on the website of the Company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in Public domain. The Circular no. J-20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its compliance.

Reply: - Noted and being adhered. We have established four ambient air quality monitoring stations in the core zone as well as buffer zone. Monitoring of Ambient Air Quality and Treated

Water is being carried out by NABL accredited Laboratory and reported to the concerned authorities. Monitoring Report is attached herewith as Annexure 2. Half-yearly EC compliance along with Environmental monitoring reports is being uploaded on company website regularly.

A Display board is already installed near the mine gate office. We have also installed an online PM10 analyzer at mine site.

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

Reply: - Mining Plan along with progressive mine closure plan has been approved by Indian Bureau of Mines. Final Mine Closure Plan will be submitted in due time as per applicable guideline and timelines mentioned in MCDR/IBM guideline who are competent authority to approve the same. Based on present resource estimate and peak rated production capacity mentioned in EC, Mining operation is being carried out.

General Conditions:-

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

Reply: - Noted.

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

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

Condition iii: - At least four ambient air quality-monitoring station should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10 μ m (i.e. PM₁₀) & 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: - We have already established four ambient air quality monitoring stations in the core zone as well as buffer zone. Monitoring is being carried out and reported to the concerned authorities. Monitoring Report is attached as **Annexure 2**.

Condition iv: - Data on ambient air quality RSPM [(Particulate matter with size less than 10 μ m i.e. PM₁₀) & NO_X] should be regularly submitted to the Ministry including its Regional office located at Bhubneshwar and the State Pollution Control Board / Central pollution Control Board once in six months.

Reply: - Being adhered to. Monitoring Reports for the reporting period are attached as **Annexure-2**. Now, the Regional office of MoEF&CC is in Ranchi.

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

Reply: - Mobile water tanker with sprinkling facility has been provided along haul roads, at loading and unloading areas, and at transfer points to control dust emissions.

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

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

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

Reply: - No wastewater is generated from our mining operation. However, only negligible amount of effluent is being generated from workshop and Oil & grease trap system is already installed for Pakhar group of mines to treat this effluent. The treated water is in close circuit and being reused for washing of vehicle in the workshop. We are not discharging any wastewater outside the mine lease area.

Furthermore, the quality of this treated water is being monitored regularly and the monitoring report is attached herewith as **Annexure 2**.

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

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

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

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

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

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

Reply: This is an operating mine and hence the provision related to financial closure is not applicable. Now, the Regional office of MoEF&CC is in Ranchi.

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

Reply: - Noted and Agreed. Now, the Regional Office of MoEF&CC is in at Ranchi.

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

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

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

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

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

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

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

Reply: - Environment statement is being submitted regularly to Member Secretary, JSPCB. Also, the status of compliance of EC conditions is uploaded on the website of the company on regular basis.

Condition xvii: - 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 <u>http://envfor.nic.in</u> and a copy of the same should be forwarded to the Regional Office of this Ministry located at Bhubaneshwar.

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

	Annexure 1						
Piezometer Reading - Pakhar 109.507Ha							
S No	Month	Depth (meter)					
1	Oct-23	38.53					
2	Nov-23	38.07					
3	Dec-23	37.61					
4	Jan-24	38.23					
5	Feb-24	38.09					
6	Mar-24	39.59					

ENVIRONMENTAL LABORATORIES & ENGINEERING SERVICES PVT.LTD.

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

Pakhar (109.507) Bauxite Mine-Environmental Monitoring Report

October 2023



CONTENT

Mine	rals & Minerals : Pakhar (109.507)	Environmental Monitoring Report	October 2023
		Pakhar (109.507)	
-	AMBIENT AIR QUALITY- CORE	ZONE	
1	Near Mine Quarry No-K7		
2	Near Mine Quarry No-K9		
3	Near Mine Quarry No-K5		
4.	Pakhar Loading Area		
	AMBIENT AIR QUALITY- BUFFE	R ZONE	
1	Near Bunglapart Village		
2	Yatri Shed (Near K-10)	a contraction of the second	
3	Near Utkarmit Rajkiya Prathmik Vidya	alaya Bunglapart Village	
4	Near Utkarmit Rajkiya Prathmik Vidya	alaya Dumrapart Village	







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

	TES	I REPORT	
Test Report No.	: ELES/RNC/2023/4421	Report Release Date	: 22.11.2023
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023
CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Minerals & Minerals Limited	Sample Ref. No.	: ELES/RNC/2023/AA/3947

: Minerals & Minerals Limited	Sample Ref. No.	: ELES/RNC/2023/AA/3947
	Location	: Near Mine Quarry No-K7
and a second s	State of the second	Pakhar (109.507 ha) Bauxite Mine
: Lohardaga, Jharkhand-835302	Sampling Date	: 16.10.2023 to 17.10.2023
	Sample Received Date	28.10.2023
	Type of Sample	: Ambient Air
: Operational	Sampling Procedure	: ELES/DOC/SMPL/02
: 28.10.2023 to 09.11.2023	Sample Drawn By Sample Condition	: ELES Pvt. Ltd. : Scaled & Preserved
		Location Loc

	Average Temperature (°C)		1.7	The second state of the se	
_	the second s	. 23	4	Barometric Pressure (mmHg)	: 734
	Relative Humidity (%)	: 57	4	Weather Condition	: Clear
5	Longitude	: 84°36'43.86"E	6	Latitude	: 23°33'29.12"N

Discipline : Chemics	al	Group : 4	Group : Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022	55	100 (24hrs)	
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	30	60 (24hrs)	
Sulphur Di-Öxide (SO ₂)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	6.4	80 (24hrs)	
Nitrogen Di-Oxide (NO2)	µg/m³	IS 5182 (Part-6): 2006; RA2022	19.1	80 (24hrs)	
Ozone (O ₃)	µg/m³	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)	
Ammonia (NH ₂)	μg/m³	IS 5182 (Part- 25); 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)	
Lead (Pb)	µg/m³	IS 5182 (Part-22): 2004; RA2019	0.009	1 (24hrs)	
Nickel (Ni)	ng/m ²	IS 5182 (Part-26):2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m ⁴	ELES/AIR/SOP/01	<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 intrust. 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 of the information stated on the Test Report reflects the findings done by the Laboratory of 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 Management of the Laboratory. Attention is drawn to the laboratory is prosecuted to the full except to appendice of the Test Report is unlawful and offenders may be prosecuted to the full except to the family of the samples are retained afterston & fallstfication of the Context or appendice of the Test Report is unlawful and offenders may be presecuted to the full except of the law. All the samples are retained afterston & fallstfication of the Date of Test Report forms and offenders into the take period are as a precision with be occepted. The amples from Registrary bodies are to be retained as specified. Any type of Observations will be occepted. The entire Tame schedule nectioned in Test Report is in 24hours format. Abhreviation used N/A (Nni 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.ln , eles.ranchi@amail.com Phone no.: 0651-2290103 Website : www.elespl.co.in

TEST REPORT					
Test Report No.	: ELES/RNC/2023/4421	Report Release Date	: 22.11.2023		
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023		

Discipline : Chemi	ical	Group : Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C ₆ H ₆)*	µg/m ³	IS 5182 (Part-11)2006;RA2017	<1.0	05(Annual)	
Benzo-(a)-Pyrene*	ng/m ³	IS 5182 (Part-12)2004;RA2019	<0.5	01(Annual)	

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



**** 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-opproved Sound. 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 only. The information stated on 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 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 classic is reproduced except in fall and any part of the report is not taken out of context, without prive written approval of the Laboratory. Attention is drawn to the limitation of lability, compensation and jurisdiction issues. Any unauthorized elevation & false/form of the context or appearance 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 be done within 15days from the Date of Test Report released/issued. After the time period stated before, an complaints will be occepted. The entire Time schedule inervitioned in Test Report is in 24boars format. Abbreviation osed: N/A (Not Applicable), BDL (Befow Defection Limit), LDL (Lower Detection Limit).



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

ENGINEERING SERVICES PVT. LTD.

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

TEST REPORT						
Test Report No.	: ELES/RNC/2023/4422	Report Release Date	: 22.11.2023			
Work Order No.	: M&M/23-24/01	Work Order Date : 31.03.2023				
CUSTOMER DET.	AILS	SAMPLE DETAILS				
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Location	: ELES/RNC/2023/AA/3948 : Near Mine Quarry No-K9 Pakhar (109.507 ha) Bauxite Mine			
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 16.10.2023 to 17.10.2023 : 28.10.2023 : Ambient Air			
Mines Status	: Operational	Sampling Procedure	ELES/DOC/SMPL/02			
Period of Analysis	: 28.10.2023 to 09.11.2023	Sample Drawn By Sample Condition	ELES Pvt. Ltd. Sealed & Preserved			

MI	TEOROLOGICAL INFO	RMATION			
1	Average Temperature (°C)	: 25	2	Barometric Pressure (mmHg)	: 734
3	Relative Humidity (%)	: 57	4	Weather Condition	Clear
5	Longitude	: 84°37'7.83"E	б	Latitude	: 23°33'30.72"N

Discipline : Chemics	al	Group : Atmospheric Pollution			
Parameter Unit		Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	µg/m ³	1S 5182 (Part-23): 2006; RA2022	56	100 (24hrs)	
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24); 2019	23	60 (24hrs)	
Sulphur Di-Oxide (SO1)	µg/m ¹	IS 5182 (Part-2): 2001; RA2022	6.1	80 (24hrs)	
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	22.4	80 (24hrs)	
Ozone (O ₁)	µg/m ³	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)	
Ammonia (NH1)	µg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)	
Lead (Pb)	µg/m ³	IS 5182 (Part-22): 2004; RA2019	0.007	1 (24hrs)	
Nickel (Ni)	ng/m ³	IS 5182 (Part-26):2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m ³	ELES/AIR/SOP/01	<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 shown in the Test Report refer or relates only to the job/eralysis 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 of data provided on the report, investify the information which is provided by the client. The Report cannot be rependueed except in full and any part of the report is not taken out of context, without prior written approved 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 unauthorized alreadon & fabrification of the content or appearance of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Other states will be accepted, the entire Time schedule be done within 15days from the Onte of Test Report released/assed. After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is in 24nours format. Abbreviation asid, WA (Not Applicable), BDL (Below Detection Limit), LDL (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.elespl.co.in

TEST REPORT					
Test Report No.	: ELES/RNC/2023/4422	Report Release Date	: 22.11.2023	_	
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023		

Discipline : Chemi	cal	Group :	Group : Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C ₈ H ₆)*	µg/m ³	IS 5182 (Part-11)2006;RA2017	<1.0	05(Annual)	
Benzo-(a)-Pyrene*	ng/m ³	IS 5182 (Part-12)2004;RA2019	<0.5	01(Annual)	

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



** 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 pro-approved format. The results above in the Test Report reflects the indingue done by the Laboratory on 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 price written approval of the Laboratory. The Report is full or in part shall not be published, advertise, used far any legal actions talees prior permission has been excured from the Management of the Laboratory. Attention is drown 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 fulliest extent of the samples are retained for States 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); BDL (Below Detection Limit); LDL (Lower Detection Limit).



PLOT NO-30, MANSARDVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (IHARKHAND) 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/2023/4423	Report Release Date	: 22.11.2023		
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023		
CUSTOMER DET	AILS	SAMPLE DETAILS			
Customer Name	2 Minerals & Minerals Limited	Sample Ref. No. Location	 ELES/RNC/2023/AA/3949 Near Mine Quarry No-K5 Pakhar (109,507 ha) Bauxite Mine 		
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 16.10.2023 to 17.10.2023 : 28.10.2023		

Mines Status Period of Analysis	: Operational		: 28.10.2023 : Ambient Air : ELES/DOC/SMPL/02	
Period of Analysis	: 28.10.2023 to 09.11.2023	Sample Drawn By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved	

1	Average Temperature (°C) : 25	2	Barometric Pressure (mmHg)	: 734
3	Relative Humidity (%) : 57	the second se	Weather Condition	Clear
S	Longitude : 84°37'21.94"E	5	Latitude	: 23°33'14.59"N

Discipline : Chemics	Discipline : Chemical Group :			Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022	52	100 (24hrs)
Particulate Matter (PM2.5)	μg/m ³	IS 5182 (Part- 24): 2019	27	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	µg/m³	IS 5182 (Part-2): 2001; RA2022	5.9	80 (24hrs)
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	22.8	80 (24hrs)
Ozone (O ₃)	µg/m ³	IS 5182 (Part-9); 1974; RA2019	<20.0	100 (8hrs)
Ammonia (NH3)	µg/m³	IS 5182 (Part-25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)
Lead (Pb)	µg/m ³	IS 5182 (Part-22): 2004; RA2019	0.008	1 (24hrs)
Nickel (Ni)	ng/m³	IS 5182 (Part-26):2020	<6.0	20 (Annual)
Arsenic (As)	ng/m ³	ELES/AIR/SOP/01	<2.0	06 (Annual)

Page 1 of 2

The Desenant 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 shown in the Test Report refer or relates only to the job/inalysis done by the Laboratory only. The information stated on the Test Report refers the findings done by the Laboratory at the tare of involvement only and within the limits of client's instructions. The Laboratory is responsible for all the information or data provided by the client. In the report is not fixed on the tare of involvement only and within the limits of client's instructions. The Laboratory is responsible for all the information or data provided by the client. The Report earned be reproduced except in full and any part of the report is not liken out of context, without prior orithen approval of the Laboratory. The Report is full or in part shall not be published, advertise, ased 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 anotherized alteration & fabsification of the context of the Test Report is unlawrial 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 badies 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 a 24hour farmat. Abbreviation used: N/A (Not Applicable); RDF (Below Detection Limit); LDF (Lower Detection Limit).



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

ENGINEERING SERVICES PVT. LTD.

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

	TH	ST REPORT		
Test Report No.	: ELES/RNC/2023/4423	Report Release Date	: 22.11.2023	
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023	

Discipline : Chemi	cal	Group : Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (C6H6)*	µg/m ³	IS 5182 (Pan-11)2006;RA2017	<1.0	05(Annual)
Benzo-(a)-Pyrene*	ng/m ¹	IS 5182 (Part-12)2004;RA2019	<0.5	01(Annual)

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



****End of Report****

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

Page 2 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 furnat. The results shown in the Test Report refer or relates only in the job/inalysis done by the Laboratory only. The information stated on the Test Report referes 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 excepts, 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 Minagement of the Laboratory. Attention is drawn to the limitation of filebility, compensation and jurisdiction issues. Any unauthorized alteration & falsification of the out of relations of the Date of relations from Regulatory bodies are to be retained as specified Any type of Observations or Complexits regarding the Report 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 Complexits regarding the Reports shall be done within 15days from the Date of Test Report is in 24bours firmed. Abbreviation used N/4 (Not Applicable), BDL (Below Detection Limity), LDL (Lower Detection Limit).



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

INGINEERING SERVICES PVT. LTD.

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

: Sealed & Preserved

TEST REPORT					
Test Report No.	: ELES/RNC/2023/4424	Report Release Date	: 22.11,2023		
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03,2023		
CUSTOMER DET.	AILS	SAMPLE DETAILS			
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Location	ELES/RNC/2023/AA/3950 Pakhar Loading Area Pakhar Loading Area		
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	Pakhar (109.507 ha) Bauxite Mine : 16.10.2023 to 17.10.2023 : 28.10.2023 : Ambient Air		
Mines Status	: Operational	Sampling Procedure	: ELES/DOC/SMPL/02		
Period of Analysis	: 28.10.2023 to 09.11.2023	Sample Drawn By Sample Condition	: ELES Pvt. Ltd.		

M	ETEOROLOGICAL INFOI	RMATION			
1	Average Temperature (*C)	: 25	2	Barometric Pressure (mmHg)	: 734
3	Relative Humidity (%)	3 57	4	Weather Condition	: Clear
5	Longitude	:84°36'53.77"E	6	Latitude	: 23°33'15.01"N

Sample Condition

Discipline : Chemic	al	Group : 4	Group : Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	µg/m³	IS 5182 (Part-23): 2006; RA2022	67	100 (24hrs)	
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part-24): 2019	36	60 (24hrs)	
Sulphur Di-Oxide (SO2)	µg/m³	IS 5182 (Part-2): 2001; RA2022	10.2	80 (24hrs)	
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	23.8	80 (24hrs)	
Ozone (O ₃)	µg/m ³	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)	
Ammonia (NH ₂)	µg/m³	1S 5182 (Part-25): 2018	<10,0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)	
Lead (Pb)	µg/m ²	IS 5182 (Part-22): 2004; RA2019	0.015	1 (24hrs)	
Nickel (Ni)	ng/m ³	1S 5182 (Part-26):2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m ¹	ELES/AJR/SOP/01	<2.0	06 (Annual)	

Page 1 of 2

The Document statch is Test Report, is issued by the Laboratory unifer General Terms and Conditiona, only on Company letter head in pre-approved format. The results shown in file Test Report refer or relates only in 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 fall 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 fundity, compensation and jurisdiction issues. Any unauthorized 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 10days 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 formal. Abbreviation used; N/A (Not Applicable), BDL (Below Detection Limit); LDL (Lower Detection Limit).



PLOT NO-30, MANSARDVAR ENCLAVE, TUPUDANA NATIA, RANCHI-834003 (IMARKHAND) GST NO:- 20AAECE9713D124

ENGINEERING SERVICES PVT. LTD.

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

	T	ST REPORT	
Test Report No.	: ELES/RNC/2023/4424	Report Release Date	: 22,11,2023
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023

Discipline : Chemical		Group :	Group : Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C ₄ H ₆)*	µg/m ³	1S 5182 (Part-11)2006;RA2017	<1.0	05(Annual)	
Benzo-(a)-Pyrene*	ng/m ¹	IS 5182 (Part-12)2004;RA2019	<0.5	01(Annual)	

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



****End of Report****

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

Page 2 of 2

The Document stand in Test Report, is issued by the Laboratory under General Tarms and Conditions, only on Company letter head in pre-approved formal. The results shown in the Test Report reflects the indings 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 limiters 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 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 83/005 (IMARKHAND) GST ND-20AA5CE87130124

NGINEERING SERVICES PVT. LTD.

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

	TEST	REPORT	
Test Report No.	: ELES/RNC/2023/4425	Report Release Date	: 22.11.2023
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023
CUSTOMER DET/	AILS	SAMPLE DETAILS	
Customer Name	: Hindatco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2023/AA/3951 : Near Bunglapart Village Pakhar Bauxite Mine
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure	: 14.10.2023 to 15.10.2023 : 28.10.2023 : Ambient Air : ELES/DOC/SMPL/02
Mines Status	Operational	Sample Drawn By	: ELES Pvt. Ltd.
Period of Analysis	: 28.10.2023 to 09.11.2023	Sample Condition	: Sealed & Preserved

METEOROLOGICAL INFORMATION

1	Average Temperature (°C) : 25	2	Barometric Pressure (mmHg) :734	
3	Relative Humidity (%) : 57	4	Weather Condition	: Clear	

Discipline : Chemica	1	Group : Atmospheric Pollution			
Parameter Unit		Test Protocol	Result	Regulatory Limit	
Particulate Matter (PMI0)	µg/m³	IS 5182 (Part-23); 2006; RA2022	46	100 (24hrs)	
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	22	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	5.5	80 (24hrs)	
Nitrogen Di-Oxide (NO1)	$\mu g/m^3$	IS 5182 (Part-6): 2006; RA2022	19.7	80 (24hrs)	
Ozone (Ø ₃)	µg/m ³	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)	
Ammonia (NH2)	µg/m ¹	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoside (CO)	mg/m ³	IS 5182 (Part-10); 1999; RA2019	<1.0	2 (8hrs)	
Lead (Pb)	µg/m³	IS 5182 (Part-22): 2004; RA2019	<0.002	1 (24hrs)	
Nickel (Ni)	ng/m ³	IS 5182 (Part-26):2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m ²	ELES/AJR/SOP/01	<2.0	06 (Annual)	

Page 1 of 2

The Disament stand as Test Report, is issued by the Laboratory under Geronil Tensis and Corditions, only on Company letter head in pre-approved format. The results also tails in the Test Report refer or relates only to the jobranity states done by the Laboratory with. The information stated on the Test Report refers the findings done by the Laboratory at the time of involvement only and within the finites of cleant's respondenced ensets in full and any part of the report is not taken out of context, without provescept the information which is provided by the close. The Report earned the reportions The Laboratory is responsible for all the information or data provided on the report, except the information which is provided by the close. The Report earned the reportions the taboratory is responsible for all the information or data provided on the report, except the information which is provided by the close. The Report earned the reportions, used for any faul actions unless prior permission has been secured from the Management of Ori Laboratory. Attention is drawn to the homation of Hability, compensation and provided in light for all other tenders and of the report of the laboratory of the Test Report. Since the falsification of the option of approace of the Test Report is allowed in the homation of Hability, compensation and provided in 10days from the Data of "oldersensation of the Test Report is allowed at different may be protected in the fulliest extent of the low with the samples are related for the gradient of the data of the Report Size of "oldersensation" of the Test Report. The Report for Report set to be remained as specified. Any cape of Observations of Compensition to Reports Size of our without Educe of Test Report The samples from Reports shall be done without Educe of Test Report the second test period shall before an enough cose will be scepted. The only the Time satedulation manufaction of the test Report is allowed for any test for the term period shall before an enough cose will be scepted.



ENVIRONMENTAL LABORATORIES &

PLOT NO-50, MANSAROVAR ENCLAVE, TEIPUDANA HATSA, RANCHI-834003 (JHARKHAND) GST NG:-10AAECE97130124

INGINEERING SERVICES PVT. LTD.

Email: info@elespl.co.in , eles.ranchi@arnall.com Phone no.: 0551-2290103 Website : www.elaspl.co.in

	<u>T1</u>	STREPORT		
Test Report No.	: ELES/RNC/2023/4425	Report Release Date	: 22.11.2023	
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023	

Discipline : Chemical		Group : Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (C6Ht)*	µg/m ³	IS 5182 (Part-11)2006;RA2017	<1.0	ØS(Annual)
Benzo-(a)-Pyrene*	ng/m ³	IS 5182 (Part-12)2004;RA2019	<0.5	01(Annual)

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



Ead of Report**

Authorised Signatory

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

Page 2 of 2

The Document stated as Test Report, is issued by the Libboratory under General Terms and Conditions, only on Company lotter head in pro-approved format. The results above in the Test Report reflects the findings date by the Laboratory at the close of involvement only and witten the limits of closes's instructions. The Laboratory is responsible for all the information or data provided on the report, except the information which is pravided by the client. The Report connor 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 logal actions unless prior permission has been secured from the Management of the Laboratory. Attention is chosen to die limitation of liability: compensation and jurisidiction issues. Any insuthanized alteration & falsification of the context or appearance of the Test Report is industrial and offenders may be presected to the folloss extent of the law. All the samples are retained for 30days from the Date of release/issue of the Text Report. The samples from Regulatory bodies are in he retained as specified. Any type of Observations of Complaints regarding the Reports shall he done within 15days from the Date of Test Report released/issued. After the time period stated before, on complaints will be accepted. The entire Tune schedult mentioned in Ten Report & in 24bdurs format, Abbreviation used: N/A (Not Applicable), BDF, (Below Detection Limit), [28, [Lower Detection Limit]]



PLDT NO-30, MANSAROVAR ENCLAVE, TÜRÜDANA HATIA, RANCHI-BINOGI (JHARNHAND) GST NO- 20AAECEETISDIM ENGINEERING SERVICES PVT. LTD.

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

	TH	STREPORT		
Test Report No.	: ELES/RNC/2023/4426	Report Release Date	; 22,11,2023	
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023	

CUSTOMER DET/	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2023/AA/3952 : Yatri Shed (Near K-10) Pakhar Bauxite Mine
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 14.10.2023 to 15.10.2023 : 28.10.2023
Mines Status	: Operational	Type of Sample Sampling Procedure Sample Drawn By	 Ambient Air ELES/DOC/SMPL/02 ELES Pyt. Ltd.
Period of Analysis	÷28.10.2023 to 09.11.2023	Sample Condition	: Sealed & Preserved

MI	ETEOROLOGICAL INFORMA	TION			
1	Average Temperature (°C) : 25	2	Barometric Pressure (mn	nHg) :734	
3	Relative Humidity (%) : 57	4	Weather Condition	; Clear	

Discipline : Chemics	Discipline : Chemical			Group : Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022	55	100 (24hrs)		
Particulate Matter (PM2.5)	µg/m ¹	IS 5182 (Part- 24): 2019	26	60 (24hrs)		
Sulphur Di-Oxide (SO2)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	5.9	80 (24hrs)		
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	19.1	80 (24hrs)		
Ozone (O3)	µg/m²	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)		
Ammonia (NH3)	µg/m ³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)		
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)		
Lead (Pb)	µg/m ³	IS 5182 (Part-22): 2004; RA2019	<0.002	1 (24hrs)		
Nickel (Ni)	ng/m ^t	IS 5182 (Part-26):2020	<6.0	20 (Annual)		
Arsenic (As)	ng/m ¹	ELES/AIR/SOP/01	<2.0	06 (Amual)		

Page 1 of 2

The Decement stated of Tex Report in stated by the Laboratory under General Terms and Conditions, only on Company latter head in pro-approved formal. The results down in the Text Report rate or relates only in the jubianalyzin form by the Laboratory only. The information stated on the Text Report reflects the findings done by the Laboratory of the time of involvement only and within the limits of closel's instructions. The Laboratory of responsible for all the information or data provided on the report, ancept the information which is provided by the client. The Report connet 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 fail or in part shall not be published, advertise, used for any legal actions unless prior permission his been secured from the Management of the Laboratory. Amonton is down to be to taken on a bability, componention and junctified in some secure from the Management of the Laboratory. Amonton is down to be to taken on a bability, componentiation and junctified in temples are related from the provided and affenden uses to the fullest extent of the laboratory of complexity of the taken and of the Report relation of the communities affect the Text Report. The sampling and affenden uses to be retained as specified. Any type of Observations will be sampling the Reports shall be down on the Management of the Laboratory of Text Report relations/instead. After the time period to form, on compliants regarding the Report shall be down on the Management of the Isona the Data of Text Report relation/instead. After the time period by the samples are related to the taken the Data of related bases for a field to an of Text Report relation of No. (See Amplification), BDL, (Selver Detection of the completion form).



PLOT NO-30, WANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-934003 (JHARKHAND) RST NO-204AEC197130124 GINEERING SERVICES POP. LTD.

Email: info@elesol.co.in , eles.ranchi@amail.com Phane no: 0651-2290103 Website : www.elespi.co.in

TEST REPORT					
Test Report No.	: ELES/RNC/2023/4426	Report Release Date	: 22.11.2023		
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023		

Discipline : Chemi	ical	Group : Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (C6H6)*	µg/m ³	IS 5182 (Part-11)2006;RA2017	<1.0	05(Annual)
Benzo-(a)-Pyrene*	ng/m ³	IS 5182 (Part-12)2004;RA2019	<0.5	01(Annual)

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



****End of Report****

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

Page 2 of 2

The Document stated as Test Report, is search by the Laboratory under General Turns and Conditions, only on Company letter head in pre-approved format. The usuals shown in the Tast Report refer or relates only in the private/size done by the Laboratory only. The information under on the Tast Report refers the findings done by the Laboratory at the time of involvement only and within the limits of clear's instructions. The Laboratory is responsible for all the information or data provided on the report, except the information which is provided by the cleant. The Report cannot be reputated 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, adventise, used for any legal actions unless provided in the report to the function of the Laboratory. Avertion is drawn to the limitation of liability, compensation and base. Any unauthorized dimension de fabrication of the laboratory and effective of the Tast Report. The samples from Benders may be prosecuted to the fallies extent of the base. All the samples are retained for 30days from the Date of relative States of the Tast Report. The samples from Reports build on offenders may be presented to the fallies extent of the base and for 30days from the Date of relative States of the Tast Report. The samples from Reports and offenders may be presented to specified. Any type of Observations or Compliants regarding the Reports shall be date within tidays from the Date of The Report related/sected. After the time provided as provided before the Date of the Report in 200 (Report Report and the State) State (Report in 10.200 (Report State) in Test Report in 10.200 (The reports shall be date within tidays from the Date of The Report related/sected. After the time provided before, no compliants will be accepted. The entire. Time schedule provided in Test Report in 10.200 (The Report related/sected) After the time provided as previded before, no compliants will be



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST ND> 20A42C897280124 ENGINEERING SERVICES PVF, LTD,

Email: <u>Info@elesol.co.in</u>, <u>eles.runchi@gmall.com</u> Phone no.: 0651-2290103 Website : www.elesol.co.in

	TEST	REPORT	
Test Report No.	: ELES/RNC/2023/4427	Report Release Date	: 22.11.2023
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023
CUSTOMER DET.	AILS	SAMPLE DETAILS	Louis and State
Customer Name Address	: Hindalco Industries Limited : Lohardaga, Jharkhand-835302	Sample Ref. No. Location Sampling Date Sample Received Date Type of Sample	ELES/RNC/2023/AA/3953 Near Utkarmit Rajkiya Prathmik Vidyalaya Bunglapart Village Pakhar Bauxite Mine 14.10.2023 to 15.10.2023 28.10.2023 Ambient Air
Mines Status	: Operational	Sampling Procedure	: ELES/DOC/SMPL/02
Period of Analysis	: 28.10,2023 to 09.11.2023	Sample Drawn By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved

MI	ETEOROLOGICAL INFO	RMATION				
1	Average Temperature (°C)	:25	2	Barometric Pressure (mm	Hg) :734	
3	Relative Humidity (%)	: 57	4	Weather Condition	: Clear	

Discipline : Chemics	ıl	Group : Atmospheric Pollution		
Parameter	Uait	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m³	IS 5182 (Part-23): 2006; RA2022	49	100 (24hrs)
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	25	60 (24hrs)
Sulphur Di-Oxide (SO2)	µg/m ²	IS 5182 (Part-2): 2001; RA2022	5.9	80 (24hrs)
Nitrogen Di-Oxide (NO2)	µg/m ¹	IS 5182 (Part-6): 2006; RA2022	18.5	80 (24hrs)
Ozone (O ₁)	µg/m ³	IS 5182 (Pan-9): 1974; RA2019	<20.0	100 (8hrs)
Ammonia (NH ₁)	µg/m ³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	ing/u ³	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)
Lead (Pb)	µg/m ²	1S 5182 (Part-22): 2004; RA2019	<0.002	1 (24hrs)
Nickel (Ni)	ng/m³	IS 5182 (Part-26):2020	<6.0	20 (Annual)
Arsenic (As)	ng/m ²	ELES/AIR/SOP/01	<2.0	06 (Annual)

Page 1 of 2

The Document stated as Test Report, is issued by the Laboratory under Central Tarres and Conditions, only on Company latter head in pre-approved format. The results undown in the Test Report reflects only to the jobarnalysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory only of the State 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 common the repeatured except in full and any part of the report is not taken out of context, without price origin approval of the Laboratory. The Report is not taken out of context, without price origin approval of the Laboratory. Attention is down to the limitation of likelity, compensation and jurisdicate lower. Any manufactured alteration & falsification of the outer of the Laboratory. Attention is down to the limitation of likelity, compensation and jurisdicate lower. Any manufactured for the Stategories is individed and offenders may be provided to the false state of the line samples are retained for 50days from the Date of reflects lister of the Test Report is unitawided and affenders may be provided to the false state of the law. All the samples are retained for 50days from the Date of reflects of the Test Report is unitawide and affenders may be provided as specified. Any type of Chievanians will be accepted. The entire. This samples from the Report shall be done on the limits of the samples are to be retained as specified, and compliants will be accepted. The entire. This samples that the samples are to be retained as specified, and compliants will be accepted. The entire. This samples that the samples are to be retained as specified. Any type of Chieva and the entire. This samples from the entire. This samples from the entire. This samples are to be retained as specified. Any type of Chieva and the entits. The samples that be done o



PLOT NO-30, MANSANOVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARIOHAND) GST NO-- 2044ECE23130124 NGINEERING SERVICES PVT. LTD.

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

	TE	ST REPORT	
Test Report No.	: ELES/RNC/2023/4427	Report Release Date	: 22.11.2023
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023

Discipline : Chemi	cal	Group : Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C ₆ H ₆)*	µg/m ³	IS 5182 (Part-11)2006;RA2017	<1.0	05(Annual)	
Benzo-(a)-Pyrene*	ng/m ³	IS 5182 (Part-12)2004;RA2019	<0.5	01(Annual)	

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

Reviewed b

****End of Report****

Authorised Signatory

Ph. D. Environmentel Engo ELES Pvt. Ltd. Technical Manager

Page 2 of 2

Two Discussent stated as Test Report, as 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 roler or rolates only to the job/analysis done by the Laboratory only. The information inated on the Test Report reflects the findings done by the Laboratory of the information in the Test Report reflects the findings done by the Laboratory of the information which is provided by the client. The Report cumot be repordised except in full and any part of the report is not taken out of context, without price written approval of the Laboratory. The Report is fail on in part shall not be published, advertise, used for any legal action anless prior permission has been secured from the Date of the Laboratory. Attention is drawn to the limitation of hall billing, compensation and juriadetion issues. Any unautorized dileration & faksification of the laboratory of the test Report is unawall and offenders may be presented to the fullent extend of fields of materials of faksification of the Report of the Test Report is unawall and offenders may be presented to the fullent extend of the billing compensation in the faksification of the Report is unawall and offenders may be presented to the fullent extend of the samples are retained for Johay from the Date of related billing from Reports shall be retained as specified. Any type of Observations of Complexities regarding the Report shall be adverted within 15 days from the Date of Test Report is unautorized. After the time period shall believe, in complexities will be scottfied. The retained for Johays from the Date of Test Report is in 24binum format. Abbreviation used N/A (Noi Applicable), BOU (Rehow Detection Limit) 1.00. (Lower Detection Limit)



EGÓT NO-30, M=ESAROVAR ENCLEVE TURUDANO HAIVA, RANCHI-ROBUGE (HARRHAND) EST NO-20048559280120

all had a second to be also as and 1000

Email: <u>Intel@elespl.co.in</u>, <u>eles.ronchi@igmail.com</u> Phone no.: 0651-2290103 Website - www.slaspl.ce.in

	TEST	REPORT	
Test Report No.	: ELES/RNC/2023/4428	Report Release Date	: 22.11.2023
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023
CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name Address	: Hindalco Industries Limited : Lohardaga, Jharkhand-835302	Sample Ref. No. Location	 ELES/RNC/2023/AA/3954 Near Utkarmit Rajkiya Prathmik Vidyalaya Dumrapart Village Pakhar Bauxite Mine
	: Lonaroaga, marknands6555502	Sampling Date Sample Received Date	14.10.2023 to 15.10.2023 28.10.2023

Mines Status	: Operational	Type of Sample Sampling Procedure	Ambient Air ELES/DOC/SMPL/02
Period of Analysis	: 28.10.2023 to 09.11.2023	Sample Drawn By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved

MI	ETEOROLOGICAL INFORMATION				
1	Average Temperature (%C) : 25	2	Barometric Pressure (mm	Hg) : 734	
3	Relative Humidity (%) : 57	4	Weather Condition	: Clear	

Discipline : Chemica	al	Group : Atmospheric Pollution		
Parameter	Uait	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m³	IS 5182 (Part-23): 2006; RA2022	55	100 (24hrs)
Particulate Matter (PM2.5)	µg/m ³	15 5182 (Part- 24): 2019	20	60 (24hrs)
Sulphur Di-Oxíde (SO ₂)	μg/m³	15 5182 (Part-2); 2001; RA2022	5.7	80 (24hrs)
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006: RA2022	10.5	80 (24hrs)
Ozone (O ₃)	µg/m ³	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)
Ammonia (NH ₃)	µg/m ¹	IS 5182 (Part- 25): 2018	<10,0	400 (24hrs)
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)
Lead (Pb)	µg/m ¹	IS 5182 (Part-22): 2004; RA2019	<0.002	1 (24hrs)
Nickel (bli)	ng/m ^k	IS 5182 (Part-26):2020	<6.0	20 (Annual)
Arsénic (As)	ng/m ³	ELES/AIR/SOP/01	<2.0	06 (Annual)

Page 1 of 2

The Decament stated as Test Report, is issued by the Laboratory under Geograf Terms and Conditions, only on Company letter hand in pro-approved formal. The residue shows 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 pirt of the report is not taken out of notivest, without prior written approval of the Laboratory. The Report in full or in part shall this 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 formation of liability, compensation and justification class. Any unsubtrized alteration & fullification of the content or appearance of the Test Report is unlessful and afferder may be prosecued to be fullest extent of the laboratory and the test to be provided from the be provided at a specified. All the sceptises are required for 50Mays from the Departs and as specified. Any type of Observators will be accepted. The entire Time schedule be done within [5days from the Data of Test Report referee/function on set [6days] (2days (2days) from the Data of Test Report referee/function of the respectator). The schedule the other the formation at the best report of the test of the schedule the respectatory by the client of the test of the respectatory. The Beger results and attender may be prosecued to the function of the test of the test Report is unlessful and affer dee to be related as appendixed here to be available to the test of the test Report. The schedule the Report by the data of the Report schedule the test relation of the test Report is the function of the report is the test of the test Report is the t

e Eneleonnum Gaes Furne



FLOT NO-36, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834063 (JHARKHAND) 557 NO:-2048ECE97130154

NGINEERING SERVICES PVT. LTD.

Email: Info@elesol.co.in : eles.ranchl@pmall.com Phone no.: 0651-2250103 Website : www.elespl.co.in

	11	ST REPORT		
Test Report No.	: ELES/RNC/2023/4428	Report Release Date	: 22.11.2023	
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023	

Discipline : Chemical		Group : Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (C _a H _a)*	µg/m ¹	IS 5182 (Part-11)2006;RA2017	<1.0	05(Annual)
Benzo-(a)-Pyrene*	ng/m ⁴	15 5182 (Part-12)2004;RA2019	<0.5	01(Annual)

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



****End of Report****

Authorised Signatory Ir Deependra Kumar Sinha Pb Tr Envronmental Engg ELES Pvt. Ltd. Technical Managel

Page 2 of 2

The Bocument stand at Teen Report, in issued by the Laboratory under General Terms and Coulditions, only on Company John head in pre-approved domas. This 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 to 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 context, without price withen approval of the Laboratory. The Report is fail or in part shall not be poblished, adventue, used for any legal actions unlies prior permission has been secured from the Management of the Laboratory. Attention is driven to the limitation of Tability, compensation and participation essays. Any unsubtrained alteration & fabilitation of the content or approximate of the Teen Report is unlikeling and affendent may be provided to the fullest estent of the law. All the samples are retained for 30 days from the Date of release lasse of the Teen Report. The tamples from Regulatory Indias are to be retained as specified. Any type of Chievantion will be accepted. The softward laboratory indias are solved in the time prind stated before, no compliants will be accepted. The context from schedules is also within 15days from the Date of Test Report released issued. Net Applicable, 2001. (Bulew Dateson Limit) 1.01. (Lawer Detection Limit).

ENVIRONMENTAL LABORATORIES & ENGINEERING SERVICES PVT.LTD.

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

Pakhar (109.507) Bauxite Mine-Environmental Monitoring Report

November- 2023


CONTENT

Miner	als & Minerals : Pakhar (109.507)	Environmental Monitoring Report	November- 2023
	and the second se	Pakhar (109.507)	
	AMBIENT AIR QUALITY- CORE	ZONE	
1	Near Mine Quarry No-K7		
2	Near Mine Quarry No-K9		
3	Near Mine Quarry No-K5		
4	Pakhar Loading Area		
	AMBIENT AIR QUALITY- BUFFI	ER ZONE	
1	Near Bunglapart Village		
2	Yatri Shed (Near K-10)		
3	Near Utkarmit Rajkiya Prathmik Vidy	alaya Bunglapart Village	
4	Near Utkarmit Rajkiya Prathmik Vidy	alaya Dumrapart Village	
	DRINKING WATER		





5

Longitude

ENVIRONMENTAL LABORATORIES &

PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 [JHARKHAND] GST NO:- 204AECE97130124

: 84º36'43,86"E

ING SERVICES PVT, LTD.

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



	TEST	L BEDO	DRT		
Test Report No.	: ELES/RNC/2023/4764	Rep	ort Release Date	: 21.12.2023	
Work Order No.	: M&M/23-24/01	Wo	rk Order Date	: 31.03.2023	
CUSTOMER DET	AILS	SAM	APLE DETAILS		
Customer Name	: Minerals & Minerals Limited	Sam	ple Ref. No.	ELES/RNC/2023/AA/4234	
		Loca	ation	: Near Mine Quarry No-K7 Pakhar (109.507 ha) Bauxite Mine	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample		16.11.2023 to 17.11.2023	
	a second s			24.11.2023	
	1			Ambient Air	
Mines Status	: Operational		pling Procedure	ELES/DOC/SMPL/02	
Period of Analysis	: 24.11.2023 to 08.12.2023	Sample Drawn By		ELES Pvt. Ltd.	
24.11.2023 (0.00,12.2023		Sample Condition		: Sealed & Preserved	
METEOROLOGIC	AL INFORMATION	-			
1 Average Temper	rature (°C) : 22	2	Barometric Pressi	re (mmHg) 2734	
3 Relative Humidi	ty (%) : 54	4	Weather Conditio	AND IN THE OWNER OF THE OWNER OWNER OF THE OWNER	
P	and the second sec		and the second se		

6

Latitude

Discipline : Chemic	tmospheric	eric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022	67	100 (24hrs)
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	33	60 (24hrs)
Sulphur Di-Oxide (SO2)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	7.1	80 (24hrs)
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	22.8	80 (24hrs)
Ozone (O ₁)	µg/m ³	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)
Ammonia (NH3)	µg/m ³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)
Lead (Pb)	µg/m³	IS 5182 (Part-22): 2004; RA2019	0.012	I (24hrs)
Nickel (Ni)	ng/m ^h	IS 5182 (Part-26):2020	<6.0	20 (Annual)
Arsenic (As)	ng/m ³	ELES/AIR/SOP/01	<2.0	06 (Annual)

Reviewed by

Authorised Signatory

****End of Report****

ar Sinha D Courie

: 23°33'29.12"N

The Document stated as Test Repair, is insted by the Laboratory Lader General Terms and Conditions, only on Company letter head or 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 fladings 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 Date of release/assae of the Test Report The samples from Regulatory bothes are to be retained as specified. Any type of Observations or Complaints regarding the Report shall be date: within 15days from the Date of Test Report released/asseed. After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is in 24boors format. Alterviation used: N/A (Not Applicable), BDL (Below Detection Limit), LDL (Lower Detection Limit).



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

GINEERING SERVICES PVT. LTD.

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

	TES	T REPO	ORT		
Test Report No.	: ELES/RNC/2023/4764	Rep	ort Release Date	: 21.12.2023	
Work Order No.	: M&M/23-24/01	Wor	k Order Date	: 31.03.2023	
CUSTOMER DET	AILS	SAN	IPLE DETAILS		
Customer Name Address Mines Status	 Minerals & Minerals Limited Lohardaga, Jharkhand-835302 Operational 	Loca Sam Sam Type Sam	pling Date ple Received Date of Sample pling Procedure	: ELES/RNC/2023/AA/4234 : Near Mine Quarry No-K7 Pakhar (109.507 ha) Bauxite Mine : 16.11.2023 to 17.11.2023 : 24.11.2023 : Ambient Air : ELES/DOC/SMPL/02	
Period of Analysis	: 24.11.2023 to 08.12.2023		ple Drawn By ple Condition	: ELES Pvt. Ltd. : Sealed & Preserved	
METEOROLOGIC	CAL INFORMATION	-			
I Average Tempe		2	Barometric Pressu	re (mmHg) : 734	
3 Relative Humid	ity (%) 54	4	Weather Condition		
5 Longitude	: 84°36'43,86"E	6	Latitude	: 23°33'29.12"N	

Discipline : Chemical Group :			Atmospheric Pollution	
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (C ₆ H ₆)*	µg/m ³	IS 5182 (Part-1))2006;RA2017	<1.0	05(Annual)
Benzo-(a)-Pyrene*	ng/m ³	IS 5182 (Part-12)2004:RA2019	<0.5	01(Annual)

arks: (*)-Parameters are outsourced to other Lab.



**** End of Report****

Authorised Signatory Dr. Deependra Kumar Sinha Ph. D Environmental Engg. ELES PVI. Ltd. Technical Managhr

Page 1 of 1

The Document stated in 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 fall and any part of the report is not taken out of cantext, 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 luminition of liability, compensation and jurisdictices issues. Any unsufficient alteration & falsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fulles, extent of the law. All the samples are retained for 30days from the Date of release/ssue of the Test 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/assued After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is in 14hours formut, Abbreviation used: N/A (Not Applicable), BDL (Below Detection Limit): UDL (Lower Detection Limit)



5

Longitude

ENVIRONMENTAL LABORATORIES

ET DEDOI

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

: 84°37'7.83"E

ERING SERVICES PVT. LTD.

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



-	TEST	REPO	DRT		
Test Report No.	: ELES/RNC/2023/4765	Rep	ort Release Date	: 21.12.2023	
Work Order No.	: M&M/23-24/01	Wei	rk Order Date	: 31.03.2023	
CUSTOMER DETA	AILS	SAN	APLE DETAILS		
Customer Name Address	: Minerals & Minerals Limited : Lohardaga, Jharkhand-835302	Sample Ref. No. Location Sampling Date Sample Received Date Type of Sample		: ELES/RNC/2023/AA/4235 : Near Mine Quarry No-K9 Pakhar (109,507 ha) Bauxite Mine : 16.11.2023 to 17.11.2023 : 24.11.2023 : Ambient Air	
Mines Status) Operational		pling Procedure	: ELES/DOC/SMPL/02	
Period of Analysis	124.11.2023 to 08.12.2023		ple Drawn By ple Condition	: ELES Pvt. Ltd. : Sealed & Preserved	
METEOROLOGIC	AL INFORMATION	-			
1 Average Temper		2	Barometric Press	are (mmHg) : 734	
3 Relative Humidi	ty (%) : 54	4	Weather Conditio		

6

Latitude

Discipline : Chemica	Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022	64	100 (24hrs)
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	28	60 (24hrs)
Sulphur Di-Oxide (SO2)	µg/m ³	IS 5182 (Part-2); 2001; RA2022	6.9	80 (24hrs)
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	24.1	80 (24hrs)
Ozone (Q ₃)	µg/m ³	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)
Ammonia (NH3)	µg/m ³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m [*]	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)
Lead (Pb)	µg/m ³	IS 5182 (Part-22): 2004; RA2019	0.010	1 (24hrs)
Nickel (Ni)	ng/m ⁸	IS-5182 (Part-26):2020	<6.0	20 (Annual)
Ansenie (As)	ng/m [#]	ELES/AIR/SOP/01	<2.0	06 (Annual)

Reviewed by

Authorised Signatory

: 23°33'30.72'N

****End of Report****

Dr. Deependra Kumar S

Page 1 of 1

Ph. D Environmental Engg. The Document stated as Yest-Report, is assued by the Laboratory under General Terms and Conditions, only on Congress Jetter pand in pre-approved format. The results shown in the Test Report refer or relates only in the job/analysis done by the Laboratory only. The information stated on the Test Report references including showe 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 prim written appraval of the Laboratory. The Report in full or in part shall not be published, advertise, used for any legal actions unless prior permassion has been accured from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any anoutherized alteration & falsification of the content or appearance of the Test Report is unlawful and offenders may be presecuted to the fullest extent of the law. All the samples are retained for 30 days from the Date of release) sue of the Test Report. The samples from Regulatory budies 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 34hours 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

VGINEERING SERVICES PVT. LTD.

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

Test Report No.	: ELES/RNC/2023/4765	Report Release Date	; 21.12,2023
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023
CUSTOMER DET.	AILS	SAMPLE DETAILS	
Customer Name Address	: Minerals & Minerals Limited : Lohardaga, Jharkhand-835302	Sample Ref. No. Location Sampling Date Sample Received Date Type of Sample	 ELES/RNC/2023/AA/4235 Near Mine Quarry No-K9 Pakhar (109.507 ha) Bauxite Mine 16.11.2023 to 17.11.2023 24.11.2023 Ambient Air
Mines Status	: Operational	Sampling Procedure	: ELES/DOC/SMPL/02
Period of Analysis	: 24.11.2023 to 08.12.2023	Sample Drawn By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved

	Average Temperature (°C)	: 22	2	Barometric Pressure (mmHg)	: 734
_	Relative Humidity (%)	: 54	4	Weather Condition	: Clear
5	Longitude	: 84°37'7.83"E	6	Latitude	: 23°33'30.72"N

Discipline : Chem	ical	Group : Atmospheric Pollution				
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Benzene (C _b H _b)*	µg/m ¹	IS 5182 (Part-11)2006;RA2017	<1.0	05(Annual)		
Benzo-(a)-Pyrene*	ng/m	IS 5182 (Part-12)2004;RA2019	<0.5	01(Annual)		

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



**** End of Report****

Authorised Signatory Pr. Deependra Kumar Sinna Ph. D Environmental Engg. St. Flvt. Ltd. Technical Managers

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 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 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 is full or in part shall not be published, advortise, 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 unstatherized alteration & falsification of the Oate of release/issue of the Test Report is unalwall and offenders may be prosecuted to the fullest cuent of the law. All the samples are retained for Bodys from the Date of release/issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Conservations will be accepted. The entire Time schedule mentioned by the date within 15days from the Date of Test Report released/issue of NA (Not Applicable), BDL (Below Detection Limit), LDL (Lower Detection Limit).



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

CIN: U74999JH2018PTC011125

NGINEERING SERVICES PVT. LTD

Email: info@elespl.co.in , eles.ranchi@amail.com Phane na.: 0651-2290103 Website : www.elespl.co.in



: ELES/RNC/2023/4766	Rep	ort Release Date	: 21.12.2023
: M&M/23-24/01	Wor	k Order Date	: 31.03.2023
AILS	SAN	IPLE DETAILS	
: Minerals & Minerals Limited : Lohardaga, Jharkhand-835302	Loca Samp Samp Type	tion bling Date ble Received Date of Sample	: ELES/RNC/2023/AA/4236 : Near Mine Quarry No-K5 Pakhar (109.507 ha) Bauxite Mine : 16.11.2023 to 17.11.2023 : 24.17.2023 : Ambient Air
: Operational			
: 24.11.2023 to 08.12.2023			: ELES Pvt. Ltd. : Sealed & Preserved
: 24,11,2023 to 08.12.2023	Sample Drawn By Sample Condition		: ELES/DOC/SMPL/02 : ELES Pvt. Ltd.
	TA	Description of the local sectors of the local secto	
	: M&M/23-24/01 ILS : Minerals & Minerals Limited : Lohardaga, Jharkhand-835302 : Operational	: M&M/23-24/01 Work ULS SAM : Minerals & Minerals Limited Sample : Lohardaga, Jharkhand-835302 Sample : Operational Sample : 24.11.2023 to 08.12.2023 Sample AL INFORMATION Sample	: M&M/23-24/01 Work Order Date ULS SAMPLE DETAILS : Minerals & Minerals Limited Sample Ref. No. Location : Lohardaga, Jharkhand-835302 Sampling Date Sample Received Date Type of Sample : Operational Sampling Procedure Sample Drawn By Sample Condition : 24.11.2023 to 08.12.2023 Sample Condition

-	Average Temperature ("C)	: 22	2	Barometric Pressure (mmHg)	: 734
3	Relative Humidity (%)	: 54	4	Weather Condition	: Clear
5	Longitude	: 84°37'21,94"E	6	Latitude	: 23°33'14.59"N

Discipline : Chemics	pline : Chemical Group : Atmospheric Pollu		Pollution	
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022	59	100 (24hrs)
Particulate Matter (PM2.5)	$\mu g/m^3$	IS 5182 (Part- 24): 2019	30	60 (24hrs)
Sulphur Di-Oxide (SO2)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	6.3	80 (24hrs)
Nitrogen Di-Oxide (NO2)	µg/m ³	15 5182 (Part-6): 2006; RA2022	23,1	80 (24hrs)
Ozone (O ₃)	µg/m ⁷	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)
Ammonia (NH ₃)	ug/m ³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs).
Lead (Pb)	µg/m ⁹	IS 5182 (Part-22): 2004; RA2019	0.011	1 (24hrs)
Nickel (Ni)	ng/m ³	IS 5182 (Part-26):2020	<6.0	20 (Annual)
Arsenic (As)	ng/m ⁴	ELES/AIR/SOP/01	<2.0	06 (Annual)

Reviewed by

Authorised Signatory

**** End of Report****

Dr. Deependra Kumar Sinha

Page 1 of 1

Ph. D Environmental Engg.

The Document stated as Text Report in issued by the Laboratory under General Terms and Conditions, only on Cancerdy Reter hald. Recomposed an array of the results shown in the Text Report refer or relates only to the job/analysis done by the Laboratory only. The information stated in the Text 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 reports of the Laboratory. The Report in fall or in part shall not be published, advective, used for any legal actions unless prior permission has been secured item the Management of the Laboratory. Attention is drawn to the limitation of limbility, competition and jurisdiction issues. Any unauthorized alteration & faksification of the Date of release/issue of the Text Report. The samples from Regulatory bodies are to be remained 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 = 24hours format. Albeevation used: N/A (Not 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@gmail.com Phone na.: 0651-2290103 Website : www.elespl.co.in

Test Report No.	: ELES/RNC/2023/4766	Report Release Date	: 21.12.2023
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023
CUSTOMER DET/	AILS	SAMPLE DETAILS	
Customer Name Address	: Minerals & Minerals Limited : Lohardaga, Jharkhand-835302	Sample Ref. No. Location Sampling Date Sample Received Date	 ELES/RNC/2023/AA/4236 Near Mine Quarry No-K5 Pakhar (109.507 ha) Bauxite Mine 16.11.2023 to 17.11,2023 24.11.2023
Mines Status	: Operational	Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02
Period of Analysis	; 24.11.2023 to 08.12.2023	Sample Drawn By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved

1	Average Temperature (°C)	: 22	2	Barometric Pressure (mmHg)	: 734
_	Relative Humidity (%)	: 54	- 4	Weather Condition	; Clear
5	Longitude	:84°37'21.94*E	6	Latitude	: 23°33'14.59"N

Discipline : Chem	ical	Group :	Atmospherie	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (C6H6)*	µg/m ³	IS 5182 (Part-11)2006;RA2017	<1.0	05(Annual)
Benzo-(a)-Pyrene*	ng/m ³	LS 5182 (Part-12)2004;RA2019	<0.5	01(Annual)

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

Reviewed by

Authorised Signatory

Page 1 of 1

**** End of Report****

The Document stated as Test Report, is issued by the Laboratory lander General Terms and Conditions, only on Company latter head in pro-approval format. The results shown in the Test Report refer or relines only to the johanalysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the information stated on the Test Report reflects the findings done by the Laboratory at the information stated on the Test Report reflects the findings done by the Laboratory at the information which is provided by the client. The Report cannot be reproduced except in full and only part of the report is not taken out of context, which a prior written approval of the Laboratory. The Report in full or in part shall not be published, advectise, used for any legal actions unless prior permission has been secured from the Management of the Laboratory. Attention is drawn to the limition of liability, compensation and juridiction esses. Any unsultatived alternation & fabsification of the Date of releases from Report as analysing the Report relined as specified. Any type of Observations will be accepted. The entire Time schedule mentional Stary 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 24baars format. Altervation used. N/A (Nor Applicable), BDL (Below Descented Limits), LDI, (Lower Detection Limit).



5

Longitude

ENVIRONMENTAL LABORATORIES &

PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (IHARKHAND) GST NO:- 20AAECE9713D1/4

: 84°36'53.77"E

GINEERING SERVICES PUT, LTD

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



TEST	REPO	DRT	
: ELES/RNC/2023/4767	Rep	ort Release Date	: 21.12.2023
: M&M/23-24/01	Wor	k Order Date	: 31.03.2023
AILS	SAN	IPLE DETAILS	
: Minerals & Minerals Limited : Lohardaga, Jharkhand-835302	Loca	ution pling Date	: ELES/RNC/2023/AA/4237 : Pakhar Loading Area Pakhar (109.507 ha) Bauxite Mine : 16.11.2023 to 17.11.2023
: Operational	Type Sam	of Sample pling Procedure	: 24.11.2023 : Ambient Air : ELES/DOC/SMPL/02
: 24.11.2023 to 08.12.2023			: ELES Pvt. Ltd. : Sealed & Preserved
AL INFORMATION			
and the second se	2	Barometric Press	ure (mmHg) : 734
ty (%) : 54	4	Weather Conditio	
	: ELES/RNC/2023/4767 : M&M/23-24/01 AILS : Minerals & Minerals Limited : Lohardaga, Jharkhand-835302 : Operational : 24.11.2023 to 08.12.2023 AL INFORMATION rature (°C) : 22	: ELES/RNC/2023/4767 Rep : M&M/23-24/01 Wor AILS SAM : Minerals & Minerals Limited Sam Loca : Lohardaga, Jharkhand-835302 Sam Sam Type : Operational Sam : 24.11.2023 to 08.12.2023 Sam Sam AL INFORMATION rature (°C) : 22 2 2	: M&M/23-24/01 Work Order Date AILS SAMPLE DETAILS : Minerals & Minerals Limited Sample Ref. No. Location : Lohardaga, Jharkhand-835302 Sampling Date Sample Received Date Type of Sample : Operational Sampling Procedure Sample Drawn By Sample Condition : 24.11.2023 to 08.12.2023 Sample Condition

6

Latitude

Discipline : Chemical Gi			p: Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	µg/m³	IS 5182 (Part-23): 2006; RA2022	71	100 (24hrs)	
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part-24): 2019	42	60 (24hrs)	
Sulphur Di-Oxide (SO2)	µg/m ³	IS 5182 (Part-2); 2001; RA2022	11.6	80 (24hrs)	
Nitrogen Di-Oxide (NO ₇)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	25.2	80 (24hrs)	
Ozone (O ₃)	µg/m ³	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)	
Ammonia (NH3)	µg/m [®]	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)	
Lead (Pb)	µg/m'	IS 5182 (Part-22): 2004; RA2019	0.011	1 (24hrs)	
Nickel (Ni)	ng/m ³	IS 5182 (Part-26):2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m ³	ELES/AIR/SOP/01	<2.0	06 (Annual)	

Reviewed by

Authorised Signatory

C Environme

****End of Report**** Page 1 of 1

: 23°33'15.01"N

The Document stated as Test Report, in issued by the Laboratory under General Terms and Containions, only on Company letter head in pre-approved formation The results shown in the Tex 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, escept the information which is provided by the olient. The Report cannot be reproduced except in full and any part of the report is not taken out of centext, 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 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 alteration & Subification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted to the fallest extern of the law. All the samples are remined 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 Complaints regarding the Reports shall be done within 15days from the Date of Test Report released issued. After the time period dated before, no complaints will be accepted. The entire Tane schedule mentioned in Test Report is in 24bours formal. Addressing and NA (Not Applicable). BDL (Below Detection Limit); LDL (Lower Detection Limit).



ŝ

Longitude

ENVIRONMENTAL LABORATORIES &

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

: 84°36'53.77"E

NGINEERING SERVICES PVT. LTD.

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

	TEST	REPO	RT	
Test Report No.	: ELES/RNC/2023/4767	Rep	ort Release Date	: 21.12.2023
Work Order No.	: M&M/23-24/01	Wor	k Order Date	: 31.03.2023
CUSTOMER DET.	AILS	SAN	IPLE DETAILS	Same and Same
Customer Name Address	: Minerals & Minerals Limited : Lohardaga, Jharkhand-835302	Loca Sami Sami Type	pling Date ple Received Date of Sample	: ELES/RNC/2023/AA/4237 : Pakhar Loading Area Pakhar (109.507 ha) Bauxite Mine : 16.11.2023 to 17.11.2023 : 24.11.2023 : Ambient Air
Mines Status	: Operational	Sampling Procedure : ELES/DOC/SM		ELES/DOC/SMPL/02
Period of Analysis	: 24.11.2023 to 08.12.2023		ple Drawn By ple Condition	: ELES Pvt. Ltd. : Sealed & Preserved
METEOROLOGIC	AL INFORMATION			
1 Average Temper		2	Barometric Pressi	are (mmHg) : 734
3 Relative Humid	ity (%) = 54	4	Weather Conditio	n : Clear

Discipline : Chem	ical	Group :	Atmospheric	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (C ₆ H ₆)*	µg/m ³	15 5182 (Part-11)2006;RA2017	<1.0	05(Annual)
Benzo-(a)-Pyrene*	ng/m ³	IS 5182 (Part-12)2004;RA2019	<0.5	01(Annual)

б

Latitude

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



****End of Report****

Ph. D Environmental Engg.

: 23°33'15.01"N

Page 1 of 1

The Document sinted as fest Report, is assed by the Laboratory under Georal 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 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 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 not taken out of context, without prior written approval of the Laboratory. The Report is not taken out of 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 limitotic of publicle, compensation and jurisdiction issues. Any unauthorized alteration & fabrification of the content or appearance of the Test Report is unlawful and affecters may be prosecuted to the fabrility compensation and jurisdiction issues. Any unauthorized alteration & fabrification of the content or appearance of the Test Report is unlawful and affecters may be prosecuted to the fabrility of the samples are retained for 30days from the Date of relaxe/usue 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 schedule mentioned in Test Report is in 24bours format. Abbreviation used. N/A (Not Applicable), BDL (Below Detection Limit); LDL (Lawer Detection Limit).

re farvironnent. Save Farm



ENVIRONMENTAL LABORATO

PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-334003 (IHARKHAND) GST NO: 204AECE97130124

CHGDVE FRING SEDVICES

Email: iniv@elespi.co.in , eles.conchi@amail.com Phone no.: 0651-2290103 Website : www.elespl.co.in



	TEST	T REPORT	
Test Report No.	: ELES/RNC/2023/4768	Report Release Date	: 21.12.2023
Work Order No,	: 13612310218	Work Order Date	: 21.04.2023
CUSTOMER DET.	AILS	SAMPLE DETAILS	
Customer Name Address Mines Status	: Hindalco Industries Limited : Lohardaga, Jharkhand-835302 : Operational	Sample Ref. No. Location Sampling Date Sample Received Date Type of Sample Sampling Procedure Sample Drawn By	: ELES/RNC/2023/AA/4238 : Near Bunglapart Village Pakhar Bauxite Mine : 14.11.2023 to 15.11.2023 : 24.11.2023 : Ambient Air : ELES/DOC/SMPL/02 : ELES Pv1_Ltd.
Period of Analysis.	: 24.11.2023 to 09.12.2023	Sample Condition	: Sealed & Preserved

3	Relative Humidity (%)	: 53		4	Weather Condition	ŧ	Clear
	Discipline : Chemic	al		_	Group : /	Atmospheric	Pollution
	Parameter	Unit	т	est P	rotocol	Result	Regulatory Limit
Parti	culate Matter (PM10)	µg/m ³	IS 5182 (Pr	ar1-23): 2006; RA2022	51	100 (24hrs)
							and the second se

dimmer and first av	N.B. III	THE FIGHT IN ALL AND A MARKED AND A MARKED	27	100 (24firs)
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	25	60 (24hrs)
Sulphur Di-Oxide (SO ₂)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	6,1	80 (24hrs)
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	16.8	80 (24hrs)
Özone (O3)	µg/m ¹	IS 5182 (Pan-9): 1974; RA2019	<20.0	100 (8hrs)
Ammonia (NH1)	µg/m²	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Menoxide (CO)	ing/m ³	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)
Lead (Pb)	µg/m ³	15 5182 (Part-22); 2004; RA2019	<0.002	1 (24hrs)
Nickel (Ni)	ng/m ²	1S 5182 (Part-26):2020	<6.0	20 (Annual)
Arsenic (As)	ng/m ³	ELES/AJR/SOP/01	<2.0	06 (Annual)
	the second se			

Reviewed by

Authorised Signato Deependra Ruma

**** End of Report****

Dr.

Page 1 of 1

Page 1 of 1 ELES Pyt. Ltd. Technical Manag 37 The Document stated as Test Report, is closed by the Laboratory and Gateral Tests and Conditions, only on Company letter feed in pre-approved Report Report reflects the findings date by the shown in the Test Report reflect or relates only on the polyandous deverby the Laboratory one. The information stated on the Test Report reflects the findings date by the Laboratory in the time of involvement only and watten the linux of client's instructions. The Laboratory is responsible for all the ordernation or data provided on the report, assert the information wheth is provided by the client. The Report entities of reproduced except in full and any pair of the report is not taken out of context, without prair shall out be published, solvering, used for any legal access unless prior permission has been accord from the Management of the Laboratory. Attention is drawn to the Emission of liability, componentian and jurisdiction issues. Any ensutherized attention & falsification of the content or appearance of the Test Report is unleavial and offenders may be preservated so the Foligat extent of the law. All the samples are related for 300ays from the Date instance of appendice of the Test receiver in unity in unity in unity in providing the providence of events of the run in the samples are related by story and the respective of the run in the samples are runned as specified. Any type of Observations or Compilation regarding the Reports shall be taken within 15th with the Date of Test Report related by Ador the time period united before, no compilation will be accepted. The sample time schedule mentioned in Test Report in a 24boars format. Although and NW (Not Applicable), HDL (Below Descent) Limit), LDL (Lower Descence Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATTA, RANCHI-\$34003 (JHARKHAND) GST ND- 264AECE9713D174

ENGINEERING SERVICES PUT. LTD.

Email: info@elesal.co.in , eles.ranchi@amail.com Phone no.: 0651-2290103 Website 1 www.elesol.co.in

Test Report No.	: ELES/RNC/2023/4768		E.J. M. KARK
		Report Release Date	: 21.12.2023
Work Order No.	: 13612310218	Work Order Date	; 21.04.2023
CUSTOMER DET.	AILS	SAMPLE DETAILS	
Customer Name Address Mines Stanes	: Hindalco Industries Limited : Lohardaga, Jharkhand-835302 : Operational	Sample Ref. No. Location Sampling Date Sample Received Date Type of Sample Sampling Procedure	: ELES/RNC/2023/AA/4238 : Near Bunglapart Village Pakhar Bauxite Mine : 14.11.2023 to 15.11.2023 : 24.11.2023 : Ambient Air : ELES/DOC/SMPL/02
Period of Analysis	1 24.11.2023 to 09.12.2023	 Sample Drawn By Sample Condition 	ELES Pvt. Ltd. Scaled & Preserved

3 Relative Humidity (%)

Discipline : Chemi	Discipline : Chemical Group :			
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (C ₆ H ₆)*	µg/m³	IS 5182 (Part-11)2006;RA2017	<1.0	05(Annual)
Benzo-(a)-Pyrene*	ng/m!	IS 5182 (Part-12)2004;RA2019	<0.5	(Icanneal)

14

Weather Condition

Remarks: (*)-Patameters are outsourced to other Lab.

: 53



eaaa End of Report ****

· Clear

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

Page I of 1

The Discussion stated as Test Report in issued by the Laboratory under General Terms and Conditions, only on Company lister head as pre-approved format. The manife chosen in the Text Report refer or relates only to the job/analysis does by the Lationatory only. The information stated on the Test Report reflects the findings done by the Laboratory at the third of involvement only and within the limits of chem's instructions. The Laboratory is responsible for all the information or dots provided on the report, except the unformation 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 contrar, without price written approval of the Laberniory. The Report in full or in part shall not be published, selvence, used for any legal actions unless prior permission has been secored from the Management of the Laboratory. Awonion is drawn to the limitation of imbility, coropensation and jurisdiction insues. Any unauthorized elsevation at Ghardenion of the content or applingance of the Tast Report is unlawful and offenders may be presented to the fullest extent of the faw, All the samples are retained for 30 days from the Date of release base of the Test Report. The samples from Regulatory leafles are to be retained as specified. Any type of Omervations of Complexity regarding the Reports shall be done within Galage from the Data of Test Report released/issued. After the time period stated before, no grouplants will be accepted. The entire Time schedule continued in Fest Report in an 24 hance format. Alteresticion taxed N/A (Nec Application, BDL (Bekes Detection Limit), LDL (Lower Detection Limit)



3 Relative Humidity (%)

ENVIRONMENTAL LABORATORIES &

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

:53

GINEARCAO SERVICES PUT. LTD.

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



TEST	REPO	DRT	
4 ELES/RNC/2023/4769	Rep	ort Release Date	: 21.12.2023
: 13612310218	Wo	rk Order Date	: 21.04.2023
AILS	SAN	IPLE DETAILS	The second second second
: Hindalco Industries Limited : Lohardaga, Jharkhand-835302	Loci Sam Sam Type	ntion pling Date ple Received Date of Sample	: ELES/RNC/2023/AA/4239 : Yatri Shed (Near K-10) Pakhar Bauxite Mine : 14.11.2023 to 15.11.2023 : 24.11.2023 : Ambient Air : ELES/DOC/SMPL/02
			: ELES Pvt. Ltd.
: 24.11.2023 to 09.12.2023	Sam	ple Condition	: Sealed & Preserved
AL INFORMATION			
ature (ⁿ C) = 21	2	Barometric Pressu	se (mmHg) : 734
	: ELES/RNC/2023/4769 : 13612310218 AILS : Hindalco Industries Limited : Lohardaga, Jharkhand-835302 : Operational : 24.11.2023 to 09.12.2023 AL INFORMATION	: ELES/RNC/2023/4769 Rep : 13612310218 Wor MLS SAM : Hindalco Industries Limited Sam Loca : Lohardaga, Jharkhand-835302 Sam Sam Type : Operational : 24.11.2023 to 09.12.2023 Sam	: 13612310218 Work Order Date MLS SAMPLE DETAILS : Hindalco Industries Limited Sample Ref. No. Location : Lohardaga, Jharkhand-835302 Sampling Date Sample Received Date Type of Sample : Operational Sampling Procedure Sample Drawn By Sample Condition : 24.11.2023 to 09.12.2023 Sample Condition

4

Weather Condition

Discipline : Chemica	Discipline : Chemical G				
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	µg/m ³	IS-5182 (Part-23): 2005; RA2022	59	100 (24hrs)	
Particulate Matter (PMZ.5)	µg/m ¹	IS 5182 (Part- 24): 2019	28	60 (24hrs)	
Sulphur Di-Oxide (SO2)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	6,3	80 (24hrs)	
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	21.6	80 (24hrs)	
Ozone (O ₃)	µg/m ³	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)	
Ammonia (NH3)	µg/m²	IS 5182 (Part-25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m ²	IS 5182 (Part-10): 1999; RA2019	<1.0	I (Shrs)	
Lead (Pb)	µg/m ¹	IS 5182 (Part-22): 2004; RA2019	<0.002	1 (24hrs)	
Nickel (Nii)	ng/m ¹	IS 5182 (Part-26);2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m ³	ELES/AIR/SOP/01	<2.0	06 (Annual)	

Reviewed by

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

: Clear

Page 1 of 1

The Document named at Yest Ropert, is usuad by the Laboratory ander thermal Terms and Conditions, only as **EbsEpt Vale Most eContricploking ment**. The result 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 tase of involvement only and within the limits of client's instructions. The Laboratory is responsible for all the information or data provided on the separt except the information which is glowaked by the client. The Report reamon be reproduced except in full and any part of the report is not taken out of conext, without prior written approval of the Laboratory. The Report is full or in your shall not be published, advertise, and for any tegal outloots unders prior permission has been secured than the Management of the Laboratory. The Report is full or in your shall not be published, advertise, and for any tegal outloots unders prior permission has been secured than the Management of the Laboratory. The Report is an offenders may be prosected to the follest extent of the low line amplies are retained for 300 approximate of the Test Report in only offenders may be prosected to the follest extent of the low line amplies are retained for 300 approximate of the Test Report. The amplies are retained for 300 approximate of the laboratory. The emptivity relates are be retained to the follest extent of the low of States in the Dave of release/state of the Test Report. The amplies fram Report relations are to be follest extent of the low of States and Re 300 approximate the Report State of Test Report and 200 approximate of the artification and the Report shall be done within 15days from the Date of Test Report relation used. West Apprendiate Report Gaser States of Line 200 and the report and 200 approximate from Reports the time time periods and the follows, the complaints will be attempted. The entire from adheding maniformation in Test Report or an 200 approximate low of the time pe



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

ERING SERVICES PUT. LTD:

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

Test Report No.	: ELES/RNC/2023/4769	Report Release Date	: 21.12.2023
Work Order No.	: 13612310218	Work Order Date	: 21,04.2023
CUSTOMER DET.	AILS	SAMPLE DETAILS	
Customer Name Address Mines Status	: Hindalco Industries Limited : Lohurdaga, Jharkhand-835302 : Operational	Sample Ref. No. Location Sampling Date Sample Received Date Type of Sample Sampling Procedure Sample Drawn By	: ELES/RNC/2023/AA/4235 ; Yatri Shed (Near K-10) Pakhar Bauxite Mine 14.11.2023 to 15.11.2023 ; 24.11.2023 : Ambient Air : ELES/DOC/SMPL/02 ; ELES Pvt. Ltd.
Period of Analysis	; 24.11.2023 to 09.12.2023	Sample Condition	: Sealed & Preserved

Average Temperature (^a C) : 21	2 Barometric Pressure (mmHg) : 734	
Relative Humidity (%) : 53	4 Weather Condition : Clear	

Discipline : Chemi	cal	Group :	Atmospheric	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (C _b H _s)*	jug/m ³	IS 5182 (Part-11)2006;RA2017	<1.0	05(Annual)
Benzo-(a)-Pyrene*	ng/m	IS 5182 (Part-12)2004;RA2019	<0.5	01(Annual)

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



**** End of Report****

Authorised Signatory Dr. Deependra Kumar Sinha Ph. D Environmental Erog ELSS PvL Ltd. Technical Manager

Page 1 of 1

The Document stand as Test Report, is issued by the Libboratory under General Terms and Conditiona, only on Company longr head in pre-approved hirmar. The results shown in the Test Report refer or relates unly to the job/analysis door 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 of data provided on the report. except the information which is provided by the client. The Report control be repreduced except in fall and any part of the report is not taken out of centest, without price written approval of the Lanaratory. The Report in full or in part shall not be published, adventise, used for any legisl actions unless prior permission has been secured from the Masugement of the Laberatory. Attention is drawn to the limitation of hability, comparession and jurisdiction issues. Any mainthorized eiteration & faisalention of the content or apparents of the Test Report is aclowful and offenders very be presented to the fullest extent of the faw. All the samples are removed for 30days than the Data of intersections of the Test Report The samples from Regulatory bodies are in be ensisted as specified. Any type of Organizations or Compliants regarding the Reports shall be does within 13 days three the Date of Test Report relevant based. After the time period stated before, no compliants will be accepted. The entire Time schedule mentioned in Test Report is a 24 data y format. Abbreviation used to 0 (Not Applicable), hith, (Below Detection (Lipit), COL (Tower Detection (Lipit)).



SNURONMENTAL LABOR

PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 LIHARKHANDI GST NO: 200AECE97130324

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



	TEST	REPORT	
Test Report No.	: ELES/RNC/2023/4770	Report Release Date	: 21.12.2023
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023
CUSTOMER DET.	AILS	SAMPLE DETAILS	
Customer Name Address	 Hindalco Industries Limited Lohardaga, Jharkhand-835302 	Sample Ref. No. Location Sampling Date Sample Received Date Type of Sample	: ELES/RNC/2023/AA/4240 Near Utkarmit Rajkiya Prathmik Vidyalaya Bunglapart Village Pakhar Bauxite Mine 14.11.2023 to 15.11.2023 24.11.2023 Ambient Air
Mines Status	: Operational	Sampling Procedure	: ELES/DOC/SMPL/02
Period of Analysis	: 24.11.2023 to 09.12.2023	Sample Drawn By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved

	Average Temperature (*C) : 21	2	Barometric Pressure (mm	Hg) :734	
3	Relative Humidity (%) : 53	4	Weather Condition	: Clear	

Discipline : Chemica	Discipline : Chemical Group : /			
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m ¹	15 5182 (Part-23): 2006; RA2022	54	100 (24hrs)
Particulate Matter (PM2,5)	μ <i>g</i> /m ³	IS 5182 (Part- 24): 2019	29	60 (24hrs)
Sulphur Di-Oxide (SO2)	µg/m ³	IS 5182 (Pari-2): 2001; RA2022	5.1	80 (24hrs)
Nitrogen Di-Oxide (NO ₅)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	16.7	80 (24hrs)
Ozone (O ₅)	µg/m ³	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (Shrs)
Ammonia (NH ₂)	µg/m ⁸	IS 5182 (Part- 25): 2018	<10.0	400 (24brs)
Carbon Monoxide (CO)	mg/m ⁴	1S 5182 (Part-10): 1999; RA2019	0.1>	2 (8hrs)
Lead (Pb)	μg/m ²	IS 5182 (Part-22): 2004; RA2019	<0.002	1 (24hrs)
Nicke) (Ni)	ng/m1	IS 5182 (Part-26):2020	<6.0	20 (Annual)
Arsenic (As)	rig/m ¹	ELES/AIR/SOP/01	<2.0	06 (Annual)

Reviewed by

Dr. Deependra Kumar Sinha

**** End of Report**** Page 1 of 1

The Document sales as Test Report refer or relates only as the obtainings some by the Laboratory only. The relations, only of Company Lefts' field in pre-approved follows. The results shown in the Test Report refer or relates only as the obtainings some by the Laboratory only. The relations saled on the Test Report referes the findings done by the Laboratory at the time of involvement, only and within the limits of clices's instructions. The Laboratory is received ble 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 enless prior permission has been second from the Management of the Laboratory. Attention is dearen to the limitation of limitation and jurediction resols. Any unsubstrized alteration of the limitation of limitation of limitation and jurediction resols. content to appearance of the Test Report to unlowful and offenders mut be prospected to the fullest extent of the law. All the samples are remined for 30clays from the Date of release/name of the Test Report. The samples from Regulatory bedies are to be replined as specified. Any type of Observations or Compliance regarding the Reports shall be done women lideye from the Data of Tess Report released/instant. After flav some period saved before, so complaints will be externed. The writer finite schedule resentanted to Test Report to in 24 noter format. Abbreviation med. N/A (Nor Applicitable), BPA (Bolow Detection Limit), LDL (Lower Objection Limit).



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

ENGINEERING SERVICES PVT. LTD.

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

A REAL PROPERTY AND		TREPORT	
Test Report No.	: ELES/RNC/2023/4770	Report Release Date	: 21.12.2023
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023
CUSTOMER DET.	AILS	SAMPLE DETAILS	
Customer Name Address Mines Status	: Hindalco Industries Limited : Lohardaga, Jharkhand-835302 : Operational	Sample Ref. No. Location Sampling Date Sample Received Date Type of Sample Sampling Procedure	: ELES/RNC/2023/AA/4240 : Near Utkarmit Rajkiya Prathmik Vidyalaya Bunglapart Village Pakhar Bauxite Mine : 14.11,2023 to 15.11,2023 : 24.11,2023 : Ambient Air : ELES/DOC/SMPL/02
Period of Analysis	; 24,11,2023 to 09,12,2023	Sample Drawn By Sample Condition	: ELES Pvi, Ltd. : Sealed & Preserved

1	Average Temperature (%C)	¢21	2	Barometric Pressure (mm	Hg) : 734	
3	Relative Humidity (%)	: 53		Weather Condition	: Clear	

Discipline : Chemi	Discipline : Chemical Group :			Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (C ₀ H ₀)*	µµ/m³	IS 5182 (Pari-11)2006;RA2017	<1.0	05(Annual)
Benzo-(a)-Pyrene*	ng/m ¹	1S 5182 (Part-12)2004:RA2019	<0.5	01(Annual)

Remarks: (*)-Parameters are nutsouroed to other Lab.



****End of Report****

Authorised Signator Dr. Deependra KumarSinha Ph. D Environmental Enga. LES Pvt. Ltd. Technical Manager

Page 1 of 1

The Document used as Test Report, is usual by the Laboratory under General Terms and Conditions, only on Company latter head in pro-approved format. The results shown in the Test Report refer or reliaits only to the jectuality is done by the Laboratory only. The utdorination 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 of data provided on the report, except the information which is provided by the client. The Report counts be reproduced except in full and any part of the report is not taken out of current, without written approved of the Laboratory. The Report in full or in part shall not be published, advectise, used for any legal actions inless prior permission has been second from the Miningement of the Laboratory. Attention is drawn to the limitation of liability, compensation of any legal actions inless prior permission has been second from the Miningement of the Laboratory. Attention is drawn to the limitation of the fullest event of the line. All the samples are remained for study from the Data of solviperisme of the Test Report. The second from Report reliated/samed. After the time period study by no compliants to the entropy is not be remared as specified. Any type of Observations or Compliants regarding the Report shall be down within 15 days from the Date of Tost Report reliated/samed. After the time period study before, no compliants to file except. The enter Time schedulo menution is the prior determined as the date of Tost Report reliated/samed. After the time period study before, to compliants to file except. The enter Time schedulo menution of the Test Report reliated attention used. Note (New Application), RDL, (Borew Descence Limit), LDL, (Lineer Descent). The enter Time schedulo menution of the Test Report reliated attention.



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST ND:-2044ECE97150124

UNCLIDING SERVICES PVT. LSD.



Email: infa@elespl.co.in , eles.ranchi@amail.com Phane no.: 0651-2290103 Website : www.elespl.co.in

Test Report No.	: ELES/RNC/2023/4771	Report Release Date	: 21.12.2023
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023
CUSTOMER DET.	AILS	SAMPLE DETAILS	
Customer Name Address	: Hindalco Industries Limited : Lohardaga, Jharkhand-835302	Sample Ref. No. Location Sampling Date Sample Received Date	: ELES/RNC/2023/AA/4241 : Near Utkarmit Rajkiya Prathmil Vidyalaya Dumrapart Village Pakhar Bauxite Mine : 14.11.2023 to 15.11.2023 ; 24.11.2023
Mines Status	: Operational	Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02
Period of Analysis	: 24.11.2023 to 09.12.2023	Sample Drawn By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved

 Average Temperature (°C) : 2 	2	Barometric Pressure (mmHg)	1734
3 Relative Humidity (%) : 5	3 4	Weather Condition	: Clear

Discipline : Chemic	al .	Group : /	Atmospherie	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022	61	100 (24hrs)
Particulate Matter (PM2,5)	µg/m ³	IS 5182 (Part- 24): 2019	24	60 (24hrs)
Sulphur Di-Qxide (SO2)	µg/m ³	15 5182 (Part-2): 2001; RA2022	6.9	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	µg/m ¹	18 5182 (Part-6): 2006; RA2022	17.2	80 (24hrs)
Ozone (O ₂)	µg/m ³	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)
Ammonia (NH ₁)	µg/m ²	IS 5182 (Pari- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m ⁹	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)
Lead (Pb)	µg/m [®]	IS 5182 (Part-22): 2004; RA2019	<0.002	1 (24hrs)
Nickal (Ni)	ng/m ²	IS 5182 (Part-26):2020	<6,0	20 (Annual)
Arsenic (As)	ng/m³	ELES/AIR/SOP/01	<2.0	06 (Annuał)

Reviewell by

Authorised Signatory

****End of Report****

Dr. Deependra Kumar Sinha Ph. D Environmentar Enge

The Descention rated in Test Report references by the Lateratory under Content Terms and Continuous, only on Centre's Report reflects the findings done by the Lateratory and the Lateratory only. The information stared on the Test Report reflects the findings done by the Lateratory and the Lateratory only. The information stared on the Test Report reflects the findings done by the Lateratory at the indemation of the information of the information of the report, excite the indemation of the lateratory. The Report in the Lateratory is responsible for all the information or data provided on the report, excite the indemation which is provided by the client. The Report clients of the 's instructive The Laboratory is responsible for all the information or data provided on the report, excite the indomation which is provided by the client. The Report clients is that not be published, advertise, used to any legal actions unless prior pervision has been secured from the Management of the Test Report in market in a data on the the limiting of liability, compression and juriadicinon issues. Any unaddroved alteration & data from the Date using a generator of the Test Report in millional offenders using the processing and juriadicinon issues. Any unaddroved alteration & data from the Date using a generator of the Test Report in millional offenders using the processing as purified. Any syste of Observations of Compliance using the Reports shall be compliance and the Test Report. The samples from Regulatory bodies are used to the limit and provided as spacified. Any syste of Observations of Compliance to the employs from the Date using the processing as spacified. Any syste of Observations of Compliance tegending the Reports shall be compliance on a 24 provided to the time of the test syste. The samples from Regulatory bodies are used to the provided to the fuller extense of the test Report. The samples from the Date and the time priority stated before, no compliance of Compliance and the Reports shall be compliance and the Rep



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) 957 ND:- 20AAECE97130124

VOINEERING SERVICES PYT. LTD.

Email: Info@elespl.co.in , eles.ranchi@amail.com Phane no.: 0651-2290303 Website : www.elespl.co.in

Test Report No.	; ELES/RNC/2023/4771	Report Release Date	: 21.12.2023
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023
CUSTOMER DET.	AILS	SAMPLE DETAILS	
Customer Name Address Mines Status	 Hindalco Industries Limited Lohardaga, Jharkhand-835302 Operational 	Sample Ref. No. Location Sampling Date Sample Received Date Type of Sample Sampling Procedure	: ELES/RNC/2023/AA/4241 : Near Utkarmit Rajkiya Prathmik Vidyalaya Dumrapart Village Pakhar Bauxite Mine : 14.11.2023 to 15.11.2023 : 24.11.2023 : Ambient Air : ELES/DOC/SMPL/02
Period of Analysis	: 24.11.2023 to 09.12.2023	Sample Drawn By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved

1	Average Temperature (°C) : 21	2	Barometric Pressure (mm)	Hg) (734	
3	Relative Humidity (%) : 53	4	Weather Condition	: Clear	

Discipline : Chemi	cal	Group : Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C6H6)"	µg/m ³	IS 5182 (Part-11)2006;RA2017	<1.9	05(Annual)	
Benzo-(a)-Pyrene*	ng/m ³	IS 5182 (Part-12)2004;RA2019	<0.5	01(Annual)	

Remarks: (*)-Parameters are outsourced to other Lab,



****End of Report****

Authorised Signatory Dr. Deependra Kumar Sinha Ph. D Environmental Engg ELES Pyl. Ltd. Technice) Manager

Page 1 of 1

The Operamint stated as Test Report, is instant 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 only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and within the times of electr's astructions. The Laboratory is responsible for all the information of data provided on the testor, except the information which is provided by the client. The Report remote the reproduced except in full and any part of the report is not taken out of context, without prior or the Antonio of the Laboratory. The Report is full or in part shall not be published, advertise, used for any legal actions unless prior perturbation de information of the testor, without prior of the Laboratory. Attention is drawn to the lamination of fability compension and stradiction assess any unumberized alteration de information of the laboratory. Attention is drawn to the lamination of fability compension and stradiction assess any unumberized alteration de information of relation of the testor, without of relation of the laboratory. Attention is drawn to the lamination of fability compension and stradiction assess any unumberized alteration de information of relation of the laboratory of the Test Report is uninvited information of fability compension and stradiction assess any unumberized alteration de information of released to the fability compension of the fability does not be faboratory by the client from the fability does not be related assert in the fability of Observations are related for Staty from the Date of released issue of the Test Report. The samples from Reputies stated before, no compliance will be accepted. The entire activation fability to does are to be related before, no compliance will be accepted. The entire activation is analysing the related before, no complision will be accepted. The entire achedula particulated before, a

over Emittennissend, Saver Futur



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

ENGINEERING SERVICES PVT. LTD.

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

CNV: U74999804201804C012125

		TEST REPORT		
Test Report No.	: ELES/RAN/2023/3131	Report Release Date	: 21.12.2023	
Work Order No.	2 M&M/23-24/01	Work Order Date	: 31.03.2023	

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Sampling Date Sample Received Date	: ELES/RAN/2023/DW/3018 : 19.11.2023 : 24.11.2023	
Address	Lohardaga, Jharkhand-835302	Type of Sample Source/Location of Sample	: Drinking Water : Near Mine Quarry No-K7 Pakhar(109.507 ha)Bauxite Mine	
Mines Status	: Operational	Sampling Procedure Sample Collected By	: ELES/DOC/SMPL/01 : ELES Pvt. Ltd.	
Period of Analysis	: 24.11.2023 to 08.12.2023	Sample Condition	: Sealed & Preserved	

Discipline : Chem	ical	Group : Wate	r l		ory Limit 10500:2012
Parameter	Unit	Test Protocol	Result	Acceptable	Permissible
pH (at 24.9 °C)	-	APHA 23rd Ed.2017, 4500-H"	6.84	6.5-8.5	No Relaxation
Turbidity	NTU	APHA 23 rd Ed.2017, 2130 B	0.36	1.0	5.0
Taste		APHA 23rd Ed.2017, 2160 C	Agreeable	Agreeable	Agreeable
Odour	-	IS 3025 (Part-5) :2018	Agreeable	Agreeable	Agreeable
Colour	Hazen	APHA 23 rd Ed.2017, 2120B&D	2.0	5	15
Total Dissolved Solids (TDS)	mg/L	APHA 23 nd Ed.2017, 2540B,C&D	295	500	2000
Chloride (as Cl)	mg/L	APHA 23rd Ed.2017, 4500 CI B	70.4	250	1000
Fluoride (as F)	mg/L	APHA 23rd Ed.2017, 4500 F-D	BDL (DL: 0.1)	1.0	1.5
Total Alkalinity (as CaCO3)	mg/L	APHA 23 ⁴⁴ Ed.2017, 2320 B	88.4	200	600
Total Hardness (as CaCO3)	mg/L	APHA 23rd Ed.2017, 2340 C	138	200	600
Sulphate (as SO4)	mg/L	APHA 23rd Ed.2017, 4500 SO4-2-E	19.6	200	400
Nitrate (as NO3)	mg/L	APHA 23rd Ed.2017, 4500 NO3-B	3.68	45	No Relaxation
Phenolic Compound (as C ₆ H ₃ OH)	mg/L	IS 3025 (Part-43):1992;RA2019	BDL (DL: 0.0005)	0.001	0.002

Page | 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 former. 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 alteration & faisification 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 formal. Abbreviation used. N/A (Not Applicable); BDL (Below Detection Linit); LDL (Lower Detection Lonid)



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) G3T NO:- 20AAECE97130124

ENGINEERING SERVICES PUT, LTD.

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

CIN: U74995/H2018FTC011125

THE REAL PROPERTY.	DEDODT
11.51	REPORT
	ACCESS OF ALL

Test Report No.	: ELES/RAN/2023/3131	Report Release Date	: 21.12.2023
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023

Discipli	ine : Che	mical Group: W	Vater		tory Limit 10500:2012
Parameter	Unit	Test Protocol	Result	Acceptable Limit	Permissible Limit
Cyanide (as CN)	mg/L	APHA 23 rd Ed.2017, 4500 CN-E	BDL (DL: 0.012)	0.05	No Relaxation
Residual Free Chlorine (RFC)	mg/L	IS 3025 (Part-26):2021	BDL (DL: 0.1)	0.02	1.0
Calcium (as Ca)	mg/L	APHA 23rd Ed.2017, 3500 Ca B	35.4	75	200
Discipl	ine: Che	mical Group	: Residues in	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	IS 3025(Part-57): 2005; RA2021	BDL (DL: 0.2)	0.5	1.0
Cadmium (as Cd)	mg/L	APHA 23 rd Ed.2017, 3111B	BDL (DL: 0.003)	0.003	No Relaxation
Total Chromium (as Cr)	mg/L	APHA 23rd Ed.2017, 3111B	BDL (DL: 0.03)	0.05	No Relaxation
Copper (as Cu)	mg/L	APHA 23rd Ed.2017, 3111B	BDL (DL: 0.03)	0.05	1.5
Iron (as Fe)	mg/L	APHA 23rd Ed.2017 . 3111B	0.192	1.0	1.0
Lead (as Pb)	mg/L	APHA 23ed Ed.2017, 3111B	BDL (DL: 0.01)	0.01	No Relaxation
Manganese (as Mn)	mg/L	APHA 23rd Ed.2017, 3111B	BDL (DL: 0.05)	0.1	0.3
Mercury (as Hg)	mg/L	IS 3025 (Part-48): 1994; RA2019	BDL (DL: 0.001)	0.001	No Relaxation
Selenium (as Se)	mg/L	IS 3025 (Part-56): 2003; RA2019	BDL (DL: 0.01)	0.01	No Relaxation
Zinc (as Zn)	mg/L	APHA 23rd Ed.2017, 3111B	BDL (DL: 0.1)	5	15

Remarks: 1. pH & RFC done at Lab.

Page 2 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 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 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 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: 204AECE97130124

GINEERING SERVICES PVT. LTD.

Email: info@elespl.co.in , eles.ranchi@gmail.com Phone no.: 0551-2290103 Website : www.elespi.co.in

CIN: UT4599/H2018PTC011125

	TE	ST REPORT		
Test Report No.	: ELES/RAN/2023/3131	Report Release Date	: 21.12.2023	
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023	

Discipline ; Che	mical		Group: Water		
Parameter	Unit	Test Protocol	Result	Regulatory Limit as per IS 10500:2012	
Pesticides					
Alachlor*	µg/L	АРНА	BDL (DL: 1.0)	20	
Atrazine* µg/L APHA		АРНА	BDL (DL: 1.0)	2	
Aldrin/Dieldrin* pg/L		APHA	BDL (DL: 0.01)	0.03	
Alpha HCH*	µg/L	АРНА	BDL (DL: 0.001)	0.01	
Beta HCH*	µg/L	АРНА	BDL (DL: 0.01)	0.04	
Butachlor* µg/L APHA		АРНА	BDL (DL: 10)	125	
Chlorpyriphos*	Chlorpyriphos* µg/L		BDL (DL: 10)	30	
Delta HCH*	µg/L	АРНА	BDL (DL: 0.01)	0.64	
2,4 dichlorophenoxyacetic acid*	µg/L	АРНА	BDL (DL: 10)	30	
DDT(0,p and p,p-isomers of DDT,DDE and DDD)*	µg/L	АРНА	BDL (DL: 0.5)	1	
Endosulfan (alpha, beta, and sulphate)* µg/		АРНА	BDL (DL: 0.1)	0.4	
Ethion*			BDL (DL: 0.5)	3	
Gamma HCH (Lindane)*	µg/L	АРНА	BDL (DL: 0.5)	2	
Isoproturon*	µg/L	АРНА	BDL (DL: 0.5)	9	

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 resource 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 untuthorized alteration & falsification of the content or appearance of the Text 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:- 20AAECE97130124

ENGINEERING SERVICES FVT. LTD.

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

CIN: U745993H2018FTC011125

	TE	ST REPORT	
Test Report No.	: ELES/RAN/2023/3131	Report Release Date	: 21.12.2023
Work Order No.	: M&M/23-24/01	Work Order Date	± 31.03.2023

Discipline : Bi	ological	Group : \	Water	and the second se	ory Limit 10500:2012
Parameter	Unit	Test Protocol	Result	Acceptable Limit	Permissible Limit
Total Coliform	Per 100 mL	IS 15185:2016; RA 2021	Not Detected	Shall not 1	be detected
Escherichia Coli (E. Coli)	Per 100 mL	IS 15185:2016; RA 2021	Not Detected	Suan not	be detected
Discipline :	Chemical	Group :	Water		ory Limit
Parameter	Unit	Test Protocol	Result	Acceptable	Permissible Limit
Anionic Surfactants (as MBAS)*	mg/L	IS 3025 Part 68	BDL (DL: 0.1)	0.2	1.0
Mineral Oil*	mg/L	CL-6, 1S: 3025 (P-39)	BDL (DL: 0.1)	1.0	No relaxation
Polynuclear Aromatic Hydrocarbons (PAH)*	mg/L	APHA 23rd Edition	BDL (DL: 0.0001)	0.0001	No relaxation
Polychlorinated Biphenyls (PCB)*	mg/L	APHA 23 ^{nl} Edition	BDL (DL: 0.0005)	0.0005	No relaxation

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



****End of Report****

Dr. Doublerrired Simal 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 Text 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 nine 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 juradiction issues. Any unsuthorized alteration & faisification 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 30dnys 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 Complanets 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); LDL (Lower Detection Limiti

ENVIRONMENTAL LABORATORIES & ENGINEERING SERVICES PVT.LTD.

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

Pakhar (109.507) Bauxite Mine-Environmental Monitoring Report

December 2023



CONTENT

Mine	rals & Minerals : Pakhar (109.507)	Environmental Monitoring Report	December 2023
	and the second	Pakhar (109.507)	
	AMBIENT AIR QUALITY- CORE	ZONE	
1	Near Mine Quarry No-K7		
2	Near Mine Quarry No-K9		
3	Near Mine Quarry No-K5		
4	Pakhar Loading Area		
	AMBIENT AIR QUALITY- BUFFF	ER ZONE	
1	Near Bunglapart Village		
2	Yatri Shed (Near K-10)		
3	Near Utkarmit Rajkiya Prathmik Vidy	alaya Bunglapart Village	
4	Near Utkarmit Rajkiya Prathmik Vidy	alaya Dumrapart Village	





PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (IHARKHAND) GST ND:- 204AECE9713D124

GINEENING SERVICES PVT. LTD.

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



	TE	ST REPORT	
Test Report No.	: ELES/RNC/2024/0235	Report Release Date	: 15,01,2024
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023
ULR No.	: TC883924000000218F		

CUSTOMER DET.	AILS	SAMPLE DETAILS	
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Location	: ELES/RNC/2023/AA/4895 : Near Mine Quarry No-K7 Pakhar (109.507 ha) Bauxite Mine
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 24.12.2023 to 25.12.2023 : 30.12.2023
Mines Status	: Operational	Type of Sample Sampling Procedure Sampling Done By	: Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt. Ltd.
Period of Analysis	: 30.12.2023 to 13.01.2024	Sample Condition	: Sealed & Preserved

1	Average Temperature (°C)	: 20	2	Barometric Pressure (mmHg)	: 738
3	Relative Humidity (%)	: 48	4	Weather Condition	; Clear
5	Longitude	: 84°36'43.86"E	6	Latitude	; 23°33'29.12"N

Discipline : Chemica	d.	Group : A	Group : Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022	63	100 (24hrs)		
Particulate Matter (PM2.5)	µg/m³	IS 5182 (Part- 24): 2019	35	60 (24hrs)		
Sulphur Di-Oxide (SO2)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	8.2	80 (24hrs)		
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	24.2	80 (24hrs)		
Ozone (O3)	µg/m ³	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)		
Ammonia (NH ₃)	µg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)		
Carbon Monoxide (CO)	mg/m ¹	1S 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)		
Lead (Pb)	µg/m ³	IS 5182 (Part-22): 2004; RA2019	0.007	1 (24hrs)		
Nickel (Ni)	ag/m ³	IS 5182 (Part-26):2020	<6.0	20 (Annual)		
Arsenic (As)	ng/m ³	ELES/AIR/SOP/01	<2.0	06 (Annual)		

Authorised Signatory Reviewed by Deependra Kumar Sinha **** End of Report****

Page I of I

The University English

The Document stated Lest hepotyper and by the Laboratory ander General Terms and Conditions, only on Company eiter head lide Terphonic states. The groups shown in the Test Report for an address 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 inner of involvement only and within the limits of elient's instructions. The Laboratory is report is not taken out of context, without prive write 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. The Report is in the limits of history of the report is not taken out of context, without prive write approval of the Laboratory. The Report is in the limits of history compensation and jurisdiction issues. Any unauthorized alteration & falsification of the content or approval of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the two of the tamples are retained for 36days from the Date of the Secure of the Test Report is in 24hours format. Abbreviation used Alter the approval of the test Report is in 24hours format. Abbreviation used Alter the approximate of the Test Report is not taken of offenders may be prosecuted to the fullest extent of the two of the tamples are retained for 36days from the Date of Test Report is in 24hours format. Abbreviation used Alter the tample at the tample of the compliants will be scepted. The entire Time schedule method and the time of the Report is a 24hours format. Abbreviation used N/A (Not Applicable), BDL. (Below Detection Limits), LDL (Lower Detection Limit)

lave Lot transact. Save Parare



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

NGINEERING SERVICES PVT. LTD.

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

	TE	ST REPORT		_
Test Report No.	: ELES/RNC/2024/0235	Report Release Date	: 15.01.2024	
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023	

CUSTOMER DET.	AILS	SAMPLE DETAILS	
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Location	 ELES/RNC/2023/AA/4895 Near Mine Quarry No-K7 Pakhar (109.507 ha) Bauxite Mine
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 24,12,2023 to 25,12,2023 : 30,12,2023
		Type of Sample Sampling Procedure Sampling Done By	: Ambient Air : ELES/DOC/SMPL/02 : ELES Pyt. Ltd.
Mines Status	: Operational		
Period of Analysis	: 30.12.2023 to 13.01.2024	Sample Condition	: Sealed & Preserved

M	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (°C)	: 20	2	Barometric Pressure (mmHg)	: 738
3	Relative Humidity (%)	: 48	4	Weather Condition	: Clear
5	Longitude	: 84*36'43.86*E	6	Latitude	: 23°33'29.12"N

Discipline : Chemical		Group : Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (CoHo)*	µg/m ³	IS 5182 (Part-11)2006;RA2017	<1.0	05(Annual)	
Benzo-(a)-Pyrene*	ng/m ³	IS 5182 (Part-12)2004;RA2019	<0.5	01(Annual)	

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



****End of Report****

Authorised Signatory Dr. Deependra Kumar Sinina Ph D Environmental Engg. SLES Pvt. Ltd. Technical Managers

Page 1 of 1

The Discument stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pry-approved format. The results shown in the Test Report reflects cells to the job/analysis done by the Laboratory only. The isformation 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 assuections. 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 price written approval of the Laboratory. The Report in full or in part shall not be published, advertise, used for my legal actions unless prior permission has been secured them the Management of the Laboratory. Attention is drawn to the Inditation of liability, compensation and periadicition issues. Any unauthorized electration & falsification of the context 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 be done within Tidays from the Date of Test Report reflects from Regulatory bodies are to be retained as specified. Any type of Observations or Compliants regarding the Reports shall be done within Tidays from the Date of Test Report reflects from Actions and Action as a prevision before, no compliants will be accepted. The entity Time schedule mentioned in Test Report is in 24hours format. Abbreviation and N. (Not Applicable), BDL (Balow Detection Limit), LDL (Lower Detection Limit).

iore Environment, how furne



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 [JHARKHAND] GST NO: 26AAECE9713D124

GINEERING SERVICES PVT. LTD.

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



	TE	ST REPORT	
Test Report No.	: ELES/RNC/2024/0236	Report Release Date	: 15.01.2024
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023
ULR No.	: TC883924000000219F		

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Location	: ELES/RNC/2023/AA/4896 : Near Mine Quarry No-K9 Pakhar (109.507 ba) Bauxite Mine	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 24.12.2023 to 25.12.2023 : 30.12.2023 : Ambient Air	
Mines Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02 : ELES Pvt. Ltd.	
Period of Analysis	: 30.12.2023 to 13.01.2024	Sample Condition	: Sealed & Preserved	

1	Average Temperature ("C)	: 20	2	Barometric Pressure (mmHg)	: 738
3	Relative Humidity (%)	; 48	4	Weather Condition	: Clear
5	Longitude	:84°37'7.83*E	6	Latitude	: 23°33'30.72"N

Discipline : Chemical		Group : Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022	69	100 (24hrs)	
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	36	60 (24hrs)	
Sulphur Di-Oxide (SO2)	µg/m ³	15 5182 (Part-2): 2001; RA2022	7.8	80 (24hrs)	
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	26.3	80 (24hrs)	
Ozone (O3)	µg/m ⁷	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)	
Ammonia (NH ₃)	µg/m ³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m ³	1S 5182 (Part-10): 1999; RA2019.	<1.0	2 (8hrs)	
Lead (Pb)	µg/m ²	IS 5182 (Part-22): 2004; RA2019	0.013	1 (24hrs)	
Nickel (Ni)	ng/m ³	IS 5182 (Part-26):2020	<6.0	20 (Annual)	
Arsenic (As)	ng/mª	ELES/AIR/SOP/01	<2.0	06 (Annual)	

Reviewed by Sa

Dr. Deependia Kum

****End of Report****

Cumar Sinna

The Document stated of test logical period of the taboratory under General Terms and Conditions, only on Company lease held Technical Magnation for results shown in the Test Report relation and relationships done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Page 1 of 1 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 fall or in part shall not be published, advertise, used for any legal actions unless prior permission has been secured from the Maragement of the Laboratory. Attention is drawn to the luminition of liability, compensation and jurisdiction issues. Any unaothorized alteration & fulsification of the commit 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 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 he done within 15days from the Door of Test Report released assed. After the time period stated before, an complaints will be accepted. The entire Time schedule mentioned in Test Report is in 24hours format. Abbreviation used: N/A (Not Applicable). BDL (Bekin Detection Limit), LDL (Lower Detection Limit).



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

NGINEERING SERVICES PVT. LTD.

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

	TE	ST REPORT		
Test Report No.	: ELES/RNC/2024/0236	Report Release Date	: 15.01.2024	_
Work Order No.	> M&M/23-24/01	Work Order Date	: 31.03.2023	

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Location	 ELES/RNC/2023/AA/4896 Near Mine Quarry No-K9 Pakhar (109.507 ha) Bauxite Mine 	
Address : Lohardaga, Jharkhand	:: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 24.12.2023 to 25.12,2023 : 30.12.2023	
24		Type of Sample Sampling Procedure Sampling Done By	Ambient Air ELES/DOC/SMPL/02 ELES Pvt_Ltd.	
Mines Status	: Operational			
Period of Analysis	: 30.12.2023 to 13.01.2024	Sample Condition	: Sealed & Preserved	

MI	ETEOROLOGICAL INFOR	MATION		and the second se	
1	Average Temperature ("C)	: 20	2	Barometric Pressure (mmHg)	: 738
3	Relative Humidity (%)	: 48	4	Weather Condition	: Clear
5	Longitude	: 84°37'7.83"E	6	Latitude	: 23°33'30.72"N

Discipline : Chemical		Group : Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C ₆ H ₆)*	µg/m³	IS 5182 (Part-11)2006;RA2017	<1.0	05(Annual)	
Benzo-(a)-Pyrene*	ng/m ³	IS 5182 (Part-12)2004;RA2019	<0.5	01(Annual)	

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



*End of Report****

Authorised Signatory Dr. Deependra Kumar Sinha Ph. D Environmental Engo. ELES Pvt. Ltd. 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 pro-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 cannut 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 his 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 insue of the Test Report. The sumples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall be done wathin 13days 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 formal. 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

RING SERVICES PVT. LTD.

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



TEST REPORT			
Test Report No.	: ELES/RNC/2024/0237	Report Release Date	: 15.01.2024
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023
ULR No.	: TC883924000000220F		

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Location	ELES/RNC/2023/AA/4897 : Near Mine Quarry No-K5 Pakhar (109.507 ha) Bauxite Mins	
Address	1.ohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure	: 24.12.2023 to 25.12.2023 : 30.12.2023 : Ambient Air : ELES/DOC/SMPL/02	
Mines Status	: Operational	Sampling Done By	: ELES Pyt. Ltd.	
Period of Analysis	: 30.12.2023 to 13.01.2024	Sample Condition	: Sealed & Preserved	

1	Average Temperature (°C)	: 20	2	Barometric Pressure (mmHg)	:738
3	Relative Humidity (%)	: 48	4	Weather Condition	- Clear
5	Longitude	:: 84°37'21.94"E	6	Latitude	: 23°33'14.59"N

Discipline : Chemica	C	Group : Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022	62	100 (24hrs)	
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	33	60 (24hrs)	
Sulphur Di-Oxide (SO2)	µg/m ³	1S 5182 (Part-2): 2001; RA2022	8.6	80 (24hrs)	
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	26.3	80 (24hrs)	
Ozone (O ₃)	µg/m³	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)	
Ammonia (NH3)	µg/m ³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)	
Lead (Pb)	µg/m ³	15 5182 (Part-22): 2004; RA2019	0.009	1 (24hrs)	
Nickel (Ni)	ng/m ³	IS 5182 (Part-26):2020	<6.0	20 (Annual)	
Arsenic (As)	eg/m ³	ELES/AIR/SOP/01	<2.0	06 (Annual)	

Reviewed by

Dr. Berhovind, Sikhulaar Sinha

**** End of Report****

Ph. D Environmental Enge

ELES Pvt. Ltd. Technical Manac/

Page 1 of 1 The Document stated as Test Report is essed 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/unalysis 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 Anentien is drawn to the limitation of liability, compensation and jurisdiction issues. Any anauthorized 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 J0days from the Date. of release/issue of the Test Report. The samples from Regulatory budies are in he remained as specified. Any type of Observations or Complaints regarding the Reports shall he come within 15days from the Date of Test Report released/assed. After the time period stated before, on complaints will be accepted. The entire Time achedule mentioned 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 (IHARKHAND) GST NO:- 20AAECE9713D124

NGINEERING SERVICES PVT. LTD.

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

	TE	ST REPORT	
Test Report No.	: ELES/RNC/2024/0237	Report Release Date	: 15.01.2024
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Location	: ELES/RNC/2023/AA/4897 : Near Mine Quarry No-K5 Pakhar (109.507 ha) Bauxite Mine	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 24.12.2023 to 25.12.2023 : 30.12.2023	
Marine Presso	: Operational	Type of Sample Sampling Procedure Sampling Done By	: Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt. Ltd.	
Mines Status		Sample Condition	: Sealed & Preserved	
Period of Analysis	: 30.12.2023 to 13.01.2024	Sample Condition	Themes as a readined	

MI	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (°C)	: 20	2	Barometric Pressure (mmHg)	+738
3	Relative Humidity (%)	: 48	4	Weather Condition	; Clear
5	Longitude	: 84°37'21_94"E	6	Latitude	: 23°33'14.59"N

Discipline : Chemical		Group : Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C _a H _n)*	µg/m ³	1S 5182 (Part-11)2006;RA2017	<1.0	05(Annual)	
Benzo-(a)-Pyrene*	ng/m ³	IS 5182 (Part-12)2004;RA2019	<0.5	01(Annual)	

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



End of Report****

Authorised Signatory

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

Page 1 of 1

The Document stated as Test Report, is usual 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 unalysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the time of avolvement 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 upproval 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 to onlowful and offenders may be prosecuted to the fulless extent of the law. All the samples are retained for 30days from the Date of release/ssue of the Test Report. The samples from Regulatory bodies are in 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/ssued. After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report as in 24boars format. Abtreviation used 'N/A (Not Applicable), BDL (Below Detection Limit), LDE (Lower Detection Limit),



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

GINEERING SERVICES PVT. LTD.

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



	TE	ST REPORT	
Test Report No.	: ELES/RNC/2024/0238	Report Release Date	: 15.01.2024
Work Order No.	: M&M/23-24/01	Work Order Date	: 31,03.2023
ULR No.	: TC883924000000221F		

CUSTOMER DET.	AILS	SAMPLE DETAILS	There exists a local sector of the sector	
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Location	: ELES/RNC/2023/AA/4898 : Pakhar Loading Area Pakhar (109,507 ha) Bauxite Mine	
Addresa	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 24.12.2023 to 25.12,2023 : 30.12.2023 : Ambient Air	
Mines Status	: Operational	Type of Sample Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02 : ELES Pvt. Ltd.	
Period of Analysis	: 30.12.2023 to 13.01.2024	Sample Condition	: Sealed & Preserved	

	Average Temperature (°C)		2	Barometric Pressure (mmHg)	: 738
_	Relative Humidity (%)	:48	-	Weather Condition	: Clear
5	Longitude	: 84°36'53.77"E	5	Latitude	:23°33'15.01"N

Discipline : Chemical Group : /			Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	µg/m ¹	IS 5182 (Part-23): 2006; RA2022	69	100 (24hrs)	
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	40	60 (24hrs)	
Sulphur Di-Oxide (SO2)	µg/m ³	18 5182 (Part-2): 2001; RA2022	12.6	80 (24hrs)	
Nitrogen Di-Oxide (NO2)	µg/m ²	IS 5182 (Part-6): 2006; RA2022	23.7	80 (24hrs)	
Ozone (O3)	µg/m ³	IS 5182 (Part-9): 1974; RA2019	<20,0	100 (8hrs)	
Ammonia (NH3)	µg/m ³	1S 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)	
Lead (Pb)	µg/m ³	IS 5182 (Part-22): 2004; RA2019	0.013	1 (24hrs)	
Nickel (Ni)	ng/m ³	IS 5182 (Part-26):2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m ³	ELES/AIR/SOP/01	<2.0	06 (Annual)	

****End of Report****

Reviewed by

Authorised Signatory Dr. Deependra Kumar Sinha

Page 1 of 1

The Document stated as the Report is second by the Laboratory under General Terms and Conditions, only on Company Scherchert head in Technologie done by the Laboratory and the information stated on the Test Report reflects the information of the laboratory as the limits of client's instructives. 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 is maturatives. 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 is maturatives. The Laboratory is responsible for all the information or data provided on the report, except the information of the Laboratory. The Report is full or in part shall not be published, divertise, used for any legal actions unless prior permission has been secured from the Management of the Test Report is unlawful and offenders may be prosected to the fullest extent of the law. All the samples are retained for 30days from the Date of released issued of the fullest extent of the law. All the samples are retained for 30days from the Date of Test Report released issued. After the time period stated before, no complaints will be accepted. The entire Time schedule neutrino in Test Report is in 24bours format. Abbreviation used N/A (Nex Applicable), BDE (fieldow Detection Limit), LDL (Larver Detection Limit).

new Electrophysical, Save Factors



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

GINEERING SERVICES PVT. LTD.

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

Test Report No.	; ELES/RNC/2024/0238	Report Release Date	: 15.01.2024
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023

CUSTOMER DET/	AILS	SAMPLE DETAILS		
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Location	 ELES/RNC/2023/AA/4898 Pakhar Loading Area Pakhar (109.507 ha) Bauxite Mine 	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 24,12,2023 to 25,12,2023 : 30,12,2023	
	1.	Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02	
Mines Status	: Operational	Sampling Done By	: ELES PvL Ltd.	
Period of Analysis	: 30.12.2023 to 13.01.2024	Sample Condition	: Sealed & Preserved	

M	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (°C)	: 20	2	Barometric Pressure (mmHg)	: 738
3	Relative Humidity (%)	: 48	4	Weather Condition	: Clear
5	Longitude	: 84°36'53.77"E	6	Latitude	: 23°33'15.01"N

Discipline : Chem	ical	Group : Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C ₆ H ₆)*	µg/m ³	IS 5182 (Part-11)2006;RA2017	<1.0	05(Annual)	
Benzo-(a)-Pyrene*	ng/m ³	1S 5182 (Part-12)2004;RA2019	<0.5	01(Annual)	

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



****End of Report****

Authorised Signatory Dr. Deependra Kumar Sinna Ph D Environmental Engg. ELES Pvt. Ltd. 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 jabianthysis 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 & fullification of the consent or appearance of the Test Report is unlawful and offenders may be presecuted to the fullest extent of the law. All the samples are retained for 30days from the Date of release/ssue of the Text Report. The samples from Regulatory budies 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 tune period stated before, no complaints will be accepted. The entire Time schedule metholicable); BDL (Below Detection Limit); LDL (Lower Detection Limit); LDL (Lower Detection Limit);



PLOT NO 30, MANSAROWAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (IHARKHAND) GST NO- 254AECERTI3D124

NUMBER OF STREET, STREET, STREET, ST

Emolf: <u>info@elespl.co.in</u>, <u>eles ranch/@annall.com</u> Phone no.: 0651-2290103 Website : www.elespl.co.in



TEST REPORT

Test Report No.	; ELES/RNC/2024/0239	Report Release Date	: 15.01.2024
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023
ULR No.	: TC883924000000222F		

CUSTOMER DET.	AILS	SAMPLE DETAILS	1 Andrew States and the second
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2023/AA/4899
	A company of the second s	Location	: Near Bunglapart Village
			Pakhar Bauxite Mine
		Sampling Date	22 12,2023 to 23.12.2023
Address	: Lohardaga, Jharkhand-835302	Sample Received Date	: 30.12.2023
	1 Surgeries	Type of Sample	- Ambient Air
		Sampling Procedure	: ELES/DOC/SMPL/02
Mines Status	: Operational	Sampling Done By	: ELES Pvt. Ltd.
Period of Analysis	: 30.12.2023 to 13.01.2024	Sample Condition	: Sealed & Preserved

M	ETEOROLOGICAL INFO	MATION			
1	Average Temperature (PC)	: 19	2	Barometric Pressure (mmHg)	: 734
1	Relative Humidity (%)	: 48	4	Weather Condition	: Clear

Discipline : Chemics	al	Group : A	Atmospheric	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022	56	100 (24hrs)
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	28	60 (24hrs)
Sulphur Di-Oxide (SO2)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	7.4	80 (24hrs)
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	19.2	80 (24hrs)
Ozone (O ₃)	-µg/m ³	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (Shrs)
Ammonia (NH3)	µg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m ¹	IS \$182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)
Lead (Pb)	µg/m	IS 5182 (Part-22): 2004; RA2019	<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	<2.0	06 (Annual)

Reviewed by

*****End of Report****

Authorised Signatory

Dr. Deependra Kumar turinu

Ph. D Environmental Engg

Page 1 of 1

cccs PWL Ltd. Technical Menar

The Document stated as Test Report, is issued by the Laboratory uniter General Terms and Conditions, only on Company later hand 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 dane 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 currics be reproduced except in fail and any part of the report is not taken out of context, without prior written apprendi of the Laboratory. The Report in fail or in part shall not be published, advertise, used for any legal actions inless prior permission has been secured from the Management of the Laboratory. Adaption is analytical and offenders may be prosecuted to be failable, compression and jurisdiction issues. Any unsufficiencies distribution of the context or appearance of the Test Report. The samples from Bragulatory budies are to be retioned as specified. Any type of Observations of Complexit regarding the Report shall be done within Educes from the Date of Test Report regarding the Report used. NIA (Net Appringle): BDI, (Below Detroition Low), LDL (Lower Detection Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATTA, RANCHI-634005 (JRARKHAND) GST NO-- 20AAFCE97130124

NAINEERING SERVICES PUT, LID.

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

	TE	ST REPORT		
Test Report No.	: ELES/RNC/2024/0239	Report Release Date	: 15.01.2024	
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023	

CUSTOMER DET/	AILS	SAMPLE DETAILS	Contractor of the
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	 ELES/RNC/2023/AA/4899 Near Bunglapart Village Pakhar Bauxite Mine
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 22.12.2023 to 23.12.2023 : 30.12.2023
Mines Status	: Operational	Type of Sample Sampling Procedure Sampling Done By	: Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt. Ltd.
Period of Analysis	: 30.12.2023 to 13.01.2024	Sample Condition	: Sealed & Preserved

Mi	ETEOROLOGICAL INFOR	MATION			
	Average Temperature (°C)	: 19	2	Barometric Pressure (mmHg)	: 734
3	Relative Humidity (%)	: 48	4	Weather Condition	: Clear

Discipline : Chem	ical	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C ₄ H ₀)*	µg/m ³	IS 5182 (Part-11)2006;RA2017	<1.0	05(Annual)	
Benzo-(a)-Pyrene*	ng/m³	IS 5182 (Part-12)2004;RA2019	<0.5	01(Annual)	

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



**** End of Report****

Authorised Signatory Dr. Deependra Komar Sirika Ph. D Environmental Engg. ELES Pvt. Ltd. Technical Managhr

Page 1 of 1

The Document stated as Text Report, is usual 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/unitysis done by the Laboratory only. The information stated on the Test Report referes 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 to 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, nevertise, and for any legal actions unless prior permission has been secured from the appendent of the Laboratory Attention is drawn to the limitation of limbity, compensation and jurisdiction issues. Any unadhorized alteration & falsefaction of the context of the Test Report is unitawill and offenders may be protected to the fullest extern of the laboratory attended for all the Samples are retained for allong from the appendent of the Test Report. The samples from Registratory bodies are to be retained as specified. Any type of Observations of Completing the Reports shall be done within 15days from the Date of Test Report to the Test Report released/issue (N/A (Net Applicable), BD). (Below Detection Limit), LD1 (Lower Detection Limit).



ENVIRONMENTAL LABORAT

PLOT NO-30, MANSAROVAR ENCLINE, TUPUDANA HATTA, RANCHI-834009 (IMARKHAND) GST NO-- 30A//ECE97130324

Cite U74599(H2018PTC011125

Entail: info@eluspi.co.in , eles.ranchi@amail.com Phone no.: 0551-2290103 Website ; www.elespl.co.in



TEST REPORT

Test Report No.	: ELES/RNC/2024/0240	Report Release Date	± 15.01.2024
Work Order No.	: 13612310218	Work Order Date	+ 21,04.2023
ULR No.	: TC88392400000223F		

CUSTOMER DETA	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No.	: ELES/RNC/2023/AA/4900
		Location	: Yatri Shed (Near K-10)
			Pakhar Bauxite Mine
	A contract of the second of	Sampling Date	: 22.12.2023 to 23.12.2023
Address	: Lohardaga, Jharkhand-835302	Sample Received Date	: 30.12.2023
		Type of Sample	: Ambient Air
	1	Sampling Procedure	= ELES/DOC/SMPL/02
Mines Status	: Operational	Sampling Done By	: ELES Pvt. Ltd.
Period of Analysis	: 30.12.2023 to 13.01.2024	Sample Condition	: Sealed & Preserved

1	Average Temperature (°C)	: 19	2	Barometric Pressure (mmHg)	: 734	
3	Relative Huntidity (%)	: 48	4	Weather Condition	: Clear	

Discipline : Chemical Gro			p: Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022.	63	100 (24hrs)	
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	33	60 (24hrs)	
Sulphur Di-Oxide (SO2)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	7.5	80 (24hrs)	
Nitrogen Di-Oxide (NO2)	μg/m ³	IS 5182 (Part-6): 2006; RA2022	23.3	80 (24hrs)	
Ozone (O ₁)	µg/m ³	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)	
Ammonia (NH ₃)	µg/m ³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m ²	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)	
Lead (Pb)	µg/m ³	IS 5182 (Part-22): 2004; RA2019	<0.002	1 (24hrs)	
Nickel (Ni)	og/m*	IS 5182 (Part-26):2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m ¹	ELES/AIR/SOP/01	<2.0	06 (Annual)	

die to Reviewed by U L

**** End of Report****

Authorised Signatory Dr. Deependra Kumar Sin., a

Raber

Ph. D Environmental Enga

Page 1 of I

EDES PVt, Ltd. Technical Manager

DI The Document stated as The Deposit remained by the Laboratory under Optienal 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 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 control 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 appendance of the Test Report is unlawful and offenders may be prosedured to the fullest extent of the law. All the samples are related for 30days from the Date of releasedssue 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 te done within (Sdays from the Date of Test Report released/escod. After the time period stated hellore, 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) 657 NO-28AAECE97130134

CONTERING SERVICES PVT, LTD.

Email: Info@elespl.co.in , eles.ronchi@amail.com Phane no.: 0651-2290303 Website : www.elespl.co.in

TEST REPORT				
Test Report No.	: ELES/RNC/2024/0240	Report Release Date	: 15.01.2024	
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023	

CUSTOMER DET.	AILS	SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2023/AA/4900 : Yatri Shed (Near K-10) Pakhar Bauxite Mine	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 22.12.2023 to 23.12.2023 : 30.12.2023	
Mines Status	: Operational	Type of Sample Sampling Procedure Sampling Done By	: Ambient Air : ELES/DOC/SMPL/02 ; ELES Pvt. Ltd.	
Period of Analysis	: 30.12,2023 to 13.01.2024	Sample Condition	: Sealed & Preserved	

MI	ETEOROLOGICAL INFORMATION				
1	Average Temperature (°C) 19	.2	Barometric Pressure (mmH)	g) = 734	
3	Relative Humidity (%) 48	4	Weather Condition	: Clear	

Discipline : Chemical		Group :	Group : Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C _h H ₆)*	µg/m'	IS 5182 (Part-11)2006;RA2017	<1.0	05(Annual)	
Benzo-(a)-Pyrene*	ng/m ³	IS 5182 (Part-12)2004;RA2019	<0.5	01(Annual)	

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



****Ead of Report****

Authorised Signatory Dr. Deependlia Klimar Siki, J Ph. D Environmental Engg ELES Pvt. Ltd. Technical Manaror

Page 1 of 1

The Document stated is Test Report, is issued to the Laboratory under General Termy 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 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 assurations. 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 sepreduced except in full and any part of the report is not taken out of context, without prior written upproval of the Laboratory. The Report is full of 'n 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 limitation efficient only and officients may be prosecuted to the fullest extent of the samples are retained alternation & falsification of the Date of returned of the Test Report. The samples from Regulatory bides are to be retained an specified. Any type of the Test Report, an 24hours form Regulatory bides are to be retained an specified. Any type of Observations of Compliant regarding the Report is shall be done within 15kby from the Date of Test Report reflects that State of the time period state before, no complaints will be accepted. The entire time schedulo mentioned in Test Report as a 24hours form Regulatory bides are to be time period state before, no complaints will be accepted. The market alternation used N/A (Not Applicable), BDL (Below Detection Limit), LDL (Linwer Detection Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-B34003 (JHARKHAND) GST NO- 20AASCES7130124 FORESTIVE SERVICES PRO 1

Email: <u>info@elesal.co.in</u>, <u>eles.ranchi@gmial.com</u> Phone na.: 0651-2290103 Website : www.elespi.co.in



Test Report No.	: ELES/RNC/2024/0241	Report Release Date	: 15.01.2024	
Work Order No.	: 13612310218	Work Order Date	21.04.2023	
ULR No.	: TC883924000000224F			

CUSTOMER DET/	AILS	SAMPLE DETAILS	
Customer Name	: Hindaleo Industries Limited	Sample Ref. No. Location	: ELES/RNC/2023/AA/4901 : 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	: 22.12.2023 to 23.12.2023 : 30.12.2023 : Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt. Ltd.
Period of Analysis	: 30 12.2023 to 13.01.2024	Sample Condition	: Sealed & Preserved

M	METEOROLOGICAL INFORMATION					
1	Average Temperature (°C)	; 19	2	Barometric Pressure (mm)	fg) :734	
3	Relative Humidity (%)	: 48	4	Weather Condition	: Clear	

Discipline : Chemics	al	Group : Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022	51	100 (24hrs)	
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	33	60 (24hrs)	
Sulphur Di-Oxide (SO2)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	6,7	80 (24hrs)	
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	19.1	80 (24hrs)	
Ozone (O ₁)	µg/m ³	1S 5182 (Part-9): 1974; RA2019	<20.0	100 (Shrs)	
Ammonia (NH ₃)	µg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m ³	1S 5182 (Part-10); 1999; RA2019	<1.0	2 (8hrs)	
Lead (Pb)	µg/m ³	IS 5182 (Part-22): 2004; RA2019	0.008	1 (24hrs)	
Nickel (Ni)	ng/m ²	IS 5182 (Part-26):2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m*	ELES/AIR/SOP/01	<2.0	06 (Annual)	

mas à Eng 117 Reviewed by B Sau

Thutharised Signatory

****End of Report**** Page 1 of 1

Ph Dischild American Cr

a Kumar Signu

The Document stated in the Report is in School period laboratory and of General Terms and Conditions, only on Company letter head in are approved which. The results shown in the Test Report of Or results of the index stated on the Test Report reflects the findings date by the Laboratory at the time of inverse and only on the laboratory of 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 deal or the information and location issues. Any unachorated dearated the information at the information is not taken out of context, without prior written approval of the Laboratory. The Report is full or in part deal or the billity, compensation and location issues. Any unachorated dearated dearated from the content or appearance of the Test Report to unawful and offenders intage to the realise extent of the tamples are related for 30days from the Date of the Test Report to unawful and offenders intage to the training aspective of the Test Report to unawful and offenders intage to the realise extent of the tamples are related for 30days from the Date of test Report to unawful and offenders intage to be realised aspective. All the samples are related for 30days from the Date of test Report to entered from State before, no complaints will be accepted. The entire Time jededals uncritised in Test Report are 34boon format. Alter the time period state before, no complaints will be accepted. The entire Time jededals uncritised in Test Report is a 34boon format. Alter the time period state before, no complaints will be accepted. The entire Time jededals uncritised in Test Report is a 34boon format. Alter the time period state before, no complaints will be accepted. The entire Time jededals uncritised in Test Report is a 34boon format. Alter the time period state before, no complaints will be accepted.


FLOT NO-3D, MANSAROVAR ENCLAVE, TUPUDAWA HATIA, RANCHI-834003 (IHARKHAND) 55T NO: 20AAECE9723D124

NOINEERING SERVICES PVF. LTD.

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

	TI	EST REPORT	
Test Report No.	: ELES/RNC/2024/0241	Report Release Date	: 15.01,2024
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2023/AA/4901 : Near Utkarmit Rajkiya Prathmik Vidyalaya Bunglapart Village Pakhar Bauxite Mine	
Address	: Lobardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure	: 22.12.2023 to 23.12.2023 : 30.12.2023 : Ambient Air : ELES/DOC/SMPL/02	
Mines Status	3 Operational	Sampling Done By	: ELES Pvt. Ltd.	
Period of Analysis	: 30.12.2023 to 13.01.2024	Sample Condition	: Sealed & Preserved	

M.	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (°C)	:19	2	Barometric Pressure (mmHg)	: 734
3	Relative Humidity (%)	: 48	4	Weather Condition	: Clear

Discipline : Chem	ical	Group : Atmospheric Pollution				
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Benzene (C ₆ H ₆)*	µg/m³	IS 5182 (Part-11)2006;RA2017	<1.0	05(Annual)		
Benzo-(a)-Pyrene*	ng/m ³	IS 5182 (Part-12)2004;RA2019	<0.5	01(Annual)		

Remarks: (")-Parameters are outsourced to other Lab.



****End of Report****

Authorised Signatory

Dr. Deependra Komar Sitoria Ph. D Environmental Engo. ELES Pvl. Ltd. Technical Mane

Page 1 of 1

The Document stand as Test Report, is usual by the Laboratory usder 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 dute by the Laboratory only. The information stated on the Test Report refer or relates only to the job/analysis dute by the Laboratory only. The information stated on the Test Report refer or relates only to the job/analysis dute 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 in data provided on the report, except the information which is provided by the client. The Report carnot be represented except in full and any part of the report is not taken out of context, without prior written approval of the Laboratory. Attention is drawn to the limitation of liability, compression and jurisdiction issues. Any instructories allenation & filestification of the content of appearance of the Test Report is unlawful and offenders may be prosecuted us to field except of the law. All the samples are retained for Holeys from the Date of release/issue of the Test Report. The samples from Regulatory boles are to be retained as specified. Any type of Observations will be accepted. The entire Time schedule mentioned in Test Report is in 24bourt fermal. Atheremition used NA (Nat Applicable), BDL (Entire Limit), LDL (Lower Detection Limit).



ULR No.

VTRONMENTAL LABORA

FLOT NO.30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARNHAND) GST NO:- 20436CE9713D124

: TC883924000000225F

THE CASE OF





(The second of the second s				_
	TI	ST REPORT		
Test Report No.	: ELES/RNC/2024/0242	Report Release Date	: 15.01.2024	
Work Order No.	: 13612310218	Work Order Date	± 21.04.2023	

CUSTOMER DET.	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref No. Location	: ELES/RNC/2023/AA/4902 : Near Utkarmit Rajkiya Prathmil Vidyalaya Dumrapart Village Pakhar Bauxite Mine
Address Mines Status	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure Sampling Done By	: 22.12.2023 to 23.12.2023 : 30.12.2023 : Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt. Ltd.
Period of Analysis	: 30.12.2023 to 13.01.2024	Sample Condition	Sealed & Preserved

1	Average Temperature ("C) : 19	2	Barometric Pressure (mml	Hg) = 734
3	Relative Humidity (%) :48	4	Weather Condition	: Clear

Discipline : Chemica	ıl	Group : Atmospheric Pollution				
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022	58	100 (24hrs)		
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	26	.60 (24hrs)		
Sulphur Di-Oxide (SO ₂)	µg/m ³	1S 5182 (Part-2): 2001; RA2022	7.4	80 (24hrs)		
Nitrogen Di-Oxide (NO1)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	19,1	80 (24hrs)		
Ozone (O ₃)	µg/m ³	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)		
Ammonia (NH ₃)	μg/m ³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)		
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)		
Lead (Pb)	µg/m ³	IS 5182 (Part-22): 2004; RA2019	<0.002	1 (24hrs)		
Nickel (Ni)	ng/m'	1S 5182 (Part-26):2020	<6.0	20 (Annual)		
Arsenic (As)	ng/m ¹	ELES/AIR/SOP/01	<2.0	06 (Annual)		

0/HBS & Reviewed b 10 mg

****End of Report****

Authorised Signatory

Page 1 of 1 ELES Pvt. Ltd. Technical Mana The results stored in the Laboratory under General Terms and Conditions, only on Company latter head in pre-approved formal. The results stored in the Test Report and conditions of 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 chem. The Report council 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 second from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jarisdiction eaues. Any unauthorized alteration & falsification of the content or applarance of the Test Report is an inwful and offenders may be prosecuted to the fullest extent of the law. All the samples are related for 30 days from the Date of relative/issue of the Test Report. The samples from Regulatory bodies are to be rotained as specified. Any type of Observations or Complaints regarding the Reports shall he time within 15days from the Date of Test Report released/issued. After the time period stated before, no complainer will be accepted. The endre Time schedule mentioned in Test Report is in 24hours formal. Altervision used: N/A (Nat Applicable); BDL (Beinw Detection Limit). LDL (Lower Detection Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NG:- 2044ECE9713D124

NOINEEMINO SERVICES PVT, LTD.

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

	17	LST REPORT	
Test Report No.	: ELES/RNC/2024/0242	Report Release Date	: 15.01.2024
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023

CUSTOMER DET.	CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	 ELES/RNC/2023/AA/4902 Near Utkarmit Rajkiya Prathmik Vidyalaya Dumrapart Village Pakhar Bauxite Mine 		
Address Mines Status	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure	: 22.12.2023 to 23.12.2023 : 30.12.2023 : Ambient Air : ELES/DOC/SMPL/02 ELES/DOC/SMPL/02		
Mines Status	: Operational	Sampling Done By	: ELES Pvt. Ltd.		
Period of Analysis	: 30,12.2023 to 13.01.2024	Sample Condition	: Sealed & Preserved		

MI	TEOROLOGICAL INFOR	MATION			
1	Average Temperature (%C)	:19	2	Barometric Pressure (mmHg)	: 734
3	Relative Humidity (%)	: 48	4	Weather Condition	: Clear

Discipline : Chem	ical	Group 1 Atmospheric Pollution				
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Benzene (C _b H _b)*	µg/m ³	18 5182 (Part-11)2006;RA2017	<1.0	05(Annual)		
Benzo-(a)-Pyrene*	ng/m ³	15 5182 (Part-12)2004;RA2019	<0.5	01(Annual)		

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



****End of Report****

Authorised Signatory Dr. Deepend.a Kumar Simila Ph. D Environmental Engg. ELES Pvt. Ltd. Technical Menn

Page 1 of 1

The Document stated is Test Report, is assued by the Laboratory under General Terms and Conductors, only on Company letter head in pre-approved format. The results shown in the Test Report refer of centes only in the jub/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 reprediced 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 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 of provided for the limitation of falsified and offenders may be prosecuted to the fullege extent of the samples are retained for 30days from the Date of releasefusate of the Test Report. The samples from Regulatory bodies are to be retained at specified. Any type of Observations or Complaints regarding the Report shall be doee within 15 days from the Date of Test Report Address format. Address format Ad

ENVIRONMENTAL LABORATORIES & ENGINEERING SERVICES PVT.LTD.

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

Pakhar (109.507) Bauxite Mine-Environmental Monitoring Report

January 2024



CONTENT

Minerals	& Minerals : Pakhar (109.507)	Environmental Monitoring Report	January 2024
		Pakhar (109.507)	
1	MBIENT AIR QUALITY- CORE	ZONE	
1. 1	Near Mine Quarry No-K7		
2 1	lear Mine Quarry No-K9		-
3 N	lear Mine Quarry No-K5		
4 P	akhar Loading Area		
1	MBIENT AIR QUALITY- BUFFE	R ZONE	
1 1	sear Bunglapart Village		
2 1	(atri Shed (Near K-10)	N	
3 N	lear Utkarmit Rajkiya Prathmik Vidya	alaya Bunglapart Village	
	ear Utkarmit Rajkiya Prathmik Vidya		
S	Surface Water		
5	ioil		





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

GINEERING SERVICES PUT, LTD.

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



CM: U749999/W2018P7C011125

and the state	TE	ST REPORT	a. a
Test Report No.	: ELES/RNC/2024/0551	Report Release Date	: 06.02.2024
Work Order No.	: M& M/23-24/01	Work Order Date	: 31.03.2023
ULR No.	: TC883924000000522F		

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/0594 : Near Mine Quarry No-K7 Pakhar (109.507 ha) Bauxite Mine	
Address	Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 25.01.2024 to 26.01.2024 : 31.01.2024	
		Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02	
Mines Status	: Operational	Sampling Done By	: ELES Pvt_Ltd.	
Period of Analysis	: 31.01.2024 to 06.02.2024	Sample Condition	: Sealed & Preserved	

1	Average Temperature (°C)	:19	2	Barometric Pressure (mmHg)	; 738
3	Relative Humidity (%)	: 48	4	Weather Condition	: Clear
5	Longitude	: 84°36'43.86"E	6	Latitude	: 23°33'29.12"N

Discipline : Chemics	d	Group : Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022	70	100 (24hrs)	
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	39	60 (24hrs)	
Sulphur Di-Oxide (SO2)	µg/m ³	IS 5182 (Part-2): 2001: RA2022	11.6	80 (24hrs)	
Nitrogen Di-Oxide (NO1)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	26.1	80 (24hrs)	
Ozone (O3)	µg/m ³	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)	
Ammonia (NH2)	µg/m ³	IS 5182 (Part-25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)	
Lead (Pb)	ug/m ³	IS 5182 (Part-22): 2004; RA2019	0.011	1 (24hrs)	
Nickel (Ni)	ng/m ³	IS 5182 (Part-26):2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m ³	ELES/AIR/SOP/01	<2.0	06 (Annual)	

****End of Report****

Reviewed by

DAuthorised Signatory

ar Sinna

Page 1 of 1 CLES Pvt. Ltd. Technical Manual The results Page 1 of 1 shown in the Test Report role; to refules only to the job/analysis dane by the Laboratory celly. 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 our of context, without prior verifien approval of the Laboratory. The Report in full or in part shall not be published, advertise, used for any legal actions unless prior permusion has been second from the Management of the Laboratory. Attention is drawn to the limitation of flability, compensation and jurisdiction assues. Any unauthorized mention & 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 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), BDI, (Below Detection Linux), LDI, (Lower Detection Linux).



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

NGINEERING SERVICES PVT. LTD.

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

	TI	ST REPORT		
Test Report No.	: ELES/RNC/2024/0551	Report Release Date	: 06.02.2024	
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023	

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	; Minerals & Minerals Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/0594 : Near Mine Quarry No-K7	
Address	: Lohardaga, Jharkhand-835302	Sampling Date	Pakhar (109.507 ha) Bauxite Mine : 25.01.2024 to 26.01.2024	
-		Sample Received Date Type of Sample	: 31.01.2024 : Ambient Air	
	A	Sampling Procedure	: ELES/DOC/SMPL/02	
Mines Status	: Operational	Sampling Done By	ELES PVL Ltd.	
Period of Analysis	: 31.01.2024 to 06.02.2024	Sample Condition	: Sealed & Preserved	

MI	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (%C)	: 19	2	Barometric Pressure (mmHg)	: 738
3	Relative Humidity (%)	a 48	4	Weather Condition	: Clear
5	Longitude	: 84°36'43.86"E	6	Latitude	: 23°33'29.12"N

Discipline : Chem	ical	Group : Atmospheric Pollu		
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (C6H6)*	µg/m ³	IS 5182 (Part-11): 2006; RA2022	<1.0	05(Annual)
Benzo-(a)-Pyrene*	ng/m ³	IS 5182 (Part-12): 2004; RA2019	<0.5	01(Annual)

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



****End of Report****

Authorised Signatory Dr. Deependra Kumar Sinna Ph D Environmental Engg. LLES Pvt. Ltd. Technical Mananor

Page 1 of 1

The Occument stated as Test Report, is usued by the Laboratory under General Terms and Conditions, only in Company letter head in pre-appenved format. The results shown in the Test Report refer or relates only in the jubianalysis 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 previded on the report. except lite information which is provided by the chent. The Report cannot be reproduced except in full and any part of the report is not taken out of context, wallout 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 hability, compensation and jurisdiction issues. Any amauthorized alteration & falsification of the comein or appearance of the Test Report is unlawful and offenders may be proseeded to the fullest extent of the law. All the samples are retained for 30days from the Date of release/saue of the Text 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 reltased/assed. After the time period stated before, no complaints will be accepted. The entire Time schedule maintimed 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, TLIPUDANA HATIA, RANCHI-834003 (IHARKHAND) GST NO:- 20AAECE9713D124

GINEERING SERVICES PVT. L

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



	TE	EST REPORT	
Test Report No.	: ELES/RNC/2024/0552	Report Release Date	: 06.02.2024
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023
ULR No.	: TC883924000000523F		

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Location	ELES/RNC/2024/AA/0595 Near Mine Quarry No-K9 Pakhar (109.507 ha) Bauxite Mine	
Address	: Lohardaga. Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 25.01.2024 to 26.01.2024 : 31.01.2024 : Ambient Air	
Mines Status	: Operational	Sampling Procedure Sampling Done By	ELES/DOC/SMPL/02 ELES Pvt. Ltd.	
Period of Analysis	231,01.2024 to 06.02.2024	Sample Condition	: Sealed & Preserved	

Ŧ.	Average Temperature (°C)	:19	2	Barometric Pressure (mmHg)	: 738
3	Relative Humidity (%)	: 48	4	Weather Condition	: Clear
5	Longitude	: 84º377.83*E	6	Latitude	: 23°33'30.72"N

Discipline : Chemica	al	Group : Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022	72	100 (24hrs)	
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	41	60 (24hrs)	
Sulphur Di-Oxide (SO2)	μg/m ³	IS 5182 (Part-2): 2001; RA2022	11.5	80 (24hrs)	
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	28.1	80 (24hrs)	
Ozone (O ₃))Ig/m ³	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)	
Ammonia (NH3)	µg/m ³	1S 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)	
Lead (Pb)	µg/m ³	IS 5182 (Part-22): 2004; RA2019	0.016	1 (24hrs)	
Nickel (Ni)	ng/m ³	IS 5182 (Part-26):2020	<6,0	20 (Annual)	
Arsenic (As)	ng/m ³	ELES/AIR/SOP/01	<2.0	06 (Annual)	

Reviewed by

Authorised Signatory

****End of Report****

Or Deependra Kumar Sin

Page 1 of 1

Ph. D Environmental Engg.

The Document stated as Test Report is assed by the Laboratory under General Terms and Conditions, only on Concepts Johnson in the Test Report in pre-approach format. The results above in the Test Report refer or relates only in the jub/analysis done by the Laboratory only. The information stated on the Test Report refer or relates only and within the limits of chem'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 approval of the Laboratory. The Report in full or in part shall not be published, advertise, used for any legal actives unless prior permission has been visuand from the Categories of the Laboratory. Attention is drawn to the limiterion of liability, compensation and jurisdiction issues. Any untathorized alteration & fabrification of the Date of release issue of the Test Report. The Report is unlawful and offenders may be prosecuted as the fabrification of the laboratory and from the Date of release issue of the Test Report. The amples from Repations becaused as the information as precised as specified. Any type of Observations will be accepted. The entire Time schedule memories of laboratory is not alternation and provided in fabrification of the Report shall be done within is days from the Date of Test Report released issued. After the time period stated before, no complaints will be accepted. The entire Time schedule memories of the Report is in 24hours format. Abbreview used: N/A (Not Applicable), BDL (Balvo Detection Limit); LDL (Lower Detection Limit).



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

GINEERING SERVICES PVT. LTD.

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/2024/0552	Report Release Date : 06.02.2024		
Work Order No.	: M&M/23-24/01	Work Order Date : 31.03.2023		

CUSTOMER DET.	CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/0595 : Near Mine Quarry No-K9 Pakhar (109.507 ha) Bauxite Mine		
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 25.01.2024 to 26.01.2024 : 31.01.2024		
		Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02		
Mines Status	: Operational	Sampling Done By	: ELES Pvt. Ltd.		
Period of Analysis	: 31.01.2024 to 06.02.2024	Sample Condition	: Scaled & Preserved		

MI	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (%C)	: 19	2	Barometric Pressure (mmHg)	: 738
3	Relative Humidity (%)	1:48	4	Weather Condition	: Clear
5	Longitude	: 84°37'7.83"E	6	Latitude	: 23°33'30.72"N

Discipline : Chemical		Group : Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (CsHs)*	$\mu g/m^3$	IS 5182 (Part-11): 2006; RA2022	<1.0	05(Annual)	
Benzo-(a)-Pyrene*	ng/m ³	IS 5182 (Part-12): 2004; RA2019	<0.5	01(Annual)	

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



****End of Report****

Authorised Signatory Ox. Deependra Kumar Sinital Ph D Environmentel Enge LES Pvt. Ltd. Technical Marray r.

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 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 anless prior permission has been seemed from the Management of the Laboratory Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alteration & fulsification of the contents or appearance of the Test Report is anlawful and offenders may be proseculed 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 Comptaints 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 memoried 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:- 208AECE9713D1Z4

GINEERING AERTICES 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/2024/0553	Report Release Date	: 06.02.2024		
Work Order No.	: M&M/23-24/01	Work Order Date	; 31,03,2023		
ULR No.	: TC88392400000524F				

CUSTOMER DET.	AILS	SAMPLE DETAILS	and a second beaution of the
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/0596 : Near Mine Quarry No-K5 Pakhar (109.507 ha) Bauxite Mine
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 25.01.2024 to 26.01.2024 : 31.01.2024 : Ambient Air
Mines Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02 : ELES Pvt. Ltd.
Period of Analysis	: 31.01.2024 to 06.02.2024	Sample Condition	: Sealed & Preserved

1	Average Temperature (%C)	: 19	2	Barometric Pressure (mmHg)	±738
В	Relative Humidity (%)	: 48	4	Weather Condition	: Clear
5	Longitude	: 84°37'21.94"E	6	Latitude	: 23°33'14.59"N

Discipline : Chemica	d.	Group : Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limi	
Particulate Matter (PM10)	µg/m ³	1S 5182 (Part-23): 2006; RA2022	67	100 (24hrs)	
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	36	60 (24hrs)	
Sulphur Di-Oxide (SO2)	µg/m3	1S 5182 (Part-2): 2001; RA2022	12.2	80 (24hrs)	
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	28.1	80 (24hrs)	
Ozone (O ₁)	µg/m³	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)	
Ammonia (NH ₃)	µg/m ³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)	
Lead (Pb)	µg/m'	IS 5182 (Part-22): 2004; RA2019	0.013	1 (24hrs)	
Nickel (Ni)	ng/m ³	IS 5182 (Part-26):2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m ³	ELES/AIR/SOP/01	<2.0	06 (Annual)	

Reviewed by

Authorised Signatory

****End of Report****

Desigendra Kumar Sinisa
 Desigendra Kumar Sinisa

Su hy

Page 1 of 1 The Document stated as test Report, to issued by the Laboratory under General Tenses and Conditions, only on Compare Week Weiter Report reflects the findings done by the Laboratory enty. The information stated on the Test Report reflects the findings done by the Laboratory enty. The information stated on the Test Report reflects the findings done by the Laboratory enty. The information stated on the Test Report reflects the findings done by the Laboratory enty. The information stated on the Test Report reflects the findings done by the Laboratory enty. The information stated on the Test Report reflects the findings done by the Laboratory enty. The information stated on the Test Report reflects the findings done by the Laboratory enty 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 embort, without plan written approval of the Laboratory. The Report is full or in pure shall not be published, advertise, used for any legal actions unless prior permission has been secured from the fourier of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any anotherized alteration & fakilitation of the commut or appearance of the Test Report is unitawild and offenders may be processed to the fullest extern of the law. All the take takend for 30days from the Date of relaxe/issue of the Test Report is unitawild and offenders may be processed to the fullest extern of the law and relaxed for 30days from the Date of relaxe/issue of the Test Report is marked for 30days from the Date of relaxe/issue of the Test Report relaxed/used. After the time period stated before, no compliants will be accepted. The entire time schedule aconator of the fuel Report is in 24bnum format. Athreviation used: N/A (Not Applicable), BDI. (Below Dotection Limit), LDI. (Lawer Detection Limit).



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

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/2024/0553	Report Release Date	: 06.02.2024	
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023	

CUSTOMER DET/	CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/0596 : Near Mine Quarry No-K5		
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	Pakhar (109,507 ha) Bauxite Mine : 25,01,2024 to 26.01,2024 : 31.01,2024		
		Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02		
Mines Status	; Operational	Sampling Done By	ELES Pvt. Ltd.		
Period of Analysis	: 31.01.2024 to 06.02.2024	Sample Condition	: Sealed & Preserved		

MI	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (*C)	=19	2	Barometric Pressure (mmHg)	; 738
3	Relative Humidity (%)	: 48	4	Weather Condition	: Clear
5	Longitude	: 84°37'21.94"E	6	Latitude	: 23°33'14.59"N

Discipline : Chemical		Group : Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C6H6)*	µg/m ³	1S 5182 (Part-11): 2006; RA2022	<1.0	05(Annual)	
Benzo-(a)-Pyrene*	ng/m ^x	15 5182 (Part-12): 2004; RA2019	<0.5	01(Annual)	

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



****End of Report****

Authorised Signatory endra Kumar Sinnu _nvironmental Engg. so rvt Ltd. Technical Manan

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 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 an obvienent andy 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 full and any part of the report is not taken out of context, without prior written approval of the Laboratory. The Rapper 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 & fabrification of the content or appenning 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 period stated before, no complaints will be accepted. The entire Time schedule mentioned in Tast 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

VGINEERING SERVICES PVT, LTD

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



	TI	ST REPORT	
Test Report No.	: ELES/RNC/2024/0554	Report Release Date	: 06.02.2024
Work Order No.	: M&:M/23-24/01	Work Order Date	: 31.03.2023
ULR No.	: TC883924000000525F	Contraction of the	

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/0597 : Pakhar Loading Area Pakhar (109.507 ha) Bauxite Mine	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 25.01.2024 to 26.01.2024 : 31.01.2024	
Mines Status	: Operational	Type of Sample Sampling Procedure Sampling Done By	: Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt. Ltd.	
Period of Analysis	: 31.01.2024 to 06.02.2024	Sample Condition	: Sealed & Preserved	

I	ETEOROLOGICAL INFOI Average Temperature (°C)	and an address of the second se	2	Barometric Pressure (mmHg)	:: 738
3	Relative Humidity (%)	: 48	4	Weather Condition	: Clear
5	Longitude	: 84°36'53.77"E	6	Latitude	: 23°33'15.01"N

Discipline : Chemical		Group : Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022	78	100 (24hrs)	
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	49	60 (24hrs)	
Sulphur Di-Oxide (SO2)	µg/m ³	IS 5182 (Part-2); 2001; RA2022	14.2	80 (24hrs)	
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	26.5	80 (24hrs)	
Ozone (O ₃)	µg/m ²	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)	
Ammonia (NH ₂)	µg/m"	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m ⁸	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)	
Lead (Pb)	µg/m'	IS 5182 (Part-22): 2004; RA2019	0.016	1 (24hrs)	
Nickel (Ni)	ng/m³	1S 5182 (Part-26):2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m ³	ELES/AIR/SOP/01	<2.0	06 (Annual)	

Reviewed by

****End of Report****

har Silling

DAuthorised Signatory

The Document stated as Test Report Ltd Tentral and 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 cliers. 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 Minurgement of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unpurborized alteration & falsification of the content or appearance of the Test Report is onlowful and offenders may be prosecuted to the fullest extent of the law. All the samples are remined for Bidays from the Date of release/issue of the Test Report. The samples from Regulatory bodies are to be rotained 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 comptaints will be accepted. The other Time schedule mentioned in Test Report is in 24 hours format. Abbreviation used: N/A (Net Applicable); BDL (Below Detection Limit), LDL (Lower Detection Limit)



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

CINEERING SERVICES PVF. LTD.

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

	TE	ST REPORT		
Test Report No.	: ELES/RNC/2024/0554	Report Release Date	: 06.02.2024	1
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023	

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/0597 : Pakhar Loading Area Pakhar (109.507 ha) Bauxite Mine	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 25.01.2024 to 26.01.2024 : 31.01.2024	
Mines Status	: Operational	Type of Sample Sampling Procedure Sampling Done By	: Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt. Ltd.	
Period of Analysis	: 31.01.2024 to 06.02.2024	Sample Condition	: Sealed & Preserved	

M	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (°C)	; 19	2	Barometric Pressure (mmHg)	: 738
3	Relative Humidity (%)	: 48	4	Weather Condition	: Clear
5	Longitude	84°36'53.77"E	6	Latitude	: 23°33'15.01"N

Discipline : Chemical		Group : Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzene (C ₁ H ₄)*	µg/m ³	15 5182 (Part-11): 2006; RA2022	<1,0	05(Annual)	
Benzo-(a)-Pyrene*	ng/m ³	15 5182 (Part-12): 2004: RA2019	<0.5	01(Annual)	

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



**** End of Report****

Dr. Deepender Signatory pendra Kumar Sinh Ph. D Environmental Enda. ELES Pvt. Ltd. Technical Manam

Page 1 of 1

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only co-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 cannot be reproduced except in fall 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 ematherized alteration & falsification of the content or appearance of the Test Report is unlawful and offenders may be prosecuted in the fullest extent of the law. All the samples are related 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/assed. After the time period stated before, no complaints will be accepted. The entire Time schedule mentioned in Test Report is in 25hours format. Abbreviation used: N/A (Not Applicable), BDE, (Below Detection Limit); LDL (Lower Detection Limit);



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-934003 (IHARKHAND) EST NO:- 20AAECEB7120134

CIN: U74999/H2018PTC011125

Т N U Email: info@elespl.co.in , eles.ronchi@aniail.com

NO SERVICES FTT. LTD.



Phone no.: 0651-2290103 Website ; www.elingtl.co.in

	TB	ST REPORT	
Fest Report No.	: ELES/RNC/2024/0559	Report Release Date	: 06.02.2024
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023
ULR No.	: TC\$83924000000530F		

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/0602 : Near Bunglapart Village Pakhar Bauxite Mine	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	26.01.2024 to 27.01.2024 31.01.2024 Ambient Air	
Mines Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02 : ELES Pvt. Ltd.	
Period of Analysis	: 31.01.2024 to 06.02.2024	Sample Condition	: Sealed & Preserved	

1.	Average Temperature (°C)	:19	2	Barometric Pressure (mmHg)	: 734
3	Relative Humidity (%)	: 45	-4	Weather Condition	(Clear

Discipline : Chemics	al	Group : Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	µg/m ¹	IS 5182 (Part-23): 2006; RA2022	60	100 (24hrs)	
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	31	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	µg/m ²	IS 5182 (Part-2): 2001; RA2022	9.3	80 (24hrs)	
Nitrogen Di-Oxide (NO ₂)	µg/m ^{3/}	IS 5182 (Part-6): 2006; RA2022	21.4	80 (24hrs)	
Ozone (O ₂)	µg/m	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)	
Ammonia (NH ₂)	ug/m ¹	IS 5182 (Part-25); 2018	<10.0	400 (24hrs)	
Carbon Monexide (CO)	mg/m1	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)	
Lead (Pb)	µg/m³	IS 5182 (Part-22): 2004; RA2019	<0.002	1 (24hrs)	
Nickel (Ni)	ng/m ¹	IS 5182 (Part-26):2020	<5.0	20 (Annual)	
Arsenic (As)	ng/m ³	ELES/AIR/SOP/01	<2.0	06 (Annual)	

Reviewed by

ANTERODOT OF BELLEVELONDAL ATERON

Dr. Decorised Signatory

Ph. D Environmental Engg. and the second state of the relationship of the

Page | of |

**** End of Report****

The Document mated of Test Report, is used by the Unborntory oncer Gerenti Terms and Couliforn, only on Company letter head to pre-approved format. The results, shown in the Test Report refer of relates only to the jubianity to done by the Laboratory only. The information matter on the Test Report reflects the indiana date by the Laboratory at the time of involvement only and wohn the tanks of client a distribution. The Laboratory is responsible for all the information or data provided on the report, except the submanion which a provided by the closes. The Report cannot be reproduced except in full and any part of the report is not taken out of context, without prarorthon approval of the Laboratory. The Report in full or in part shall not be published, advertise, used for any legal actions anless price promotion has been second from the Missignment of the Laboratory Attention is down to the formation of liability, compensation and jurisdiction issues. Any maintainized attention & falsification of the apparent or apparents of the Test Report is autoweld and affenders may be presented to the fulliest awant of the law. All the scorples are retained for 30days from the Date of releasedsome of the Tost Report. The samples from Regulatory bodies are in by returned or specified. Any type of Observations or Complaints regarding the Reports shall be score within 15days from the Date of Test Report refersed/search. After the time period stated before, no complaints will be adopted. The online Time schedules mentioned in Test Report = = "Alexers formal Althoustion man 31/A (but Applicable), BDI. (Below Detection Limit), LDL (Lower Detection Limit)



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 [JHARKHAND] GST NO:- 2044ECE97130124 NGINEEMING SERVICES PVT, LTD. Email: info@elespl.co.in , eles.conchi@amail.com

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

	TEST	REPORT	
Test Report No.	: ELES/RNC/2024/0559	Report Release Date	: 06,02,2024
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023
CUSTOMER DET.	AILS	SAMPLE DETAILS	
Customer Name	: Hindaleo Industries Limitéd	Sample Ref. No. Location Sampling Date	: ELES/RNC/2024/AA/0602 : Near Bunglapart Village Pakhar Bauxite Mine : 26.01.2024 to 27.01,2024
Address	: Lohardaga, Jharkhand-835302	Sample Received Date Type of Sample Sampling Procedure	: 31.01.2024 : Ambient Air : ELES/DOC/SMPL/02
Mines Status	: Operational	Sampling Done By	: ELES PvL Ltd.
Period of Analysis	: 31.01.2024 to 06.02.2024	Sample Condition	: Sealed & Preserved

M	ETEOROLOGICAL INFOR	MATION			
1	Average Temperature (%C)	- 19	2	Barometric Pressure (mmHg)	: 734
3	Relative Humidity (%)	: 45	4	Weather Condition	: Clear

Discipline : Chem	Group : .	Group : Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (C _a H ₆) ^a	µg/m³	15 5182 (Part-11): 2006; RA2022	<1.0	05(Annual)
Benzo-(a)-Pyrene*	ng/m³	15 5182 (Part-12): 2004; RA2019	<0,5	01(Annual)

Remarks: (")-Parameters are outsourced to other Lab.



ows*End of Report****

Authorised Signatory Dr. Deependie K. mar Tahou Ph. D. Brvironment: Prog LLSS Pyr. Ltd. Techolcal Mann

Page 1 of 1

This Document visual nit Test Report, is mored by the Laboratory under General Terms and Conditions, only on Company letter head in pie-opproved format. The results shown in the Test Report refer of orbits only in 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 docolvenent only and within the limits of client's instructions. The Laboratory is responsible for all the information or data provided of the report, except the information obtains provided by the client. The Report cannot be reperished eccept in full and any part of the report is not laboratory and of contest, without prior original provided by the client. The Report cannot be reperished eccept in full and any part of the report is not laboratory and contest, without prior original of the Laboratory. The Report in full or in part shall not be publicated, advertise, used for any legal actives unless prior permission has been secured from the Management of the Laboratory. Attortion is drawn to the limitation of liability, compensation and jurnalistic symples are retained for States with the Original content or appendiate of the Test Report to follow/foll and offenders may be proteined to the fallest extent of the faw. All the samples are retained for States from the Management of the Test Report to follow/foll and offenders may be proteined at the fallest extent of the faw states will be applied by the Original retained active of the Test Report to follow/foll and offenders may be proteined as specified. Any type of Original to accept the active of States and the done within relation of the Test Report to be applied to the related as specified. Any type of Original to accept the attract of Test Report released by and offenders in the test met period attract before, no scattering will be accepted to accepted attractory for a schedule method of the Test Report to a fault domesed based based by the fault before, no scattering will be accepted. The antitic the

iave Emironment Save Fotor-



ENVIRONMENTAL LABORAT

PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) 65T NO- 10A4ECE97130124

the look of the later amuil.com



Events 1016 meleabreach , eser unite	0
Phone no.: 0651-2290103	
Website : www.elespl.co.in	

	TE	ST REPORT	
Test Report No.	: ELES/RNC/2024/0560	Report Release Date	: 06.02.2024
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023
ULR No.	: TC883924000000531F		

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	ELES/RNC/2024/AA/0603 Yatri Shed (Near K-10) Pakhar Bauxite Mine	
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 26:01,2024 to 27:01,2024 : 31:01,2024 : Ambient Air	
Mines Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02 : ELES Pvt. Ltd.	
Period of Analysis	: 31.01.2024 to 06.02.2024	Sample Condition	: Sealed & Preserved	

1	Average Temperature (°C) : 19	2	Barometric Pressure (mmH	fg) :734
з	Relative Humidity (%) 45	4.	Weather Condition	: Clear

Discipline : Chemics	al	Group : Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	$\mu g/m^3$	IS 5182 (Part-23): 2006; RA2022	67	100 (24hrs)	
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	36	60 (24hrs)	
Sulphur Di-Oxide (SO2)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	8.2	80 (24hrs)	
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	25,5	80 (24hrs)	
Ozone (O ₃)	µg/m ²	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)	
Ammonia (NH ₂)	µg/m²	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (Shrs)	
Lead (Pb)	µg/m ³	IS 5182 (Part-22): 2004; RA2019	<0.002	1 (24hrs)	
Nickel (Ni)	ng/m ¹	IS 5182 (Part-26):2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m³	ELES/AIR/SOP/01	<2.0	06 (Annual)	

Reviewed by

a supported at the state in the second line and from the t

Dr. Deapender Signatory Inna

**** End of Report****

Ph. D Environmental Engg CLUPY, Etcl Trabatent Mary

Page | of]

The Document stated as Test Report, as search by day Caboutory order General Terms and Conditiant, may an Company letter head in pre-approved format. The results shown in the Ten Report roles on relates only in the jubantity in done by the Laboratory andy. The information started on the Yest Report reflects the findings done by the Laboratory at the time of involvement only and within the limits of abora's instrument. The Laboratory is responsible for all the information or data provided on the report, except the information which is provided by the clurit. The Report current be repeadured except in full and any part of the report is not inform out of contest, without prior written upproval of the Laboratory. The Report in foil or in part shall not be published, investigation and part and part and part of the Laboratory. Attention is drawn to the invation of Inviting, congenisation and provide the number of the Laboratory. Attention is drawn to the invation of Inviting, congenisation and provide the number of the Laboratory. Attention is drawn to the invation of Inviting, congenisation and provide the laboratory. Attention is drawn to the invation of Inviting, congenisation and the law. All the samples are retained for Stokey, from the Dale of relaxedissic of the Tan Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaints regarding the Reports shall he fore write (Stay) from the line of Ten Report released/ispeed. After the time period stried before, as compliants will be accepted. The entire Time schedule manifored in Test Repairs to p. 24bases forout. Astronomics N/A (Key Appreciation, 800). (Bulow Detersion Limit), LD, (Lower Destersor Limit).

E DESERVOIRE DESERVOIR



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-E34003 (IHARKHANO) GST NO:- 20AAECE97130124

INGINEERING SEMPICES PVT. LED.

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

	TEST	REPORT	
Test Report No.	: ELES/RNC/2024/0560	Report Release Date	7.06.02.2024
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023
CUSTOMER DET.	AILS	SAMPLE DETAILS	
Customer Name	: Fündalco Industries Limited	Sample Ref. No. Location Sampling Date	: ELES/RNC/2024/AA/0603 : Yatri Shed (Near K-10) Pakhar Bauxite Mine : 26.01.2024 to 27.01.2024
Address	: Lohardaga, Jharkhand-835302	Sample Received Date Type of Sample Sampling Procedure	31.01.2024 Ambient Air ELES/DOC/SMPL/02
Mines Status	: Operational	Sampling Done By	: ELES Pvt. Ltd.
Period of Analysis	: 31.01.2024 to 06.02.2024	Sample Condition	: Sealed & Preserved

1	Average Temperature (°C) : 19	2	Barometric Pressure (mm)	Hg) :734
3	Relative Humidity (%) : 45	4	Weather Condition	: Clean

Discipline : Chemical Group : /			Atmospheric	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (C ₉ H ₆)*	µg/m³	IS 5182 (Part-11): 2006; RA2022	<1.0	05(Annual)
Benzo-(a)-Pyrene*	ng/m ³	IS 5182 (Part-12): 2004; RA2019	<0.5	(Annual)

Remarks: (") Parameters are outsourced to other Lah.



"End of Report*

Authorised Signatory Dr. Doecondra K. man Satan Ph. D. Environmentel Epog ELES PVI. Ltd. Technical Manager

Page | of |

The Decoment stated as Test Report, is assumed to the Laboratory under General Terms and Conditions, only on Company lutter bead in pre-approved format. The results shown in the Test Report reflects on relates only to the Jaboratory under General Terms and Conditions, only on Company lutter bead in pre-approved format. The results shown in the Test Report reflects on relates only to the Jaboratory onder General Terms and Conditions, only on Company lutter bead in pre-approved format. The results shown in the Test Report reflects on relates only to the Jaboratory of the Laboratory of the Test Report reflects the findings done by the Laboratory of the information stated on the Test Report reflects the findings done by the Laboratory at the information which is provided by the client. The Report cances te 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 wall only be published, advertise, used for any legal actions soless prior permission has been received from the Management of the Laboratory. Attention is drawn to the Imminuo of Habity, compression and jurisdiction ascess. Any caracterized alteration & fully from the Odays from the Odays from the generalized and affinders may be grossenal to the Indicat event of the fear Report is unlawful and affinders may be grossenal to the Indicat event of the farm Report form Report form Report reflaced. After the nine period was properly to the samples are remained for Habity from the Odays from the Odays from the to be reflated to specified. Any type of Observations will be accepted. The entite Time schedule unational to Test Report is address from Report reflaced (taken Schedule and taken Schedule unational of takens), BEI, Oblevio Faunces Lutic, Lower Detection. The entitie Time schedule unational to Test Report is a 24 feature format. Alternative Schedule unational to Test Report is a 24 feature format. Alternative perior schedule unational funders are aperio



PLDT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATLA, RANCHI-834003 (JHARKHAND) GTT NO-20446CE97130104 NGINEERING SERVICES PET. 23

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



1000	dis result.	In his place party.
- 1	EST	REPORT

Test Report No.	: ELES/RNC/2024/0561	Report Release Date	: 06.02.2024
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023
ULR No.	: TC883924000000532F		

CUSTOMER DET/	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/0604 : Near Utkarmit Rajkiya Prathmil Vidyalaya Bunglapart Village Pakhar Bauxite Mine
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure	: 26.01.2024 to 27.01.2024 : 31.01.2024 : Ambient Air : ELES/DOC/SMPL/02
Mines Status	Operational	Sampling Done By	: ELES Pvt. Ltd.
Period of Analysis	: 31,01:2024 to 06.02,2024	Sample Condition	: Sealed & Preserved

METEOROLOGICAL INFORMATION Average Temperature (°C) : 19	7	Barometric Pressure (mm)	Hui - 784	_
3 Relative Humidily (%) :45		Weather Condition	: Clear	_

Discipline : Chemic	al	Group : A	Atmospheric !	Pollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022	59	100 (24hrs)
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	35	60 (24hrs)
Sulphur Di-Oxide (SO ₁)	µg/m ³	TS 5182 (Part-2): 2001; RA2022	7.8	80 (24hrs)
Nitrogen Di-Oxida (NO2)	µg/m ¹	IS 5182 (Part-6): 2006; RA2022	22.2	80 (24hrs)
Ozone (O ₁)	µg/m ³	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (Slars)
Ammonia (NH ₂)	µg/m ¹	IS 5182 (Part-25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m'	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (Shrs)
Lead (Pb)	ug/m ³	IS 5182 (Part-22); 2004; RA2019	0.011	1 (24hrs)
Nickel (Ni)	ng/m ¹	15 5182 (Part-26):2020	<6.0	20 (Annual)
Arsenic (As)	ng/m ¹	ELES/AIR/SOP/01	<2.0	06 (Annual)

BLTD. Reviewed by

Dr. Deependra Kunap

**** End of Report****

Pit DEmensionant Page

The Document taked as fest Report of based by the Calmonitors under General Terms and Conditions, only of Company lefts head in pre-approved format. The results shown in the Test Report refer to relates only to the job/analysis does by the Caboratory only. The information instead on the Test Report refers to relates only in the job/analysis does by the Caboratory only. The information instead on the Test Report refers to relates only in the job/analysis does by the Caboratory only. The information instead on the Test Report refers to relates only in the job/analysis does by the Caboratory only. The information instead on the Test Report refers to relates only in the limits of chert'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 occept in full and my part of the report is not follow on the feature, without poor written approval of the Laboratory. Attention is the limits of limiting of limitity, compensation and participation issues. Attention is a Baserian & Baserian A may be presented to the fullest extent of the low. All the samples are relating for the Report to be related and offenders may be presented to the fullest extent of the low. All the samples are relating for the Date of Test Report. The tamples, from Repulsary to be related to the fullest extent of the low. All the samples are relating for Selays from the Date of Test Report. The tamples, from Repulsary to be trained to the fullest extent of the low. All the samples are relating for the Report to the Report of the Report of the Date of Test Report of the Report of the Selays from the Date of Test Report. The tamples, from Repulsary to be trained to the fullest extent of the low. All the samples are relating for Selays from the Date of Test Report for the Report of the Re

Save Environment, Save Forthe



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D124 NGINEERING SERVICES PVF. LTD.

Email: <u>info@elespl.co.in</u>, <u>eles.ranchi@gmail.com</u> Phone no.: 0651-2290103 Websitz : www.elespl.co.in

Fest Report No.	: ELES/RNC/2024/0561	Report Release Date	: 06.02.2024	
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023	

CUSTOMER DET.	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/0604 : Near Utkarmit Rajkiya Prathmik Vidyalaya Bunglapart Village Pakhar Bauxite Mine
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure	: 26.01 2024 to 27.03.2024 : 31,01,2024 : Ambient Air : ELES/DOC/SMPL/02
Mines Status	: Operational	Sampling Done By	: ELES Pvt. Ltd.
Period of Analysis	: 31.01.2024 to 06.02.2024	Sample Condition	: Scaled & Preserved

MI	ETEOROLOGICAL INFORMATION	-		
1	Average Temperature (°C) : 19	2	Barometric Pressure (mmHg)	: 734
3	Relative Humidity (%) :45	4	Weather Condition	: Clear

Discipline : Chem	ica)	Group : Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (C ₆ H ₆)*	µg/m ³	IS 5182 (Part-11): 2006; RA2022	<1.0	05(Annual)
Benzo-(a)-Pyrene*	ng/m [®]	IS 5182 (Part-12): 2004; RA2019	<0.5	01(Annuml)

Remarks: (*)-Paramieters are oursourced to other Lab.



"""" End of Report

Authorised Signatory Dr. Deependre Kumer Ginne Ph. D Environmental Gingg ELES Phr. Ltd. Technical Mane

Page | of |

The Deciment similar Test Report, is issued by the Laboratory under General Terms and Constitions, only or Company letter hand in pre-approved format. The reading shrown in the Test Report refer or relates only to the jubbandysis done by the Laboratory only. The information mixed on the Test Report reflects the findings done by the Laboratory at the time of involvement only and online 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 reporting except in fall and any part of the report is not taken out of context, without price written approval of the Laboratory. The Report is fall not be published, advecting, used for my legal actions inless prior permission has been secured from the Management of the Laboratory. Attention advantor to the landitum of limits, comprisition of the falls of the laboratory attention of the laboratory between the first of the fall and inference of the Test Report. Attention & data introduces into the fallest extint of the falls for the Destinant of a client is introduced in the fallest extint of the law and the Report and the Data content of appearance of the Test Report. The surgets from the lambders may be presented to the fallest extint of the law. All the samples are called the Data of context/secure of the Test Report. The surgets from the Data of context/secure of the Test Report. The surgets from the galatory bodies are to be retained to specified. Any type of Clearconions of Compliants englishing the Report chill be down within 15days from the Data of Test Report relaxed/samed. After the faint period and the fallest external Laws (1DL (Grower Detection Limit).

iave Environment, Save Future'



PLDT NO-30, MANSARDVAR ENCLAVE, TUPUDANA HATIA, RANCHT-854003 (IHARKHAND) GST NO:- 20AAECE97130324

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



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

	<u>T6</u>	EST REPORT
Test Report No.	: ELES/RNC/2024/0562	Report Release Date : 06.02.2024
Work Order No.	: 13612310218	Work Order Date : 21.04.2023
ULR No.	: TC883924000000533F	

CUSTOMER DET.	AILS	SAMPLE DETAILS	and the second second second
Customer Name	Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/0605 : Near Utkarmit Rajkiya Pratunik Vidyalaya Dumrapart Village Pakhar Bauxite Mine
Address	: Lohardaga, Jharkhund-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure	: 26.01.2024 to 27.01.2024 : 31.01.2024 : Ambient Air : ELES/DOC/SMPL/02
Mines Status	: Operational	Sampling Done By	ELES Pyt. Ltd.
Period of Analysis	- 31.01.2024 to 06.02.2024	Sample Condition	: Sealed & Preserved

METEOROLOGICAL INFORMATION

11	Average Temperature (°C) : 19	2	Barometric Pressure (mm	Hg) 734	
- 3	Relative Humidity (%) :45	4	Weather Condition	2 Clear	

Discipline : Chemier	21	Group : /	Atmospheric	Poflution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022	63	100 (24hrs)
Particulate Matter (PM2.5)	µg/m²	1S 5182 (Part- 24); 2019	32	60 (24hrs)
Sulphur Di-Oxide (SO2)	µg/m ³	1S 5182 (Part-2): 2001; RA2022	7.8	80 (24hrs)
Nitrogen Di-Oxide (NO ₂)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	21,5	80 (24hrs)
Ozone (O3)	µg/m ³	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)
Ammonia (NH2)	µg/m	1S 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m ¹	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)
Lead (Pb)	ug/m ⁷	15 5182 (Part-22): 2004; RA2019	<0.002	1 (24hrs)
Nickel (Ni)	ng/m³	IS 5182 (Part-26):2020	<6.0	20 (Annual)
Amenic (As)	ng/m	ELES/AJR/SOP/01	<2.0	06 (Annual)

11110 Reviewed by

****End of Report**** Page 1 of 1

Pro D Environmental 10269

Dr. Deependia Signalap

The Downtoin interior Test forget is even by the Laboratey under General Terms and Conditions, only on Employ hear head in pre-approved format. The results shown in the Test Report on the related only to the something done by the Laboratory only. The information stated on the Test Report relates the findings done by the Laboratory only. The information stated on the Test Report relates the findings done by the Laboratory only. The information stated on the Test Report relates the findings done by the Laboratory only. The information stated on the Test Report relates the findings done by the Laboratory only. The information stated on the Test Report relates the findings done by the Laboratory is the inter of involvement relates the findings done by the Laboratory of the information of data provided on the report, escept the information with its provided by the client. The Report examples be reprediced except in full end any part of the report is not taken out of content, without provide the Laboratory. The Report is failed in the institute of the information, and understand with the findings form the laboratory is channed to the institute of the Laboratory. The Report is failed to the published advertise, used to any legal actions unless plate previous has been secure from the Management of the Laboratory. Altertory is channed to the finding to the failed on the finding and provided attended in the finding form the Date of the failed content of the failed to the samples of the Test Report in the any begin and the failed excent of the laboratory and the failed for all the samples are related in States of the Date of the failed form of the failed excent of the failed excent of the Test Report in the samples failed for all the samples are to the failed excent of the failed excent is the failed excent of the failed excending the R

Save Lindy unment, Save Putnice



PLOT NO 30, MANSAROVAB ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST ND:- 2044ECE9713D124

ENGINEERING SERVICES PTT. LTD.

Email: Info@elespl.co.in , eles.ranchi@gmail.com Phone no.: 0551-2290103 Website : www.elespl.co.in

TEST REPORT					
Test Report No.	: ELES/RNC/2024/0562	Report Release Date	: 06.02.2024		
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023		

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name	 Hindalco Industries Limited 	Sample Ref. No. Location	 ELES/RNC/2024/AA/0605 Near Utkarmit Rajkiya Prathmik Vidyalaya Dumrapart Village Pakhar Bauxite Mine 	
Address Mines Status	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure Sampling Done By	: 26.01_2024 to 27.01.2024 : 31.01_2024 : Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt. Ltd.	
Period of Analysis	: 31.01.2024 to 06.02.2024	Sample Condition	: Sealed & Preserved	

5.6.8	ETEOROLOGICAL INFORMATION	-	I TO THE REPORT OF THE REPORT	ter te la constante de la const
L	Average Temperature (°C) = 19	2	Barometric Pressure (mmHg)	= 734
3	Relative Humidity (%) :45	9	Weather Condition	: Clean

Discipline : Chemical		Group : Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Benzena (CeHe)*	,µg/m ²	IS 5182 (Part-11): 2006; RA2022	<1.0	05(Annual)	
Benzo-(a)-Pyrene*	ng/m ³	15 5182 (Part-12): 2004: RA2019	<0,5	01(Annual)	

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



****End of Report****

Authorised Signatory Dr. Deependia Kommi Sino Ph. D Environmenici Eceg. ELES Pvt. Ltd. Teannical Marm

Page | of |

The Document stated as Test Report, is issued by the Laboratory and er General Terms and Conditions, andy ou Company latter boad in pro-approval formal. The results shown in the Test Report refer or refutes only in the job/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the trans of involvement effly and writin the limits of clipit's two outport. The Laboratory is reapossible for all the information of dam provided by the Laboratory at the trans of involvement effly and writin the limits of clipit's two outport. The Laboratory is reapossible for all the information or dam provided by the recept the information which is provided by the client. The Report menois be epicolaced except in full and any part of the report, is not factor out of context, without prior written approval of the Laboratory. The Report in full or in part shall not oblight, compensation used for any legal actions unless prior permission has been vectored from the Management of the laboratory. Altentian is drawn to the limitation of laboratory is produced as specified, advertise, used for any legal actions unless prior permission has been vectored from the Management of the laboratory. Altentian is drawn to the limitation of laboratory is produced as specified. Any type of Observations and Merense Altentian of the Solid results and the full the samples free remainst for 30 days from the Date directed state 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 writin 150 type free. The Examples form related/meter of Altentian as specified, and type of Observations or Compliants regarding the Reports shall be done writin 150 type free. The Examples form the Report claused/meter of the trans prior compliants will be transported. The entire time adjoration mentioned in Test Report is in 24 years formation aneal NVA (Not Applicable); BDL (Below Defension Limit), L

jave Environment, Save Fature



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) 65T NO:- 200A6CE9713D124

GINLERING SERVICES PVT. LTD.

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



THEFT	DEDODT
LAL	REPORT

Test Report No.	: ELES/RNC/2024/0591	Report Release Date	: 06.02.2024
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023
ULR No.	: TC88392400000562F		

CUSTOMER DETAILS		SAMPLE DETAILS	
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Sampling Date Sample Received Date	: ELES/RNC/2024/SW/0626 : 27.01.2024 : 31.01.2024
Address	Lohardaga, Jharkhand-835302	Type of Sample Source of Sample	 Surface Water Near Mine Quarry No-K9, Pakhar (109,507ha) Bauxite Mine
Plant Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/01 : ELES Pvt. Ltd.
Period of Analysis	: 31.01.2024 to 05.02.2024	Sample Condition	: Sealed & Preserved

Discipline : Chemical Group :				Tolerance Limits
Parameter	Unit	Test Protocol	Result	as per IS 2296-1992 Class C (Inland Surface Water
pH (at 24.5 °C)		IS 3025 (Part 11) + 2022	6.38	6.5-8.5
Temperature	°C	IS 3025 (Part 9):1984; RA2017	24.7	
Chemical Oxygen Demand (COD)	-7	IS 3025 (Part-58) :2006; RA2017	BDL (DL: 4.0)	
Biochemical Oxygen Demand (BOD) (@ 20°C for 5 days)	mg/L	APHA 23 nd Ed.2017; 5210B	BDL (DL: 1.0)	3.0
Total Dissolved Solids (TDS)	mg/L	IS 3025 (Part 16):1984; RA2017	96.8	1500
Total Suspended Solids (TSS)	mg/L	IS 3025 (Part-17):2022	8.0	-
Oil & Grease	mg/L	IS 3025 (Part-39): 2021	BDL (DL: 0.1)	0.1
Calcium (as Ca)	mg/L	IS 3025 (Part-40) :1991, RA2019	3.1	-
Discipline : Cher	nical	Group :	Residues in W	ater
Aluminium (Al)	mg/L	IS 3025 (Part-55) :2003; RA2019	BDL (DL: 0.02)	0.03
Iron (as Fe)	mg/L	APHA23 ^{e0} Ed 2017; 3111B	0.095	50

SACK Reviewed by ****End of Report****

Dr. Deependra Kumar Sinus

Page | of |

n o charodhaenarenda

The Document study as Test Report of space by the Laboratory under General Terms and Conditions, only on Company letter terms in pro-topproved terms. The results shown in the Test Report release 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 andy 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 causes the reportient except in full and any part 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 acteres unless prior permission has been secured from the Management of the Laboratory. Attention is drawn to the limitation of fability, compensation and jurisdiction issues. Any unacthorized alteration & fabilitation of the context of release/issue of the Test Report is unitarial and offenders may be prosecuted to the fullest extent of the taw. All the samples are retained for 30days from the Date of release/issue of the Test Report. The semples 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 release/issue. Mile the accepted, The entire schedule mentioned in Test Report is in 24hours formal. Abbreviation used: NiA (Not Applicable); BDL (Below Detection Limit); LDL (Lower Detection Limit).



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

CINEERING SERVICES PVT. LTD.

Email: info@eiespl.ca.in , eles.ranchi@gmail.com Phane no.: 0651-2290203 Website : www.elespl.co.in



TEST REPORT

Test Report No.	: ELES/RNC/2024/0608	Report Release Date	: 06.02.2024
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023
ULR No.	: TC883924000000579F		

CUSTOMER DETAILS		SAMPLE DETAILS	
Customer Name	? Minerals & Minerals Limited	Sample Ref. No. Sampling Date Sample Received Date	: ELES/RNC/2024/SL/0643 : 26.01.2024 : 31.01.2024
Address	: Lohardaga, Jharkhand-835302	Type of Sample Location of Sample	: Soil : Near Mine Quarry No-K9, Pakhar Bauxite Mine (109.507 ha)
Plant Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/05 ; ELES Pvt. Ltd.
Period of Analysis	: 31.01.2024 to 05.02.2024	Sample Condition	: Sealed

Discipline : Chemical		Group : Pollution & En	vironmeal
Parameter	Unit	Test Protocol	Result
pH (1:2) at 24.6 °C		IS 2720 (Part 26):1987; RA2021	4.03
Conductivity (1:2) at 24.6 °C	µS/cm	IS 14767: 2000; RA2021	374
Total Organic Carbon (TOC)	%	Soil Testing in India: 2011 (Walkley & Black Method)	0.01
Available Phosphorus (as P) (1:10)	kg/ha	Soil Testing in India; 2011	3.56
Potassium (as K)	mg/kg	IS 9497:1980; RA 2020	1250
Available Nitrogen	%	Soil Testing in India: 2011	1.12
Chloride (1:2)	-9%	ELES/SOIL/SOP/01	0.003
Lead (as Pb)	mg/kg	US EPA 3050 A&B : 1996	BDL (DL: 0.1)
Cadmium (as Cd)	mg/kg	US EPA 3050 A&B : 1996	BDL (DL: 0.1)
Mercury (as Hg)	mg/kg	US EPA 7473 : 2007	BDL. (DL: 0,01)
Magnesium (as Mg)	mg/kg	Soil Testing in India: 2011	310

Remarks: Loff done at Lab.

MILES. Reviewed by

Authorised Signatory

Dr. Deependia

Page 1 of 1

****End of Report****

The Document shifted as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Consoling follow head in pre-approved format. The results shown in the Test Report reflects only to the jub/malysis 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 disa 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 Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alteration & falsification of the centeri or 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 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 shall be done within 15days from the Date of Test Report shall be done within 15days from the Date of Test Report shall be done within 15days from the Date of Test Report is in 24boards of Test Report and the ViA (Not Applicable); BDL (Below Desection Limit); LDL (Lower Detection Limit).



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

VGINEERING SERVICES PVT. LTD.

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

	1	EST REPORT		_
Test Report No.	: ELES/RNC/2024/0608	Report Release Date	: 06.02.2024	
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023	

PECT DEBODT

CUSTOMER DET	AILS	SAMPLE DETAILS		
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Sampling Date Sample Received Date	: ELES/RNC/2024/SL/0643 : 26.01.2024 : 31.01.2024	
Address	: Lohardaga, Jharkhand-835302	Type of Sample Location of Sample	 Soil Near Mine Quarry No-K9, Pakhar Bauxite Mine (109.507 ha) 	
Plant Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/05 : ELES Pyt. Ltd.	
Period of Analysis	: 31,01.2024 to 05.02.2024	Sample Condition	I Sealed	

Discipline:	Chemical	Group: Pollution & Environment		
Parameter	Unit	Test Protocol	Result	
Arsenie (as As)	mg/kg	1S 3025 (Part 37): 2022	BDL (DL: 0.005)	
Selenium (as Se)	mg/kg	IS 3025 (Part-56) :2003; RA 2019	BDL (DL: 0.01)	

Reviewed by

****End of Report****

Authorised Signatory Dr. Deependra Kornar Situra Ph. D Environmental Engl ELES Pyt. Ltd. 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 bend in pre-topported formal. 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 referes 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 price 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 Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction issues. Any unauthorized alteration & fullsification of the content or appearance of the Test Report is unawful and offenders may be prosecuted to the fullest extent of the law. All the samples from 30days from the Date of reference/ssue of the Test Report is in 24hours from the Date of Test Report reference/issued. Allor the Date of Observations or Compliants regarding the Reports shall be done within 15days from the Date of Test Report released/issued. Aller the time period stated before, no compliants will be secopted. The entiry Time schedule mentioned in Test Report is in 24hours from the Date of Test Report station used: N/A (Net Applicable); BDL (Below Detection Limit); LDL (Lower Detection Limit).

ENVIRONMENTAL LABORATORIES & ENGINEERING SERVICES PVT.LTD.

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

Pakhar (109.507) Bauxite Mine-Environmental Monitoring Report

February 2024



CONTENT

-	Minerals & Minerals : Pakhar (109.507)Environmental Monitoring Report	February 2024
	Pakhar (109.507)	
	AMBIENT AIR QUALITY- CORE ZONE	
I	Near Mine Quarry No-K7	
2	Near Mine Quarry No-K9	
3	Near Mine Quarry No-K5	
4	Pakhar Loading Area	
	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	
	Ambient Noise	
	Workzone Noise	





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

UNG SERVICES PVT. LTD.

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

	TES	T REP	ORT		
Test Report No.	: ELES/RAN/2024/1296	Repo	ort Release Date	: 11.03.2024	
Work Order No.	: M&M/23-24/01	Wor	k Order Date	: 31.03.2023	
CUSTOMER DET	AILS	SAM	PLE DETAILS		
Instomer Name : Minerals & Minerals Limited Sample Ref. No. Location Address : Lohardaga, Jharkhand-835302 Sampling Date Address tatus : Operational Sample Received I		tion ling Date le Received Date of Sample ling Procedure	: ELES/RAN/2024/AA/1339 : Near Mine Quarry No-K7 Pakhar (109.507 ha) Bauxite Min : 21,02.2024 to 22,02.2024 : 26.02,2024 : Ambient Air : ELES/DOC/SMPL/02		
Period of Analysis	: 26.02.2024 to 05.03.2024	Sampling Done By Sample Condition		: ELES Pvt. Ltd. : Sealed & Preserved	
METEOROLOGI	CAL INFORMATION				
1 Average Temp	erature (°C) = 22	2	Barometric Pressur	e (mmHg) : 738	
3 Relative Humi	dity (%) : 49	4	Weather Condition	: Clear	
5 Longitude	= 84°36'43.86"E	6	Latitude	- 23°33'29.12"N	

Discipline	: Chemical	Group : Atmospheric Pollution				
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Particulate Matter (PM10)	µg/m ⁵	IS 5182 (Pari-23): 2006; RA2022.	66	100 (24hrs)		
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	34	60 (24hrs)		
Sulphur Di-Oxide (SO2)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	9.7	80 (24hrs)		
Nitrogen Di-Oxide (NO ₂)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	22.4	80 (24hrs)		
Ozone (O ₃)	µg/m ³	IS 5182 (Part-9): 1974; RA2019	<20,0	100 (8hrs)		
Ammonia (NH _s)	µg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)		
Carbon Monoxide (CO)	mg/m ³	15 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)		
Lead (Pb)	µg/m ⁸	1S 5182 (Part-22): 2004; RA2019	0.008	1 (24hrs)		
Nickel (Ni)	ng/m ³	1S 5182 (Part-26):2020	<6.0	20 (Annual)		
Arsenic (As)	ng/m ²	ELES/AIR/SOP/01	<2.0	06 (Annual)		

****End of Report****

anto print

E City City

Reviewed by

mmontal Engo

Dr. Deependra Kimar Sinha

Page 1 of 1 The Document states and the Laboratory under General Terms and Conditions, only in Conducts keller hand in pro-opproved format. The results shown in the Test Report Field 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 incolorithm form and when the laboratory only the unformation stated on the Test Report reflects the findings done by the Laboratory at the time of involvement only and wohin the limits of client's instructions. The Laboratory is responsible for all the minimution 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 is 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 life content or appearance of the Lest Report is unlawful and offenders may be princeded to the fullest extent of the law. All the samples are returned for 30days from the Date of release/usue of the Test Report. The samples from Regulatory hodges 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/sseed. After the time period stated before, no complaints will be accepted. The either Time schedule mentioned in Test Report is in 24hours format. Abbreviation used: N/A (Not Applicable), BDL (Below Detection Limit), LDL (Lower Detection Limit).



PLDT ND-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA; RANCHI-834003 (JHARKHAND) GST ND:- 20AAECE9713D124

NGINEERING SERVICES PVT. LTD.

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

			TES	TREP	ORT		
Test	Report No.	: ELES/R	AN/2024/1296	Rep	ort Release Date	: 11.03.2	024
Worl	k Order No.	: M&M/2	3-24/01	Wor	k Order Date	: 31.03.2	023
CUST	TOMER DET	AILS		SAM	IPLE DETAILS		
Addre	mer Name ess s Status		& Minerals Limited ga, Jharkhand-835302 nal	Sample Ref. No. Location Sampling Date Sample Received Date Type of Sample Sampling Procedure		: ELES/RAN/2024/AA/1339 : Near Mine Quarry No-K7 Pakhar (109.507 ha) Bauxite Min : 21.02.2024 to 22.02.2024 : 26.02.2024 : Ambient Air : ELES/DOC/SMPL/02	
Period of Analysis		: 26.02.2024 to 05.03.2024		Sampling Done By Sample Condition		: ELES Pvt. Ltd. : Sealed & Preserved	
MET	EOROLOGI	CAL INFOR	RMATION				
1 4	Average Temp	erature (*C)	: 22	2	Barometric Pressu	re (mmHg)	: 738
3 F	Relative Humic	iity (%).	: 49	4	Weather Condition	1	: Clear
5 1	ongitude		: 84°36'43.86"E	6	Latitude		: 23°33'29.12"N

Discipline : Chemical		Group : Atmospheric Pollution				
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Benzene (C ₆ H ₆)*	µg/m ³	18 5182 (Part-11): 2006; RA2022	<1.0	05(Annual)		
Benzo-(a)-Pyrene*	ng/m ^k	1S 5182 (Part-12): 2004; RA2019	<0.5	01(Annual)		

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



****End of Report****

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

Page 1 of 1

The Document anised as Test Report, is issued by the Laboratory under General Terms and Conductors, only on Company letter bead in pre-approved format. The results abovat in the Test Report refer or relates only to the job/study-six 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 instruction of data provided on the report, except the information which is provided by the client. The Report cannot be reproduced except in tail and any part of the report is not taken out of context, without prior written approval of the Laboratory. The Report in fail or in part shall not be published, advertise, used for any legal actions unless prior permission has been secared from the Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and particle in success. Any unauthorated alteration & fails/fination of the industry of the Test Report is unlawful and offenders may be prosecuted to the failest extent of the samples are retained for 30 days from the Oster of the Test Report. The samples from the Report shall of the retained as specified. Any type of Observations or Compliants will be computed for the days from the Date of Test Report is in 24hours format. Alter the time period date before, no compliants will be accepted. The entire Time schedule mentioned in Test Report is in 24hours format. Althreviation used. N/A (Not Applicable), BDL (Below Detection Limit), LDL (Lower Detection Limit).

Jawe Enstronement, Sprit Petrov



101

Reviewed by

ENVIRONMENTAL LABORATORIES &

PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 204AECE9713D1Z4

NGINEERING SERVICES PVT. LTD.

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

	TES	ST REPO	ORT		
Test Report No.	: ELES/RAN/2024/1297	Repo	ort Release Date	; 11.03.2024	
Work Order No.	: M&M/23-24/01	Wor	k Order Date	: 31.03.2023	
CUSTOMER DET	AILS	SAM	PLE DETAILS		
Customer Name Address	ner Name : Minerals & Minerals Limited Sample Ref. No. Location		: ELES/RAN/2024/AA/1340 Near Mine Quarry No-K9 Pakhar (109.507 ha) Bauxite Mine 21,02,2024 to 22,02,2024 26,02,2024 Ambient Air		
Mines Status	: Operational	Sampling Procedure Sampling Done By Sample Condition		: ELES/DOC/SMPL/02 ELES Pvt. Ltd. : Sealed & Preserved	
Period of Analysis	26.02.2024 to 05.03.2024				
METEOROLOGI	CAL INFORMATION				
1 Average Temp	erature (°C) = 22	2	Barometric Pressur	e (mmHg) : 738	
3 Relative Humid	lity (%) = 49	4	Weather Condition	: Clear	
5 Longitude	: 84°37'7.83"E	6	Latitude	: 23°33'30.72"N	

: Chemical	Group : Atmospheric Pollution				
Unit	Test Protocol	Result	Regulatory Limit		
µg/m³	IS 5182 (Part-23): 2006; RA2022	75	100 (24hrs)		
µg/m ¹	1S 5182 (Part- 24): 2019	44	60 (24hrs)		
µg/m ³	IS 5182 (Part-2): 2001; RA2022	13.2	80 (24hrs)		
µg/m ³	IS 5182 (Part-6): 2006; RA2022	27.1	80 (24hrs)		
µg/m ³	IS 5182 (Pari-9): 1974; RA2019	<20.0	100 (8hrs)		
µg/m ³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)		
mg/m ³	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)		
µg/m²	IS 5182 (Part-22): 2004; RA2019	0.012	1 (24hrs)		
ng/m³	15 5182 (Part-26):2020	<6.0	20 (Annual)		
ng/m ³	ELES/AIR/SOP/01	<2.0	06 (Annual)		
	Unit µg/m ³ µg/m ³ µg/m ³ µg/m ³ µg/m ³ µg/m ³ µg/m ³	Unit Test Protocol μg/m³ IS 5182 (Part-23): 2006; RA2022 μg/m³ IS 5182 (Part-24): 2019 μg/m³ IS 5182 (Part-24): 2019 μg/m³ IS 5182 (Part-2): 2001; RA2022 μg/m³ IS 5182 (Part-6): 2006; RA2022 μg/m³ IS 5182 (Part-6): 2006; RA2022 μg/m³ IS 5182 (Part-6): 2006; RA2019 μg/m³ IS 5182 (Part-2): 2006; RA2019 μg/m³ IS 5182 (Part-2): 2018 mg/m³ IS 5182 (Part-10): 1999; RA2019 μg/m³ IS 5182 (Part-22): 2004; RA2019 μg/m³ IS 5182 (Part-22): 2004; RA2019 μg/m³ IS 5182 (Part-26): 2020	Unit Test Protocol Result μg/m³ IS 5182 (Part-23): 2006; RA2022 75 μg/m³ IS 5182 (Part-24): 2019 44 μg/m³ IS 5182 (Part-2): 2001; RA2022 13.2 μg/m³ IS 5182 (Part-6): 2006; RA2022 27.1 μg/m³ IS 5182 (Part-6): 2006; RA2019 <20.0		

**** End of Report****

Dr. Deependra Kumar Sinha

The Document stated as Ten Report is shown by the Laboratory under General. Terms and Continuous, only of Comparison for the provide binna. The secular 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 only. The information stated on 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 only. The information stated on the Test Report reflects the findings done by the Laboratory only in the time of information of 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 Management of the Laboratory. Attention is drawn to the limitation of liability, compression and jurisdiction issues. Any unauthorized alteration & faisification of the Onte of the Test Report is unlawful and offendering be prosecuted to the fullest extent of the law. All the samples are retained for Hodays from the Date of rotaxismes of the Test Report. The samples turn Regulatory bodies are to be totained as specified. Any type of Observations of Compluins regarding the Reports shall be done within 15days from the Date of Test Report is in 24hours internet. Abbreviation used. NA (Not Applicable), BDL (Below Decetion Limit), LDL (Lower Detection Limit).



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

NGINEERING SERVICES PVT. LTD.

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

			TEST RE	PORT		
Te	st Report No.	: ELES/RAN/2024/1297	Rep	oort Release Date	: 11.03.2024	
W	ork Order No.	: M&M/23-24/01	Wa	rk Order Date	: 31.03.2023	
cl	STOMER DET	AILS	SA.	MPLE DETAILS		
CUSTOMER DET Customer Name Address Mines Status		: Minerals & Minerals Limite : Lohardaga, Jharkhand-8353 : Operational	02 San San Typ San	ation ation pling Date ple Received Date to of Sample tpling Procedure	2 ELES/RAN/2024/AA/1340 2 Near Mine Quarry No-K9 Pakhar (109.507 ha) Bauxite Mine 2 21.02.2024 to 22.02.2024 2 26.02.2024 2 Ambient Air 2 ELES/DOC/SMPL/02	
Per	riod of Analysis	: 26.02.2024 to 05.03.2024		pling Done By ple Condition	ELES Pvt. Ltd. : Scaled & Preserved	
MI	ETEOROLOGI	CAL INFORMATION				
1	Average Temps		2	Barometric Pressu	re (mmHg) : 738	
3	Relative Humid	lity (%) : 49	4	Weather Condition	clear	
5	Longitude	: 84°37'7.83*E	6	Latitude	: 23°33'30.72"N	

Discipline : Chemical		Group : Atmospheric Pollution				
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Benzene (C6H6)*	µg/m ³	TS 5182 (Part-11): 2006; RA2022	<1.0	05(Annual)		
Benzo-(a)-Pyrene*	ng/m ³	IS 5182 (Part-12): 2004; RA2019	<0.5	01(Annual)		

****End of Report****

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



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

Page 1 of 1

The Document stored of First Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter head in pre-approved deemat. The results shown in the Test Report refer in relates only to the job/inalysis done by the Laboratory only. The information stated on the Test Report reflects the findings done by the Laboratory at the one of involvement only and within the timus 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 repordiced 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 out be published, afventise, used for any legal actions inless prior permission has been secured from the Management of the Laboratory. Attention is drawn to the limition of lubility, compensation and periodiction issues. Any unauthorized alteration & file/lifeation of the content or appearance of the Test Report. The samples from the Brutesting and offenders may be prosecuted to the taliest of the law. Alt the samples are retained alteration & file/lifeation of the Date of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations will be accepted. The entire Time schedule mentioned in Test Report is in 24bours format. Abbreviation used N/A (Not Applicable), BDL (Relies Detection Limit); LDL (Lower Detection Limit).

ave husteningen). Save hatarr



11 21

ENVIRONMENTAL LABORATORIES

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

ERING SERVICES PVT. LTD.

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

	TES	T REP	ORT	
Test Report No.	: ELES/RAN/2024/1298	Repo	ort Release Date	: 11.03.2024
Work Order No.	: M&M/23-24/01	Worl	k Order Date	: 31.03.2023
CUSTOMER DET	AILS	SAM	PLE DETAILS	
Customer Name Address Mines Status	: Minerals & Minerals Limited : Lohardaga, Jharkhand-835302 : Operational	Local Samp Samp Type Samp	oling Date ole Received Date of Sample oling Procedure	: ELES/RAN/2024/AA/1341 : Near Mine Quarry No-K5 Pakhar (109.507 ha) Bauxite Mine : 21.02.2024 to 22.02.2024 : 26.02.2024 : Ambient Air : ELES/DOC/SMPL/02 ELES Data Ltd
Period of Analysis	: 26,02,2024 to 05.03,2024		oling Done By ole Condition	: ELES Pvt. Ltd. : Scaled & Preserved
METEOROLOGI	CAL INFORMATION			
1 Average Tempo	rature (°C) : 22	2	Barometric Pressur	e (mmHg) : 738
3 Relative Humic	lity (%) : 49	4	Weather Condition	Clear
5 Longitude	: 84°37'21.94"E	6	Latitode	: 23°33'14.59"N

Discipline	e : Chemical	Group : Atmospheric Pollution				
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022	69	100 (24hrs)		
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	38	60 (24hrs)		
Sulphur Di-Oxide (SO ₁)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	13.1	80 (24hrs)		
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	26.7	80 (24hrs)		
Ozone (O ₃)	µg/m ²	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)		
Ammonia (NH2)	jug/m ³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)		
Carbon Monoxide (CO)	mg/m ¹	1S 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)		
Lead (Pb)	µg/m ³	IS 5182 (Pan-22): 2004; RA2019	0.009	1 (24hrs)		
Nickel (Ni)	ng/m'	15 5182 (Part-26):2020	<6.0	20 (Annual)		
Arsenic (As)	ng/m ¹	ELES/AIR/SOP/01	<2.0	06 (Annual)		
111	unter l		uthorised Sign	natory		

****End of Report****

Dr. Deependra Kumar Sinha

Page 1 of 1

The Document stated as Text Report is level by the Laboratory under General Terms and Conditions, only of Lampa Number Hest Terminal Marketing 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 previded 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 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 issues. Any unauthorized afteration & BibiliCanion of the content or appearance of the Yest Report is unlawing and offenders may be proceeded to the fullest extent of the law. All the samples are returned for 30days from the Date of relensevission of the Test Report. The samples from Regulatory bedoes are to be national as specified. Any type of Observations or Compliants regarding the Reports shall be flow within 15days from the Date of Test Report released assisted. After the time period stated before, no compliants will be accepted. The entire Tane schedule meananed in Test Report is in 14hours format. Abbreviation used: N/A (Nint Applicable), BDI. (Below Detection Limit), LDI. (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@gmail.com Phone no.: 0651-2290103 Website : www.elespl.co.in

	TES	ST REP	ORT	
Test Report No.	: ELES/RAN/2024/1298	Repo	ort Release Date	: 11.03.2024
Work Order No.	: M&M/23-24/01	Wor	k Order Date	: 31.03.2023
CUSTOMER DET	AILS	SAN	IPLE DETAILS	The first state of the state of the
Customer Name Address Mines Status	: Minerals & Minerals Limited : Lohardaga, Jharkhand-835302 : Operational	Loca Sam Sam Type Sam	oling Date ole Received Date of Sample oling Procedure	1 ELES/RAN/2024/AA/1341 : Near Mine Quarry No-K5 Pakhar (109:507 ha) Bauxite Mine : 21.02.2024 to 22.02.2024 : 26.02.2024 : Ambient Air : ELES/DOC/SMPL/02 : ELES/DOC/SMPL/02
Period of Analysis	: 26.02.2024 to 05.03.2024		oling Done By ole Condition	: ELES Pvt. Ltd. : Sealed & Preserved
METEOROLOGI	CAL INFORMATION			
1 Average Temp		2	Barometric Pressur	e (mmHg) : 738
3 Relative Humid	fity (%) = 49	4	Weather Condition	(Clear
5 Longitude	: 84º37'21.94"E	6	Latitude	: 23"33'14.59"N

Discipli	ine : Chemical	Group : Atmosp	oup : Atmospheric Pollution	
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (C ₆ H ₆)*	μg/m ³	1S 5182 (Part-11): 2006; RA2022	<1.0	05(Annual)
Benzo-(a)-Pyrene*	ng/m ²	IS 5182 (Part-12): 2004; RA2019	<0.5	01(Annual)

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



****End of Report****

Authorised Signatory Dr. Deependra Kumar Sinha Ph. D Environmental Engg. ELES Pvt. Ltd. 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 lefter head in pre-approved format. The results above in the Test Report refer or relates only to the jubianalysis 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 writen 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 refers the time of involvement only and writen 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 enters that not be publicated except in full and any pair of the report is not taken out of context, 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 & foldows from the Date of releas/issue of the Test Report is unlawful and offenders may be prosecuted to the fullest extent of the law singles are retained for 30daws from the Date of release/issue of the Test Report is analysing the Report shall be done within 15days from the Date of Test Report is Report released/issued. After the same period state before, no complaints will be accepted. The entire Time scholule mentanism of 20daws from the Date of Test Report is in 24hours format. Abbreviation used N/A (Not Applicable), RDI. (Below Detection Limit), LDI. (Lower Detection Limit)

the folger quantity have further



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

UNG SERVICES PVT. LTD.

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

	TES	TREPORT	
Test Report No.	: ELES/RAN/2024/1299	Report Release Da	te : 11.03.2024
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023
CUSTOMER DET	AILS	SAMPLE DETAIL	S
Customer Name Address Mines Status	 Minerals & Minerals Limited Lohardagu, Jharkhand-835302 Operational 	Sample Ref. No. Location Sampling Date Sample Received D Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02
Period of Analysis	= 26.02.2024 to 05.03.2024	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved
METEOROLOGI	CAL INFORMATION		
1 Average Temp	erature (°C) = 22	2 Barometric P	ressure (mmHg) : 738
3 Relative Humie	ity (%) = 49	4 Weather Con	dition : Clear
5 Longitude	. 84°36'53.77"E	6 Latitude	: 23°33'15.01"N

Discipline	e : Chemical	Group : Atmospheric Pollution				
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Particulate Matter (PM10)	µg/m ¹	IS 5182 (Part-23): 2006; RA2022	73	100 (24hrs)		
Particulate Matter (PM2.5)	µg/m³	IS 5182 (Part- 24): 2019	44	60 (24hrs)		
Sulphur Di-Oxide (SO2)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	12.8	80 (24hrs)		
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	24.3	80 (24hrs)		
Ozone (O3)	µg/m*	IS 5182 (Part-9): 1974; RA2019	<20,0	100 (8hrs)		
Ammonia (NH ₃)	µg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)		
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)		
Lead (Pb)	µg/m³	IS 5182 (Part-22): 2004; RA2019	0.012	1 (24hrs)		
Nickel (Ni)	ng/m ³	IS 5182 (Part-26):2020	<6.0	20 (Annual)		
Arsenic (As)	ng/m'	ELES/AIR/SOP/01	<2.0	06 (Annual)		
Reviewed b	- Ball	****End of Report**** Dr. D	uthorised Sign	-		

Page 1 of 1

The Document stated as To Separt, a month by the Laboratory under General Terms and Conditions, only on Company lefter head in pre-approved tornat. 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 of the information stated on the Test Report reflects the findings done by the Laboratory of the information of the information of 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 apprival 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 lumination of liability, compensation and jurisdiction issues. Any unautherized alteration & fideification of the content to appearance of the Lest 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 releasensate of the Text Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complaintic regarding the Reports shall be done within 15days from the Date of Test Report released/issned. After the time period stated before, no complaints will be accepted. The entire Time selustule mentioned in Test Report is to 24nours formal. Abbroviation used: N/A (Nor Applicable), BDL (Bellow Detection Limit), LDL (Lower Detection Limit).



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

NGINEERING SERVICES PVT. LTD.

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

	TES	ST REP	ORT	
Test Report No.	: ELES/RAN/2024/1299	Repo	ort Release Date	: 11.03.2024
Work Order No.	: M&M/23-24/01	Wor	k Order Date	: 31.03.2023
CUSTOMER DET	AILS	SAM	PLE DETAILS	
Customer Name Address Mines Status	: Minerals & Minerals Limited : Lohardaga, Jharkhand-835302 : Operational	Loca Samp Samp Type Samp	oling Date ole Received Date of Sample oling Procedure	: ELES/RAN/2024/AA/1342 : Pakhar Loading Area Pakhar (109.507 ha) Bauxite Mine : 21.02,2024 to 22.02.2024 : 26.02.2024 : Ambient Air : ELES/DOC/SMPL/02
Period of Analysis	: 26.02.2024 to 05.03.2024		nling Done By nle Condition	: ELES Pvt, Ltd. : Sealed & Preserved
METEOROLOGI	CAL INFORMATION			
1 Average Temp		2	Barometric Pressur	e (mmHg) : 738
3 Relative Humi	dity (%) : 49	4	Weather Condition	: Clear
5 Longitude	= 84°36'53.77"E	6	Latitude	: 23°33'15.01"N

Discipl	ine : Chemical	Group : Atmosp	Atmospheric Pollution	
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (C ₆ H ₆)*	µg/m ³	1S 5182 (Part-11): 2006; RA2022	<1.0	05(Annual)
Benzo-(a)-Pyrene*	ng/m ³	IS 5182 (Part-12): 2004; RA2019	<0.5	01(Annual)

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



**** End of Report****

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

Page 1 of 1

The Document stated in Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company latter hand in presupproved format. The establishown in the Test Report reflects the findings done by the Laboratory on 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 careties be reproduced everyt in fail and only part of the report is not taken out of context, without prior written approval of the Laboratory. The Report in fail or in part shall not be publicited, adventise, used for any legal actions, unless prior permission has been secared from the function of the Laboratory. Attention is drawn in the limitation of liability, compensation and jurisdiction issues. Any anauthorized alternation & falsification of the context of the Test Report is million of the Date of reference insure of the Test Report is million of the Statement of the Test Report is million and offenders may be provided to the fullest event of the standard alternation & falsification of the Context without prior written approach of the Test Report is million and offenders may be provided in the limitation of the fullest event of the full of the samples are related alternation & falsification of the context is million from Regulatory bodies are to be retained as specified. Any type of Observations of Compliants regarding the Report shall be done within Test Report in a 24hours format. Alternation used NA (Not Applicable), BDI (Berlow Date on Laboratory 1.DL (Lawer Detection Lamit)

ive fairfreament. Save Patient



TLOT NO-30, MANSAROVAR EXCLAVE, TUNUDANA NATIA, RAMCHI-834003 [JHARKHAND] GST NO> 20AAECE97130224

ING SERVICES FFT, LTD. Email: Info@elespl.ca.in , eles ranchi@gmail.com

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

TEST REPORT Test Report No. : ELES/RAN/2024/1294 Report Release Date : 11.03.2024 Work Order No. Work Order Date : 21.04.2023 : 13612310218 CUSTOMER DETAILS SAMPLE DETAILS Customer Name : Hindalco Industries Limited Sample Ref. No. : ELES/RAN/2024/AA/1334 Location : Near Bunglapart Village Pakhar Bauxite Mine : 20.02.2024 to 21.02.2024 Sampling Date : Lohardaga, Jharkhand-835302 Address Sample Received Date : 26.02.2024 Type of Sample : Ambient Air Sampling Procedure : ELES/DOC/SMPL/02 Mines Status : Operational Sampling Done By ; ELES Pvt. Ltd. Sample Condition : Sealed & Preserved Period of Analysis 26.02.2024 to 05.03.2024

1	Average Temperature (°C)	: 22	2	Barometric Pressure (mmHg)	: 734	
3	Relative Humidity (%)	:48	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): 2006; RA2022	57	100 (24hrs)		
Particulate Matter (PM2.5)	µg/m³	IS 5182 (Part- 24): 2019	28	60 (24hrs)		
Sulphur Di-Oxide (SO2)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	8.1	80 (24lurs)		
Nitrogen Di-Oxide (NO ₂)	µg/m ³	15 5182 (Part-6); 2006; RA2022	19.4	80 (24hrs)		
Ozose (O3)	µg/m ¹	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (Shrs)		
Ammonia (NH1)	µg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)		
Carbon Monoxide (CO)	mg/m ³	15 5182 (Part-10): 1999; RA2019	<1.0	2 (Shrs)		
Lead (Pb)	µg/m ²	IS 5182 (Part-22): 2004; RA2019	<0.002	1 (24hrs)		
Nickel (Nij	ng/m	IS 5182 (Part-26):2020	<6.0	20 (Annual)		
Arsenic (As)	ng/m ³	ELES/AIR/SOP/01	<2.0	06 (Annual)		

G 1. / Reviewed by

****End of Report****

Authorised Signatory Dr. Deependre Kumar Sinha

Pri. D Environmental Engli

Page 1 of I The Decembern states as Figh Report, as most Par the Laboratory under General Terms and Conditions, only the Confront, label, East Briteshild and Brites. The results shown in the Test Report over of related on the to the job analysis done by the Laboratory only. The information under on the Test Report reflects the findings done by the Laboratory at the time of involvement arity 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 isluch 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 upproval 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 in Management of the Laboratory. Attention is drawn to the limitation of liability, compensation and variediction issues. Any annutherized distribution of the content or approvenes of the Test Report is unlowful and offenders may be proceeded to the fullest extent of the law. All the tamples are retained for 30days from the Date of release/essoe of the Test Report. The samples from Regulatory bodies are to be venated as specified. Any type of Observations or Complaints regarding the Reports shall be done within Eddays from the Edde of Test Report reinsurd/issued. After the time period stand before, no compliants will be accepted. The entire Time schedule mentioned in Test Report is in Eddoury format. Abbreviation used: N/A (Net Applicable); ROL (Bolow Detection Limit); LDI, (Lower Detection Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) 957 NO-20AAECE9713D124

ENGINEERING SERVICES PVT. LTD.

Email: <u>Info@elespl.co.in</u>, <u>eles.ranchi@gmail.com</u> Phone no.: 0651-2290103 Websim: www.elespl.co.in

Test Report No.	: ELES/RAN/2024/1294	Report Release Date	: 11.03.2024
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023
CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name Address Mines Status	: Hindalco Industries Limited : Lohardaga, Jharkhand-835302 : Operational	Sample Ref. No. Location Sampling Date Sample Received Date Type of Sample Sampling Procedure Sampling Done By	 ELES/RAN/2024/AA/1334 Near Bunglapart Village Pakhar Bauxite Mine 20.02.2024 to 21.02.2024 26.02.2024 26.02.2024 Ambient Air ELES/DOC/SMPL/02 ELES Pvt. Ltd.
Period of Analysis	: 26.02.2024 to 05.03.2024	Sample Condition	: Sealed & Preserved

Ŀ.	Average Temperature (°C)	: 22	2	Barometric Pressure (mml	Ig) : 734.
3	Relative Humidity (%)	: 48	-4)	Weather Condition	: Clear

Discipline : Chemical		Group : Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (CaHa)*	µg/m ³	IS-5182 (Part-11): 2006; RA2022	<1.0	05(Annual)
Benzo-(a)-Pyrene*	ng/m ¹	IS 5182 (Part-12): 2004; RA2019	<0.5	01(Annual)

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



****End of Report****

Authorised Signatory Dr. Deependra Kumar Sinha Ph. D Environmental Engg. ELES Pvl. Ltd. 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 later head in pre-approval format. The results shown in the Test Report reflects the industry done by the Laboratory and 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 estimates the report of the report is not taken ow of context, without prior writes approval of the Laboratory. The Report is not taken ow of context, without prior writes approval of the Laboratory. The Report is not taken ow of context, without prior writes approval of the Laboratory. The Report is not taken ow of context, without prior writes approval of the Laboratory. The Report is not stall on the involvement of the laboratory. The Report is not fail or in part stuff into the publiched, advertise, used for any legal antimistic and any unadhorized alteration & failed form to the limitation of the context of the Laboratory. Attention is drawn to the limitation of the bioaction of the failest ensent of the Same Same. Any unadhorized alteration & failest client of the limitation of the context of the Test Report is unabhorized intenders may be presented to the failest ensent of the failest ensent of the Test Report is unabhorized attenders in the descentee of the Test Report is unabhorized attenders into the provides are to be resented at specified. Any type of Overwarders will be accepted. The assigned for the failed of the Net of the failed of the taken and the time before, an complexity will be accepted. The astrophyse from the failed of the taken attenders will be accepted. The astrophyse from the Base attended at specified. Any type of Overwarders will be accepted. The astrophyse from the failed attenders will be formation of the failed of the failed attended attended to the failed attended by the senter will be accepted. The astreption failed at

In Englishmentation, Save Patrice


PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA MATIA, RANCHI-834003 (IMARKHAND) 657 NO:- 20445CE9713D124

NGINEERING SERVICES FUT. LTD.

Email: Info@elespl.co.in , eles.ranchi@amall.com Phone na : 0651-2290103 Website : www.elespl.co.in

	TEST	REPORT	
Test Report No.	; ELES/RAN/2024/1292	Report Release Date	2 11.03.2024
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023
CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RAN/2024/AA/1335 : Yatri Shed (Near K-10) Pakhar Bauxite Mine
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 20.02.2024 to 21.02.2024 : 26.02.2024 : Ambient Air
Mines Status	: Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/02 : ELES Pvi, Ltd.
Period of Analysis	: 26.02.2024 to 05.03.2024	Sample Condition	: Scaled & Preserved

METEOROLOGICAL INFORMATION

 Average Temperature (*C) : 22 	2 Barometric Pressure (mmHg) 2734
3 Relative Humidity (%) :48	4 Weather Condition Clear

Disciplin	e : Chemical	Group : Atmosp	Group : Atmospheric Pollution				
Parameter	Unit	Test Protocol	Result	Regulatory Limit			
Particulate Matter (PM10)	µg/m³	IS 5182 (Part-23); 2006; RA2022	71	100 (24hrs)			
Particulate Matter (PM2.5)	µg/m ¹	IS 5182 (Part- 24): 2019	39	60 (24hrs)			
Sulphur Di-Oxide (SO ₂)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	9.5	80 (24hrs)			
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	23.8	80 (24hrs)			
Ozone (O ₃)	µg/m ⁸	TS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)			
Ammonia (NH ₁)	µg/m²	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)			
Carbon Monoxide (CO)	mg/m ³	15 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)			
Lead (Pb)	µg/m ²	IS 5182 (Part-22): 2004; RA2019	0,012	1 (24hrs)			
Nickel (Ni)	ng/m ³	JS 5182 (Part-26):2020	<6.0	20 (Annual)			
Arsenic (As)	ng/m*	ELES/AIR/SOP/01	<2.0	06 (Annual)			

tæ Reviewed b

Authorised Signatory Dr. Deependra Kumar Sinha

****End of Report****

Photo Brillion and Bridgerster

Page 1 of 1 Provide a construction of the laboratory only formed and the provided of the laboratory only the laboratory on t



FLOT NO-30, MANSARDVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (IHARKHAND) GST NO- 20A4ECE97130124

VGENEERING SERVICES PVT. L9D.

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

Test Report No.	: ELES/RAN/2024/1292	Report Release Date	: 11.03.2024
Work Order No.	: 13612310218	Work Order Date	: 21,04.2023
CUSTOMER DET.	AILS	SAMPLE DETAILS	
Customer Name	: Hindalco Industries Limited	Sample Ref. No. Location	: ELES/RAN/2024/AA/1335 : Yatri Shed (Near K-10) Pakhar Bauxite Mine : 20.02.2024 to 21.02.2024
Address	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure	26.02.2024 to 21.02.2024 26.02.2024 : Ambient Air : ELES/DOC/SMPL/02
Mines Status	: Operational	Sampling Done By	: ELES Pvt. Ltd.
Period of Analysis	: 26.02.2024 to 05.03.2024	Sample Condition	: Sealed & Preserved

1	Average Temperature (*C)	: 22	2	Barometric Pressure (mmHg)	= 734
3	Relative Humidity (%)	: 48	30	Weather Condition	: Clear

Discipline : Chemical		Group : Atmospheric Pollution				
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Benzene (C ₆ H _n)*	μg/m ³	IS 5182 (Part-11): 2005; RA2022	<1.0	05(Annual)		
Benzo-(a)-Pyrene*	ng/m [×]	IS 5182 (Part-12): 2004; RA2019	<0.5	01(Annual)		

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

METEODOLOCICAL INFORMATION



****End of Report****

Dr. Deependra Rumar Sinha Ph. D Environmental Engg. ELES Pvi. Ltd. Technical Menager

Page 1 of 1

The Document stated in Test Report, is insued by the Laboratory under General Terms and Conditional, only on Company letter head in pre-approved format. The resolutiown in the Test Report refer in 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 unit 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, escept the information which is provided by the client. The Report estimates a reproduced except in full and any part of the report is not taken out of context, without provwritten approval of the Laboratory. The Report is full or is part shall not be published, advection, used for any legal actions unless prior permission has been secured from the Management of the Laboratory. Adjustion is drawn to the limitation of limbility, compensation and jurisdiction issues. Any unauformed alteration & falsification of the context or appearance of the Test Report in unlewful and offenders may be provided to the fallest orong of the law samples are retained for 30days from the David trebase/issue of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations will be incaped. The same Time Report shall needland a specific of the Test Report. The same of Dest from Regulatory bodies are to be retained as specified. Any type of Observations will be unapplicable from the David will be interest to the fact and the time period states within 15 days. From the David the actional as specified. Any type of Observations will be unapped. The same Time stateshills are done within 15 days from the David The Report time and Marchine terms period. After time terms by David Action Limit, LDU (Lewer Detection Limit).

ave Fredrighten, Save Europ



PLOT NO.30, MANSAROVAR ENCLAVE, TUPUDANA HATLA, RANCHI-834003 (IHARKHAND) GST NO- 20AAECE9713D174

VC SERVICES PVT. LTD.

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

	TEST	REF	ORT		
Test Report No.	; ELES/RAN/2024/1293	Report Release Date : 11.03.2024			
Work Order No.	: 13612310218	Work Order Date : 21.04.2023		: 21.04.2023	
CUSTOMER DET.	AILS	SA	MPLE DETAILS		
Customer Name	 Hindalco Industries Limited Lohardaga, Jharkhand-835302 	Sal	nple Ref. No. cation	: ELES/RAN/2024/AA/1336 : Near Utkarmit Rajkiya Prathmik Vidyalaya Bunglapart Village Pakhar Banxite Mine	
Mines Status	: Operational	Sar Tyj Sar	npling Date nple Received Date or of Sample npling Procedure npling Done By	: 20.02.2024 to 21.02.2024 : 26.02.2024 : Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt. Ltd.	
			nple Condition	: Scaled & Preserved	
METEOROLOGIC	AL INFORMATION				
1 Average Temper		2	Barometric Pressur	e (mmHg) : 734	
3 Relative Homidi	ty (%) :48	4	Weather Condition		

Discipline	: Chemical	Group : Atmospheric Pollution				
Parameter	Unit	Test Protocol	Result	Regulatory Limi		
Particulate Matter (PM10)	µg/m ³	15 5182 (Part-23): 2006; RA2022	62	100 (24hrs)		
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	33	60 (24hrs)		
Sulphur Di-Oxide (SO ₂)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	6.2	80 (24hrs)		
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	20,5	80 (24hrs)		
Ozone (O ₃)	µg/m1	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)		
Ammonia (NH ₁)	µg/m³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)		
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)		
Lead (Pb)	µg/m [±]	1S 5182 (Part-22): 2004; RA2019	<0.002	1 (24hrs)		
Nickel (Nii)	ng/m ³	IS-5182 (Part-26):2020	<6.0	20 (Annual)		
Arsenic (As)	ng/m"	ELES/AIR/SOP/01	<2.0	06 (Annual)		

Reviewed by

****End of Report****

Authorised Signatory Dr. Deependra Kumar Sinha

Page 1 of 1

The Document statest as The Report, R Sented by the Laboratory under General Terms and Condisions, only ELES Pyt. 140 - Taph Diget Management The results shown in the Test Report refer or relates only to the job analysis done by the Laboratory only. The information mand on the Test Report reflects the findings done by the Laboratory at the time of anothermore only and within the lands of cherit'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 in full or in part shall not be published, advertise, used for any legal actions unless provided provided has been second from the Management of the Laboratory. Attention is drawn to the limitation of lighting, compensation and jurisdiction issues. Any unauthorized alteration & faisification of the contrast or appearance of the Text Report is unknownal and offenders may be presented to the fallest extent of the law. All the samples are related for 30days from the Date of release/esus of the Test Report. The samples from Regulatory bodies are to be retained as specified. Any type of Observations or Complainty regarding the Reports shall be done within 15 days from the Dave of Test Report released/issued. After the unite period nitrad before, on manplaints will be accepted. The entite Tank schedule mentioned in Test Report is in 24hour's formal. Althreviation used 30% (Not Applicable). Hitl. (Below Detection Limit), UDL (Lower Detection Limit).



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-B34003 (JHARKHAND) GST NO:- 20AAECE97130224

NOINEERING SERVICES PVT. LTD.

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

	TEST	REP	ORT	
Tesi Report No.	: ELES/RAN/2024/1293	Re	port Release Date	: 11.03.2024
Work Order No.	: 13612310218	W	ork Order Date	: 21.04.2023
CUSTOMER DET	AILS	SA	MPLE DETAILS	
Customer Name	: Hindalco Industries Limited	1.00	nple Ref. No. cation	: ELES/RAN/2024/AA/1336 : Near Utkarmit Rajkiya Prathmik Vidyalaya Bunglapart Village Pakhar Bauxite Mine
Address Mines Status	· Lohardaga, Jharkhand-835302	Sar Tyj Sar	npling Date nple Received Date or of Sample npling Procedure npling Done By	: 20.02.2024 to 21.02.2024 ; 26.02.2024 ; Ambient Air : ELES/DOC/SMPL/02 ; ELES Pvt. Ltd.
Period of Analysis	: 26.02.2024 to 05.03.2024	_	nple Condition	: Sealed & Preserved
METEOROLOGIC	AL INFORMATION			
1 Average Temper	ature (°C) : 22	2	Barometric Pressur	re (mmHg) : 734
3 Relative Humidi	ty (%) : 48	4	Weather Condition	: Clear

Discipline : Chemical		Group : Atmospheric Pollution				
Parameter	Unit	Test Protocol	Result	Regulatory Limit		
Benzene (C ₆ H ₆)*	ug/m ³	1S 5182 (Part-11): 2006; RA2022	<1.0	05(Annual)		
Benzo-(a)-Pyrene*	ng/m ³	15 5182 (Part-12): 2004; RA2019	<0.5	01(Annual)		

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



**** End of Report****

Authorized Signatory

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

Page 1 of 1

The Document stated at Test Report, is issued by the Laboratory under Genaral Terms and Condinents, only on Company letter head in pre-approved format. The result shown in the Test Report reflects only to the job/undysis done by the Laboratory andy. The information stated on the Test Report reflects the findings done by the Laboratory at the units of any obverses, only on the information stated on the Test Report reflects the findings done by the Laboratory at the units of any obverses, only on the information stated on the Test Report reflects the findings done by the Laboratory at the units of any obverses, only to the job/undysis done by 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 repreduced 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 of in part shall not be published, advertise, used for any legal actors takes prior permansion has been accured from the Mintagement of the Laboratory. Attention is drawn to the limitation of habitation, compensation and period for mass. Any wombrowed alternation & falsification of the volument of the Test Report is unlawful and offenders may be processed in the fullest extent of the laboratory. Attention is drawn to the limitation of the fullest extent of the laboratory of the Test Report is unlawful and offenders may be processed in the fullest extent of the laboratory attention of Solays from the Date of release (solar of the Test Report for Solays from the Report shall be from Report at the time certed stated before, no compliants will be accepted. The entire Time schedule intentioned on Test Report to a Aboratory builts at the before extended before, no compliants will be accepted. The entire Time schedule mentioned on Test Report to a Aboratory builts at the time certed stated before, no compliants will be accepted. The entire Time schedule menticated on Test Re



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATTA, RANCHI 834003 (JHARKHAND) GST ND:- 2044ECE9713D124 NGINELIJING SERVICES PVT, LTD.

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

	TEST	REP	PORT	
Test Report No.	: ELES/RAN/2024/1295	Re	port Release Date	: 11.03.2024
Work Order No.	: 13612310218	W	Work Order Date : 21.04.2023	
CUSTOMER DET.	AILS	SA	MPLE DETAILS	
Customer Name	: Hindalco Industries Limited		uple Ref. No. cation	: ELES/RAN/2024/AA/1337 : Near Utkarnuit Rajkiya Prathmik Vidyalaya Dumrapart Village Pakhar Bauxite Mine
Address Mines Status	: Lobardaga, Jharkhand-835302	Sar Typ Sar	npling Date nple Received Date pe of Sample npling Procedure npling Done By	: 20.02,2024 to 21.02.2024 : 26.02.2024 : Ambient Air : ELES/DOC/SMPL/02 : ELES Pyt. Ltd.
Period of Analysis	: 26.02.2024 to 05.03.2024		nple Condition	: Sealed & Preserved
METEOROLOGIC	AL INFORMATION	-		
1 Average Temper	rature (°C) : 22	2	Barometric Pressur	e (mmHg) : 734
3 Relative Humidi	iy (%) :48	4	Weather Condition	

Discipline : Chemical Grou			ip : Atmospheric Pollution		
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	$\mu g/m^3$	IS 5182 (Part-23): 2006; RA2022	67	100 (24hrs)	
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	35	60 (24hrs)	
Sulphur Di-Oxide (SO2)	$\mu g/m^3$	IS 5182 (Part-2): 2001; RA2022	6.9	80 (24hrs)	
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	19,3	80 (24hrs)	
Ozone (O ₃)	µg/m²	15 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)	
Ammonia (NH ₃)	µg/m ³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m [±]	IS 5182 (Part-10): 1999; RA2019	<1.0	2 (8hrs)	
Lead (Pb)	ha/m3	IS 5182 (Part-22): 2004; RA2019	<0.002	1 (24hrs)	
Nickel (Ni)	ng/m ³	IS 5182 (Part-26):2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m³	ELES/AIR/SOP/01	<2.0	06 (Annual)	
CHARLE S				planet and a second sec	

85 a /5, Reviewed by

****End of Report****

Authorised Signatory Dr. Deepandra Kumat Sinha

Page [of]

The contraining days

The Document states of fort gepting property in speed by the Laboratory under General Terms and Condition, only the company hand used in provided in the laboratory in the Term Report reflects the fluctuat. The results shown in the Term Report reflects the fluctuation of the laboratory only. The information manual on the Term Report reflects the fluctuation of the Laboratory on 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 writing approval of the Laboratory. The Report is full of 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, configuression and provided interactions of adaptions and offenders may be processed to the fullest statement of the Laboratory and offenders may be processed to the fullest statement of Barrations of Barrat



PLOT NO-30, MANSAROVAR ENCLAVE, TUPUDANA HATIA, RANCHI-834003 (JHARKHAND) GST NO:- 20AAECE9713D124 NOINEERING SERVICES PVT. LTD.

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

	TEST	REP	ORT	
Test Report No.	: ELES/RAN/2024/1295	Re	port Release Date	: 11.03.2024
Work Order No.	: 13612310218	W	ork Order Date	: 21.04.2023
CUSTOMER DET.	AILS	SA	MPLE DETAILS	
Customer Name	: Hindalco Industries Limited		nple Ref. No. cation	: ELES/RAN/2024/AA/1337 : Near Utkarmit Rajkiya Prathmik Vidyalaya Dumrapart Village Pakhar Bauxite Mine
Address Mines Status	: Lobardaga, Jharkhand-835302	Sar Typ Sar	npling Date nple Received Date pe of Sample npling Procedure npling Done By	: 20.02.2024 to 21.02.2024 : 26.02.2024 : Ambient Air : ELES/DOC/SMPL/02 : ELES Pvt. Ltd.
Period of Analysis	: 26.02.2024 to 05.03.2024	_	nple Condition	: Sealed & Preserved
METEOROLOGIC	AL INFORMATION	-		
1 Average Temper		2	Barometric Pressu	e (mmHg) : 734
3 Relative Humidi	ty (%) : 48	4	Weather Condition	: Clear

Discipl	ine : Chemical	Group : Atmosp	n	
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Benzene (C ₆ H ₆)*	µg/m³	IS 5182 (Part-11): 2006; RA2022	<1.0	05(Annual)
Benzo-(a)-Pyrene*	ng/m ³	IS 5182 (Part-12); 2004; RA2019	<0.5	01(Annual)

Remarks: (*)-Parameters are outsourced to other Lah.



****End of Report****

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

Page 1 of 1

The Document stated as Test Report, is bound by the Laboratory under General Terms and Conditional, naty on Company latter and in prosepproved formal. The results shown in the Test Report refer or relates only to the job/analysis dorie 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 cliam'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 fall and any part of the report is no taken out of context, whole prior written approval of the Laboratory. The Report is fall on its period stall not be published, advertise, used for any legal actions index prior permission has been secured from the Matagement of the Laboratory. Attention is drawn to the Initiation of labelity, compensation and jurisdiction issues. Any waveful attention & Inistification of the context or approvale of the Test Report is in lawful and offendior important to be prosecuted to the fullent extent of the take application of the Report is an lawful and offendior important or specified any type of the take application & Inistification of the context or appearance of the Test Report is an lawful and offendior important to the interface extent of the family specified in the fullest extent of the take application for Report is an lawful and offendior important to specified Are type of Observations of Complexity regulations for Report for the Report is an lawful and offendiors are to be retained as specified. Are type of Observations of Complexity regulations for Reports and the down while 15deys from the Date of Test Report relative functions and the time period as specified. Are type of Observations of Complexity regulations for Complexity regulations for the rest Report. The samples from the part relative functions are to be retained as specified. Are type of Observations or Complexity r



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

NGINEERING SERVICES PVT. LTD

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

	11	ST REPORT	
Test Report No.	: ELES/RAN/2024/1322	Report Release Date	: 11.03.2024
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023
CUSTOMER DET	TAILS	SAMPLE DETAILS	
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Sampling Date Sample Received Date	: ELES/RAN/2024/DW/1359 : 21.02.2024 : 26.02.2024
Address	Lohardaga, Jharkhand-835302	Type of Sample Source/Location of Sample	Drinking Water Near Mine Quarry No-K7 Pakhar (109.507ha)Bauxite Mine
Mines Status	(Operational	Sampling Procedure Sampling Done By	: ELES/DOC/SMPL/0) : ELES Pyt. Ltd.
Period of Analysis	: 26.02.2024 to 07.03.2024	Sample Condition	: Sealed & Preserved

Discipline : Chemical		Group : Water	r	Regulatory Limit as per IS 10500:2012	
Parameter	Unit	Test Protocol	Result	Acceptable Limit	Permissible Limit
pH (at 24.4 °C)		APHA 23 ^{nl} Ed.2017, 4500-H	6.72	6.5-8.5	No Relaxation
Turbidity	NTU	APHA 23" Ed. 2017, 2130 B	0.50	1.0	5.0
Taste	-	APHA 23rd Ed.2017, 2160 C	Agreeable	Agreeable	Agreeable
Odour		IS 3025 (Part-5) :2018	Agreeable	Agreeable	Agreeable
Colour	Hazen	APHA 23rd Ed.2017, 2120B&D	1.0	5	15
Total Dissolved Solids (TDS)	mg/L	APHA 23 rd Ed.2017, 2540B,C&D	288	500	2000
Chloride (as Cl)	mg/L	APHA 23 nd Ed.2017, 4500 CI B	40.2	250	1000
Fluoride (as F)	mg/L	APHA 23rd Ed.2017, 4500 F-D	BDL. (DL: 0.1)	1.0	1.5
Total Alkalinity (as CaCO3)	mg/L	APHA 23 rd Ed.2017, 2320 B	104	200	600
Total Hardness (as CaCO3)	mg/L	APHA 23 ^{nl} Ed.2017, 2340 C	132	200	600
Sulphate (as SO ₄)	mg/L	APHA 23 ^{nl} Ed.2017, 4500 SO4 ⁻² -E	10.8	200	400
Nitrate (as NO ₃)	mg/L	APHA 23 ^{3d} Ed.2017, 4500 NO ₃ -B	2,08	45	No Relaxation
Phenolic Compound (as C ₀ H ₂ OH)	mg/L	15 3025 (Part-43):1992;RA2019	BDL (DL: 0.001)	0.001	0.002

Page | of 4

The Document stated as Test Report, is issued by the Laboratory under General Tornes and Conditions, only on Company letter head in pre-approved format. The results shown in the Test Report refer or relates only in 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. Activation is drawn to the limitation of liability, compensation and jurisdiction issues. Any ununthorized alteration & fullification of the content or appearance of the Test Report is valuable 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/issued. After the time period stated before, no complaints will be decepted. The cannot form as all the schedule mentioned in Test Report is in 24hours format. Abhrevitation used: N'A (Not Applicable), BDI, (Below Detection Limit), LDI. (Lawer Detection Limit)



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

ENGINEERING SERVICES FVT. LTD.

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

	TES	TREPORT	
Test Report No.	: ELES/RAN/2024/1322	Report Release Date	: 11.03.2024
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023

Discipline : Chemical Group : W			Vater		tory Limit 10500:2012
Parameter	Unit	Test Protocol	Result	Acceptable	Permissible
Cyanide (as CN)	mg/L	APHA 23 rd Ed.2017, 4500 CN-E	BDL (DL: 0.012)	0.05	No Relaxation
Residual Free Chlorine (RFC)	mg/L	IS 3025 (Part-26):2021	BDL (DL: 0.1)	0.02	0,1
Calcium (as Ca)	mg/L	APHA 23 rd Ed.2017, 3500 Ca B	34.4	75	200
Discipl	ine : Che	mical Group	: Residues in	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	IS 3025(Part-57): 2005; RA2021	BDL (DL: 0.2)	0.5	1.0
Cadmium (as Cd)	mg/L	APHA 23 rd Ed.2017, 3111B	BDL (DL: 0.003)	0.003	No Relaxation
Total Chromium (as Cr)	mg/L	APHA 23" Ed.2017, 3111B	BDL (DL: 0.03)	0.05	No Relaxation
Copper (as Cu)	mg/L	APHA 23 th Ed.2017, 3111B	BDL (DL: 0.03)	0.05	1.5
Iron (as Fe)	mg/L	APHA 23td Ed.2017 . 3111B	0.321	1.0	1.0
Lead (as Pb)	mg/L	APHA 23 nd Ed.2017, 3111B	BDL (DL: 0.01)	0.01	No Relaxation
Manganese (as Mn)	mg/L	APHA 23 rd Ed.2017, 3111B	BDL (DL: 0.05)	0.1	0.3
Mercury (as Hg)	mg/L	IS 3025 (Part-48): 1994: RA2019	BDL (DL: 0.001)	0.001	No Relaxation
Selenium (as Se)	mg/L	IS 3025 (Part-56): 2003; RA2019	BDL (DL: 0.01)	0.01	No Relaxation
Zine (as Zn)	mg/L	APHA 23 rd Ed.2017, 3111B	BDL (DL: 0.1)	5)5

Page 2 of 4

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company letter bend in pre-approved formal. The results shown in the Test Report relief 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 persolution issues. Any unnationized alternation & falsification of the content or appearance of the Test Report is unlikeful and offenders muy be prosecuted to the fullest extent of the law. All the samples are retained for 30days from the Date of retease-base of the Test Report Test Report released issued. After the time period stated before, no complaints will be accepted. The catter Time schedule mentioned in Test Report is in 24hours format. Abbreviation used: N/A (Not Applicable); BDL (Below Detection Limit); LDL (Lower Detection



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

VGINEERING SERVICES PVT. LTD.

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

	TE	ST REPORT		
Test Report No.	: ELES/RAN/2024/1322	Report Release Date	: 11.03.2024	
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023	

Discipline : Chemical		Group :	Water		tory Limit 10500:2012
Parameter	Unit	Test Protocol	Result	Acceptable Limit	Permissible Limit
Pesticides				-	
Alachlor	µg/L	APHA 23 rd Edition 6630 B&C	BDL (DL: 1.0)	20	No Relaxation
Atrazine*	µg/l.	APHA 23 rd Edition 6630 B&C	BDL (DL: 1.0)	2.0	No Relaxation
Aldrin/Dieldrin*	µg/L	APHA 23rd Edition 6630 B&C	BDL (DL: 0.01)	0.03	No Relaxation
Alpha HCH*	µg/L	USEPA 508:1985	BDL (DL: 0.001)	0.01	No Relaxation
Beta HCH*	μg/L	USEPA 508:1985	BDL (DL: 0.01)	0.04	No Relaxation
Butachlor*	μg/L	APHA 23rd Edition 6630 B&C	BDL (DL: 10)	125	No Relaxation
Chlorpyriphos*	µg/L	USEPA 8141 A	BDL (DL: 10)	30	No Relaxation
Delta HCH*	µg/L	USEPA 508:1985	BDL (DL: 0.01)	0.04	No Relaxation
2,4 dichlorophenoxyacetie acid*	µg/L	APHA 23 rd Edition 6640 B	BDL. (DL: 10)	30	No Relaxation
DDT(0,p and p,p-isomers of DDT,DDE and DDD)*	µg/L	APHA 23 rd Edition 6630 B&C	BDL (DL: 0.5)	1.0	No Relaxation
Endosulfan (alpha, beta, and suiphate)*	µg/L	APHA 23 rd Edition 6630 B&C	BDL (DL: 0.1)	0.4	No Relaxation
Ethion*	µg/L	USEPA 1657 A	BDL (DL: 0.5)	3.0	No Relaxation
Gamma HCH (Lindane)*	µg/L	USEPA 508:1985	BD1. (D1.: 0.5)	2.0	No Relaxation
Isoproturon*	μg/L	USEPA 532:2000	BDL (DL: 0.5)	9.0	No Relaxation

Page 3 of 4

The Document stated as Test Report, is issued by the Laboratory under General Terms and Conditions, only on Company lener head in pre-approved format. The testahi shown in the Test Report refer or relates only to the joh/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 reportized 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 & falsiglication of the content or appearance of the Test Report is unlimpful and offenders may be prosecuted to the fullest extent of the law. All the samples are retained for 50days 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 in Compliants requiring the Reports shall be done within 15days from the Date of Test Report released/issued. After the time period sime before, no compliants will be accepted. The entite Time schedule mentioned in Test Report is in 24hours format. Abbreviation asci. N/A (Net Applicable), BDJ (Below Detection Limity, LDI. (Lawer Detection Limity, LDI). (Lawer Detection



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

GINEERING SERVICES PVT. LTD.

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

TEQT	REPORT
11.01	REFURI

Test Report No.	: ELES/RAN/2024/1322	Report Release Date	: 11.03.2024
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023

Discipline : B	alagiaal	Group: V	Vator	Regulat	ory Limit
Discipline : 6	lological	Group : v	vater	as per 15	10500:2012
Parameter	Unit	Test Protocol	Result	Acceptable Limit	Permissible Limit
Total Coliform	Per 100 mL	IS 15185:2016; RA 2021	Not Detected	Charl and	
Escherichia Coli (E. Coli)	Per 100 mL	IS 15185:2016; RA 2021	Not Detected	Shall not be detected	
Discipline :	Chambral	Course A	Victory.	Regulat	ary Limit
Discipline :	Chemical	Group : V	water	as per IS	10500:2012
Parameter	Unit	Test Protocol	Result	Acceptable Limit	Permissible Limit
Anionic Surfactants (as MBAS)*	mg/L	IS 3025 (Part- 68) : 2019 (RA2023)	BDL (DL: 0.1)	0.2	1.0
Polynuclear Aromatic Hydrocarbons (PAH)*	mg/L	APHA 23 rd Edition: 6440 B	BDL (DL: 0.0001)	0.0001	No Relaxation
Polychlorinated Biphenyls (PCB)*	mg/L	APHA 23 rd Edition: 6431B	BDL (DL: 0.0005)	0.0005	No Relaxation

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



****End of Report****

Authorised Signatory Dr. 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 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 alient'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 fiability, compensation and jurisdiction issues. Any unauthorized alteration & fabilitienter of the context, 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 a specified. Any type of Observations or Complaints regarding the Reports shall be done within 15days from the Date of Test Report release/issued. After the time period stated hefore, no complaints will be accepted. The units of the Caboratory Time Report of the State of Test Report is in 24bcars 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

GINEERING SERVICES PVT. LTD.

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

THE OWNER.	DEDODT
18.51	REPORT
	2.277 . C. 2.2 %

Test Report No.	: ELES/RAN/2024/1340	Report Release Date	: 11.03.2024
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023

CUSTOMER DE	TAILS	SAMPLE DETAILS		
Customer Name Address	2 Minerals & Minerals Limited 2 Lohardaga, Jharkhand-835302	Sampling Date Sampling Received Date Type of Sample Sampling procedure Sampling Done By	: 21.02.2024 to 22.02.2024 : 26.02.2024 : Ambient Noise : ELES/DOC/SMPL/03 : ELES Pvt. Ltd.	
Mines Status	; Operational	Period of Analysis	: 26.02.2024 to 02.03.2024	

METEOROLOGICAL INFORMATION				
1	Average Temperature (°C) : 22	2	Barometric Pressure (mmHg)	: 734
3	Relative Humidity (%) ± 48	4	Weather Condition	; Clear

Location	Unit	Test Protocol	Result		Regulatory Limit (Industrial Zone)
			Time	Leq	
Near Mine Quarry No-K7 Pakhar Bauxite Mine (109.507 ha)	dB(A)	15 9989:1981, RA 2020	Day Time	61	75 dB(A) Day Time & 70 dB(A) Night Time
Sample 1D: ELES/RAN/2024/AN/1350			Night Time	49	



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 job/analysis done by the Laboratory only. The information stated on the Test Report reflects the finalings 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 our 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 alteration & falsification of the content or appearance of the Test Report is antioveful and offenders may be prosecuted to the fullest extent of the taw. 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). I DL (Lower Detection Limit).



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

NGINEERING SERVICES PVT. LTD.

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

	<u> </u>	EST REPORT		
Test Report No.	: ELES/RAN/2024/1341	Report Release Date	: 11.03.2024	
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023	

CUSTOMER DETAILS		SAMPLE DETAILS		
Customer Name Address	: Minerals & Minerals Limited : Lohardaga, Jharkhand-835302	Sampling Date Sampling Received Date Type of Sample Sampling procedure Sampling Done By	: 21.02.2024 to 22.02.2024 : 26.02.2024 : Ambient Noise : ELES/DOC/SMPL/03 ; ELES Pvt. Ltd.	
Mines Status	: Operational	Period of Analysis	: 26.02.2024 to 02.03.2024	

METEOROLOGICAL INFORMATION					
1	Average Temperature (°C)	: 22	2	Barometric Pressure (mmHg)	+ 734
3	Relative Humidity (%)	:48	4	Weather Condition	Clear

Location	Unit Test Protocol		Result		Regulatory Limit (Industrial Zone)
and the second			Time	Leq	
Near Mine Office Pakhar Bauxite Mine (109.507 ha)	dB(A)	IS 9989:1981, RA 2020	Day Time	64	75 dB(A) Day Time & 70 dB(A) Night Time
Sample ID: ELES/RAN/2024/AN/1351			Night Time	-48	



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 job/analysis done by the Laboratory only. The information stated on the Test Report refers or relates only in the job/analysis done by the Laboratory only. The information stated on the Test Report refers or relates only in the job/analysis done by the Laboratory only. The information stated on the Test Report reflects the findings dote 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 our 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 netions unless prior permission has been secured from the Management of the Caboratory. Attention is drawn to the limitation of liability, compensation and jurisdiction useds: Any unauthorized alteration & fastilication of the content or appearance of the Test Report is unlawfal and offenders may be provided to the fullest extent of the law. All the samples are retained for 30days from the Date of nelenselissate of the Test Report is in 24hours format. Abbreviation used: N/A (Not Applicable); BD1 (Below Detection Limit), LDI, (Lower Detection Limit).

any Environment, Sare Peterr



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

NGINEERING 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/RAN/2024/1354	Report Release Date	: 11.03.2024		
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023		

CUSTOMER DET	TAILS	SAMPLE DETAILS		
Customer Name Address	: Minerals & Minerals Limited : Lohardaga, Jharkhand-835302	Sampling Date Sampling Received Date Type of Sample Sampling procedure Sampling Done By	: 22.02.2024 : 26.02.2024 : Workzone Noise : ELES/DOC/SMPL/03 : ELES Pvt. Ltd.	
Mines Status	: Operational	Period of Analysis	: 26.02.2024 to 02.03.2024	

METEOROLOGICAL INFORMATION

1	Average Temperature (%C) : 22	2	Barometric Pressure (mmHg) : 734
3	Relative Humidity (%) : 48	4	Weather Condition	: Clear

Location	Unit	Test Protocol	Result		Regulatory Limit (Industrial Zone)
Loading Point Near Dumper -			Time	\mathbf{L}_{eq}	
Pakhar Bauxite Mines (109,507 ha.)	dB(A)	IS 4758:1968; RA 2017	Day Time	73	90 dB (A)
ample ID: LES/RAN/2024/WN/1354					



****End of Report****

Authorised Signatory Dr. Deependra Kumar Sinha Ph. D Environmenial Enog ELES Pvt. Ltd. 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 limitat. 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 injusthorized 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. Alt 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 Tane schedule mentioned in Test Report is in 24hours formal. Abbreviation used: N'A (Not Applicable): BDI. (Below Detection Limits; LDL (Lower Detection Limit)

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

State- Jharkhand.

Pakhar (109.507) Bauxite Mine-Environmental Monitoring Report

March 2024

CONTENT

	Minerals & Minerals : Pakhar (109.507) Environmental Monitoring Report	March 2024
	Pakhar (109.507)	
	AMBIENT AIR QUALITY- CORE ZONE	
1	Near Mine Quarry No-K7	
2	Near Mine Quarry No-K9	
3	Near Mine Quarry No-K5	
4	Pakhar Loading Area	
	AMBIENT AIR QUALITY- BUFFER ZONE	2224
1	Near Bunglapart Village	
2	Yatri Shed (Near K-10)	
3	Near UtkarmitRajkiyaPrathmikVidyalayaBunglapart Village	
4	Near UtkarmitRajkiyaPrathmikVidyalayaDumrapart Village	
	Spring Water	
1	Dumar Part	

TC-LEUC

	TE	ST REPORT	
Test Report No.	± ELES/RNC/2024/1513	Report Release Date	: 10.04.2024
Work Order No.	t M&M/23-24/01	Work Order Date	: 31.03.2023
CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/1594 : Near Mine Quarry No-K7 Pakhar (109,507 ha) Bauxite Mine
Address	Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date	: 20.03.2024 to 21.03.2024 : 22.03.2024
Mines Status	: Operational	Type of Sample Sampling Procedure	: Ambient Air : ELES/DOC/SMPL/02
Period of Analysis	: 22.03.2024 to 28.03.2024	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved

M	ETEOROLOGICAL INFOR	MATION				
1	Average Temperature ("C)	: 25	2	Barometric Pressure (mmHg)	: 738	
3	Relative Humidity (%)	= 47	4	Weather Condition	: Clear	

Discipline:	Chemical	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	µg/m ³	1S 5182 (Part-23): 2006; RA2022	73	100 (24hrs)	
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part-24): 2019	39	60 (24hrs)	
Sulphur Di-Oxide (SO ₂)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	7.8	80 (24hrs)	
Nitrogen Di-Oxide (NO2)	µg/m ³	15 5182 (Part-6); 2006; RA2022	25.9	80 (24hrs)	
Ozone (O ₂)	µg/m ³	15 5182 (Part-9): 1974; RA2019	<20.0	100 (Shrs)	
Ammonia (NH2)	µg/m ³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part-10): 1999; RA2019 (NDIR Method)	<1.0	2 (8hrs)	
Lead (Pb)	µg/m ³	IS 5182 (Part-22): 2004; RA2019	0.011	1 (24hrs)	
Nickel (Ni)	ng/m ³	IS 5182 (Part-26):2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m ³	ELES/AIR/SOP/01	<2.0	06 (Annual)	
Benzene (C _n H ₀)	µg/m	ELES/GC/SOP/06	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m ²	ELES/GC/SOP/05	<0.5	01(Annual)	

Reviewed by :

and

****End of Report****

Authorised Signatory : EF.T.

(Bapan Das, Dy. Technical Manager)

Page 1 of 1

(Saswata Burman Roy, Dy. Quality Manager)





TEST REPORT Test Report No. : ELES/RNC/2024/1514 Report Release Date : 10.04.2024 Work Order No. : M&M/23-24/01 Work Order Date : 31.03.2023 CUSTOMER DETAILS SAMPLE DETAILS : Minerals & Minerals Limited : ELES/RNC/2024/AA/1595 Customer Name Sample Ref. No. Location : Near Mine Quarry No-K9 Pakhar (109,507 ha) Bauxite Mine Address + Lohardaga, Jharkhand-835302 Sampling Date : 20.03.2024 to 21.03.2024 : 22.03.2024 Sample Received Date Type of Sample : Ambient Air : ELES/DOC/SMPL/02 Sampling Procedure Mines Status : Operational Sumpling Done By ELES Pvt. Ltd. Period of Analysis : 22.03.2024 to 28.03.2024 Sample Condition - Sealed & Preserved

METEOROLOGICAL INFORMATION

1	Average Temperature (°C) : 25	2	Barometric Pressure (mml	Hg) = 738
3	Relative Humidity (%) : 47	4	Weather Condition	: Clear

Discipline:	Chemical	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	µg/m ³	1S 5182 (Part-23): 2006; RA2022	70	100 (24hrs)	
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	33	60 (24hrs)	
Sulphur Di-Oxide (SO2)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	8.9	80 (24hrs)	
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	25.4	80 (24hrs)	
Ozone (O3)	µg/m!	15 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)	
Ammonia (NHs)	µg/m ¹	IS 5182 (Part- 25): 2018	<10,0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m ³	15 5182 (Part-10): 1999; RA2019 (NDIR Method)	<1.0	2 (8hrs)	
Lead (Pb)	µg/m ³	IS 5182 (Part-22): 2004; RA2019	0.008	1 (24hrs)	
Nickel (Ni)	ng/m ¹	1S 5182 (Part-26):2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m ²	ELES/AIR/SOP/01	<2.0	06 (Annual)	
Benzene (C6H6)	µg/m ¹	ELES/GC/SOP/06	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m ³	ELES/GC/SOP/05	<0.5	01(Amual)	
	the second se				

Reviewed by :

192-1

****End of Report****

Authorised Signatory : Char!

(Bapan Das, Dy. Technical Manager)

Page 1 of 1

(Saswata Burman Roy, Dy. Quality Manager)

Jharkhand 826001 TEF CAN

TROC



	TE	ST REPORT	
Test Report No.	: ELES/RNC/2024/1515	Report Release Date	: 10.04.2024
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023
CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Location	: ELES/RNC/2024/AA/1596 : Near Mine Quarry No-K5 Pakhar (109.507 ha) Bauxite Mine
Address	Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample	: 20.03.2024 to 21.03.2024 : 22.03.2024 : Ambient Air
Mines Status	± Operational	Sampling Procedure	: ELES/DOC/SMPL/02
Period of Analysis	: 22.03.2024 to 28.03.2024	Sampling Done By Sample Condition	: ELES Pvt, Ltd. : Sealed & Preserved

MI	TEOROLOGICAL INFO	RMATION			
1	Average Temperature ("C)	25	2	Barometric Pressure (mmHg)	: 738
3	Relative Humidity (%)	: 47	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): 2006; RA2022	63	100 (24hrs)	
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	31	60 (24hrs)	
Sulphur Di-Oxide (SO2)	µg/m ³	1S 5182 (Part-2): 2001; RA2022	9.2	80 (24hrs)	
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	21.3	80 (24hrs)	
Ozone (O3)	µg/m/	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)	
Ammonia (NH ₃)	µg/m ⁵	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m ²	IS 5182 (Part-10): 1999; RA2019 (NDIR Method)	<1.0	2 (8hrs)	
Lead (Pb)	µg/m'	IS 5182 (Part-22): 2004; RA2019	0.015	1 (24hrs)	
Nickel (Ni)	ng/m ³	IS 5182 (Part-26):2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m ⁵	ELES/AIR/SOP/01	<2.0	06 (Annual)	
Benzene (C ₆ H ₆)	µg/m ³	ELES/GC/SOP/06	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m ⁴	ELES/GC/SOP/05	<0.5	01(Annual)	

Reviewed by :

80-1

****End of Report****

Authorised Signatory :

(Saswata Burman Roy, Dy. Quality Manager)



(Bapan Das, Dy Technical Manager)

tha!

Page 1 ml 1

Kolkata Office i 63/8, Rastraguru Avenue, Kolkata - 700028 (033-25793891/25497490 Email environmeteck50@gmail.com

14
TC 1450L

Test Report No.	: ELES/RNC/2024/1516	Report Release Date	: 10.04.2024
Work Order No.	: M&: M/23-24/01	Work Order Date	: 31.03,2023
CUSTOMER DET	AILS	SAMPLE DETAILS	
Customer Name	: Minerals & Minerals Limited	Sample Ref. No. Location	ELES/RNC/2024/AA/1597 : Pakhar Loading Area Pakhar (109.507 ha) Bauxite Mine
Address Mines Status	: Lohardaga, Jharkhand-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure	: 20.03.2024 to 21.03.2024 : 22.03.2024 : Ambient Air : ELES/DOC/SMPL/02
Period of Analysis	: 22.03.2024 to 28.03.2024	Sampling Done By Sample Condition	: ELES Pvt. Ltd. : Sealed & Preserved

TEST REPORT

M	ETEOROLOGICAL INFORMATION			
1	Average Temperature (°C) : 25	4	Barometric Pressure (mmHg)	- 738
3	Relative Humidity (%) : 47	4	Weather Condition	: Clean

Discipline:	Chemical	Group: Atmospheric Pollution		
Parameter Unit		Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022	64	100 (24hrs)
Particulate Matter (PM2.5)	µg/m ³	IS 5182 (Part- 24): 2019	37	60 (24hrs)
Sulphur Di-Oxide (SO2)	µg/m ²	IS 5182 (Part-2): 2001; RA2022	10.1	80 (24hrs)
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	25.6	80 (24hrs)
Ozone (O ₂)	µg/m ³	15 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)
Ammonia (NHb)	µg/m ³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	mg/m ^x	IS 5182 (Part-10): 1999; RA2019 (NDIR Method)	<1.0	2 (8hrs)
Lead (Pb)	µg/m ³	IS 5182 (Part-22): 2004: RA2019	0.010	1 (24hrs)
Nickel (Ni)	ng/m ²	IS 5182 (Part-26):2020	<6.0	20 (Annual)
Arsenic (As)	og/m ³	ELES/AIR/SOP/01	<2.0	06 (Annual)
Benzene (C.H.))4g/m ²	ELES/GC/SOP/06	<2.5	05(Annual)
Benzo-(a)-Pyrene	ng/m ¹	ELES/GC/SOP/05	<0.5	01(Annual)

Reviewed by :

****End of Report****

Authorised Signatory : GA1"

100-1

(Saswata Burman Roy, Dy. Quality Manager)



(Bapan Das, Dy. Technical Manager)

Page 1 oF1

Kolkata Office : 53/B, Rastraguru Avenue, Rolkata - 700028 (033-25792891/25497490 Email Invirucheck50@grout.com



and a restrict of the solution of

LIN - NITE Fold Constructionary Interding, Phil - 12:8001, State - Hartston, J.C. 9050503044 / J. 1990511227

	2	Ņ	ŝ	
		'n		
1			50	

TEST REPORT

Test Report No.	: ELES/RNC/2024/1517	Report Release Date	: 10.04.2024
Work Order No.	; 13612310218	Work Ortisr Date	: 21.04.2923
CUSTOMER DETA	VLS	SAMPLE DETAILS	
Customer Name Address	Lohardags, Jinrkhand-835302	Sample Ref. No. Location Sampling Date Sample Received Date	: ELES/RNC/2024/AA/1598 : Near Bunglapart Village Fakhar Backite Mine 18.03,2024 to 19.03,2024 : 22.03,2024
Mines Status Period of Analysis	Coperational 1 22.03.2024 to 28.03.2024	Type of Sample Sampling Procedure Sampling Dane By Sample Condition	: Amblent A.r : ELES/DOC/SMPL/02 ELES Pvt. Lts. : Sealed & Preserved

1	Average Temperature ("C) : 26	2	Barometric Pressure (mm)	Hg) :734	
3	Relative Humidity (%) : 45	4	Weather Coudition	: Clear	

Discipline:	Chemical	Group: Atmospheric Pollation			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particulate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022	52	(00 (24hrs)	
Particulate Matter (PM2.5)	µg/m³	IS 5182 (Part-24): 2019	33	60 (24hrs)	
Sulphur Di-Oxide (SO2)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	7.4	80 (24hrs)	
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	17.9	80 (24hrs)	
Ozone (O3)	µg/m ⁷	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)	
Ammonia (NH ₂)	µg/m ³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m ²	IS 5182 (Part-10): 1999; RA2019 (NDIR Method)	<1.0	2 (Sites)	
Lead (Pb)	µg/m ³	1S 5182 (Part-22); 2004; RA2019	0.005	1 (24hrs)	
Nickel (Ni)	ng/m ³	IS 5182 (Part-26):2020	<6.0	20 (Anaual)	
Arsenic (As)	ng/m ³	ELES/AIR/SOP/01	<2.0	06 (Annual)	
Benzene (C6Hs)	pg/m ²	ELES/GC/SOP/06	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m²	ELES/GC/SOP/05	<0.5	01(Anauai)	

Reviewed by :

31-

****End of Report**** VIROCH 助 Jharkhand 調理 826001 ing Calob

Authorised Signatory :

(Bapan Das, Dy Technical Manager)

Page | of |

Rolleto SHice 107/8. Restraguru Avenue. Kolketz - 700028 [028-25/02821/28423455 Fmail - materioadenia/salat.on

(Saswata Burman Roy, Dy. Quality Manager)



part on 2 Third and a second

Las 1 MHG #-3 Burning Column Duncker, Phys 826001, State- Humanum C-9830007040 / 4 STRESTS757

	TEST	REPORT	
Test Report No.	: ELES/RNC/2024/1518	Report Release Date	: 10.04.2024
Work Order No.	13612310218	Work Order Date	: 21.04.2023
CUSTOMER DET/	AILS	SAMPLE DETAILS	
Customer Name Address	: Hindalco Industries Limited : Loherdsga, Jhurichand-\$35302	Sample Ref. No. Location Sampling Date Sample Received Date Type of Sample Sampling Procedure	 ELES/RNC/2024/AA/1599 Yani Sneo (Near X-10) Pakhar Bauxite Mina 18.03.2024 to 19.03.2024 22.03.2024 Ambient Air ELES/DOC/SMPL/02
Mines Stems	: Operational	Sampling Done By	: ELES PV: Ltd.
Period of Analysis	: 22.03.2024 to 28.03 2024	Sample Condition	: Sealed & Preserved

1	Average Temperature ("C)	: 26	2	Barnmetric Pressure (mmHg)	: 734
3	Relative Flumidity (%)	:45	4	Weather Condition	: Clear

Discipline:	Chemical	Group: Atmospheric Pollution			
Parameter	Unit	Test Protocol	Result	Regulatory Limit	
Particolate Matter (PM10)	µg/m ³	IS 5182 (Part-23): 2006; RA2022	.64	100 (24hrs)	
Particulate Matter (PM2.5)	µg/m ³	îS 5182 (Part-24): 2019	33	60 (24hrs)	
Sulphur Di-Oxide (SO2)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	8.4	80 (24hrs)	
Nitrogen Di-Oxide (NO2)	$\mu g/m^2$	IS 5182 (Part-6): 2006; RA2022	21.5	80 (24hrs)	
Ozone (O1)	µg/m ³ :	IS 5182 (Part-9): 1974; RA2019	<20.0	100 (Shrs)	
Ammonia (NH)	µg/m ³	IS 5182 (Part- 25): 2018	<10.0	400 (24hrs)	
Carbon Monoxide (CO)	mg/m ³	IS 5182 (Part-10): 1999; RA2019 (NDIR Method)	<1.0	2 (8hrs)	
Lead (Ph)	$\mu g/m^3$	IS 5182 (Part-22): 2004; RA2019	0.007	1 (24hrs)	
Nickel (NI)	ng/m ¹	IS 5132 (Part-26);2020	<6.0	20 (Annual)	
Arsenic (As)	ng/m ¹	ELES/AIR/SOP/01	<2.0	06 (Annual)	
Benzene (CoHs)	µg/m1	ELES/GC/SOP/06	<2.5	05(Annual)	
Benzo-(a)-Pyrene	ng/m²	ELES/GC/SOP/05	<0.5	01(Annual)	

Reviewed by :

Train?

(Saswata Burman Roy, Dy. Quality Manager) *



Authorised Signatory :

67.

(Bapan Das, Dy. Technical Manager)

Page 1 of 1

Kolkara Office (\$2/8, Restrogues Aconus, Kolkasa - TEDD26 1 013-25703801/25407400 Sec.10 s w/ rochecki S0/mm/s/ ulom



13



(a) a second se second sec

out shift R-2.9 works (delong) Deaning, Physical Acade - Derived and Colliconstance (Science 1973)

TEST REPORT

	di darber di	THEIR CONTRACTOR	
Test Report No.	: ELES/RNC/2024/1519	Report Refease Date	+ 10.04.2024
Work Order No.	: 13612310218	Work Order Date	: 21.04.2023
CUSTOMER DETA	AILS	SAMPLE DETAILS	
Customer Name	: Flindalco Industries Limited	Sample Ref. No. Location	 ELES/RNC/2024/AA/1600 Near Uttannit Rajkiya Prathmik Vidyalaya Bunglapert Village Paxhar Bauxite Mine
Address	: Lohendags, Jharkitspd-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure Sampling Date: By	: 18:03:2024 to 19:03:2024 : 22:03:2024 : Ambient Alif : ELES/DOC/SMPL/02 : ELES Pvt: Ltd.
Mines Status	: Operational	e e	
Perind of Analysis	: 22.03.2024 to 28.03.2024	Sample Condition	: Sealed & Preserved

Average Temperature (°C) : 26	2	Barometric Pressure (mmHg)	: 734
Relative Humidity (%) :45	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): 2006; RA2022	55	100 (24hrs).
Particulate Matter (PM2.5)	µg/m ³	1S 5182 (Part- 24): 2019	31	60 (24hrs)
Sulphur Di-Oxide (SO2)	µg/m ³	IS \$182 (Part-2): 2001; RA2022	7.3	80 (24hrs)
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Pan-6): 2006; RA2022	23.1	80 (24hrs)
Ozone (O3)	µg/m ⁵	1S 5182 (Part-9): 1974; RA2019	<20.0	100 (Shrs)
Ammonia (NH ₅)	µg/m ³	IS 5182 (Part- 25): 2018	<10.8	400 (24hrs)
Carbon Monoxide (CO)	mg/m ¹	IS 5182 (Part-10); 1999; RA2019 (NDIR Method)	<1.0	2 (8hrs)
Lead (Pb)	µg/m ³	IS 5182 (Part-22): 2004; RA2019	6,007	1 (24hrs)
Nickel (Ni)	ng/m*	IS 5182 (Part-26):2020	<6.0	20 (Annual)
Arsenic (As)	ng/m ³	ELES/AIR/SOP/01	<2.0	66 (Amual)
Benzene (CoHs)	µg/m ²	ELES/GC/SOP/06	<2.5	05(Annual)
Benzo-(a)-Pyrenc	ng/m ^a	ELES/GC/SOP/05	<0.5	01(Annual)

Reviewed by :

and and

****End of Report****

107

Authorised Signatory :

(Bapan Das, Dy Technical Manager)

(Saswata Burman Roy, Dy. Guality Manager)



Page 1 of 1

Karkala Office : 55/8, Hastragura Avanue, 650025 (050-25752651/25497450



: 45

47 TE 116 1

TEST REPORT

Can short for remaining to many formation. The empty of a simulation of deside the statement of the statemen

Test Report No.	: ETES/RNC/2024/1520	Report Release Date	: 10.04.2024
Work Order No.	: 13612310218	Work Order Bats	- 21.04.2023
CUSTOMER DETA	JILS .	SAMPLE DETAILS	
Customer Nume	(Hindaleo Industries Limited	Sample Ref. No. Location	 ELES/RNC/2024/AA/1601 Near Utkannit Rajkiya Prathmik Vidyalaya Dumrapan Village Pakinr Bauxite Mine
Address	: Lohardaga, Jhurkhund-835302	Sampling Date Sample Received Date Type of Sample Sampling Procedure	- 18.03.2024 to 19.03.2024 : 23.03.2024 : Ambient Air : ELES/DOC/SMP1/02
Mines Status	: Operational	Sampling Done By	ELES Pvt. Ltd.
Period of Analysis	- 12,03.2024 to 28.03.2024	Sample Condition	: Sealed & Preserved

2

4

METEOROLOGICAL INFORMATION 1 Average Temperature (*C) : 26

3 | Relative Humidity (%)

Barometric Pressure (mmHg) : 734 Weather Condition : Clear

Discipline	: Chemical	Group: A	tmospheric Po	ollution
Parameter	Unit	Test Protocol	Result	Regulatory Limit
Particulate Matter (PM10)	µg/m³	IS 5182 (Part-23): 2006; RA2022	62	100 (24hrs)
Particulate Matter (PM2.5)	µg/m ³	1S 5182 (Part- 24): 2019	31	60 (24hrs)
Sulphur Di-Oxide (SO2)	µg/m ³	IS 5182 (Part-2): 2001; RA2022	7.4	80 (24hrs)
Nitrogen Di-Oxide (NO2)	µg/m ³	IS 5182 (Part-6): 2006; RA2022	23.6	80 (24hrs)
Ozone (O3)	µg/m²	(\$ 5182 (Part-9): 1974; RA2019	<20.0	100 (8hrs)
Ammonia (NH3)	ug/m ³	1S 5182 (Part-25): 2018	<10.0	400 (24hrs)
Carbon Monoxide (CO)	ing/m ¹	IS 5182 (Part-10): 1999; RA2019 (NDIR Method)	<1.0	2 (Bhrs)
Lead (Pb)	μg/m ³	IS 5182 (Part-22): 2004; RA2019	0.007	1 (24hrs)
Nickel (Ni)	ng/m ³	IS 5182 (Part-26):2020	≪6.0	20 (Annual)
Arsenic (As)	ng/m ²	ELES/AIR/SOP/01	<2.0	06 (Annual)
Benzene (Ceita)	ug/m ¹	ELES/GC/SOP/06	<2.5	B5(Annual)
Benzo-(a)-Pyrene	ng/m ¹	ELES/GC/SOP/05	<8.5	01(Annual)

Reviewed by :

Sta-1

(Saswata Burman Roy, Dy, Quality Manager)

**** End of Reportance

IRO

Ung Colns

3

Authorised Signatory : 2.27

(Bapan Das, Dy. Technical Manager)

Page | of 1

Section 1

Wolliate Office : 03/d, distriction sunnum, Kolkets - V00028 / 083-05-733851/25487690

Lubr MK, R-J Housing Colony, Dhambad, Pin - F26001, State - Darkhone, \$ 9880067044 / \$ 9304513737



	TES	TREPORT	
Test Report No.	: ELES/RNC/2024/1553	Report Release Date	: 10,04,2024
Work Order Na.	: M&M/23-24/01	Work Order Date	: 31.03.2023
CUSTOMER DET	AILS	SAMPLE DETAILS	
Castomer Name Address	 Minerals & Minerals Limited Lohardaga, Jharkhand-#35302 	Sample Ref. No. Sampling Date Sample Received Date Type of Sample Source of Sample Location of Sample	 ELES/RNC/2024/SW/1603 21.03.2024 22.03.2024 Surface Water Spring Water Dumar Part, Pakhar Bauxite Mine (109.507 ha)
Mines Status	: Operational	Sampling Procedure Sample Collected By	: ELES/DOC/SMPL/01 : ELES Pvt. Ltd.
Period of Analysis	: 22.03.2024 to 29.03.2024	Sample Condition	: Sealed & Preserved

Discipline : Chemical (: Water	Tolerance Limits
Parameter	Linit	Test Protocol	Result	as per IS 2296-1992 Class C (Inland Sarface Water)
pH (at 25,2°C)	÷.	IS 3025 (Part 11) : 2022	6.51	6.5-8.5
Colour	Hazen	IS 3025 (Part -4) : 2021	4.0	300
Odour		IS 3025 (Part-5) : 2018	Unobjectionable	-
Taste	1.4	APHA 23rd Ed.2017, 2160 C	N/A	1.00
Turbidity	mg/L_	1S 3025 (Part-10) :1984;RA2017	0.89	
Total Dissolved Solids (TDS)	mg/L	18 3025 (Part 16):1984; RA2017	94	1500
Total Alkalinity (as CaCO)]	mg/L	IS 3025 (Part-23) (1986; RA2019	12.8	
Total Hardness (as CaCO ₁)	mg/L	IS 3025 (Part-21) : 2009; RA2019	5.9	
Sulphate (as SO4)	mg/L	15 3025 (Part 24) : 1986; RA2019	9.2	400
Nitrate (as NO ₂)	mg/L	АРИА 23 rd Ed.2017, 4500 NO ₃ -В	0.86	50
Chloride (as Cl)	mg/L	IS 3025 (Part-32) :1988; RA2019	5,7	600
Fluoride (as F)	mg/L	IS 3025 (Part-60) 2008; RA2019	0.135	1.5
Cyanide (as CN)	mg/L	APHA 23 rd Ed.2017, 4500 CN-E	BDL (DL: 0.012)	0.05
Phenols Compounds (as CsH3OH)	mg/L	IS 3025 (Part-43): 1992;RA2019	BDL (DL: 0.001)	0.005

Page | of 4

EN.	Inc	0.01	EC.	n
	/11Y 2592120001			

44 TE 3350

Lab: MIG, R-3 Housing Edoury, Dhanhad, Pin- 826001, State - Jharkband & 9830067044 / & 9304513737

TEST REPORT						
Test Report No.	: ELES/RNC/2024/1553	Report Release Date	: 10.04.2024			
Work Order No.	: M& M/23-24/01	Work Order Date	: 31.03.2023			

Discipline: Chem	ical	Group: Wat	er	Tolerance Limits
Parameter	Unii	Test Protocol	Result	as per 1S 2296-1992 Class C (Inland Surface Water
Calcium (as Ca)	mg/L	IS 3025 (Part-40): 1991:RA2019	1.5	-
Free Residual Chlorine (RFC)	mg/L	(\$ 3025 (Part-26) :202)	BDL (DL: 0,1)	~
Anionic Surfactants (as MBAS)	mg/L	APHA 24 th Ed.2023, 5540-C	BDL (DL: 0.025)	1.0
Discipline: Chemic	al	Group: Residu	es in Water	
Aluminium (as A1)	mg/L	IS 3025 (Part-55) (2003; RA2019	BDL (D1.: 0.02)	
Arsenic (as As)	mg/l_	(\$ 3025 (Part-37): 2022	BDL (DL: 0.005)	0.2
Boron (as B)	mg/L	IS 3025 (Part-57) :2021	BDL (DL: 0.2)	н;
Cadmium (as Cd)	mg/L	APHA23 rd Ed.2017; 3111B	BDL (DL: 0.003)	0.01
Total Chromium (as Cr)	mg/L	APHA 23rd Ed.2017; 3111B	BDL (DL: 0.03)	
Copper (as Cu)	mg/L	APHA 23 rd Ed.2017; 3111B	BDL (DL: 0.03)	1.5
Iron (as Fe)	mg/L	APHA 23 rd Ed.2017; 3111B	0.109	50
Lead (as Pb)	mg/L	APHA 23 rd Ed.2017, 3111 B	BDL (DL: 0.01)	0.1
Manganese (as Mn)	mg/Ĺ	APHA 23 rd Ed.2017; 3111 B	BDL (DL: 0.05)	-
Mercury (as Hg)	mg/L	IS 3025 (Part-48) :1994; RA2019	BDL (DL: 0.001)	-
Selenium (as Se)	mg/L	IS 3025 (Part-56) :2003; RA2019	BDL (DL: 0.01)	0.05
Zinc (as Zn)	mg/L	APHA 23rd Ed.2017, 3111 B	BDL (DL: 0.1)	15
Polynuclear Aromatic Hydrocarbons (PAH)	µg/1_	ELES/GC/SOP/04	BDL (DL: 0.05)	

Remarks: 1. pH & RFC done at 1 ab.

Page 2 of 4

Lab - MIG, R-3 Heating Golony, Dhenbod, Pin - 826001, State - Ibarkhaud \$ 9830067044 / \$ 9304513737

\$	
12-41501	

TEST REPORT						
Test Report No.	: ELES/RNC/2024/1553	Report Release Date	: 10.04.2024			
Work Order No.	: M&M/23-24/01	Work Order Date	: 31.03.2023			

Parameter	Unit	Test Protocol	Result	as per IS 2296-1992 Class C (Inland Surface Water)
Pesticides				
Alachlor	pg/L	ELES/GC/SOP/01	BDL (DL: 0.5)	-
Atrazine	µg/L	ELES/GC/SOP/01	BDL (DL: 0.5)	-
Butachlor	$\mu g/\xi_i$	ELES/GC/SOP/01	BDL (DL: 0.5)	
Chlorpyriphos	$\mu g/L$	ELES/GC/SOP/01	BDL (DL: 0.5)	(A.)
Ethion	ня/Б	ELES/GC/SOP/01	BDL (DL: 0.5)	
Malathion	µg/L	ELES/GC/SOP/01	BDL (DL: 0.5)	
Methyl parathion	µg/L	ELES/GC/SOP/01	BDL (DL: 0.1)	-
Monocrotophos	µg/L	ELES/GC/SOP/01	BDL (DL: 0.5)	
Phorate	µg/L	ELES/GC/SOP/01	BDL (DL: 0.5)	-
Phorate Sulphone	$\mu g/L$	ELES/GC/SOP/01	BDL (DL: 0.5)	÷
Dieldrin	µg/L	ELES/GC/SOP/02	BDL. (DL: 0.01)	
Alpha HCH	µg/L	ELES/GC/SOP/02	BDL (DL: 0.006)	=
Beta HCH	µg/L	ELES/GC/SOP/02	BDL (DL: 0.02)	-
Delta HCH	µg/L	ELES/GC/SOP/02	BDL (DL: 0.02)	-
Gamma HCH (Lindane)	pg/L	ELES/GC/SOP/02	BDL (DL: 0.02)	*
Endosulfan (alpha, beta and sulphate)	μg/L	ELES/GC/SOP/02	BDL (DL; 0.05)	-
DDT(o,p and p,p-isomers of DDT,DDEand DDD)	μg/L	ELES/GC/SOP/02	BDL (DL: 0.05)	-

Page 3 of 4

Lab. MIG. R.S. Housing Colony, Mianhad. Pin - 826001, State - Barkhand (9830067064 / (9304513737

OCHECK



		TEST REPORT		
Test Report No.	: ELES/RNC/2024/15	853 Report Release Da	te : 10	.04.2024
Work Order No.	: M&M/23-24/01	Work Order Date	:31	.03.2023
Discipline	: Biological	Group : W	ater	Tolerance Limits
Parameter	Unit	Test Protocol	Result	as per IS 2296-1992 Class C (Inland Surface Water)
Total Coliform	CFU/100 mL	IS 15185; 2016, RA2021	3.18×10^{2}	5000
Escherichia Coli	CFU/100 mL	IS 15185: 2016: RA2021	<1.0	-

Reviewed by :

190-1-1

****End of Report****

Chr!

(Bapan Das, Dy. Technical Manager)

Authorised Signatory :

(Saswata Burman Roy, Dy. Quality Manager)



Page 4 of 4

MINERALS & MINERALS LIMITED

Regd. Office- Court Road, P.O. & Distt.-Lohardaga, Jharkhand-835302 Tel.-06526-223163 CIN NO. U26990JH1970PLC000875

Date

Annexure 3

Date:- 28.10.2023

Office Order

Environmental Cell has been re-constituted at Pakhar Bauxite Mine (Area 109.507 ha) comprising below mentioned team members. The team will ensure compliance of Environment Act, Regulation & Rule in respect of the said mines of Minerals & Minerals Limited.

- 1. Mr. Kiran Shankar Singh (Coordinator)
- 2. Mr. Tapas Kumar Gachhayat (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)

Ref. :

Annexure-5

BREAK UP THE COST OF ENVIRONMENTAL MEASURES DURING THE YEAR 2023-24

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), Pakhar (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 2023-24	Actual (in Rupees) FY 2023-24 (From Oct'23 to Mar'24)
1	Pollution Control & Environment monitoring	1,57,41,102.00	73,14,906.01
2	Reclamation/ Back filing & Rehabilitation**	1,36,62,095.00	6,53,29,973.21
3	Green belt, Plantation & Water sprinkling arrangement	67,45,898.00	32,08,288.90
4	Rural Development	6,19,33,534.00	2,08,14,673.36

**Part of OB removed cost.

Basudev Gangopadhyay AVP (Planning, Environment & Compliance)