

HIL/ENV/GP-IV/5/EC/2023-24/I/251

24th November 2023

To, The Integrated Regional Office, Ministry of Environment Forests & Climate Change (MoEF & CC) Aranya Bhawan, North Block, Sector – 19, Naya Raipur, Atal Nagar, Chhattisgarh, 492002

Subject: Half Yearly EC Compliance Report for 1 MTPA Underground Captive Coal Mine, Gare Palma IV/5 Coal Mine of M/s Hindalco Industries Limited, Village – Milupara, Tehsil – Tamnar, District – Raigarh, Chhattisgarh.

Respected Sir,

This has reference to the Environment Clearance Letter no. -J-11015/8/1998-IA -II. (M) dated 16.04.2015 (Transferred in favour of HIL). We are submitting herewith the Half Yearly EC Compliance Report along with Environmental Monitoring Reports for the period from **April 2023 to September 2023** for your kind perusal please.

The receipt of the report may kindly be acknowledged.

Yours faithfully, For Hindalco Industries Limited,

(Mine Agent- Gare Palma Coal Mines) Encl.: As Above.

- CC.: 1. Member Secretary, Chhattisgarh Environment Conservation Board, Paryavas Bhawan, Raipur Chhattisgarh.
 - 2. Regional Officer, Chhattisgarh Environment Conservation Board, TV tower Road, Raigarh (CG).
 - 3. Member Secretary, CPCB Parivesh Bhawan, East Arjun Nagar Delhi 110032
 - The Regional Director, Regional Directorate (Central), Bhopal, Central Pollution Control Board (MoEF&CC, GOI), "Parivesh Bhawan" Paryavaran Parishar, E–5, Arera Colony, Bhopal (MP), 462016
 - 5. The Director (Monitoring Cell), Ministry of Environment, Forest & Climate Change, IPB, Aliganj, Jorbagh Road, New Delhi 110003

Hindalco Industries Limited

Gare Palma Mines (1V/4 & IV/5), Vill & Po: Milupara , Tehsil: Tamnar Dist: Raigarh- 496107 , Chhattisgarh T: +91 7762 228212, Website : www.hindalco.com E mail ; hindalco@adityabirla.com Registered Office : Ahura Centre, 1st Floor, B Wing, Mahakali Caves Road Andheri (East) , Mumbai 400093, India T: + 912266917000 | Fax: + 912266917001 Corporate ID No: L27020MH1958PLC011238

COMPLIANCE REPORT

Compliance Report on conditions of Environment Clearance for Gare-Palma IV/5 Underground Captive Coal Mine of production capacity 1.0 MTPA Transfer by Ministry of Environment, Forests & Climate Change vide letter no. J-11015/ 8/1998-IA. II (M) Dated: - 16th April 2015

Sr. No.	Conditions	Status
1	Any change in scope of work will attract the provisions of Environment Protection Act (EPA), 1986 and Environmental Impact Assessment Notification, 2006 in conjunction with the subsequent amendments/circulars.	Noted.
2	All conditions stipulated in the EC letter No.J-11015/8/1998-IA.II (M) dated 31 st August, 2000 shall remain unchanged.	Noted.
3	The successful bidder shall be liable, if any, for any act of violation of the EPA 1986/EIA Notification 2006/subsequent amendments and circulars which it has inherited during the transfer.	Noted.
4	Successful bidder shall be liable for compliance of all court directions, if any.	Noted.

Compliance Report on conditions of Environment Clearance for Gare-Palma IV/5 Underground Captive Coal Mine of production capacity 1.0 MTPA by Ministry of Environment, Forests & Climate Change vide letter no. J-11015/8/98-IA. II (M) Dated: - 31st August 2000 for.

Sr. No.	Conditions	Status
A	A. Specific Conditions	
i	Regular Monitoring of subsidence movement on the surface over working areas and impact on water bodies/ vegetation/ structures/ surroundings should be continued till movement ceases completely. In case of observation of any high rates of subsidence movement, appropriate measures should be taken to avoid loss of life and materials. Cracks should be effectively plugged with ballast and clayey soil/ suitable material.	The method of mining at Gare Palma IV/5 coal mine is Bord & Pillar. Regular monitoring of subsidence movement on the surface over and around the working area and impact on natural pattern, water bodies, vegetation, structure, roads and surroundings is being done by internal experts. During the observation no subsidence movement has been observed. In future, if any subsidence movement is found, appropriate effective corrective measures will be taken to avoid loss of life and material. Cracks will be effectively plugged with ballast and clayey soil/suitable material if observed. The subsidence study has already been carried out for working panel by CSIR – Central Institute of Mining & Fuel Research Dhanbad in May 2019 for GP IV/5 Coal mines.
ii	Adequate underground barrier should be left in consultation with the Director General of Mines & Safety (DGMS). Depillaring should also be carried out after taking approval from DGMS.	Adequate underground barrier as required are being maintained between the working face and the river in consultation with DGMS and also at other places whenever required. Depillaring operation was not carried out.

iii	Garland drains should be constructed around the waste rock and ore stockpiles to prevent surface run-off.	Garland drain has been constructed around the coal stock yard to prevent the surface run-off. We would like to inform you that the Gare Palma IV/5 Coal mine is not in operation since long. As the mine is not doable due to technical reasons it has been surrendered in 2020 itself. Accordingly, Hindalco Industries Limited has applied for termination of the mining lease of Gare Palma IV/5 coal mine to the government. A copy of the above application on termination of the mining lease of Gare Palma IV/5 Coal Mine to the State Government/ Ministry of Coal, Government of India, is attached as <u>Annexure -1</u> for ready reference.
iv	A Green Belt of adequate width should be raised by planting the local species along the mine boundary, Waste rock dumps, ore stockpile, ventilation fan road and in selected open areas in consultation with local DFO/ Agriculture Department. Density of tree should be at least 2500 plants per ha.	Plantation in mines area is being done. At present 52604 nos. of trees have been planted within the Mine boundary and other places. Native species planted are Neem, Mahua, Jamun, Mango, Guava, Imli, Drumstick, Teak, Shivan / Ghamar, Sisham, Sirus, Bamboo, Peltafarm, Nilgiri, Amla, Saptaparni, Kathal, kassod tree, Arjuna & Kachnar etc. in consultation with DFO. Plantation has been carried out @2500 per hectare and will also be ensured in future. Plantation details enclosed as <u>Annexure –2.</u>
V	Compensation to the 14 land losers from whom private land will be acquired should be paid as per the state government norms.	Compensation to the 14 land losers has been paid by the company.
vi	The project authority should conduct a subsidence estimation study and submit the report to the Ministry within six months.	Subsidence estimation study report has been submitted to the Ministry by Prior allottee.
vii	dams "at the sites proposed by the State Ground Water Department in their report, while undertaking the proposed mining. The construction of the check dams should be carried out in consultation with Ground water survey department, Government of MP and should have necessary financial provision and technical expertise, which should be communicated to the MoEF and CGWB.	As per requirement the check dam site will be constructed in consultation with state forest department and Ground water survey department, Government of Chhattisgarh and will be communicated to MOEF& CC and CGWB.
viii	Regular monitoring of the Ground water level and quality should be carried out by establishing a network of existing wells and constructing new Piezometer during the mining operation. The interval of monitoring should be four times a year- Pre monsoon (April to May), Monsoon (August), Post Monsoon (November) and winter (January). The data thus collected may be sent regularly to MoEF and CGWB for information.	Being Complied. Regular monitoring of groundwater level and quality of the area is being carried out by establishing a network of existing wells/Piezometers. The Ground water level (from April 2023 to September 2023) and quality Monitoring report of Pre-Monsoon (May) and Monsoon (August) is attached as <u>Annexure No</u> <u>3.</u>

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ix	Digital processing of the entire lease area using remote sensing technique should be regularly once in three years for monitoring land use pattern and report submitted to MoEF and its regional office.	Quarterly monitoring report of Ground Water Level (from April 2023 to June 2023) and (from July 2023 to September 2023) & GW Quality Monitoring for the month of May 2023 (Pre- Monsoon) and August 2023 (Monsoon) has been submitted to MoEF & CC, CPCB and CECB on quarterly within one month of monitoring basis. A copy of same is attached as <u>Annexure No. – 4.</u> Report on Assessment of Land Use / Land Cover using High Resolution Satellite Imagery for the GP Mine IV/5 Coal Mine was carried out by IndiGEO Consultants, Bangalore in the month of December 2022 and the report was submitted to your good office dated 11 January 2023.
x	A detailed mine decommissioning plan should be submitted to the MoEF, five years in advance for approval.	Detailed mine decommissioning plan will be submitted to the Ministry of Environment and forests, five years in advance for approval as applicable.
B. Ge	eneral Conditions	
i	No change in mining technology and scope of working should be made without prior approval of the MoEF.	Noted and being complied.
ii	No change in the calendar plan including excavation, quantum of mineral coal and waste should be made.	Noted.
111	Four ambient air quality stations should be established in the core zone as well as the buffer zone for RPM, SPM, SO2, NOx & CO Monitoring. Location of stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.	Four ambient air quality monitoring stations (Core Zone) & Four ambient air quality monitoring stations (Buffer Zone) have been established and regular monitoring of environmental quality parameters are being carried out. Reports are being periodically furnished to CECB/CPCB/MoEF & CC. Copy of AAQ Monitoring Report from the period April 2023 to September 2023 is enclosed as <u>Annexure –5.</u>
iv	Data of ambient air quality (RPM, SPM, SO2, NOx & CO) should be regularly submitted to the Ministry including its Regional Office at Bhopal and the State Pollution Control Board & Central Pollution Control Board once in six months.	Four ambient air quality monitoring stations (Core Zone) & Four ambient air quality monitoring stations (Buffer Zone) have been established and regular monitoring is being carried out. Reports are being periodically furnished to
		CECB/CPCB/MoEF & CC. Copy of AAQ Monitoring Report from the period April 2023 to September 2023 is enclosed above.
v	Drill should be wet operated or with dust	Copy of AAQ Monitoring Report from the period

vi	Fugitive dust emission from all the sources should be controlled regularly monitored and the data recorded properly. Water spraying arrangement on haul roads, Wagons loading, dump trucks (loading and unloading) should be provided and properly maintained.	 Fugitive dust emission from all the sources is being monitored regularly. Fugitive dust emission report is attached as Annexure – 6A. Fixed type water sprinkler has been provided at all along the roads and loading points and engaged truck mounted water sprinkling system to control the fugitive dust emission. Photographs of fixed type of water sprinklers &
		truck mounted water sprinkling system at GP IV/5 Coal Mines is attached as Annexure – 6B.
Vii	Adequate measures should be taken for control of noise levels below 85dB in the work environment. Workers engaged in blasting and drilling operations, operations of HEMM etc. should be provided with ear plugs/ muffs	Earmuffs/plugs have been provided to all workers engaged in blasting and drilling operations, operations of HEMM etc. The Noise monitoring report for the period from April 2023 to September 2023 is enclosed as <u>Annexure - 7</u> .
Viii	Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the standards prescribed under GSR 422 (E) dated 19.05.1993 and 31.12.1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents into the pond.	We have constructed 05 Nos. of settling pond & 02 nos of ETP (Capacity 200 m3 / Hr Each) along with Lamella clarifier with chemical dosing arrangement for the treatment of mine seepage water, the treated water is being used for spraying / sprinkling on mines roads and also for greenbelt development inside the mine premises & remaining treated water from ETP is being distributed to the nearby villagers for irrigation & agriculture purpose (other than drinking).
		The treated water quality is maintained well within the prescribed standards all the time.
		Analysis reports (Inlet & Outlet) are being periodically furnished to CECB/CPCB/MoEF & CC, carried out through CECB & MoEF & CC approved & NABL accredited Laboratory.
		Copy of Analysis Report (ETP Inlet & Outlet) for the period from April 2023 to September 2023 is attached as <u>Annexure – 8.</u>
		Photograph of Treatment Facility at GP IV/5 Coal Mines is attached as <u>Annexure – 8A.</u>
		HIL also provided the Sewage Treatment Plant of capacity 50 m3/day at Kondkel to treat the domestic wastewater generated from Toilets, bathroom etc.

		Copy of Analysis Report (Inlet & Outlet of STP) for the period from April 2023 to September 2023 is attached as <u>Annexure – 9.</u> Photograph of Sewage Treatment Plant installed at GP IV/5 Coal Mines (Kondkel) is attached as <u>Annexure – 9A.</u>
		Treated water from the Water treatment plant (Kondkel) is being released to nearby village (Kondkel) for drinking purpose twice a day X 7 for 02 hours at each shift (6 am to 8 am and 4 pm to 6 pm).
		Copy of Analysis Report for the period from April 2023 to September 2023 is enclosed above.
ix	Acid mine water if any has to be treated and disposed off after conforming to the standards prescribed by the competent authority.	There is no acid mine water. HIL has provided ETP (Capacity 200 m3 / Hr Each) along with Lamella clarifier with chemical dosing arrangement for the treatment of mine seepage water and the analysis report of treated water quality are being periodically furnished to CECB/CPCB/MoEF & CC.
x	Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board	We have engaged CECB & MoEF&CC approved and NABL accredited Laboratory i.e. M/s Ultimate Envirolytical Solutions Raipur to carried out the mine environmental quality parameters monitoring.
		Approval letter of Monitoring Agency from CECB Raipur, MoEF&CC & NABL accredited Laboratory certificates are attached as <u>Annexure No. – 10.</u>
xi	Personnel working in dusty areas should wear protective respiratory devices and they should also be 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 coal dust and take corrective measures if needed.	Personnel working in dusty areas wearing protective respiratory devices and HIL provides the adequate training and information on safety and health aspects. Occupational health surveillance program of the workers is being undertaken periodically to observe any contraction due to exposure to coal dust and corrective measures are being taken accordingly.
xii	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.	A separate Environmental Management Department is functioning at Coal Mine under the direct control of a senior executive. EMD organization Chart is attached as <u>Annexure</u> <u>No. – 10A</u>
xiii	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 Ministry.	The funds earmarked for environmental protection measures have been budgeted separately and have not been diverted for other purposes. Environmental Expenditure details from April 2023 to September 2023 is enclosed as Annexure – 11.

xiv	The Regional Office of this ministry located at Bhopal shall monitor compliance of the stipulated conditions. The project authorities should extent full co-operation to the officer (s) of the Regional Office by furnishing the requisite data information / monitoring reports.	Now Raipur, Integrated Regional Office is looking EC monitoring & compliances. Full co – operation has been extended to Regional Officer by furnishing requisite data information / monitoring reports.
XV	A copy of the clearance letter will be marked to concerned Panchayat/ local NGO if any from whom suggestion / representation has been received while processing the proposal	Complied by Prior Allottee.
xvi	State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office/Tehsildar's office for 30 days	Complied by Prior Allottee.
xvii	The project authorities should advertise at least two local newspapers widely circulated around the project one of which shall be in vernacular language of the locality concerned informing that the project has been accorded environmental clearance and the copy of the clearance letter is available with the State Pollution Control Board and may also be seen at web site of the MoEF at http:/envfor.nic.in	Complied by Prior Allottee.

Annexure-1



Ref: HIL/GP IV5/2020-21/239

Date: 20th November 2020

- Secretary, Department of Mineral Resources, Government of Chhattisgarh, Mantralaya, Naya Raipur, Chhattisgarh.
- Director, Department of Mines & Geology, Government of Chhattisgarh, Indravati Bhawan, Mantralaya, Naya Raipur, Chhattisgarh.
- Collector, Raigarh, Raigarh, Chhattisgarh.

Dear Sirs,

To

Subject: Notice of Termination of Mining Lease dated 16.10.2015 in respect of Gare Palma IV /5 coal mine, under Clause 4 of Part VIII of the Mining Lease and Rule 29 of the Mineral Concession Rules, 1960

We, Hindalco Industries Limited ('HIL'), being the lessee / holder of Mining Lease dated 16.10.2015 in respect of Gare Palma IV / 5 coal mine, at Tamnar Tehsil, Raigarh District, Chhattisgarh, comprising an area of 829.82 Ha, ("Mining Lease") bring to your notice as under:

- The Mining Lease was executed by the State Government of Chhattisgarh in favor of HIL on 16.10.2015 pursuant to vesting order dated 23.03.2015 issued by the Central Government under the Coal Mines (Special Provisions) Act, 2015.
- 2. As you are aware, the Gare Palma IV/5 mine was an operational mine at the time of deallocation by the Hon'ble Supreme Court vide judgments dated 25.08.2014 and 24.09.2014 in WP (Crl.) No. 120/2012. HIL had bid for the mine to ensure consistent supply of coal from GP IV/5 to its end-use plants, i.e. captive power plants feeding power to aluminium smelters at Aditya Aluminium, Lapanga and Hirakud. As aluminium smelters are continuous process plants, they require uninterrupted supply of power.
- 3. The Prior Allottee (M/s. Monnet Ispat Ltd.) had extracted 85,73,104 tonnes of coal from the total coal reserves during its tenure from 2004 till the date of de-allocation in 2015. At the time of bidding for the mine, we believed, bona fide, that the development of the mine could be continued in the same manner as undertaken by the Prior Allottee to yield production of 1 MT

Hindalco Industries Limited

Gare Palma Mines (IV/4 & IV/5), Vill & Po: Milupara , Tehsil: Taimnar Dist: Raigarh- 496107 , Chhattisgarh T: +91 7762 228212, Website : www.hindalco.com E mail : hindalco@adityabirta.com Registered Office : Ahura Centre, 1st Floor. B Wing, Mahakali Caves Road Andheri (East) , Mumbai 400093, India



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annually as per the capacity granted in the Environment Clearance ("EC") dated 31.08.2000. Our understanding was based, inter-alia, on the information contained in the mine dossier made available to us at the time of auction, the stipulations made in the mining plan approved by Ministry of Coal, Govt of India, and the production data of the Prior Allottee.

- 4. After the mine was vested upon us, we came across several unforeseen challenges in operationalizing the mine. Despite such challenges, due to our *bona fide* and best possible efforts, we could commence operations in 2016-2017. It is now well documented that the transfer of statutory permissions to us took more than the anticipated time. The High Court of Chhattisgarh vide order dated 18.02.2020 in Hindalco Industries Ltd. Vs. Union of India & Ors. bearing No. WP (227) No. 647/2019 has held that such delay in transfer of permissions rendered it impossible for HIL to commence operations prior to 2016-2017.
- 5. We have conducted mining operations at the Gare Palma IV/5 coal mine strictly in accordance with the terms and conditions of the Mining Lease. We have adhered to highest standards of safety of our mine workers, while pursuing the objective of ensuring optimum coal production as per the capacity granted by EC dated 31.08.2000.
- 6. Due to our bona fide efforts and best practices, we achieved peak rated capacity of 1 MTPA during the very first year of production, i.e., FY 2016-17. Since FY 2017-2018 however, we have been facing considerable technical challenges which have rendered the continuation of mining operations unviable, unfeasible and unsustainable, thereby, defying the very purpose of securing the mine.
- Following is a brief summary of the challenges being faced in the mine:
 - (i) The Gare Palma IV/5 mine has only three workable seams as per the approved mining plan, viz., Seam I, Seam II and Seam III. Of these, Seam I is geologically occurring in patches and therefore not consistently workable.
 - (ii) Seam II is the most important Seam as it has workable thickness throughout the sub block. However, major portion of Seam II had already been developed by the Prior Allottee by the conventional bord and pillar method and is now standing on pillars.
 - (iii) Seam III was partly developed by Prior Allottee by the conventional bord and pillar method and has now been further developed by HIL.
 - (iv) A major portion of the coal reserves is locked underneath the pillars and could ideally have been extracted by de-pillaring however, the same is technically impossible on account of constraints which are enumerated below.
 - (v) The Forest Clearance granted by Ministry of Environment, Forest and Climate Change, prohibits de-pillaring in Seam III in multiple sectors of the mining lease area. Seam III being on top of Seam II and Seam I, such prohibition from de-pillaring in Seam III also poses challenges in de-pillaring Seam II and Seam I as the same can cause subsidence of Seam III.

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- (vi) Since the mine was developed by conventional bord and pillar underground method of mining, steel roof bolts of 1.8 m length and Steel W-straps have been installed at a distance of 1 m all along the mine to support the roof for which deployment of continuous miners is very difficult. De-pillaring using the caving method or gallery blasting method, though recommended in the mining plan, is also not possible as it involves caving the thick seams which would cause subsidence on the surface, resulting in violation of Forest Clearance granted with respect to the mine. Gallery Blasting method is also discouraged by DGMS presently due to safety concerns.
- (vii) The only option available to us to operate the mine without causing subsidence of overhead seams was by using the de-pillaring and stowing method. However, the experience gained from the depillaring of two panels using this method has shown that despite our best efforts, this method is extremely unproductive in the existing geo-technical conditions, and is therefore not a sustainable method for this mine. Further, the surface features like village and forest make implementation of this method impossible on sustainable basis.
- 8. As it was clear that reliance solely upon de-pillaring with caving or stowing is not feasible, on 28.12.2017, we approached the apex expert agency of the country, namely Central Institute of Mining & Fuel Research ("CIMFR"), an agency of Government of India, for guidance on alternate approaches to achieve the scheduled production. After detailed study, vide its report dated 23.04.2018, CIMFR proposed a partial extraction method called 'Wide Stall' method of mining. However, the implementation of wide stall method was rejected by DGMS vide its letter dated 05.09.2018 due to safety concerns. DGMS's letter dated 05.09.2018 is enclosed as Annexure A.
- 9. We approached CIMFR once again seeking a way forward. After further detailed technical assessment as elaborated in its report dated 11.09.2020, CIMFR has categorically opined that Coal extraction of 1 MTPA from Gare Palma IV/5 coal mine, as mentioned in the approved mining plan, is impossible to achieve in the current facts and circumstances. A copy of CIMFR's report dated 11.09.2020 is enclosed as Annexure B.
- 10. The perusal of the facts mentioned above would clearly reveal that HIL has explored all possible alternatives to find a solution to carry-on the mining operations to sustainably produce 1 MTPA with emphasis on safety of people employed, safety of surface features including forest and conservation of coal under the Extant law and DGMS guidelines. However, operations in the GP IV/5 mine have been rendered impossible due to the constraints enumerated above.
- 11. In view of the above facts and circumstances, we have no other option but to exercise our right to terminate the Mining Lease under Clause 4 of Part VIII of the Mining Lease and Rule 29 of the Mineral Concession Rules, 1960. Please note that the Mining Lease shall stand determined and terminated upon expiry of the notice period prescribed under the said provisions.
- 12. You are aware that we have diligently discharged our obligations under the Mining Lease and applicable laws regarding payment of statutory dues, including royalties, Monthly Payments, E&D cess, contribution to DMF, NMET etc. to the Government of Chhattisgarh from time to

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time. Details of coal production and linked statutory payments made by HIL to the Government of Chhattisgarh from commencement of mining operations in 2015 till date, totaling to INR 909,59,84,097 are annexed herewith as Annexure C.

- 13. Further, we have incurred an amount of INR 8,40,054 as Demarcation of Mining Lease boundary for execution of Mining Lease. We have has also made payment towards Net Present Value of forest land falling under the mining lease area, as demanded by the State Government of Chhattisgarh, to the tune of INR 14,52,75,873 as Annexure D.
- 14. Details of expenditure incurred by us towards establishment of mine related infrastructure, including plant, machinery and structures to enable mining operations at the GP IV/5 coal mine since 2015 till date, to the tune of INR 181,64,83,736 are annexed herewith as Annexure E.
- 15. Details of water rates paid by us in respect of GP IV/5 coal mine since 2015 till date, to the tune of INR 4,80,721 are annexed herewith as Annexure F.
- 16. We would be happy to offer the mine infrastructure established by us in the mine for purchase to the State Government in terms of Clause 5 of Part IX read with Clause 20 of Part VII of the Mining Lease and await your notification in this regard.

Thanking You.

Yours sincerely, For Hindalco Industries Limited,

(Authorized Signatory)

Copy to:

Nominated Authority, Ministry of Coal, Government of India, New Delhi.

Annexure-2

Plantation details of Gare Palma IV/5 Under Ground Coal Mine of M/s Hindalco Industries Limited

	Year wise plantation detail of Gare Palma IV/5 Coal Mine					
Year	Location	No. of Tree Planted (Approx.)	Survival Rate (%)	Number of Plant Survived	Area Covered in Plantation (hectare)	Sapling Details
Upto 2015		30000	82.00	24600	9.84	
2016		2000	85.00	1700	0.68	Neem, Mahua, Jamun, Mango, Guava, Imli,
2017	Cast	5000	80.00	4000	1.60	
2018	Coal	5000	92.00	4600	1.84	
2019	mine	5000	93.00	4650	1.86	
2020	lease	1100	95.00	1045	0.42	Drumstick, Teak,
2021	area	1504	91.00	1369	0.55	Shivan / Ghamar, Sisham, Sirus,
2022		2500	95.00	2375	0.95	Bamboo, Peltafarm
2023		500	100.00	500	0.20	Nilgiri, Amla etc
Total		52604	90.33	44839	17.9	

Plantation Photographs of Gare Palma IV/5 Under Ground Coal Mine of M/s Hindalco Industries Limited



















Photographs of Plantation of Gare Palma IV/5 Under Ground Coal Mine of M/s Hindalco Industries Limited for FY 2023-2024







Annexure-3

Ground Water Level Monitoring Report in and around the Coal Mine Area (From April 2023 to June 2023)

Sr.	Location	Types of		In Meters	
No.		Structure	Ground Water level (BGL) Apr' 2023	Ground Water level (BGL) May' 2023	Ground Water level (BGL) Jun' 2023
1	Near Security Gate, Bankheta	Borewell / AWLR	12.85	13.14	13.40
2	Near Mines office, Banjikhol	Borewell / AWLR	27.30	28.10	28.75
3	Near Mines office, Milupara	Borewell / AWLR	13.11	13.55	13.83
4	Near Staff Quarter, Milupara	Borewell / AWLR	8.49	8.74	8.60
5	Near PHC – HIL, Milupara Village	Dugwell	6.22	6.33	4.42
6	Near Primary School, Sakta Village	Dugwell	3.51	3.59	2.91
7	Near Primary School, Sidarpara Village	Dugwell	9.27	9.51	6.55
8	Near Primary School, Beljor Village	Dugwell	6.95	7.15	7.10



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of	The Customer	REPORT NO	UES/TR/23-24/0126	3	
то,		LAB REF NO	UES/23-24/W/02506		
HINDALCO INDUSTR		DATE OF SAMPLING	20/05/2023		
GARE PALMA - IV/4, VILLAGE - BANKHET		DATE OF RECEIPT	22/05/2023		
POST -MILUPARA,		DATE OF REPORT			
DISTT RAIGARH (C.	.G.) 496107.	DATE OF ANALYSIS			
	S	AMPLE DETAILS			
SAMPLE TYPE	GROUND WATER	ORDER /REFERENCE:	P.O.13552310211, DATED:07.09.2022		
CUSTMER SAMPLE ID NEAR MAIN SECURITY GATE BANKHETA MINE (PIEZOMETER) AWLR		SAMPLE CONDITION AT RECEIPT	OK		
PACKING OF SAMPLE 3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN SEALED 1 L X 1 NO. GLASS BOTTLE		SAMPLE COLLECTED BY	CHEMIST		
IS:3025 (PART I):1987 RA SAMPLING PROCEDURE 2003; APHA 23RD ED. 2012, 1060-B, 1-39 1-39		QUANTITY RECEIVED	5 LTR		

Report No.01263

SR.	PARAMETER		TEST REPORT	AS PER IS	10500:2012	
NO.		UNIT	METHOD OF TEST	Acceptable Limit	Permissible	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
4	рН	-	APHA 23 nd Ed.2012,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	6.93
5	Turbidity	NTU	APHA 23 nd Ed.2012,2130-B,2-13	1	5	1.34
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	156.3
7	Residual Chlorine	mg/Lit	APHA 23 nd Ed.2012,4500-CI-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 23 nd Ed.2012,2540- B, 2- 64	-	-	96.1
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	93.5
10	Total Suspended Solids	mg/Lit	APHA 23 nd Ed.2012,2540- D, 2- 66	-	-	2.6
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	44.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,2340-C, 2- 44,45	200	600	- 64.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Ca-B, 3-67	-	-	40.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	-	-	24.0
15	Calcium (as Ca)	mg/Lit	APHA 23 nd Ed.2012,3500-Ca-B, 3-67	75	200	16.03
16	Magnesium (as Mg)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	30	100	5.83
17	Chloride (as CI)	mg/Lit	APHA 23 nd Ed.2012,4500-CI-B, 4-72	250	1000	13.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 23 nd Ed.2012,4500-SO ₄ -E, 4-190	200	400	16.6
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 nd Ed.2012,4500-NO ₃ -B, 4-122	45	No Relaxation	0.36



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Report No.01263

			TEST REPORT			
SR.				AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESUL
23	Boron (as B)	mg/Lit	APHA 23 nd Ed.2012,4500–B-B, 4- 25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit		0.3	No Relaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 23 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.07
26	Manganese (as Mn)	mg/Lit		0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 23 nd Ed.2012,3111-B, 3-18	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 23 nd Ed.2012,3500-Ni, 3- 108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit		5	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 23 nd Ed.2012,3111-B, 3-18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 23 nd Ed.2012,3500-Cd, 3- 105	0.003	No Relaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 23 nd Ed.2012,3112-B, 3-23	0.001	No Relaxation	N.D.
33	Arsenic (as As)	mg/Lit	APHA 23 nd Ed.2012,3114-C, 3-38	0.01	0.05	N.D.
34	Selenium (as Se)	mg/Lit	APHA 23 nd Ed.2012,3114-C, 3-38	0.01	No Relaxation	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 23 nd Ed.2012,3500-Cr-B, 3-69	0.05	No Relaxation	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 23 nd Ed.2012,5540-C, 5-53	0.2	1.0	N.D.
37	Phenolic Compound (as C_6H_5OH)	mg/Lit	APHA 23 nd Ed.2012,5540-B & C, 5-47	0.001	0.002	N.D.
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	µg/Lit	APHA 23 nd Ed.2012,6440-6-93	0.0001	No Relaxation	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003		-	N.D.
Micro	biological Analysis	-			L	
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019	Shall not be any 100 n		Absent
2	Faecal Coliform	MPN/ 100ml	IS:1622:1981: RA:2019	Shall not be any 100 n		Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be o	detectable in	Absent
esti	cides	-	L	any 100m		
1	p,p DDT	µg/L	US EPA 508-1995	1		N.D.
2	o.p DDT	µg/L	US EPA 508-1995	1		N.D.
3	p,pDDE	µg/L	US EPA 508-1995	1		N.D.
4	p,p DDD	µg/L	US EPA 508-1995	1		N.D.
5	O,p DDD	µg/L	US EPA 508-1995	1		N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995	2		N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	0.0		N.D.
8	Beta-HCH	µg/L	US EPA 508-1995	0.0		N.D.
9	Delta HCH	µg/L	US EPA 508-1995	0.0		N.D.
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0.4		N.D.



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Report No.01263

SR.	PARAMETER			AS PER IS	10500:2012	
NO.			METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.
12	Endosulfansulphate	µg/L	US EPA 508-1995	0	.4	N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994		1	N.D.
14	Ethion	µg/L	US EPA 8141A-1994		3	N.D.
15	Chloropyrifos	µg/L	US EPA 8141A-1994	3	0	N.D.
16	Phorate	µg/L	US EPA 8141A-1994	2		N.D.
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994	-		N.D.
18	Phoratesulphone	µg/L	US EPA 8141A-1994	-		N.D.
19	2,4-D	µg/L	US EPA 515.1-1995	3	30	
20	Alachlor	µg/L	US EPA 508- 1995	2	0	N.D.
21	Atrazine	µg/L	US EPA 532-2000	2	2	N.D.
22	Methyl parathion	µg/L	US EPA 8141A-1994	0.	3	N.D.
23	Methyl paraxone	µg/L	US EPA 8141A-1994	-		N.D.
24	Malathion	µg/L	US EPA 8141A-1994	19	0	N.D.
25	Malaoxon	µg/L	US EPA 8141A-1994	-	-	
26	Aldrin	µg/L	US EPA 508- 1995	0.0)3	N.D.
27	Dieldrin	µg/L	US EPA 508-1995	0.0)3	N.D.

Note: mg/lit.: milligram per liter, N.D.: Not Detected.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

The report for publication, arbitration or as legal dispute is forbidden. ×

Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer. This is for information as the party has asked for above test(s) only. >

26/05/23

REVIEWED BY

ubhajee

AUTHORIZED SIGNATORY

For ULTIMATE ENVIROLYTICAL SOLUTIONS

of the test report-

Format No. : UES/FORM/09



HDD-272, Phase III - Near JP Chowk Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099 Ph : 0771 - 4027777 I Email : ultimatenviro@gmail.com

Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Cu.	stomer	REP	PORT NO	UES/	S/TR/23-24/01264			
TO, HINDALCO INDU	STRIES LIMITED,	LAF	BREF NO	UES/	UES/23-24/W/02507 20/05/2023 22/05/2023 26/05/2023			
GARE PALMA - I	And a second sec	DAT	TE OF SAMPLING	20/0				
VILLAGE - BANK	75	DAI	TE OF RECEIPT	22/0				
POST -MILUPAR	Α,	DAI	E OF REPORT	26/0				
DISTT RAIGAR	H (C.G.) 496107.	DAI	E OF ANALYSIS	START: 22/05/2023		END:26/05/2023		
		SAMI	PLE DETAILS					
SAMPLE TYPE	GROUND WATER		ORDER /REFERENC	æ:	P.O.135523102 DATED:07.09.2			
CUSTMER SAMPLE ID	NEAR MINE OFFICE - BANJ MINE (PIEZOMETER) AWLR	IKHOL	SAMPLE CONDITIC	ON AT	OK			
PACKING OF SAMPLE	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	SEALED	SAMPLE COLLECTE	D BY	CHEMIST			
SAMPLING PROCEDURE	IS:3025(PART I):1987 RA APHA 22ND ED. 2012, 106		QUANTITY RECEIV	ED	5 LTR			

Report No.01264

SR.				AS PER IS	10500:2012		
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT	
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1	
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable	
3	Taste	_	IS 3025(part-8)	Agreeable	Agreeable	Agreeable	
4	pH	-	APHA 23 nd Ed.2012,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	7.23	
5	Turbidity	NTU	APHA 23 nd Ed.2012,2130-B,2-13	1	5	1.21	
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	189.2	
7	Residual Chlorine	mg/Lit	APHA 23 nd Ed.2012,4500-Cl-G, 4 - 69	0.2	1	N.D.	
8	Total Solid	mg/Lit	APHA 23 nd Ed.2012,2540- B, 2- 64	-	-	115.2	
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	113.0	
10	Total Suspended Solids	mg/Lit	APHA 23 nd Ed.2012,2540- D, 2- 66	- 297		2.2	
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	56.0	
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,2340-C, 2- 44,45	200	600	82.0	
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Ca-B, 3-67	-	-	46.0	
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	-	-	36.0	
15	Calcium (as Ca)	mg/Lit	APHA 23 nd Ed.2012,3500-Ca-B, 3-67	75	200	18.44	
16	Magnesium (as Mg)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	30	100	8.75	
17	Chloride (as Cl)	mg/Lit	APHA 23 nd Ed.2012,4500-Cl-B, 4-72	250	1000	17.9	
18	Sulphate (as SO ₄)	mg/Lit	APHA 23 nd Ed.2012,4500-SO ₄ -E, 4-190	200	400	26.41	
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 nd Ed.2012,4500-NO ₃ -B, 4-122	45	No Relaxation	2.38	
20	Phosphate (as P)	mg/Lit	APHA 23nd Ed.2012,4500-P-C, 4-153	-	-	N.D.	
21	Sodium (as Na)	mg/Lit	APHA 23nd Ed.2012,3500-Na-B, 3-97	-	-	9.1	



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Report No.01264

			TEST REPORT	and the other sectors.		
SR.				AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESUL
22	Potassium (as K)	mg/Lit	APHA 23 nd Ed.2012,3500-K-B, 3-87	-	-	0.32
23	Boron (as B)	mg/Lit	APHA 23 nd Ed.2012,4500-B-B, 4-25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 23 nd Ed.2012,3111-B,3-18	0.3	No Relaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 23 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.08
26	Manganese (as Mn)	mg/Lit	APHA 23 nd Ed.2012,3111-B, 3-18	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 23 nd Ed.2012,3111-B, 3-18	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 23 nd Ed.2012,3500-Ni, 3- 108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 23 nd Ed.2012,3111-B, 3-18	5	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 23 nd Ed.2012,3111-B, 3-18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 23 nd Ed.2012,3500-Cd, 3-	0.003	No Relaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 23 nd Ed.2012,3112-B, 3-23	0.001	No Relaxation	N.D.
33	Arsenic (as As)	mg/Lit	APHA 23 nd Ed.2012,3114-C, 3-38	0.01	0.05	N.D.
34	Selenium (as Se)	mg/Lit	APHA 23 nd Ed.2012,3114-C, 3-38	0.01	No Relaxation	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 23 nd Ed.2012,3500-Cr-B, 3-69	0.05	No Relaxation	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 23 nd Ed.2012,5540-C, 5-53	0.2	1.0	N.D.
37	Phenolic Compound (as C_6H_5OH)	mg/Lit	APHA 23 nd Ed.2012,5540-B & C, 5-47	0.001	0.002	N.D.
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	µg/Lit	APHA 23 nd Ed.2012,6440-6-93	0.0001	No Relaxation	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003	- 1997	-	N.D.
Micro	biological Analysis	L				
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019	Shall not be de 100 ml	tectable in any sample	Absent
2	Faecal Coliform	MPN/ 100ml	IS:1622:1981: RA:2019	Shall not be de 100 ml		Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be de 100ml	tectable in any	Absent
Pestic	cides		Leanna	1001111	sample	
1	p,p DDT	µg/L	US EPA 508-1995	1		N.D.
2	o.p DDT	µg/L	US EPA 508-1995	1	-	N.D.
3	p,pDDE	µg/L	US EPA 508-1995	1		N.D.
4	p,p DDD	µg/L	US EPA 508-1995	1		N.D.
5	O,p DDD	µg/L	US EPA 508-1995	1		N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995	2		N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	0.0	01	N.D.
8	Beta-HCH	µg/L	US EPA 508-1995	0.0		N.D.



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Report No.01264

			TEST REPORT				
SR.				AS PER IS	10500:2012		
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESUL	
9	Delta HCH	µg/L	US EPA 508-1995	0.	04	N.D.	
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.	
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0.	.4	N.D.	
12	Endosulfansulphate	µg/L	US EPA 508-1995	0.	.4	N.D.	
13	Monocrotophos	µg/L	US EPA 8141A-1994		L	N.D.	
14	Ethion	µg/L	US EPA 8141A-1994		3		
15	Chloropyrifos	µg/L	US EPA 8141A-1994	30		N.D.	
16	Phorate	µg/L	US EPA 8141A-1994	2		N.D.	
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994	-		N.D.	
18	Phoratesulphone	µg/L	US EPA 8141A-1994	-	-		
19	2,4-D	µg/L	US EPA 515.1-1995	3	0	N.D.	
20	Alachlor	µg/L	US EPA 508- 1995	2	D	N.D.	
21	Atrazine	µg/L	US EPA 532-2000	2		N.D.	
22	Methyl parathion	µg/L	US EPA 8141A-1994	0.	3	N.D.	
23	Methyl paraxone	µg/L	US EPA 8141A-1994			N.D.	
24	Malathion	µg/L	US EPA 8141A-1994	19	0	N.D.	
25	Malaoxon	µg/L	US EPA 8141A-1994	-	-		
26	Aldrin	µg/L	US EPA 508- 1995	0.0)3	N.D.	
27	Dieldrin	µg/L	US EPA 508-1995	0.0)3	N.D.	

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

> The report for publication, arbitration or as legal dispute is forbidden.

> Test sample will be retained for 15days after issue of test report unless otherwise agreed with customer.

This is for information as the party has asked for above test(s) only.





For ULTIMATE ENVIROLYTICAL SOLUTIONS

ubhajeet

AUTHORIZED SIGNATORY

-----End of the test report-----



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Name & Address Of The Cu	stomer	REPO	ORT NO	UES/TR/23-24	1/01	281
то,		LAB	REF NO	UES/23-24/W/02524 20/05/2023		
HINDALCO INDUSTR		DATI	E OF SAMPLING			
GARE PALMA - IV/5,		DATI	OF RECEIPT	22/05/2023		
U/G COAL MINE, VILL BLOCK-TAMNAR.	AGE - MILUPARA,	DATI	OF REPORT	26/05/2023		
DISTT RAIGARH (C	.G.) 496107	DATE	TE OF ANALYSIS START: 22/0		023	END: 26/05/2023
		SAMPI	E DETAILS			
SAMPLE TYPE	GROUND WATER		ORDER /REFER	RENCE :	VEI	RBAL COMMUNICATION.
CUSTMER SAMPLE ID	NEAR MILUPARA MINES (PIEZOMETER -AWLR	OFFICE	SAMPLE CONDITION AT RECEIPT		ок	
PACKING OF SAMPLE	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	SEALED	SAMPLE COLLE	CTED BY	СШ	emist
SAMPLING PROCEDURE	TS: 3025 (PART T): 1987 PA 2003:			EIVED	5 LTR	

REPORT NO.01281

			TEST REPORT			
SR.				AS PER I	S 10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	Taste	100 - A.	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
4	рН	-	APHA 22 nd Ed.2012,4500-H ⁺ -B, 4-92	<mark>6.5-</mark> 8.5	No Relaxation	7.21
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	2.78
6	Electrical Conductivity	μS/cm	IS 3025(part-14):1984, RA 2013	-	-	276.6
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-G,4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2- 64	<mark>.</mark>	-	175.6
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	167.2
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2- 66	-	-	8.4
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	42.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2- 44,45	200	600	70.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	-	-	38.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84		-	32.0
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	75	200	15.23
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	30	100	7.77
17	Chloride (as CI)	mg/Lit	APHA 22 nd Ed.2012,4500-CI-B, 4-72	250	1000	20.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO4-	200	400	17.2



PEPOPT NO 01291

Pesticides

HDD-272, Phase III - Near JP Chowk Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099 Ph : 0771 - 4027777 I Email : ultimatenviro@gmail.com

Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

			TEST REPORT			
SR.				AS PER I	S 10500:2012	34477
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESUL
			E,4-190			
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ -B, 4-122	45	No Relaxation	3.3
20	Phosphate (as P)	mg/Lit	APHA 22nd Ed.2012,4500-P-C, 4-153	-	-	N.D.
20	Sodium (as Na)	mg/Lit	APHA 22ndEd.2012,3500-Na-B, 3-97	-	-	8.4
21	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3- 87	-	-	0.32
22 -	Boron (as B)	mg/Lit	APHA 22 nd Ed.2012,4500-B-B, 4- 25	0.5	1.0	N.D.
23	Iron (as Fe)	mg/Lit	APHA 22 nd Ed.2012,3111-B,3-18	0.3	No Relaxation	N.D.
24	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.21
25	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	0.3	N.D.
26	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.01	No Relaxation	N.D.
27	Nickel (as Ni)	mg/Lit	APHA 22 nd Ed.2012,3500-Ni, 3- 108	0.02	No Relaxation	N.D.
28	Zinc (as Zn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	5	15	N.D.
29	Copper (as Cu)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.05	1.5	N.D.
30	Cadmium (as Cd)	mg/Lit	APHA 22 nd Ed.2012,3500-Cd,3- 105	0.003	No Relaxation	N.D.
31	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3-23	0.001	No Relaxation	N.D.
32	Arsenic (as As)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3-38	0.01	0.05	N.D.
33	Selenium (as Se)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3-38	0.01	No Relaxation	N.D.
34	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B, 3-69	0.05	No Relaxation	N.D.
35	Anionic Detergent (as MBAS)	mg/Lit	APHA 22 nd Ed.2012,5540-C, 5-53	0.2	1.0	N.D.
36	Phenolic Compound (as C_6H_5OH)	mg/Lit	APHA 22 nd Ed.2012,5540-B & C, 5-47	0.001	0.002	N.D.
37	Poly-nuclear Aromatic Hydrocarbon (PAH)	µg/Lit	APHA 22 nd Ed.2012,6440-6-93	0.0001	No Relaxation	N.D.
38	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003	0.5	No Relaxation	N.D.
39	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003	-	-	N.D.
1icro	biological Analysis				L	
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		detectable in any nl sample	Absent
2	Faecal coliform	MPN/ 100ml	IS:1622:1981: RA:2019	Shall not be o	detectable in any nl sample	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be o	detectable in any	Absent



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			TEST REPOR	RT .		
SR.				AS PER I	S 10500:2012	
NO.	PARAMETER	ETER UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
1	p,p DDT	µg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	µg/L	US EPA 508-1995		1	N.D.
4	p,p DDD	µg/L	US EPA 508-1995		1	N.D.
5	O,p DDD	µg/L	US EPA 508-1995		1	N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995		2	N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995		0.01	N.D.
8	Beta-HCH	µg/L	US EPA 508-1995		0.04	N.D.
9	Delta HCH	µg/L	US EPA 508-1995		0.04	N.D.
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0.4		N.D.
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0.4		N.D.
12	Endosulfansulphat e	µg/L	US EPA 508-1995	0.4		N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994	1		N.D.
14	Ethion	µg/L	US EPA 8141A-1994		3	N.D.
15	Chloropyrifos	µg/L	US EPA 8141A-1994		30	N.D.
16	Phorate	µg/L	US EPA 8141A-1994		2	N.D.
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994		-	N.D.
18	Phoratesulphone	µg/L	US EPA 8141A-1994			N.D.
19	2,4-D	µg/L	US EPA 515.1-1995		30	N.D.
20	Alachlor	µg/L	US EPA 508- 1995		20	N.D.
21	Atrazine	µg/L	US EPA 532-2000		2	N.D.
22	Methyl parathion	µg/L	US EPA 8141A-1994		0.3	N.D.
23	Methyl paraxone	µg/L	US EPA 8141A-1994		-	N.D.
24	Malathion	µg/L	US EPA 8141A-1994		190	N.D.
25	Malaoxon	µg/L	US EPA 8141A-1994		-	N.D.
26	Aldrin	µg/L	US EPA 508- 1995		0.03	N.D.
27	Dieldrin	µg/L	US EPA 508-1995		0.03	N.D.

REMARKS: RESULTS ARE AS ABOVE Terms & conditions

> The report for publication, arbitration or as legal dispute is forbidden.

> Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.

> This is for information as the party has asked for above test(s) only

Rell 26/05/23

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Name & Address Of The Cu	stomer	REPO	RT NO	UES/TR/23-2	4/01	280	
то,		LAB REF NO UES/23-24/			N/02523		
HINDALCO INDUSTR		DATE	OF SAMPLING	s 18/05/2023			
GARE PALMA - IV/5,		DATE	OF RECEIPT	19/05/2023			
U/G COAL MINE,VILL	AGE – MILUPARA,	DATE	OF REPORT	F REPORT 23/05/2023			
BLOCK-TAMNAR, DISTT RAIGARH (C	.G.) 496107	DATE	DATE OF ANALYSIS START: 19/05/2		2023 END:23/05/2023		
		SAMP.	LE DETAILS				
SAMPLE TYPE	GROUND WATER		ORDER /REFERE	NCE :	P.0.	.13552310212,DATED:07.09.20	
CUSTMER SAMPLE ID	STAFF QUARTER- MILUPARA PIEZOMETER (AWLR)		SAMPLE CONDIT	ION AT RECEIPT	ок		
PACKING OF SAMPLE	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	SEALED	SAMPLE COLLEC	TED BY	CHEN	MIST	
SAMPLING PROCEDURE	IS:3025(PART I):1987 RA 20 APHA 22ND ED. 2012, 1060-E	317 Steril	QUANTITY RECE	IVED	5 L1	IR	

REPORT NO. 01280

			TEST REPORT				
SR.					LE LIMIT FOR R (IS 10500:2012)	Bert The Los	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT	
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1	
2	Odour	-	IS 3025:(part-5)	Agreeable	Agreeable	Agreeable	
3	Taste	-	IS 3025:(part-8)	Agreeable	Agreeable	Agreeable	
4	рН	-	APHA 22 nd Ed.2012,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	6.99	
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	0.76	
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-		221.0	
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-G, 4 - 69	0.2	1	N.D.	
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2- 64			140.7	
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	132.6	
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2- 66	-	-	8.1	
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	42.0	
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2- 44,45	200	600	92.0	
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	-	1.7.	60.0	
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	-		82.0	
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	75	200	22.04	
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	30	100	7.29	
17	Chloride (as Cl)	mg/Lit	APHA 22 nd Ed.2012,4500-CI-B, 4-72	250	1000	25.9	
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ - E,4-190	200	400	28.2	
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ - B,4-122	45	No Relaxation	0.74	
20	Phosphate (as P)	mg/Lit	APHA 22nd Ed.2012,4500-P-C, 4-153	-	-	N.D.	



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			TEST REPORT			
SR.	PARAMETER	UNIT	METHOD OF TEST	DRINKING WAT	ER (IS 10500:2012)	RESUL
NO.				Acceptable Limit	Permissible limit	
21	Sodium (as Na)	mg/Lit	APHA 22ndEd.2012,3500-Na-B, 3-97	-	-	6.2
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3- 87	-	-	3.7
23	Boron (as B)	mg/Lit	APHA 22 nd Ed.2012,4500-B-B, 4- 25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 22 nd Ed.2012,3111-B,3-18	0.3	No Relaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.19
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 22 nd Ed.2012,3500-Ni, 3- 108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	5	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 22 nd Ed.2012,3500-Cd, 3- 0.003		No Relaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3-23	0.001	No Relaxation	N.D.
33	Arsenic (as As)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3-38	0.01	0.05	N.D.
34	Selenium (as Se)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3-38	0.01	No Relaxation	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B, 3-69	0.05	No Relaxation	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 22 nd Ed.2012,5540-C, 5-53	0.2	1.0	N.D.
37	Phenolic Compound (as C_6H_5OH)	mg/Lit	APHA 22 nd Ed.2012,5540-B & C, 5-47	0.001	0.002	N.D.
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	µg/Lit	APHA 22 nd Ed.2012,6440-6-93	0.0001	No Relaxation	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003	0.5	No	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003		Relaxation	
licrob	iological Analysis		10 0020 (101005)(1951) 101 2005		-	N.D.
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		detectable in ml sample	Absent
2	Faecal coliform	MPN/ 100ml	IS:1622:1981: RA:2019	Shall not be	detectable in ml sample	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be	detectable in nl sample	Absent
estici	des	Lumman and a state of the		ully 1001		
1	p,p DDT	µg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	µg/L	US EPA 508-1995		1	N.D.
4	p,p DDD	µg/L	US EPA 508-1995		1	N.D.
5	O,p DDD	µg/L	US EPA 508-1995		1	N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995		2	N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995		01	N.D.



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			TEST REPORT			
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	ACCEPTABLE LIMIT FOR DRINKING WATER (IS 10500:2012)		
				Acceptable	Permissible limit	RESULT
8	Beta-HCH	µg/L	US EPA 508-1995	0.04		N.D.
9	Delta HCH	µg/L	US EPA 508-1995	0.04		N.D.
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0.4		N.D.
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0.4		N.D.
12	Endosulfansulphate	µg/L	US EPA 508-1995	0.4		N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994	1		N.D.
14	Ethion	µg/L	US EPA 8141A-1994	3		N.D.
15	Chloropyrifos	µg/L	US EPA 8141A-1994	30		N.D.
16	Phorate	µg/L	US EPA 8141A-1994	2		N.D.
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994	-		N.D.
18	Phoratesulphone	µg/L	US EPA 8141A-1994			N.D.
19	2,4-D	µg/L	US EPA 515.1-1995	30		N.D.
20	Alachlor	µg/L	US EPA 508- 1995	20		N.D.
21	Atrazine	µg/L	US EPA 532-2000	2		N.D.
22	Methyl parathion	µg/L	US EPA 8141A-1994	0.3		N.D.
23	Methyl paraxone	µg/L	US EPA 8141A-1994			N.D.
24	Malathion	µg/L	US EPA 8141A-1994	190		N.D.
25	Malaoxon	µg/L	US EPA 8141A-1994	-		N.D.
26	Aldrin	µg/L	US EPA 508- 1995	0.03		N.D.
27	Dieldrin	µg/L	US EPA 508-1995	0.03		N.D.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

- > The report for publication, arbitration or as legal dispute is forbidden.
- > Test sample will be retained for15 days after issue of test report unless otherwise agreed with customer.
- > This is for information as the party has asked for above test(s) only.

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----End of the test report-----



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Name & Address Of The	Customer	REPORT NO	UES/TR/23-24/01282		
то,		LAB REF NO	UES/23-24/W/02525		
HINDALCO INDUSTRI	ES LIMITED,	DATE OF SAMPLING	19/05/2023 20/05/2023 24/05/2023		
GARE PALMA - IV/5, I	MILUPARA	DATE OF RECEIPT			
U/G COAL MINE, VILL	AGE – MILUPARA,	DATE OF REPORT			
BLOCK-TAMNAR, DISTT RAIGARH (C.	G.) 496107	DATE OF ANALYSIS STAR		20/05/2023 END:24/05/2023	
	S	AMPLE DETAILS	a land		
SAMPLE TYPE	GROUND WATER	ORDER /REFERE	ENCE :	VERBAL COMMUNICATION.	
CUSTMER SAMPLE ID	MILUPARA VILLAGE NEAR PHC- HIL (DUGWELL)	SAMPLE CONDIT	TION AT	ОК	
PACKING OF SAMPLE	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN SEA 1 L X 1 NO. GLASS BOTTLE	LED SAMPLE COLLEC	CTED BY	CHEMIST	
SAMPLING PROCEDURE IS: 3025 (PART I): 1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39		CHIANTITY RECT	CIVED	5 LTR	

REPORT NO.01282

TEST REPORT							
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012			
				Acceptable Limit	Permissible limit	RESULT	
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1	
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable	
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable	
4	рН	-	APHA 22 nd Ed.2012,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	7.51	
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	1.78	
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	7	243.3	
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-G, 4 - 69	0.2	1	N.D.	
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2- 64	-	-	154.6	
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	146.0	
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2- 66	-	-	8.6	
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	48.0	
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2- 44,45	200	600	108.0	
13	Calcium Hardness (as CaCO3)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca- B,3-67	-	÷.	52.0	
14	Magnesium Hardness (as CaCO3)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg- B,3-84	-		56.0	
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca- B,3-67	75	200	20.84	
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	30	100	13.60	
17	Chloride (as Cl)	mg/Lit	APHA 22 nd Ed.2012,4500-CI-B, 4-72	250	1000.	39.9	
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ - E, 4-190	200	400	24.9	
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ - B,4-122	45	No Relaxation	2.6	
20	Phosphate (as P)	mg/Lit	APHA 22ndEd.2012,4500-P-C, 4-153	-	-	N.D.	
21	Sodium (as Na)	mg/Lit	APHA 22nd Ed.2012,3500-Na- B, 3-97	-	-	6.8	
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87			2.31	



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REPORT	NO.	01282

				AS PER IS	10500:2012	THE PL
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
23	Boron (as B)	mg/Lit	APHA 22 nd Ed.2012,4500-B-B, 4-25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 22 nd Ed.2012,3111-B,3- 18	0.3	No Relaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.14
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	0.1	0.3	0.08
27	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 22 nd Ed.2012,3500-Ni, 3- 108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-	5	15	N.D.
30	Copper (as Cu)	mg/Lit	18 APHA 22 nd Ed.2012,3111-B, 3-	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	18 APHA 22 nd Ed.2012,3500-Cd, 3-	0.003	No	N.D.
32	Mercury (as Hg)	mg/Lit	105 APHA 22 nd Ed.2012,3112-B, 3-	0.001	Relaxation No	N.D.
33		mg/Lit	23 APHA 22 nd Ed.2012,3114-C, 3-	0.01	Relaxation 0.05	N.D.
	Arsenic (as As)	and all the second	38 APHA 22 nd Ed.2012,3114-C, 3-		0.05 No	
34	Selenium (as Se)	mg/Lit	38 APHA 22 nd Ed.2012,3500-Cr-B,	0.01	Relaxation No	N.D.
35	Chromium (as Cr)	mg/Lit	3-69	0.05	Relaxation	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 22 nd Ed.2012,5540-C, 5- 53	0.2	1.0	N.D.
37	Phenolic Compound (as C ₆ H ₅ OH)	mg/Lit	APHA 22 nd Ed.2012,5540-B & C, 5-47	0.001	0.002	N.D.
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	µg/Lit	APHA 22 nd Ed.2012,6440-6-93	0.0001	No Relaxation	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA	-	-	N.D.
Micro	biological Analysis	fam. and the second		Contraction of the second second	energie en energie and en en ele	and the second state
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		etectable in any I sample	Absent
2	Faecal coliform	MPN/ 100ml	IS:1622:1981: RA:2019		etectable in any I sample	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019		etectable in any sample	Absent
Pesti	cides	100/14	ly an aray in a mean and a second of the second			
1	p,p DDT	µg/L	US EPA 508-1995	n - I - Carlon Carlon Carlon - I - Carlon - Carl	1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	µg/L	US EPA 508-1995		1	N.D.
4	p,p DDD	µg/L	US EPA 508-1995		1	N.D.
5	O,p DDD	µg/L	US EPA 508-1995		1	N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995		2	N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	0	.01	N.D.
8	Beta-HCH	µg/L	US EPA 508-1995	0	.04	N.D.
9	Delta HCH	µg/L	US EPA 508-1995	0	.04	N.D.



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REPORT NO.01282

SR.		6		AS PER IS			
NO.	PARAMETER	PARAMETER UNIT		METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.	
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.	
12	Endosulfansulphate	µg/L	US EPA 508-1995	0	.4	N.D.	
13	Monocrotophos	µg/L	US EPA 8141A-1994		1	N.D.	
14	Ethion	µg/L	US EPA 8141A-1994		3	N.D.	
15	Chloropyrifos	µg/L	US EPA 8141A-1994	3	30	N.D.	
16	Phorate	µg/L	US EPA 8141A-1994		2	N.D.	
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994		-	N.D.	
18	Phoratesulphone	µg/L	US EPA 8141A-1994		-	N.D.	
19	2,4-D	µg/L	US EPA 515.1-1995	3	30	N.D.	
20	Alachlor	µg/L	US EPA 508- 1995	2	20	N.D.	
21	Atrazine	µg/L	US EPA 532-2000		2	N.D.	
22	Methyl parathion	µg/L	US EPA 8141A-1994	0	.3	N.D.	
23	Methyl paraxone	µg/L	US EPA 8141A-1994		-	N.D.	
24	Malathion	µg/L	US EPA 8141A-1994	19	90	N.D.	
25	Malaoxon	µg/L	US EPA 8141A-1994			N.D.	
26	Aldrin	µg/L	US EPA 508- 1995	0.	03	N.D.	
27	Dieldrin	µg/L	US EPA 508-1995	0.	03	N.D.	

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- > This is for information as the party has asked for above test(s) only.

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----End of the test report---

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Name & Address Of The	Customer	REPO	ORT NO	UES/TR/2	3-24/01	283	
то,		LAB	REF NO	UES/23-24	UES/23-24/W/02526		
HINDALCO INDUSTR		DATE	E OF SAMPLING	19/05/202	23		
GARE PALMA - IV/5,		DATE	E OF RECEIPT	20/05/202	23		
U/G COAL MINE, VILL	AGE – MILUPARA,	DATE	E OF REPORT	24/05/202	23	and the second	
BLOCK-TAMNAR, DISTT RAIGARH (C	G.) 496107	DATE	E OF ANALYSIS	START: 20/0	05/2023	END: 24/05/2023	
A TOTAL A		SAMPI	E DETAILS		144 T		
SAMPLE TYPE	GROUND WATER		ORDER /REFERE	NCE :	VERBA	L COMMUNICATION.	
CUSTMER SAMPLE ID	NEAR PRIMARY SCHOOL VILLAGE (PIEZOMETER	SAKTA DUGWELL)	SAMPLE CONDIT RECEIPT	ION AT	ОК		
PACKING OF SAMPLE	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	SEALED	SAMPLE COLLEC	TED BY	CHEMI	ST	
SAMPLING PROCEDURE IS:3025(PART I):1987 RA 2003; APHA 22ND ED. 2012,1060-B,1-39			QUANTITY RECE	IVED	5 LTR		

REPORT NO.01283

	TEST REPORT								
SR.			1. 发生器等于 3. 经营业	AS PER IS					
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT			
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1			
2	Odour		IS 3025(part-5)	Agreeable	Agreeable	Agreeable			
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable			
4	рН	-	APHA 22 nd Ed.2012,4500-H ⁺ -B, 4-92	6.5-8.5	NoRelaxati on	7.44			
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	1.19			
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	314.6			
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-G, 4 - 69	0.2	1	N.D.			
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2- 64	- (0))	-	194.0			
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	188.8			
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2- 66	-	-	5.2			
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	60.0			
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2- 44,45	200	600	96.0			
13	Calcium Hardness (as CaCO3)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca- B,3-67	-	-	58.0			
14	Magnesium Hardness (as CaCO3)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg- B,3-84	-	-	38.0			
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca- B,3-67	75	200	23.24			
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	30	100	9.23			
17	Chloride (as Cl)	mg/Lit	APHA 22 nd Ed.2012,4500-CI-B, 4-72	250	1000	22.9			
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500–SO ₄ -E, 4-190	200	400	28.8			
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ - B,4-122	45	NoRelaxati on	4.27			
20	Phosphate (as P)	mg/Lit	APHA 22ndEd.2012,4500-P-C, 4-153	-	-	N.D.			



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REPORT NO. 01283

			TEST REPORT			
SR.				AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESUL
23	Boron (as B)	mg/Lit	APHA 22 nd Ed.2012,4500-B-B, 4- 25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 22 nd Ed.2012,3111-B,3-18	0.3	NoRelaxati on	N.D.
25	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.17
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	0.3	0.08
27	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.01	NoRelaxati	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 22 nd Ed.2012,3500-Ni, 3- 108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	5	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 22 nd Ed.2012,3500-Cd, 3- 105	0.003	NoRelaxati on	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3-23	0.001	NoRelaxati on	N.D.
33	Arsenic (as As)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3-38	0.01	0.05	N.D.
34	Selenium (as Se)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3-38	0.01	NoRelaxati on	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B, 3-69	0.05	NoRelaxati	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 22 nd Ed.2012,5540-C, 5-53	0.2	1.0	N.D.
37	Phenolic Compound (as C_6H_5OH)	mg/Lit	APHA 22 nd Ed.2012,5540-B & C, 5-47	0.001	0.002	N.D.
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	µg/Lit	APHA 22 nd Ed.2012,6440-6-93	0.0001	NoRelaxati on	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003	-	-	N.D.
Micro	biological Analysis	1				
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019	Shall not be o any 100 m		Absent
2	Faecal coliform	MPN/ 100ml	IS:1622:1981: RA:2019	Shall not be o any 100 m	detectable in	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be o any 100m	letectable in	Absent
Pesti	cides			<u>uny 100m</u>		
1	p,p DDT	µg/L	US EPA 508-1995	1		N.D.
2	o.p DDT	µg/L	US EPA 508-1995	1		N.D.
3	p,pDDE	µg/L	US EPA 508-1995	1		N.D.
4	p,p DDD	µg/L	US EPA 508-1995	1		N.D.
5	O,p DDD	µg/L	US EPA 508-1995	1		N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995	2		N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	0.0	1	N.D.
8	Beta-HCH	µg/L	US EPA 508-1995	0.0	4	N.D.
9	Delta HCH	µg/L	US EPA 508-1995	0.0	4	N.D.
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0,4	4	N.D.



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REPORT NO. 01283

			TEST REPORT				
SR.				AS PER IS 1	AS PER IS 10500:2012		
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible	RESULT	
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0.4		N.D.	
12	Endosulfansulphate	µg/L	US EPA 508-1995	0.4	1	N.D.	
13	Monocrotophos	µg/L	US EPA 8141A-1994	1		N.D.	
14	Ethion	µg/L	US EPA 8141A-1994	3		N.D.	
15	Chloropyrifos	µg/L	US EPA 8141A-1994	30		N.D.	
16	Phorate	µg/L	US EPA 8141A-1994	2		N.D.	
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994			N.D.	
18	Phoratesulphone	µg/L	US EPA 8141A-1994	-		N.D.	
19	2,4-D	µg/L	US EPA 515.1-1995	30		N.D.	
20	Alachlor	µg/L	US EPA 508- 1995	20		N.D.	
21	Atrazine	µg/L	US EPA 532-2000	2		N.D.	
22	Methyl parathion	µg/L	US EPA 8141A-1994	0.3		N.D.	
23	Methyl paraxone	µg/L	US EPA 8141A-1994	-		N.D.	
24	Malathion	µg/L	US EPA 8141A-1994	190)	N.D.	
25	Malaoxon	µg/L	US EPA 8141A-1994	-	-	N.D.	
26	Aldrin	µg/L	US EPA 508- 1995	0.03	3	N.D.	
27	Dieldrin	µg/L	US EPA 508-1995	0.03		N.D.	

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

The report for publication, arbitration or as legal dispute is forbidden.

Test sample will be retained for15 days after issue of test report unless otherwise agreed with customer. This is for information as the party has asked for above jest(s) only. 2

ForULTIMATE ENVIROLYTICAL SOLUTIONS Rell 24/05/23 bhajee **REVIEWED BY** AUTHORIZED SIGNATORY of the test report-End



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Name & Address Of The Cus	tomer		REPORT NO	UES/TR/23-24/01265		
то,			LAB REF NO	UES/23-24/W/02508		
HINDALCO INDUST	RIES LIMITED,		DATE OF SAMPLING	19/05/2023		
GARE PALMA - IV/4	4, COAL MINE, VILLAGI	Ε-	DATE OF RECEIPT	20/05/2023		
BANKHETA, POST	-MILUPARA,		DATE OF REPORT	24/05/2023		
DISTT RAIGARH	(C.G.) 496107.		DATE OF ANALYSIS	START:20/05/2023	END:24/05/2023	
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:	P.O.13552310211, DATED:07.09.2022		
CUSTMER SAMPLE ID	NEAR PRIMARY SCHOOL - SIDARPARA VILLAGE,		SAMPLE CONDITION	DATED:07.09.2022 OK		
	(PIEZOMETER - DUGWELL)				
PACKING OF SAMPLE	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	SEALED	SAMPLE COLLECTED BY	CHEMIST		
IS: 3025 (PART I): 1987 RA SAMPLING PROCEDURE 2003; APHA 23RD ED. 2012, 1060-B, 1-39			QUANTITY RECEIVED	5 LTR		

Report No.01265

			TEST REPORT		Werner Land		
SR.				AS PER IS	10500:2012		
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT	
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1.0	
2	Odour		IS 3025(part-5)	Agreeable	Agreeable	Agreeable	
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable	
4	pH	1 8-	APHA 23 nd Ed.2012,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	7.41	
5	Turbidity	NTU	APHA 23 nd Ed.2012,2130-B,2-13	1	5	0.68	
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	280.4	
7	Residual Chlorine	mg/Lit	APHA 23 nd Ed.2012,4500-Cl-G, 4 - 69	0.2	1	N.D.	
8	Total Solid	mg/Lit	APHA 23 nd Ed.2012,2540- B, 2- 64		-	171.1	
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	168.2	
10	Total Suspended Solids	mg/Lit	APHA 23 nd Ed.2012,2540- D, 2- 66	-	-	2.9	
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	90.0	
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,2340-C, 2- 44,45	200	600	116.0	
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Ca-B, 3-67	-	-	78.0	
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	-	-	38.0	
15	Calcium (as Ca)	mg/Lit	APHA 23 nd Ed.2012,3500-Ca-B, 3-67	75	200	31.26	
16	Magnesium (as Mg)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	30	100	9.23	
17	Chloride (as Cl)	mg/Lit	APHA 23 nd Ed.2012,4500-CI-B, 4-72	250	1000	20.9	
18	Sulphate (as SO ₄)	mg/Lit	APHA 23 nd Ed.2012,4500-SO ₄ -E, 4-190	200	400	21.4	
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 nd Ed.2012,4500-NO ₃ -B, 4-122	45	No Relaxation	0.72	
20	Phosphate (as P)	mg/Lit	APHA 23nd Ed.2012,4500-P-C, 4-153	-	-	N.D.	
21	Sodium (as Na)	mg/Lit	APHA 23nd Ed.2012,3500-Na-B, 3-97	-	-	13.34	
22	Potassium (as K)	mg/Lit	APHA 23 nd Ed.2012,3500-K-B, 3-87	-	-	0.75	



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Report No.01265

			TEST REPORT			
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable	10500:2012 Permissible	RESUL
23	Boron (as B)	mg/Lit	APHA 23 nd Ed.2012,4500-B-B, 4-25	Limit 0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit		0.3	No Relaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 23 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.14
26	Manganese (as Mn)	mg/Lit	ADUA 2200 Ed 2012 2111 D 2	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	ADUA 2200 Ed 2012 2111 D 2	0.01	No	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 23 nd Ed.2012,3500-Ni, 3- 108	0.02	Relaxation No	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 23 nd Ed.2012,3111-B, 3- 18	5	Relaxation 15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 23 nd Ed.2012,3111-B, 3- 18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 23 nd Ed.2012,3500-Cd, 3- 105	0.003	No	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 23 nd Ed.2012,3112-B, 3-	0.001	Relaxation No	N.D.
33	Arsenic (as As)	mg/Lit	APHA 23 nd Ed.2012,3114-C, 3-	0.01	Relaxation 0.05	N.D.
34	Selenium (as Se)	mg/Lit	38 APHA 23 nd Ed.2012,3114-C, 3-	0.01	No	N.D.
35	Chromium (as Cr)	mg/Lit	38 APHA 23 nd Ed.2012,3500-Cr-B,	0.05	Relaxation No	
36	Anionic Detergent	mg/Lit	3-69 APHA 23 nd Ed.2012,5540-C, 5-		Relaxation	N.D.
37	(as MBAS) Phenolic Compound		53 APHA 23 nd Ed.2012,5540-B & C,	0.2	1.0	N.D.
	(as C ₆ H₅OH) Poly-nuclear Aromatic	mg/Lit	5-47	0.001	0.002	N.D.
38	Hydrocarbon (PAH)	µg/Lit	APHA 23 nd Ed.2012,6440-6-93	0.0001	No Relaxation	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003	- 30	-	N.D.
1icro	biological Analysis			ana section	L	
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019	Shall not be de 100 ml		Absent
2	Faecal coliform	MPN/ 100ml	IS:1622:1981: RA:2019	Shall not be def 100 ml		Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be det 100ml s	tectable in any	Absent
esti	cides		1			
1	p,p DDT	µg/L	US EPA 508-1995	1	1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995	1		N.D.
3	p,pDDE	µg/L	US EPA 508-1995	- 1		N.D.
4	p,p DDD	µg/L	US EPA 508-1995	1		N.D.
5	O,p DDD	µg/L	US EPA 508-1995	1		N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995	2		N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	0.0		
8	Beta-HCH	µg/L	US EPA 508-1995	0.0		N.D.
9	Delta HCH	µg/L	US EPA 508-1995	0.0		N.D.



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Report No.01265

			TEST REPORT				
SR.				AS PER IS 1	AS PER IS 10500:2012		
NO.	PARAMETER	PARAMETER UNIT		METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0.	4	N.D.	
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0.	4	N.D.	
12	Endosulfansulphate	µg/L	US EPA 508-1995	0.	4	N.D.	
13	Monocrotophos	µg/L	US EPA 8141A-1994	1		N.D.	
14	Ethion	µg/L	US EPA 8141A-1994	3		N.D.	
15	Chloropyrifos	µg/L	US EPA 8141A-1994	3(0	N.D.	
16	Phorate	µg/L	US EPA 8141A-1994	2		N.D.	
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994	-		N.D.	
18	Phoratesulphone	µg/L	US EPA 8141A-1994	-		N.D.	
19	2,4-D	µg/L	US EPA 515.1-1995	3()	N.D.	
20	Alachlor	µg/L	US EPA 508- 1995	20)	N.D.	
21	Atrazine	µg/L	US EPA 532-2000	2		N.D.	
22	Methyl parathion	µg/L	US EPA 8141A-1994	0.3	3	N.D.	
23	Methyl paraxone	µg/L	US EPA 8141A-1994	-		N.D.	
24	Malathion	µg/L	US EPA 8141A-1994	19	0	N.D.	
25	Malaoxon	µg/L	US EPA 8141A-1994			N.D.	
26	Aldrin	µg/L	US EPA 508- 1995	0.0	3	N.D.	
27	Dieldrin	µg/L	US EPA 508-1995	0.0	3	N.D.	

REMARKS: RESULTS ARE AS ABOVE

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This is for information as the party has asked for above test(s) only.

24/05/23

REVIEWED BY



Subhajee

AUTHORIZED SIGNATORY

For ULTIMATE ENVIROLYTICAL SOLUTIONS

-----End of the test report-----



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Name & Address Of The Gu	stomer	REPO	RT NO	UES/TR/23-24/0	1266		
то,		LAB	REF NO	UES/23-24/W/02	UES/23-24/W/02509		
HINDALCO INDUS	DATE	OF SAMPLING	19/05/2023				
GARE PALMA - IV/	DATE	OF RECEIPT	20/05/2023				
BANKHETA, POST	DATE	OF REPORT	24/05/2023				
DISTT RAIGARH	DATE OF ANALYSIS		START:20/05/2023		END:24/05/2023		
SAMPLE TYPE	GROUND WATER		E DETAILS	NCE:	P.O.	13552310211,	
			SAMPLE CONDITION AT RECEIPT		DATED:07.09.2022 OK		
CUSTMER SAMPLE ID	NEAR PRIMARY SCHOOL - BELL VILLAGE (PIEZOMETER - DUGW						
PACKING OF SAMPLE	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE 5 L X 1 NO. GLASS BOTTLE	D	SAMPLE COLLEC	TED BY	CHEN	11ST	
SAMPLING PROCEDURE IS: 3025 (PART I): 1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39			QUANTITY RECEIVED		5 LTR		

Report No.01266

			TEST REPORT			
SR.	PARAMETER UNIT			AS PER IS	10500:2012	
NO.		METHOD OF TEST	Acceptable Permissible Limit limit		RESULT	
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour		IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	Taste		IS 3025(part-8)	Agreeable	Agreeable	Agreeable
4	рH	-	APHA 23 nd Ed.2012,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	7.36
5	Turbidity	NTU	APHA 23 nd Ed.2012,2130-B,2-13	1	5	0.62
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	289.9
7	Residual Chlorine	mg/Lit	APHA 23 nd Ed.2012,4500-Cl-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 23 nd Ed.2012,2540- B, 2- 64		-	176.5
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	173.9
10	Total Suspended Solids	mg/Lit	APHA 23 nd Ed.2012,2540- D, 2- 66	- 48B	-	2.6
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	102.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,2340-C, 2- 44,45	200	600	118.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Ca-B, 3-67	-	-	78.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	-	-	40.0
15	Calcium (as Ca)	mg/Lit	APHA 23 nd Ed.2012,3500-Ca-B, 3-67	75	200	31.26
16	Magnesium (as Mg)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	30	100	9.72
17	Chloride (as CI)	mg/Lit	APHA 23 nd Ed.2012,4500-CI-B, 4-72	250	1000	22.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 23 nd Ed.2012,4500-SO ₄ -E, 4-190	200	400	23.84
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 nd Ed.2012,4500-NO ₃ -B, 4-122	45	No Relaxation	1.31
20	Phosphate (as P)	mg/Lit	APHA 23nd Ed.2012,4500-P-C, 4-153	-	-	N.D.
21	Sodium (as Na)	mg/Lit	APHA 23nd Ed.2012,3500-Na-B, 3-97	-	-	7.78
22	Potassium (as K)	mg/Lit	APHA 23 nd Ed.2012,3500-K-B, 3-87	-	-	0.62



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Report No.01266

0.000			TEST REPORT			
SR.				AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
23	Boron (as B)	mg/Lit	APHA 23 nd Ed.2012,4500-B-B, 4-25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 23 nd Ed.2012,3111-B,3-18	0.3	No Relaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 23 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.14
26	Manganese (as Mn)	mg/Lit	APHA 23 nd Ed.2012,3111-B, 3- 18	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 23 nd Ed.2012,3111-B, 3- 18	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 23 nd Ed.2012,3500-Ni, 3- 108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 23 nd Ed.2012,3111-B, 3- 18	5	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 23 nd Ed.2012,3111-B, 3-	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	18 APHA 23 nd Ed.2012,3500-Cd, 3-	0.003	No	N.D.
32	Mercury (as Hg)	mg/Lit	105 APHA 23 nd Ed.2012,3112-B, 3-	0.001	Relaxation No	
33	Arsenic (as As)	mg/Lit	23 APHA 23 nd Ed.2012,3114-C, 3-		Relaxation	N.D.
34			38 APHA 23 nd Ed.2012,3114-C, 3-	0.01	0.05 No	N.D.
	Selenium (as Se)	mg/Lit	38 APHA 23 nd Ed.2012,3500-Cr-B,	0.01	Relaxation	N.D.
35	Chromium (as Cr)	mg/Lit	3-69	0.05 No Relaxation		N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 23 nd Ed.2012,5540-C, 5- 53	0.2 1.0		N.D.
37	Phenolic Compound (as C_6H_5OH)	mg/Lit	APHA 23 nd Ed.2012,5540-B & C, 5-47	0.001 0.002		N.D.
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	µg/Lit	APHA 23 nd Ed.2012,6440-6-93	0.0001	No Relaxation	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003	- 592	-	N.D.
Micro	biological Analysis		2003			
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		detectable in nl sample	Absent
2	Faecal Coliform	MPN/ 100ml	IS:1622:1981: RA:2019	Shall not be	detectable in nl sample	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be	detectable in nl sample	Absent
Pesti	cides			uny 1001		
1	p,p DDT	µg/L	US EPA 508-1995	1		N.D.
2	o.p DDT	µg/L	US EPA 508-1995	1		N.D.
3	p,pDDE	µg/L	US EPA 508-1995	1		N.D.
4	p,p DDD	µg/L	US EPA 508-1995	1		N.D.
5	O,p DDD	µg/L	US EPA 508-1995	1		N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995	2		N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	0.0)1	N.D.
8	Beta-HCH	µg/L	US EPA 508-1995	0.0		N.D.
9	Delta HCH	µg/L	US EPA 508-1995	0.0		N.D.



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Report No.01266

			TEST REPORT			
SR.	PARAMETER UNIT			AS PER IS	10500:2012	
NO.		METHOD OF TEST	Acceptable Limit			
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.
12	Endosulfansulphate	µg/L	US EPA 508-1995	0.	.4	N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994	1	1	N.D.
14	Ethion	µg/L	US EPA 8141A-1994		3	N.D.
15	Chloropyrifos	µg/L	US EPA 8141A-1994	3	0	N.D.
16	Phorate	µg/L	US EPA 8141A-1994	2	2	N.D.
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994	-	-	
18	Phoratesulphone	µg/L	US EPA 8141A-1994	-	-	N.D.
19	2,4-D	µg/L	US EPA 515.1-1995	3	0	N.D.
20	Alachlor	µg/L	US EPA 508- 1995	2	0	N.D.
21	Atrazine	µg/L	US EPA 532-2000	2	2	N.D.
22	Methyl parathion	µg/L	US EPA 8141A-1994	0.	3	N.D.
23	Methyl paraxone	µg/L	US EPA 8141A-1994	- 120		N.D.
24	Malathion	µg/L	US EPA 8141A-1994	19	0	N.D.
25	Malaoxon	µg/L	US EPA 8141A-1994	-		N.D.
26	Aldrin	µg/L	US EPA 508- 1995	0.0	03	N.D.
27	Dieldrin	µg/L	US EPA 508-1995	0.0		N.D.
	Note: mg/lit.: milligram	per liter, N.D	Not Detected.	In the second	Law Street Stree	

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

> The report for publication, arbitration or as legal dispute is forbidden.

> Test sample will be retained for15 days after issue of test report unless otherwise agreed with customer.

This is for information as the party has asked for above test(s) only.

Hech 24/05/23 **REVIEWED BY**



ubhajee

AUTHORIZED SIGNATORY

For ULTIMATE ENVIROLYTICAL SOLUTIONS

-----End of the test report-

Ground Water Level Monitoring Report in and around the Coal Mine Area
(From Jul 2023 to Sep 2023)

Sr. No.	Location	Types of Structure		In Meters	
		Structure	Ground Water level (BGL) Jul 2023	Ground Water level (BGL) Aug 2023	Ground Water level (BGL) Sep 2023
1	Bankheta (Near HIL Office)	Borewell/ AWLR	12.07	10.60	9.15
2	Banjikhol (Near Office)	Borewell/ AWLR	28.37	26.64	26.29
3	Milupara (Near Office)	Borewell/ AWLR	12.75	10.09	8.09
4	HIL Staff Quarter	Borewell/ AWLR	5.63	4.43	4.07
5	Milupara Village (PHC-HIL)	Dugwell	4.40	1.77	0.42
6	Sakta Village (Near Primary School)	Dugwell	2.92	1.86	1.24
7	Sidarpara Village (Near Primary School)	Dugwell	6.33	4.95	3.53
8	Beljor Village	Dugwell	5.20	4.33	3.13



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Name & Address Of The Cus	ntomer	REPORT NO	UES/TR/23-24/0384	9		
TO, HINDALCO INDUSTR	EC I MITED	LAB REF NO	UES/23-24/W/07324			
GARE PALMA - IV/4,		DATE OF SAMPLING	24/08/2023			
VILLAGE - BANKHET		DATE OF RECEIPT	25/08/2023			
POST -MILUPARA,	40 %	DATE OF REPORT	31/08/2023			
DISTT RAIGARH (C	G.) 496107.	DATE OF ANALYSIS	START: 25/08/2023	END:29/08/2023		
	S	AMPLE DETAILS				
SAMPLE TYPE	GROUND WATER	ORDER /REFERENCE:	P.O.13552310211, DATED:07.09.2022			
CUSTMER SAMPLE ID	NEAR MAIN SECURITY GATE BANKHETA MINE (PIEZOMETER) AWLR	SAMPLE CONDITION AT RECEIPT	OK			
PACKING OF SAMPLE 3 L X 1 NO. PVC CAN 1 L X 1 NO. FVC CAN 1 L X 1 NO. GLASS BOTTLE 1 L X 1 NO. GLASS BOTTLE		SAMPLE COLLECTED BY	CHEMIST			
SAMPLING PROCEDURE IS: 3025 (PART I): 1987 RA 2003; APHA 23RD ED. 2012, 1060-B, 1-39		QUANTITY RECEIVED	5 LTR			

Report No.03849

			TEST REPORT			
SR.				AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
4	рН	-	APHA 23 rd Ed.2017,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	6.82
5	Turbidity	NTU	APHA 23rd Ed.2017,2130-B,2-13	1	5	1.27
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	- 33	-	144.8
7	Residual Chlorine	mg/Lit	APHA 23 rd Ed.2017,4500-CI-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 23 rd Ed.2017,2540- B, 2- 64	-		89.18
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	86.88
10	Total Suspended Solids	mg/Lit	APHA 23 rd Ed.2017,2540- D, 2- 66		-	2.3
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	38.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed.2017,2340-C, 2- 44,45	200	600	56.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed.2017,3500-Ca-B, 3-67	-	-	36.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed.2017,3500-Mg-B, 3-84	-	-	20.0
15	Calcium (as Ca)	mg/Lit	APHA 23 rd Ed.2017,3500-Ca-B, 3-67	75	200	14.42
16	Magnesium (as Mg)	mg/Lit	APHA 23 rd Ed.2017,3500-Mg-B, 3-84	30	100	4.86
17	Chloride (as Cl)	mg/Lit	APHA 23 rd Ed.2017,4500-CI-B, 4-72	250	1000	11.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 23 rd Ed.2017,4500-SO ₄ -E, 4-190	200	400	14.13
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 rd Ed.2017,4500-NO ₃ -B, 4-122	45	No Relaxation	0.31
20	Phosphate (as P)	mg/Lit	APHA 23 rd Ed.2017,4500-P-C, 4- 153	-	-	N.D.
21	Sodium (as Na)	mg/Lit	APHA 23 rd Ed.2017,3500–Na-B, 3-97	-	-	8.79
22	Potassium (as K)	mg/Lit	APHA 23 rd Ed.2017,3500-K-B, 3- 87		-	0.45



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			TEST REPORT			
SR.				AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESUL
23	Boron (as B)	mg/Lit	APHA 23 rd Ed.2017,4500-B-B, 4- 25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 23 rd Ed.2017,3111-B,3-18	0.3	No Relaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 23 rd Ed.2017,4500-F-B &D, 4-84 & 87	1	1.5	0.05
26	Manganese (as Mn)	mg/Lit	APHA 23 rd Ed.2017,3111-B, 3-18	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 23 rd Ed.2017,3111-B, 3-18	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 23 rd Ed.2017,3500-Ni, 3- 108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 23 rd Ed.2017,3111-B, 3-18	5	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 23 rd Ed.2017,3111-B, 3-18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 23 rd Ed.2017,3500-Cd, 3- 105	0.003	No Relaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 23 rd Ed.2017,3112-B, 3-23	0.001	No Relaxation	N.D.
33	Arsenic (as As)	mg/Lit	APHA 23 rd Ed.2017,3114-C, 3-38	0.01	0.05	N.D.
34	Selenium (as Se)	mg/Lit	APHA 23 rd Ed.2017,3114-C, 3-38	0.01	No Relaxation	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 23 rd Ed.2017,3500-Cr-B, 3-69	0.05	No Relaxation	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 23 rd Ed.2017,5540-C, 5-53	0.2	1.0	N.D.
37	Phenolic Compound (as C_6H_5OH)	mg/Lit	APHA 23 rd Ed.2017,5540-B & C, 5-47	0.001	0.002	N.D.
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	µg/Lit	APHA 23rd Ed.2017,6440-6-93	0.0001	No Relaxation	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003	-	-	N.D.
Micro	biological Analysis	L				
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019	The second second second second	detectable in ml sample	Absent
2	Faecal Coliform	MPN/ 100ml	IS:1622:1981: RA:2019		detectable in ml sample	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be	detectable in ml sample	Absent
Pesti	cides	an a		<u> </u>		
1	p,p DDT	µg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	µg/L	US EPA 508-1995		1	N.D.
4	p,p DDD	µg/L	US EPA 508-1995	1	1	N.D.
5	O,p DDD	µg/L	US EPA 508-1995		1	N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995		2	N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	0.	.01	N.D.
8	Beta-HCH	µg/L	US EPA 508-1995	0.	04	N.D.
9	Delta HCH	µg/L	US EPA 508-1995	0.	04	N.D.
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.



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	TEST REPORT										
SR.	PARAMETER	PARAMETER UNIT METHOD OF TEST		AS PER IS 10500:2012 Acceptable Permissible	RESULT						
NO.				Limit limit							
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0.4	N.D.						
12	Endosulfansulphate	µg/L	US EPA 508-1995	0.4	N.D.						
13	Monocrotophos	µg/L	US EPA 8141A-1994	1	N.D.						
14	Ethion	µg/L	US EPA 8141A-1994	3	N.D.						
15	Chloropyrifos	µg/L	US EPA 8141A-1994	30	N.D.						
16	Phorate	µg/L	US EPA 8141A-1994	2	N.D.						
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994	-	N.D.						
18	Phoratesulphone	µg/L	US EPA 8141A-1994	-	N.D.						
19	2,4-D	µg/L	US EPA 515.1-1995	30	N.D.						
20	Alachlor	µg/L	US EPA 508- 1995	. 20	N.D.						
21	Atrazine	µg/L	US EPA 532-2000	2	N.D.						
22	Methyl parathion	µg/L	US EPA 8141A-1994	0.3	N.D.						
23	Methyl paraxone	µg/L	US EPA 8141A-1994		N.D.						
24	Malathion	µg/L	US EPA 8141A-1994	190	N.D.						
25	Malaoxon	µg/L	US EPA 8141A-1994	-	N.D,						
26	Aldrin	µg/L	US EPA 508- 1995	0.03	N.D.						
27	Dieldrin	µg/L	US EPA 508-1995	0.03	N.D.						

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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The report for publication, arbitration or as legal dispute is forbidden. Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer. D

This is for information as the party has asked for above test(s) only.

REVIEWED BY

For ULTIMATE ENVIROLYTICAL SOLUTIONS ha

AUTHORIZED SIGNATORY

-End of the test report-----



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Name & Address Of The Cu	stomer	REP	PORT NO	UES/	TR/23-24/0385	0		
TO,	INDALCO INDUSTRIES LIMITED,			UES/	UES/23-24/W/07325			
GARE PALMA - IN	Compared and the second s	DAT	E OF SAMPLING	24/0	8/2023			
VILLAGE - BANK	and the second se	DAT	E OF RECEIPT	25/0	25/08/2023			
POST -MILUPARA	λ,	DAT	E OF REPORT	31/0	8/2023			
DISTT RAIGAR	H (C.G.) 496107.	DAT	E OF ANALYSIS	STAF	T:25/08/2023	END:29/08/2023		
		SAME	LE DETAILS					
SAMPLE TYPE	GROUND WATER		ORDER /REFERENC	ce :	P.O.135523102 DATED:07.09.2			
CUSTMER SAMPLE ID	NEAR MINE OFFICE - BANJ MINE (PIEZOMETER) AWLR	IKHOL	SAMPLE CONDITIC RECEIPT	ON AT	OK			
PACKING OF SAMPLE	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	SEALED	SAMPLE COLLECT	ED BY	CHEMIST			
SAMPLING PROCEDURE	QUANTITY RECEIV	TED	5 LTR					

Report No.03850

			TEST REPORT			
SR.		10.00		AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	Taste		IS 3025(part-8)	Agreeable	Agreeable	Agreeable
4	pH		APHA 23 rd Ed.2017,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	7.11
5	Turbidity	NTU	APHA 23 rd Ed.2017,2130-B,2-13	1	5	1.16
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013		-	173.7
7	Residual Chlorine	mg/Lit	APHA 23 rd Ed.2017,4500-CI-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 23 rd Ed.2017,2540- B, 2- 64	l - Stall	-	106.22
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	104.21
10	Total Suspended Solids	mg/Lit	APHA 23 rd Ed.2017,2540- D, 2- 66		-	2.0
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	52.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed.2017,2340-C, 2- 44,45	200	600	72.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed.2017,3500-Ca-B, 3-67	-	-	42.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed.2017,3500-Mg-B, 3-84	-	-	30
15	Calcium (as Ca)	mg/Lit	APHA 23 rd Ed.2017,3500-Ca-B, 3-67	75	200	16.83
16	Magnesium (as Mg)	mg/Lit	APHA 23 rd Ed.2017,3500-Mg-B, 3-84	30	100	7.29
17	Chloride (as Cl)	mg/Lit	APHA 23 rd Ed.2017,4500-CI-B, 4-72	250	1000	15.2
18	Sulphate (as SO ₄)	mg/Lit	APHA 23 rd Ed.2017,4500-SO ₄ -E, 4-190	200	400	23.8
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 rd Ed.2017,4500-NO ₃ -B, 4-122	45	No Relaxation	2.12
20	Phosphate (as P)	mg/Lit	APHA 23 rd Ed.2017,4500-P-C, 4- 153	-	-	N.D.
21	Sodium (as Na)	mg/Lit	APHA 23 rd Ed.2017,3500-Na-B, 3-97			8.8



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			TEST REPORT			
SR.				AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
22	Potassium (as K)	mg/Lit	APHA 23 rd Ed.2017,3500-K-B, 3- 87	-	-	0.27
23	Boron (as B)	mg/Lit	APHA 23 rd Ed.2017,4500-B-B, 4- 25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 23 rd Ed.2017,3111-B,3-18	0.3	No Relaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 23 rd Ed.2017,4500-F-B &D, 4-84 & 87	1	1.5	0.05
26	Manganese (as Mn)	mg/Lit	APHA 23 rd Ed.2017,3111-B, 3-18	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 23 rd Ed.2017,3111-B, 3-18	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 23 rd Ed.2017,3500-Ni, 3-	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 23 rd Ed.2017,3111-B, 3-18	5	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 23 rd Ed.2017,3111-B, 3-18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 23 rd Ed.2017,3500-Cd, 3- 105	0.003	No Relaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 23 rd Ed.2017 <mark>,3112-B</mark> , 3-23	0.001	No Relaxation	N.D.
33	Arsenic (as As)	mg/Lit	APHA 23 rd Ed.2017,3114-C, 3-38	0.01	0.05	N.D.
34	Selenium (as Se)	mg/Lit	APHA 23 rd Ed.2017,3114-C, 3-38	0.01	No Relaxation	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 23 rd Ed.2017,3500-Cr-B, 3-69	0.05	No Relaxation	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 23 rd Ed.2017,5540-C, 5-53	0.2	1.0	N.D.
37	Phenolic Compound (as C_6H_5OH)	mg/Lit	APHA 23 rd Ed.2017,5540-B & C,	0.001	0.002	N.D.
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	µg/Lit	APHA 23 rd Ed.2017,6440-6-93	0.0001	No Relaxation	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003	-	-	N.D.
licro	biological Analysis	1	2005	L	L	
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		etectable in any I sample	Absent
2	Faecal Coliform	MPN/ 100ml	IS:1622:1981: RA:2019		etectable in any I sample	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be de	etectable in any sample	Absent
estic	ides	100111		IOOIIII	sample	
1	p,p DDT	µg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	µg/L	US EPA 508-1995		1	N.D.
4	p,p DDD	µg/L	US EPA 508-1995		1	N.D.
5	O,p DDD	µg/L	US EPA 508-1995		1	N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995		2	N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	0.	01	N.D.
8	Beta-HCH	µg/L	US EPA 508-1995	for the second	04	N.D.



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			TEST REPORT				
SR.	PARAMETER			AS PER IS	AS PER IS 10500:2012		
NO.		UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESUL	
9	Delta HCH	µg/L	US EPA 508-1995	0.	04	N.D.	
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.	
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.	
12	Endosulfansulphate	µg/L	US EPA 508-1995	0	.4	N.D.	
13	Monocrotophos	µg/L	US EPA 8141A-1994		1	N.D.	
14	Ethion	µg/L	US EPA 8141A-1994		3	N.D.	
15	Chloropyrifos	µg/L	US EPA 8141A-1994	30		N.D.	
16	Phorate	µg/L	US EPA 8141A-1994	2		N.D.	
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994		<u> </u>	N.D.	
18	Phoratesulphone	µg/L	US EPA 8141A-1994		-	N.D.	
19	2,4-D	µg/L	US EPA 515.1-1995	3	0	N.D.	
20	Alachlor	µg/L	US EPA 508- 1995	2	0	N.D.	
21	Atrazine	µg/L	US EPA 532-2000		2	N.D.	
22	Methyl parathion	µg/L	US EPA 8141A-1994	0	.3	N.D.	
23	Methyl paraxone	µg/L	US EPA 814 <mark>1A-1994</mark>		-	N.D.	
24	Malathion	µg/L	US EPA 8141A-1994	19	90	N.D.	
25	Malaoxon	µg/L	US EPA 8141A-1994	l del	-Childred	N.D.	
26	Aldrin	µg/L	US EPA 508- 1995	0.	03	N.D.	
27	Dieldrin	µg/L	US EPA 508-1995	0.	03	N.D.	

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

P

- The report for publication, arbitration or as legal dispute is forbidden. D Test sample will be retained for 15days after issue of test report unless otherwise agreed with customer.
- This is for information as the party has asked for above test(s) only. 32

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AUTHORIZED SIGNATORY

-End of the test report-



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Name & Address Of The Cu	stomer	REPO	RT NO	UES/TR/23-24/	038	185	
то,		LAB REF NO UES/2			23-24/W/07399		
HINDALCO INDUSTR	DALCO INDUSTRIES LIMITED,			24/08/2023			
GARE PALMA - IV/5,		DATE	OF RECEIPT	25/08/2023			
U/G COAL MINE, VILL	AGE - MILUPARA,	DATE	OF REPORT	31/08/2023			
BLOCK-TAMNAR, DISTT RAIGARH (C	.G.) 496107	DATE	OF ANALYSIS	START:25/08/202	23	END: 29/08/2023	
		SAMPL	E DETAILS				
SAMPLE TYPE	GROUND WATER		ORDER /REFER	RENCE :	VER	BAL COMMUNICATION.	
CUSTMER SAMPLE ID	NEAR MILUPARA MINES C PIEZOMETER -AWLR	OFFICE	SAMPLE CONDI RECEIPT	ITION AT	ок		
PACKING OF SAMPLE	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	SEALED	SAMPLE COLL	ECTED BY	CHE	MIST	
AMPLING PROCEDURE IS: 3025 (PART I): 1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39		QUANTITY REC	CEIVED	5 L	TR		

RT NO	

			TEST REPORT				
				AS PER I	S 10500:2012		
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT	
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1	
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable	
3	Taste	1983 - 1983	IS 3025(part-8)	Agreeable	Agreeable	Agreeable	
4	рН	-	APHA 23 rd Ed. 2017,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	7.32	
5	Turbidity	NTU	APHA 23rd Ed. 2017,2130-B,2-13	1	5	2.61	
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	288.3	
7	Residual Chlorine	mg/Lit	APHA 23 rd Ed. 2017,4500-Cl-G,4 - 69	0.2	1	N.D.	
8	Total Solid	mg/Lit	APHA 23 rd Ed. 2017,2540- B, 2- 64	-	-	179.6	
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	172.0	
10	Total Suspended Solids	mg/Lit	APHA 23 rd Ed. 2017,2540- D, 2- 66		-	7.6	
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	44.0	
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed. 2017,2340-C, 2- 44,45	200	600	78.0	
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed. 2017,3500-Ca-B, 3-67	-	-	56.0	
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed. 2017,3500-Mg-B, 3-84	-	-	22.0	
15	Calcium (as Ca)	mg/Lit	APHA 23 rd Ed. 2017,3500-Ca-B, 3-67	75	200	22.44	
16	Magnesium (as Mg)	mg/Lit	APHA 23 rd Ed. 2017,3500-Mg-B, 3-84	30	100	5.35	
17	Chloride (as Cl)	mg/Lit	APHA 23 rd Ed. 2017,4500-Cl-B, 4-72	250	1000	21.9	
18	Sulphate (as SO₄)	mg/Lit	APHA 23 rd Ed. 2017,4500-SO ₄ - E,4-190	200	400	19.3	
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 rd Ed. 2017,4500-NO ₃ -B, 4-122	45	No Relaxation	3.6	
20	Phosphate (as P)	mg/Lit	APHA 23 rd Ed. 2017,4500-P-C, 4-153	-	-	N.D.	
20	Sodium (as Na)	mg/Lit	APHA 23rd Ed. 2017,3500-Na-B,	-		8.9	



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			TEST REPORT			
				AS PER	IS 10500:2012	
SR. NO,	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
			3-97			
21	Potassium (as K)	mg/Lit	APHA 23 rd Ed. 2017,3500-K-B, 3-87		-	0.35
22	Boron (as B)	mg/Lit	APHA 23 rd Ed. 2017,4500-B-B, 4-25	0.5	1.0	N.D.
23	Iron (as Fe)	mg/Lit	APHA 23rd Ed. 2017,3111-B,3-18	0.3	No Relaxation	N.D.
24	Fluoride (as F)	mg/Lit	APHA 23 rd Ed. 2017,4500-F-B &D, 4-84 & 87	1	1.5	0.32
25	Manganese (as Mn)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3- 18	0.1	0.3	N.D.
26	Lead (as Pb)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3- 18	0.01	No Relaxation	N.D.
27	Nickel (as Ni)	mg/Lit	APHA 23 rd Ed. 2017,3500-Ni, 3- 108	0.02	No Relaxation	N.D.
28	Zinc (as Zn)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3- 18	5	15	N.D.
29	Copper (as Cu)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3- 18	0.05	1.5	N.D.
30	Cadmium (as Cd)	mg/Lit	APHA 23 rd Ed. 2017,3500-Cd,3- 105	0.003	No Relaxation	N.D.
31	Mercury (as Hg)	mg/Lit	APHA 23 rd Ed. 2017,3112-B, 3- 23	017,3112-B, 3- 0.001 No Relaxation		N.D.
32	Arsenic (as As)	mg/Lit	APHA 23 rd Ed. 2017,3114-C, 3- 38	0.01	0.05	N.D.
33	Selenium (as Se)	mg/Lit	APHA 23 rd Ed. 2017,3114-C, 3- 38 0.01 No Relaxation		N.D.	
34	Chromium (as Cr)	mg/Lit	APHA 23 rd Ed. 2017,3500-Cr-B, 0.05 No Relaxation		N.D.	
35	Anionic Detergent (as MBAS)	mg/Lit	APHA 23 rd Ed. 2017,5540-C, 5- 53	0.2	1.0	N.D.
36	Phenolic Compound (as C_6H_5OH)	mg/Lit	APHA 23 rd Ed. 2017,5540-B & C, 5-47	0.001	0.002	N.D.
37	Poly-nuclear Aromatic Hydrocarbon (PAH)	µg/Lit	APHA 23 rd Ed. 2017,6440-6-93	0.0001	No Relaxation	N.D.
38	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003	0.5	No Relaxation	N.D.
39	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003	-	-	N.D.
Micr	obiological Analysis	3				
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		e detectable in any ml sample	Absent
2	Faecal coliform	MPN/ 100ml	IS:1622:1981: RA:2019	Shall not be	e detectable in any ml sample	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be	e detectable in any ml sample	Absent
Pest	icides	1 200111			ana	
1	p,p DDT	µg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	µg/L	US EPA 508-1995		1	N.D.
4	p,p DDD	µg/L	US EPA 508-1995		1	N.D.
5	O,p DDD	µg/L	US EPA 508-1995		1	N.D.

RESULT

N.D.



REPORT NO. 03885

HDD-272, Phase III - Near JP Chowk Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099 Ph: 0771 - 4027777 | Email: ultimatenviro@gmail.com

Acceptable

Limit

AS PER IS 10500:2012

2

Permissible limit

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TEST REPORT SR. PARAMETER UNIT METHOD OF TEST NO. Gamma-HCH 6 µg/L US EPA 508-1995 (Lindane) -Alpha HCU 110/1 LIC EDA 508-1005

			1		
7	Alpha-HCH	µg/L	US EPA 508-1995	0.01	N.D.
8	Beta-HCH	µg/L	US EPA 508-1995	0.04	N.D.
9	Delta HCH	µg/L	US EPA 508-1995	0.04	N.D.
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0.4	N.D.
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0.4	N.D.
12	Endosulfansulphat e	µg/L	US EPA 508-1995	0.4	N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994	1	N.D.
14	Ethion	µg/L	US EPA 8141A-1994	3	N.D.
15	Chloropyrifos	µg/L	US EPA 8141A-1994	30	N.D.
16	Phorate	µg/L	US EPA 8141A-1994	2	N.D.
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994		N.D.
18	Phoratesulphone	µg/L	US EPA 8141A-1994		N.D.
19	2,4-D	µg/L	US EPA 515.1-1995	30	N.D.
20	Alachlor	µg/L	US EPA 508- 1995	20	N.D.
21	Atrazine	µg/L	US EPA 532-2000	2	N.D.
22	Methyl parathion	µg/L	US EPA 8141A-1994	0.3	N.D.
23	Methyl paraxone	µg/L	US EPA 8141A-1994		N.D.
24	Malathion	µg/L	US EPA 8141A-1994	190	N.D.
25	Malaoxon	µg/L	US EPA 8141A-1994		N.D.
26	Aldrin	µg/L	US EPA 508- 1995	0.03	N.D.
27	Dieldrin	µg/L	US EPA 508-1995	0.03	N.D.

Note: mg/lit.: milligram per liter, N.D. - Not Detected

REMARKS: RESULTS ARE AS ABOVE

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This is for information as the party has asked for above test(s) only 5

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AUTHORIZED SIGNATORY

-End of the test report-



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Name & Address Of The Cus	stomer	REPOI	RT NO	UES/TR/23-2	4/03	884
то,		LAB 1	REF NO UES/23-24/W/07398			
HINDALCO INDUSTR		DATE	OF SAMPLING	24/08/2023		
GARE PALMA - IV/5, I		DATE	OF RECEIPT	25/08/2023		
U/G COAL MINE,VILL	AGE – MILUPARA,	DATE	OF REPORT	31/08/2023		
BLOCK-TAMNAR, DISTT RAIGARH (C	DATE	OF ANALYSIS	START: 25/08/2	2023	END:29/08/2023	
		SAMP	LE DETAILS			
SAMPLE TYPE	GROUND WATER		ORDER /REFERE	INCE :	P.O.13552310212, DATED:07.0	
CUSTMER SAMPLE ID	STAFF QUARTER- MILUPARA PIEZOMETER (AWLR)		SAMPLE CONDITION AT RECEIPT		ОК	
PACKING OF SAMPLE A L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE BOTTLE		SAMPLE COLLEC	SAMPLE COLLECTED BY CHEMIST		MIST	
SAMPLING PROCEDURE IS: 3025 (PART I): 1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39		QUANTITY RECEIVED 5 LTR		TR		

			TEST REPORT			
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	In the second	LE LIMIT FOR R (IS 10500:2012) Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour	. –	IS 3025:(part-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS 3025:(part-8)	Agreeable	Agreeable	Agreeable
4	pH		APHA 23 rd Ed. 2017,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	7.11
5	Turbidity	NTU	APHA 23 rd Ed. 2017,2130-B,2-13	1	- 5	0.82
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013		-	242.0
7	Residual Chlorine	mg/Lit	APHA 23 rd Ed. 2017,4500-CI-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 23 rd Ed. 2017,2540- B, 2- 64	- 3123	-	143.4
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	135.0
10	Total Suspended Solids	mg/Lit	APHA 23 rd Ed. 2017,2540- D, 2- 66			8.4
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200 600		44.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed. 2017,2340-C, 2- 44,45	200 600		98.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed. 2017,3500-Ca-B, 3-67	-	-	72.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed. 2017,3500-Mg-B, 3-84	-	-	26.0
15	Calcium (as Ca)	mg/Lit	APHA 23 rd Ed. 2017,3500-Ca-B, 3-67	75	200	28.86
16	Magnesium (as Mg)	mg/Lit	APHA 23 rd Ed. 2017,3500-Mg-B, 3-84	30	100	6.31
17	Chloride (as Cl)	mg/Lit	APHA 23 rd Ed. 2017,4500-CI-B, 4-72	250	1000	28.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 23 rd Ed. 2017,4500-SO ₄ - E,4-190	200	400	30.1
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 rd Ed. 2017,4500-NO ₃ - B,4-122	45	No Relaxation	0.66
20	Phosphate (as P)	mg/Lit	APHA 23 rd Ed. 2017,4500-P-C, 4- 153	-	-	N.D.
21	Sodium (as Na)	mg/Lit	APHA 23 rd Ed. 2017,3500-Na-B, 3-97	-	-	6.9
22	Potassium (as K)	mg/Lit	APHA 23rd Ed. 2017,3500-K-B,	-		3.1



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			TEST REPORT			
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable	Permissible limit	RESULT
			3-87			
23	Boron (as B)	mg/Lit	APHA 23 rd Ed. 2017,4500-B-B, 4-25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 23 rd Ed. 2017,3111-B,3-18	0.3	No Relaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 23 rd Ed. 2017,4500-F-B &D, 4-84 & 87	1	1.5	0.19
26	Manganese (as Mn)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3-18	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3-18	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 23 rd Ed. 2017,3500-Ni, 3- 108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3-18	5	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 23rd Ed. 2017,3111-B, 3-18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 23 rd Ed. 2017,3500-Cd, 3- 105	0.003	No Relaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 23rd Ed. 2017,3112-B, 3-23	0.001	No Relaxation	N.D.
33	Arsenic (as As)	mg/Lit	APHA 23rd Ed. 2017,3114-C, 3-38	0.01	0.05	N.D.
34	Selenium (as Se)	mg/Lit	APHA 23 rd Ed. 2017,3114-C, 3-38	0.01	No Relaxation	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 23 rd Ed. 2017,3500-Cr-B, 3-69	0.05	No Relaxation	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 23 rd Ed. 2017,5540-C, 5-53	0.2	1.0	N.D.
37	Phenolic Compound (as C ₆ H ₅ OH)	mg/Lit	APHA 23 rd Ed. 2017,5540-B & C, 5-47	0.001 0.002		N.D.
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	µg/Lit	APHA 23 rd Ed. 2017,6440-6-93	0.0001	No Relaxation	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003	- 330	-	N.D.
Microb	biological Analysis					
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		e detectable in ml sample	Absent
2	Faecal coliform	MPN/ 100ml	IS:1622:1981: RA:2019		e detectable in ml sample	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019		e detectable in ml sample	Absent
Pestic	ides					
1	p,p DDT	µg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	µg/L	US EPA 508-1995		1	N.D.
4	p,p DDD	µg/L	US EPA 508-1995		1	N.D.
5	O,p DDD	µg/L	US EPA 508-1995		1	N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995		2	N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	0	.01	N.D.
8	Beta-HCH	µg/L	US EPA 508-1995	0	.04	N.D.
9	Delta HCH	µg/L	US EPA 508-1995	0	.04	N.D.
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	(0.4	N.D.
11	Beta-Endosulfan	µg/L	US EPA 508-1995	•	0.4	N.D.



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			TEST REPORT			
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	ACCEPTABL DRINKING WATE Acceptable Limit	The second s	RESULT
12	Endosulfansulphate	µg/L	US EPA 508-1995	0.	.4	N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994	1	1	N.D.
14	Ethion	µg/L	US EPA 8141A-1994	3	3	N.D.
15	Chloropyrifos	µg/L	US EPA 8141A-1994	3	0	N.D.
16	Phorate	µg/L	US EPA 8141A-1994		2	
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994			N.D.
18	Phoratesulphone	µg/L	US EPA 8141A-1994	9		N.D.
19	2,4-D	µg/L	US EPA 515.1-1995	3	0	N.D.
20	Alachlor	µg/L	US EPA 508- 1995	2	0	N.D.
21	Atrazine	µg/L	US EPA 532-2000		2	N.D.
22	Methyl parathion	µg/L	US EPA 8141A-1994	de denseed 0 .	.3	N.D.
23	Methyl paraxone	µg/L	US EPA 8141A-1994			N.D.
24	Malathion	µg/L	US EPA 8141A-1994	19	90	N.D.
25	Malaoxon	µg/L	US EPA 8141A-1994		- 12A	N.D.
26	Aldrin	µg/L	US'EPA 508- 1995	0.0	03	N.D.
27	Dieldrin	µg/L	US EPA 508-1995	0.0	03	N.D.

REMARKS: RESULTS ARE AS ABOVE

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For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

-----End of the test report-----End of the test report-----



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Name & Address Of The	Customer	REPO	DRT NO	UES/TR/2	3-24/03	886		
то,	LAB REF NO				UES/23-24/W/07400			
HINDALCO INDUSTRI	ES LIMITED,	DATE	OF SAMPLING	24/08/2023				
GARE PALMA - IV/5, I	MILUPARA	DATE	OF RECEIPT	25/08/20	23			
U/G COAL MINE, VILL	AGE - MILUPARA,	DATE	OF REPORT	31/08/2023				
BLOCK-TAMNAR, DISTT RAIGARH (C.	DATE	E OF ANALYSIS	START:25	/08/2023	END:29/08/2023			
		SAMPL	E DETAILS					
SAMPLE TYPE	GROUND WATER		ORDER /REFERE	NCE :	VERBAL COMMUNICATION			
CUSTMER SAMPLE ID	MILUPARA VILLAGE NEAR P. HIL (DUGWELL)	нс-	SAMPLE CONDIT RECEIPT	ION AT	OK			
PACKING OF SAMPLE	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	SEALED	SAMPLE COLLEC	TED BY	CHEMI	ST		
SAMPLING PROCEDURE IS: 3025 (PART I): 1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39			QUANTITY RECE	IVED	5 LTR			

			TEST REPORT				
				AS PER IS	10500:2012		
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT	
1	Colour	lour Hazen IS:3025:(Part-4)		5	15	<1	
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable	
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable	
4	рН	-	APHA 23 rd Ed. 2017,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	7.58	
5	Turbidity	NTU	APHA 23 rd Ed. 2017,2130-B,2- 13	1	5	1.82	
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	- 8		262.4	
7	Residual Chlorine	mg/Lit	APHA 23 rd Ed. 2017,4500-Cl-G, 4 - 69	0.2	1	N.D.	
8	Total Solid	mg/Lit	APHA 23 rd Ed. 2017,2540- B, 2- 64	- 52	-	157.6	
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	150.0	
10	Total Suspended Solids	mg/Lit	APHA 23 rd Ed. 2017,2540- D, 2- 66	- 8	-	7.6	
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	50.0	
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed. 2017,2340-C, 2- 44,45	200	600	114.0	
13	Calcium Hardness (as CaCO3)	mg/Lit	APHA 23 rd Ed. 2017,3500-Ca- B,3-67	-	1.05	62.0	
14	Magnesium Hardness (as CaCO3)	mg/Lit	APHA 23 rd Ed. 2017,3500-Mg- B,3-84	-	-	52.0	
15	Calcium (as Ca)	mg/Lit	APHA 23 rd Ed. 2017,3500-Ca- B,3-67	75	200	24.85	
16	Magnesium (as Mg)	mg/Lit	APHA 23 rd Ed. 2017,3500-Mg- B, 3-84	30	100	12.64	
17	Chloride (as Cl)	mg/Lit	APHA 23 rd Ed. 2017,4500-CI-B, 4-72	250	1000	41.9	
18	Sulphate (as SO ₄)	mg/Lit	APHA 23 rd Ed. 2017,4500-SO ₄ - E, 4-190	200	400	23.2	
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 rd Ed. 2017,4500-NO ₃ - B,4-122	45	No Relaxation	2.6	
20	Phosphate (as P)	mg/Lit	APHA 23 rd Ed. 2017,4500-P-C, 4-153	-	-	N.D.	
21	Sodium (as Na)	mg/Lit	APHA 23 rd Ed. 2017,3500-Na-B, 3-97	-	-	7.6	
22	Potassium (as K)	mg/Lit	APHA 23 rd Ed. 2017,3500-K-B, 3-87	-		2.44	



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			TEST REPORT			
				AS PER IS	10500:2012	- Pagella
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible	RESUL
23	Boron (as B)	mg/Lit	APHA 23 rd Ed. 2017,4500-B-B, 4-25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 23 rd Ed. 2017,3111-B,3- 18	0.3	No Relaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 23 rd Ed. 2017,4500-F-B &D, 4-84 & 87	1	1.5	0.14
26	Manganese (as Mn)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3- 18	0.1	0.3	0.06
27	Lead (as Pb)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3- 18	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 23 rd Ed. 2017,3500-Ni, 3- 108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3- 18	5	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3-	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 23 rd Ed. 2017,3500-Cd, 3-105	0.003	No Relaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 23rd Ed. 2017,3112-B, 3-	0.001	No Relaxation	N.D.
33	Arsenic (as As)	mg/Lit	23 APHA 23 rd Ed. 2017,3114-C, 3-	0.01	0.05	N.D.
34	Selenium (as Se)	mg/Lit	38 APHA 23 rd Ed. 2017,3114-C, 3-	0.01	No Relaxation	N.D.
35	Chromium (as Cr)	mg/Lit	38 APHA 23 rd Ed. 2017,3500-Cr-B,	0.05	No Relaxation	N.D.
36	Anionic Detergent	mg/Lit	3-69 APHA 23 rd Ed. 2017,5540-C, 5-	0.2	1.0	N.D.
	(as MBAS) Phenolic Compound		53 APHA 23 rd Ed. 2017,5540-B &	0.001	0.002	N.D.
37	(as C ₆ H ₅ OH) Poly-nuclear Aromatic	mg/Lit	C, 5-47		No	
38	Hydrocarbon (PAH)	µg/Lit	APHA 23 rd Ed. 2017,6440-6-93	0.0001	Relaxation	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003	0.5	Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003	-	-	N.D.
Micro	biological Analysis					
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		letectable in any nl sample	Absen
2	Faecal coliform	MPN/ 100ml	IS:1622:1981: RA:2019		letectable in any Il sample	Absen
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be o	letectable in any I sample	Absen
Pesti	cides	i <u>roonii</u>	denotation and an and an an an and an an	.,		
1	p,p DDT	µg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	µg/L	US EPA 508-1995		1	N.D.
4	p,p DDD	µg/L	US EPA 508-1995		1	N.D.
5	O,p DDD	µg/L	US EPA 508-1995		1	N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995		2	N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	0	0.01	N.D.
8	Beta-HCH	µg/L	US EPA 508-1995	0	0.04	N.D.
9	Delta HCH	µg/L	US EPA 508-1995	C).04	N.D.



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			TEST REPOR	Т		
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable	10500:2012 Permissible limit	RESUL
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.
12	Endosulfansulphate	µg/L	US EPA 508-1995	0	.4	N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994		1	N.D.
14	Ethion	µg/L	US EPA 8141A-1994		3	N.D.
15	Chloropyrifos	µg/L	US EPA 8141A-1994	3	30	N.D.
16	Phorate	µg/L	US EPA 8141A-1994	2		N.D.
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994		-	
18	Phoratesulphone	µg/L	US EPA 8141A-1994		-	N.D.
19	2,4-D	µg/L	US EPA 515.1-1995	3	30	N.D.
20	Alachlor	µg/L	US EPA 508- 1995	2	20	N.D.
21	Atrazine	µg/L	US EPA 532-2000		2	N.D.
22	Methyl parathion	µg/L	US EPA 8141A-1994	0	.3	N.D.
23	Methyl paraxone	µg/L	US EPA 8141A-1994		-	N.D.
24	Malathion	µg/L	US EPA 8141A-1994	1	90	N.D.
25	Malaoxon	µg/L	US EPA 8141A-1994			N.D.
26	Aldrin	µg/L	US EPA 508- 1995	0.	03	N.D.
27	Dieldrin	µg/L	US EPA 508-1995	0.	03	N.D.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

> The report for publication, arbitration or as legal dispute is forbidden.

> Test sample will be retained for15 days after issue of test report unless otherwise agreed with customer.

> This is for information as the party has asked for above test(s) only.

3 **REVIEWED BY**

AUTHORIZED SIGNATORY

For ULTIMATE ENVIROLYTICAL SOLUTIONS

-----End of the test report-----



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Name & Address Of The	Customer	REPO	DRT NO	UES/TR/2	23-24/03	887		
то,		LAB	REF NO	EF NO UES/23-2		24/W/07401		
HINDALCO INDUSTRI	NDALCO INDUSTRIES LIMITED, DATE RE PALMA – IV/5, MILUPARA DATE			24/08/20	023			
GARE PALMA - IV/5, I				25/08/20	023			
U/G COAL MINE, VILL	AGE – MILUPARA,	DATE	OF REPORT	31/08/20	023			
BLOCK-TAMNAR, DISTT RAIGARH (C.	DATE	OF ANALYSIS	START:25	/08/2023	END:29/08/2023			
		SAMPL	E DETAILS					
SAMPLE TYPE	GROUND WATER		ORDER /REFERE	INCE :	VERBA	L COMMUNICATION		
CUSTMER SAMPLE ID	NEAR PRIMARY SCHOOL - S VILLAGE (PIEZOMETER - D	AKTA UGWELL)	SAMPLE CONDIT RECEIPT	'ION AT	OK			
PACKING OF SAMPLE	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	SEALED	SAMPLE COLLEC	TED BY	CHEMI	ST		
SAMPLING PROCEDURE IS: 3025 (PART I): 1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39			QUANTITY RECEIVED		5 LTR			

REPORT NO.03887

			TEST REPORT	AS PER IS	10500:2012	
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour		IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	Taste		IS 3025(part-8)	Agreeable	Agreeable	Agreeable
4	рН		APHA 23 rd Ed. 2017,4500-H ⁺ -B, 4-92	6.5-8.5	NoRelaxati on	7.51
5	Turbidity	NTU	APHA 23rd Ed. 2017,2130-B,2-13	1	5	1.26
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013		Nessie-	328.4
7	Residual Chlorine	mg/Lit	APHA 23 rd Ed. 2017,4500-Cl-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 23 rd Ed. 2017,2540- B, 2-		-	197.8
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	192.0
10	Total Suspended Solids	mg/Lit	APHA 23 rd Ed. 2017,2540- D, 2- 66	- 39	-	5.8
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	62.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed. 2017,2340-C, 2- 44,45	200	600	104.0
13	Calcium Hardness (as CaCO3)	mg/Lit	APHA 23 rd Ed. 2017,3500-Ca- B,3-67	-	-	64.0
14	Magnesium Hardness (as CaCO3)	mg/Lit	APHA 23 rd Ed. 2017,3500-Mg- B,3-84	-	-	40.0
15	Calcium (as Ca)	mg/Lit	APHA 23 rd Ed. 2017,3500-Ca- B,3-67	75	200	25.65
16	Magnesium (as Mg)	mg/Lit	APHA 23 rd Ed. 2017,3500-Mg-B, 3-84	30	100	9.72
17	Chloride (as Cl)	mg/Lit	APHA 23 rd Ed. 2017,4500-CI-B, 4-72	250	1000	20.9
18	Sulphate (as SO₄)	mg/Lit	APHA 23 rd Ed. 2017,4500-SO₄-E, 4-190	200	400	26.4
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 rd Ed. 2017,4500-NO ₃ - B,4-122	45	NoRelaxati on	4.36
20	Phosphate (as P)	mg/Lit	APHA 23 rd Ed. 2017,4500-P-C, 4-153	-	-	N.D.
21	Sodium (as Na)	mg/Lit	APHA 23 rd Ed. 2017,3500-Na-B, 3-97	-	-	21.4
22	Potassium (as K)	mg/Lit	APHA 23 rd Ed. 2017,3500-K-B, 3-87	-	-	3.28



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			TEST REPORT			
SR.				AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESUL
23	Boron (as B)	mg/Lit	APHA 23 rd Ed. 2017,4500-B-B, 4-25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 23 rd Ed. 2017,3111-B,3-18	0.3	NoRelaxati	N.D.
25	Fluoride (as F)	mg/Lit	APHA 23 rd Ed. 2017,4500-F-B &D, 4-84 & 87	1	1.5	0.13
26	Manganese (as Mn)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3- 18	0.1	0.3	0.07
27	Lead (as Pb)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3- 18	0.01	NoRelaxati	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 23 rd Ed. 2017,3500-Ni, 3- 108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3- 18	5	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3-	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 23rd Ed. 2017,3500-Cd, 3-	0.003	NoRelaxati	N.D.
32	Mercury (as Hg)	mg/Lit	105 APHA 23 rd Ed. 2017,3112-B, 3- 23	0.001	on NoRelaxati	N.D.
33	Arsenic (as As)	mg/Lit	APHA 23rd Ed. 2017,3114-C, 3-	0.01	0.05	N.D.
34	Selenium (as Se)	mg/Lit	38 APHA 23 rd Ed. 2017,3114-C, 3-	0.01	NoRelaxati	N.D.
35	Chromium (as Cr)	mg/Lit	38 APHA 23 rd Ed. 2017,3500-Cr-B,	0.05	on NoRelaxati	N.D.
36	Anionic Detergent	mg/Lit	3-69 APHA 23 rd Ed. 2017,5540-C, 5-	0.2	on 1.0	N.D.
	(as MBAS) Phenolic Compound		53 APHA 23 rd Ed. 2017,5540-B & C,			
37	(as C ₆ H ₅ OH) Poly-nuclear Aromatic	mg/Lit	5-47	0.001	0.002 NoRelaxati	N.D.
38	Hydrocarbon (PAH)	µg/Lit	APHA 23 rd Ed. 2017,6440-6-93	0.0001	on	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003		-	N.D.
Micro	biological Analysis					
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019	Shall not be any 100 n		Absent
2	Faecal coliform	MPN/ 100ml	IS:1622:1981: RA:2019	Shall not be o any 100 m		Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be o any 100m	detectable in	Absent
Pesti	cides				Ch7	
1	p,p DDT	µg/L	US EPA 508-1995	1		N.D.
2	o.p DDT	µg/L	US EPA 508-1995	1		N.D.
3	p,pDDE	µg/L	US EPA 508-1995	1		N.D.
4	p,p DDD	µg/L	US EPA 508-1995	1		N.D.
5	O,p DDD	µg/L	US EPA 508-1995	1		N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995	2		N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	0.0)1	N.D.
8	Beta-HCH	µg/L	US EPA 508-1995	0.0		N.D.
9	Delta HCH	µg/L	US EPA 508-1995	0.0		N.D.



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REPORT NO. 03887

SR.				AS PER IS 10500:2012	
NO.	PARAMETER		METHOD OF TEST	Acceptable Permissible Limit limit	RESULT
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0.4	N.D.
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0.4	N.D.
12	Endosulfansulphate	µg/L	US EPA 508-1995	0.4	N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994	1	N.D.
14	Ethion	µg/L	US EPA 8141A-1994	3	N.D.
15	Chloropyrifos	µg/L	US EPA 8141A-1994	30	N.D.
16	Phorate	µg/L	US EPA 8141A-1994	2	N.D.
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994	-	N.D.
18	Phoratesulphone	µg/L	US EPA 8141A-1994	-	N.D.
19	2,4-D	µg/L	US EPA 515.1-1995	30	N.D.
20	Alachlor	µg/L	US EPA 508- 1995	20	N.D.
21	Atrazine	µg/L	US EPA 532-2000	2	N.D.
22	Methyl parathion	µg/L	US EPA 8141A-1994	0.3	N.D.
23	Methyl paraxone	µg/L	US EPA 8141A-1994		N.D.
24	Malathion	µg/L	US EPA 8141A-1994	190	N.D.
25	Malaoxon	µg/L	US EPA 8141A-1994	-	N.D.
26	Aldrin	µg/L	US EPA 508- 1995	0.03	N.D.
27	Dieldrin	µg/L	US EPA 508-1995	0.03	N.D.

REMARKS: RESULTS ARE AS ABOVE

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This is for information as the party has asked for above test(s) only.

For ULTIMATE ENVIROLYTICAL SOLUTIONS rafee **REVIEWED BY AUTHORIZED SIGNATORY**

End of the test report-



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Cus	tomer	REPORT NO	UES/TR/23-24/03851			
то,		LAB REF NO	UES/23-24/W/07326	UES/23-24/W/07326		
HINDALCO INDUST	RIES LIMITED,	DATE OF SAMPLING	24/08/2023			
GARE PALMA - IV/4	, COAL MINE, VILLAGE -	DATE OF RECEIPT	25/08/2023			
BANKHETA, POST	MILUPARA,	DATE OF REPORT	31/08/2023			
DISTT RAIGARH	(C.G.) 496107.	DATE OF ANALYSIS	START:25/08/2023	END:29/08/2023		
		SAMPLE DETAILS				
SAMPLE TYPE	GROUND WATER	ORDER /REFERENCE:	P.O.13552310211, DATED:07.09.2022			
CUSTMER SAMPLE ID	NEAR PRIMARY SCHOOL - SIDARPARA VILLAGE, (PIEZOMETER - DUGWELL)	SAMPLE CONDITION AT RECEIPT	ок			
PACKING OF SAMPLE 3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTLE L X 1 NO. GLASS BOTLE		LED SAMPLE COLLECTED BY	CHEMIST			
SAMPLING PROCEDURE	IS:3025(PART I):1987 RA 2003; APHA 23RD ED. 2012 1060-B, 1-39	, QUANTITY RECEIVED	5 LTR			

Report No.03851

			TEST REPORT			
SR.				AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1.0
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	Taste		IS 3025(part-8)	Agreeable	Agreeable	Agreeable
4	рН	-	APHA 23 rd Ed.2017,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	7.30
5	Turbidity	NTU	APHA 23 rd Ed.2017,2130-B,2-13	1	5	0.59
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013		-	267.9
7	Residual Chlorine	mg/Lit	APHA 23 rd Ed.2017,4500-Cl-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 23 rd Ed.2017,2540- B, 2- 64	- (451)		163.34
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	160.74
10	Total Suspended Solids	mg/Lit	APHA 23 rd Ed.2017,2540- D, 2- 66		-	2.6
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	84.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed.2017,2340-C, 2- 44,45	200	600	112.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed.2017,3500-Ca-B, 3-67	2	-	76.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed.2017,3500-Mg-B, 3-84	-	-	36.0
15	Calcium (as Ca)	mg/Lit	APHA 23 rd Ed.2017,3500-Ca-B, 3-67	75	200	30.46
16	Magnesium (as Mg)	mg/Lit	APHA 23 rd Ed.2017,3500-Mg-B, 3-84	30	100	8.74
17	Chloride (as Cl)	mg/Lit	APHA 23 rd Ed.2017,4500-CI-B, 4-72	250	1000	18.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 23 rd Ed.2017,4500-SO ₄ -E, 4-190	200	400	20.2
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 rd Ed.2017,4500–NO ₃ -B, 4-122	45	No Relaxation	0.61
20	Phosphate (as P)	mg/Lit	APHA 23 rd Ed.2017,4500-P-C, 4- 153	-	-	N.D.
21	Sodium (as Na)	mg/Lit	APHA 23 rd Ed.2017,3500-Na-B, 3-97	-	-	11.62
22	Potassium (as K)	mg/Lit	APHA 23rd Ed.2017,3500-K-B, 3-	-	(E)	0.67



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			TEST REPORT			
SR.				AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESUL
			87			
23	Boron (as B)	mg/Lit	APHA 23 rd Ed.2017,4500-B-B, 4- 25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 23rd Ed.2017,3111-B,3-18	0.3	No Relaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 23 rd Ed.2017,4500-F-B &D, 4-84 & 87	1	1.5	0.12
26	Manganese (as Mn)	mg/Lit	APHA 23 rd Ed.2017,3111-B, 3-18	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 23rd Ed.2017,3111-B, 3-18	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 23 rd Ed.2017,3500-Ni, 3- 108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 23 rd Ed.2017,3111-B, 3-18	5	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 23 rd Ed.2017,3111-B, 3-18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 23 rd Ed.2017,3500-Cd, 3- 105	0.003	No Relaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 23 rd Ed.2017,3112-B, 3-23	0.001	No Relaxation	N.D.
33	Arsenic (as As)	mg/Lit	APHA 23rd Ed.2017,3114-C, 3-38	0.01	0.05	N.D.
34	Selenium (as Se)	mg/Lit	APHA 23 rd Ed.2017,3114-C, 3-38	0.01	No Relaxation	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 23 rd Ed.2017,3500-Cr-B, 3-69	0.05	No Relaxation	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 23 rd Ed.2017,5540-C, 5-53	0.2	1.0	N.D.
37	Phenolic Compound (as C_6H_5OH)	mg/Lit	APHA 23 rd Ed.2017,5540-B & C, 5-47	0.001	0.002	N.D.
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	µg/Lit	APHA 23rd Ed.2017,6440-6-93	0.0001	No Relaxation	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003	- 1	-	N.D.
Micro	biological Analysis		4			
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		etectable in any I sample	Absent
2	Faecal coliform	MPN/ 100ml	IS:1622:1981: RA:2019		etectable in any I sample	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019		etectable in any I sample	Absent
Pesti	cides		สีการการการการการการการการการการการการการก	Anno 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1		
1	p,p DDT	µg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	µg/L	US EPA 508-1995		1	N.D.
4	p,p DDD	µg/L	US EPA 508-1995		1	N.D.
5	O,p DDD	µg/L	US EPA 508-1995		1	N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995		2	N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	0	.01	N.D.
8	Beta-HCH	µg/L	US EPA 508-1995	0	.04	N.D.
9	Delta HCH	µg/L	US EPA 508-1995	0	.04	N.D.



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

			TEST REPORT		Mer Praise in	
SR.				AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0.	4	N.D.
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0.	.4	N.D.
12	Endosulfansulphate	µg/L	US EPA 508-1995	0.	4	N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994	1	L	N.D.
14	Ethion	µg/L	US EPA 8141A-1994	3	3	N.D.
15	Chloropyrifos	µg/L	US EPA 8141A-1994	30		N.D.
16	Phorate	µg/L	US EPA 8141A-1994	2		N.D.
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994	-		N.D.
18	Phoratesulphone	µg/L	US EPA 8141A-1994	-		N.D.
19	2,4-D	µg/L	US EPA 515.1-1995	3	0	N.D.
20	Alachlor	µg/L	US EPA 508- 1995	2	0	N.D.
21	Atrazine	µg/L	US EPA 532-2000	2	2	N.D.
22	Methyl parathion	µg/L	US EPA 8141A-1994	0.	3	N.D.
23	Methyl paraxone	µg/L	US EPA 8141A-1994			N.D.
24	Malathion	µg/L	US EPA 8141A-1994	, 19	90	N.D.
25	Malaoxon	µg/L	US EPA 8141A-1994	·		N.D.
26	Aldrin	µg/L	US EPA 508- 1995	0.0	03	N.D.
27	Dieldrin	µg/L	US EPA 508-1995	0.0	03	N.D.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

The report for publication, arbitration or as legal dispute is forbidden.

AA Test sample will be retained for15 days after issue of test report unless otherwise agreed with customer. This is for information as the party has asked for above test(s) only.



-----End of the test report-----



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Cu	stomer	REPORT NO	UES/TR/23-24,	UES/TR/23-24/03944 UES/23-24/W/07504			
TO,		LAB REF NO	UES/23-24/W/				
HINDALCO INDUST	RIES LIMITED,	DATE OF SAMPLING	24/08/2023	24/08/2023			
GARE PALMA - IV/4	4, COAL MINE, VILLAGE -	DATE OF RECEIPT	25/08/2023		***************************************		
BANKHETA, POST	-MILUPARA,	DATE OF REPORT	DATE OF REPORT 31/08/2023				
DISTT RAIGARH	(C.G.) 496107.	DATE OF ANALYSIS	2023 END:29/08/202				
SAMPLE TYPE	GROUND WATER	ORDER /REFER	ENCE :		13552310211, D:07.09.2022		
SAMPLE TYPE	GROUND WATER	ORDER /REFER	ENCE :		이 같은 것 같은 것은 바람이 있는 것 같아?		
CUSTMER SAMPLE ID	NEAR PRIMARY SCHOOL - BELJO VILLAGE (PIEZOMETER - DUGWI	SAMPLE CONDI	TION AT RECEIPT	OK	- 0000		
PACKING OF SAMPLE	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN SEALEL 1 L X 1 NO. GLASS BOTTLE	SAMPLE COLLE	CTED BY	CHEM	IST		
SAMPLING PROCEDURE IS: 3025 (PART I): 1987 RA 200 APHA 22ND ED. 2012, 1060-B,		OUDNITTY DEC	QUANTITY RECEIVED		5 LTR		

Report No.03944

			TEST REPORT				
SR.				AS PER IS	10500:2012		
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT	
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1	
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable	
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable	
4	рН	-	APHA 23 rd Ed.2017,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	7.22	
5	Turbidity	NTU	APHA 23rd Ed.2017,2130-B,2-13	1	5	0.57	
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	276.7	
7	Residual Chlorine	mg/Lit	APHA 23 rd Ed.2017,4500-Cl-G, 4 - 69	0.2	1	N.D.	
8	Total Solid	mg/Lit	APHA 23 rd Ed.2017,2540- B, 2- 64	-	-	168.32	
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	166.02	
10	Total Suspended Solids	mg/Lit	APHA 23 rd Ed.2017,2540- D, 2- 66	- 1		2.3	
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	94.0	
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed.2017,2340-C, 2- 44,45	200	600	110.0	
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed.2017,3500-Ca-B, 3-67	-	-	74.0	
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed.2017,3500-Mg-B, 3-84	- 1	-	36.0	
15	Calcium (as Ca)	mg/Lit	APHA 23 rd Ed.2017,3500-Ca-B, 3-67	75	200	29.65	
16	Magnesium (as Mg)	mg/Lit	APHA 23 rd Ed.2017,3500-Mg-B, 3-84	30	100	8.75	
17	Chloride (as Cl)	mg/Lit	APHA 23 rd Ed.2017,4500-Cl-B, 4-72	250	1000	20.9	
18	Sulphate (as SO ₄)	mg/Lit	APHA 23 rd Ed.2017,4500-SO ₄ -E, 4-190	200	400	21.98	
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 rd Ed.2017,4500-NO ₃ -B, 4-122	45	No Relaxation	1. <mark>1</mark> 2	
20	Phosphate (as P)	mg/Lit	APHA 23 rd Ed.2017,4500-P-C, 4- 153	-	-	N.D.	
21	Sodium (as Na)	mg/Lit	APHA 23 rd Ed.2017,3500-Na-B, 3-97	-	-	7.13	
22	Potassium (as K)	mg/Lit	APHA 23rd Ed.2017,3500-K-B,	-		0.51	



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			TEST REPORT			
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		
				Acceptable Limit	Permissible limit	RESUL
			3-87			
23	Boron (as B)	mg/Lit	APHA 23 rd Ed.2017,4500-B-B, 4-25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 23 rd Ed.2017,3111-B,3-18	0.3	No Relaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 23 rd Ed.2017,4500-F-B &D, 4-84 & 87	1	1.5	0.13
26	Manganese (as Mn)	mg/Lit	APHA 23rd Ed.2017,3111-B, 3-18	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 23 rd Ed.2017,3111-B, 3-18	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 23 rd Ed.2017,3500-Ni, 3- 108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 23 rd Ed.2017,3111-B, 3-18	5	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 23rd Ed.2017,3111-B, 3-18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 23 rd Ed.2017,3500-Cd, 3- 105	0.003	No Relaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 23 rd Ed.2017,3112-B, 3-23	0.001	No Relaxation	N.D.
33	Arsenic (as As)	mg/Lit	APHA 23 rd Ed.2017,3114-C, 3- 38	0.01	0.05	N.D.
34	Selenium (as Se)	mg/Lit	APHA 23 rd Ed.2017,3114-C, 3- 38	0.01	No Relaxation	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 23 rd Ed.2017,3500-Cr-B, 3-69	0.05	No Relaxation	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 23 rd Ed.2017,5540-C, 5- 53	0.2	1.0	N.D.
37	Phenolic Compound (as C_6H_5OH)	mg/Lit	APHA 23 rd Ed.2017,5540-B & C, 5-47	0.001	0.002	N.D.
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	µg/Lit	APHA 23 rd Ed.2017,6440-6-93	0.0001	No Relaxation	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003	1	-	N.D.
Micro	biological Analysis		1 2003		<u>.</u>	
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019	Shall not be detectable in any 100 ml sample		Absent
2	Faecal Coliform	MPN/ 100ml	IS:1622:1981: RA:2019	Shall not be detectable in any 100 ml sample		Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be detectable in any 100 ml sample		Absent
Pesti	cides	100111	1	any 100	in sumple	
1	p,p DDT	µg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995	1		N.D.
3	p,pDDE	µg/L	US EPA 508-1995	1		N.D.
4	p,p DDD	µg/L	US EPA 508-1995	1		N.D.
5	O,p DDD	µg/L	US EPA 508-1995	1		N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995	2		N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	0.01		N.D.
8	Beta-HCH	µg/L	US EPA 508-1995	0.	04	N.D.



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TEST REPORT										
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012						
				Acceptable Limit	Permissible limit	RESULT				
9	Delta HCH	µg/L	US EPA 508-1995	0.04		N.D.				
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0.4		N.D.				
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0.4		N.D.				
12	Endosulfansulphate	µg/L	US EPA 508-1995	0.4		N.D.				
13	Monocrotophos	µg/L	US EPA 8141A-1994	1		N.D.				
14	Ethion	µg/L	US EPA 8141A-1994	3		N.D.				
15	Chloropyrifos	µg/L	US EPA 8141A-1994	30		N.D.				
16	Phorate	µg/L	US EPA 8141A-1994	2		N.D.				
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994			N.D.				
18	Phoratesulphone	µg/L	US EPA 8141A-1994			N.D.				
19	2,4-D	µg/L	US EPA 515.1-1995	30		N.D.				
20	Alachlor	µg/L	US EPA 508- 1995	20		N.D.				
21	Atrazine	µg/L	US EPA 532-2000	2		N.D.				
22	Methyl parathion	µg/L	US EPA 8141A-1994	0.3		N.D.				
23	Methyl paraxone	µg/L	US EPA 8141A-1994	-		N.D.				
24	Malathion	µg/L	US EPA 8141A-1994	190		N.D.				
25	Malaoxon	µg/L	US EPA 8141A-1994	-		N.D.				
26	Aldrin	µg/L	US EPA 508- 1995	0.03		N.D.				
27	Dieldrin	µg/L	US EPA 508-1995	0.0)3	N.D.				

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

2

The report for publication, arbitration or as legal dispute is forbidden.

A Test sample will be retained for15 days after issue of test report unless otherwise agreed with customer. This is for information as the party has asked for above test(s) only.

For ULTIMATE ENVIROLYTICAL SOLUTIONS 31108 **REVIEWED BY** AUTHORIZED SIGNATORY

-End of the test report---

Annexure-4



Letter No.: HIL/EC/GP-IV/5 -Q1/2023-24/126

12TH July, 2023

The Integrated Regional Office, Ministry of Environment Forests & Climate Change (MoEF & CC) Aranya Bhawan, North Block, Sector – 19, Naya Raipur, Atal Nagar, Chhattisgarh, 492002

Sub.: Compliance of condition no. viii of Environment Clearance Letter no. – J-11015/ 8/1998-IA. II (M) Dated: - 31st August 2000 for Under Ground Mining 1.0 Million Ton/Annum Production Capacity.

Ref.: Environment Clearance Letter no. - letter no. J-11015/ 8/1998-IA. II (M) Dated: - 31st August 2000.

Dear Sir,

With reference to above subject, we are submitting herewith the quarterly monitoring report of Ground Water Level (from Apr'2023 to Jun'2023) & GW Quality for the month of May 2023 – Pre Monsoon Season of Gare Palma IV/5 Coal Mines, Hindalco Industries Limited, Village – Milupara, Tehsil – Tamnar, District – Raigarh, Chhattisgarh.

Thanking you,

Yours faithfully,

Govind Kumar (Mine Agent – Gare Palma Mines) Hindalco Industries Limited

Encl: As above



- CC: 1) Member Secretary, Chhattisgarh Environment Conservation Board, Paryavas, Bhawan, Raipur, Chhattisgarh.
 - 2) Regional Officer, Chhattisgarh Environment Conservation Board, TV tower Road, Raigarh (CG).
 - 3) The Regional Director, Regional Directorate (Central), Bhopal Central Pollution Control Board (MoEF & CC, GOI), "Parivesh Bhawan" Paryavaran Parishar, E 5, Arera Colony, Bhopal (MP), 462016
 - 4) The Regional Director, Central Ground Water Board, North Central Chhattisgarh Region, 2nd Floor, LK Corporate and Logistic Park, Dumartarai, Raipur-492015
 - 5) Member Secretary, Central Ground Water Authority, 18/11, Jamnagar House, Mansingh Road, New Delhi 110011

Hindalco Industries Limited

Gare Palma Mines (1V/4 & IV/5), Vill & Po: Milupara , Tehsil: Tamnar Dist: Raigarh- 496107 , Chhattisgarh T; +91 7762 228212, Website : www.hindalco.com E mail : hindalco@adityabirla.com Registered Office : Ahura Centre, 1st Floor, B Wing, Mahakali Caves Road Andheri (East) , Mumbai 400093, India T: + 912266917000 | Fax: + 912266917001 Corporate ID No: L27020MH1958PLC011238



HIL/EC/GP-IV/5-Q2/2023-24/212

11th October, 2023

The Integrated Regional Office, Ministry of Environment Forests & Climate Change (MoEF & CC) Aranya Bhawan, North Block, Sector – 19, Naya Raipur, Atal Nagar, Chhattisgarh, 492002

Sub.: Compliance of condition no. viii of Environment Clearance Letter no. – J-11015/ 8/1998-IA. II (M) Dated: - 31st August 2000 for Under Ground Mining 1.0 Million Ton/Annum Production Capacity.

Ref.: Environment Clearance Letter no. - letter no. J-11015/ 8/1998-IA. II (M) Dated: - 31st August 2000.

Dear Sir,

With reference to above subject, we are submitting herewith the quarterly monitoring report of Ground Water Level (from Jul'2023 to Sep'2023) & Ground Water Quality for the month of August 2023 – Monsoon Season of Gare Palma IV/5 Under Ground Coal Mines, Hindalco Industries Limited, Village – Milupara, Tehsil – Tamnar, District – Raigarh, Chhattisgarh.

Thanking you,

Yours faithfully,

(Asst. Vice President – Gare Palma Coal Mines) Hindalco Industries Limited



Encl: As above

- CC: 1)[©] Member Secretary, Chhattisgarh Environment Conservation Board, Paryavas, Bhawan, Raipur, Chhattisgarh.
 - 2) Regional Officer, Chhattisgarh Environment Conservation Board, TV tower Road, Raigarh (CG).
 - The Regional Director, Regional Directorate (Central), Bhopal Central Pollution Control Board (MoEF & CC, GOI), "Parivesh Bhawan" Paryavaran Parishar, E 5, Arera Colony, Bhopal (MP), 462016
 - 4) The Regional Director, Central Ground Water Board, North Central Chhattisgarh Region, 2nd Floor, LK Corporate and Logistic Park, Dumartarai, Raipur-492015
 - 5) Member Secretary, Central Ground Water Authority, 18/11, Jamnagar House, Mansingh Road, New Delhi – 110011

Hindalco Industries Limited

Gare Palma Mines (1V/4 & IV/5), VIII & Po: Milupara , Tehsil: Tamnar Dist: Raigarh- 496107 , Chhattisgarh T: +917762 228212, Website : www.hindalco.com E mail : hindalco@adityabirla.com Registered Office : Ahura Centre, 1st Floor, B Wing, Mahakali Caves Road Andherl (East) , Mumbai 400093, India T: + 912266917000 | Fax: + 912266917001 Corporate ID No: L27020MH1958PLC011238

Annexure-5

AAQM Report – Core Zone



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Custo	mer	REPORT NO	UES/TR/23-24/0557	1	
то,		LAB REF NO	UES/23-24/AAQM/01	365-01372	
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE, VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF SAMPLING	03/04/2023 to 27/	/04/2023	
		DATE OF RECEIPT	04/04/2023 to 28/04/2023 02/05/2023		
		DATE OF REPORT			
		DATE OF ANALYSIS	START:04/04/2023 END:30/04/2		
and the second second		SAMPLE DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED:07.09.2022		
SAMPLING LOCATION	MAIN OFFICE AREA, MILUPAL	RA			
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLING PROCEDURE	AS PER METHOD REFERENCE		damanta - teneraria esta en arresta esta anticana antica	***************************************	
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM10): 1X1 SO2: 30MLX1 NO. PVC BOTT RUBBER BLADDER: 1X1 NO.				

Test Method and NAAQM Standard for Ambient Air Quality Monitoring

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0
Mercury (Hg)	EPA Method IO-5	

TEST REPORT						
Date of Sampling	ΡM ₁₀ μg/m ³	PM _{2.5} μg/m ³	SO₂ µg/m³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³
03.04.2023	68	34	18	26	0.80	N.D.
06.04.2023	64	33	17	25	0.78	N.D.
10.04.2023	64	31	16	24	0.67	N.D.
13.04.2023	63	29	17	24	0.89	N.D.
17.04.2023	63	30	16 '	25	0.70	N.D.
20.04.2023	67	29	18	24	0.51	N.D.
24.04.2023	65	32	17	25	0.73	N.D.
27.04.2023	69	30	16	24	0.64	N.D.

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

The report for publication, arbitration or as legal dispute is forbidden. Test sample will be retained for 15 days after issue of test report unless otherwise and This is for information as the party has asked for above test(s) only.



-----End of the test report.....



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Custo	mer	REPORT NO	UES/TR/23-24/0903	3	
	TRICCI MUTCH CARE	LAB REF NO	UES/23-24/AAQM/02082-02089		
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE, VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF SAMPLING	01/05/2023 to 26/05/2023 02/05/2023 to 27/05/2023		
		DATE OF RECEIPT			
		DATE OF REPORT	31/05/2023 START:02/05/2023 END:30/05/2023		
		DATE OF ANALYSIS			
		SAMPLE DETAILS		State of the second	
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED:07.09.2022		
SAMPLING LOCATION	MAIN OFFICE AREA, MILUPAL	RA		en ander ander ander and a second state of the	
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLING PROCEDURE	AS PER METHOD REFERENCE	ukaanaa aanaa a	Land and the second		
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM10): 1X1 SO2: 30MLX1 NO. PVC BOTTI RUBBER BLADDER: 1X1 NO.	NO., FILTER PAPER (PM2 LE, NO2: 30MLX1 NO. PVC	2.5): 1X1 NO. C BOTTLE		

Test Method and NAAQM Standard for Ambient Air Quality Monitoring				
Parameter	Method Reference	NAAQM Standard		
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI			
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60		
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80		
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80		
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0		
Mercury (Hg)	EPA Method IO-5			

TEST REPORT						
Date of Sampling	ΡΜ ₁₀ μg/m ³	Ρ <mark>Μ</mark> _{2.5} μg/m ³	SO ₂ µg/m ³	NO₂ µg/m ³	CO* mg/m ³	Hg ng/m ³
01.05.2023	70	35	20	27	0.82	N.D.
05.05.2023	67	34	19	26	0.80	N.D.
08.05.2023	66	32	18	25	0.69	N.D.
12.05.2023	65	30	19	26	0.91	N.D.
15.05.2023	65	31	18	24	0.75	N.D.
19.05.2023	69	30	20	25	0.55	N.D.
22.05.2023	68	33	19	27	0.77	N.D.
26.05.2023	71	31	18	26	0.68	N.D.

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

The report for publication, arbitration or as legal dispute is forbidden.

Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
 This is for information as the party has asked for above test(s) only.



-----End of the test report.....



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Custo	mer	REPORT NO	UES/TR/23-24/0201	LO	
то,		LAB REF NO	UES/23-24/AAQM/04362-04369		
	TRIES LIMITED, GARE	DATE OF SAMPLING	02/06/2023 to 30/	/06/2023	
PALMA – IV/5, MILUPARA U/G COAL MINE, VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF RECEIPT	03/06/2023 to 01/07/2023		
		DATE OF REPORT	04/07/2023 START:03/06/2023 END:04/07/202		
		DATE OF ANALYSIS			
		SAMPLE DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED:07.09.2022		
SAMPLING LOCATION	MAIN OFFICE AREA, MILUPAL	RA			
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLING PROCEDURE	AS PER METHOD REFERENCE			- III - III - IIII - IIIII - IIIII - IIII -	
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM10): 1X1 NO., FILTER PAPER (PM2.5): 1X1 NO. SO2: 30MLX1 NO. PVC BOTTLE, NO2: 30MLX1 NO <mark>. P</mark> VC BOTTLE RUBBER BLADDER: 1X1 NO.				

Test Method and NAAQM Standard for Ambient Air Quality Monitoring				
Parameter	Method Reference	NAAQM		
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100		
Particulate Matter size less than 2.5 microns (PM2.5)	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60		
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80		
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80		
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0		
Mercury (Hg)	EPA Method IO-5			

TEST REPORT						
Date of Sampling	ΡΜ ₁₀ μg/m ³	РМ _{2.5} µg/m ³	SO₂ µg/m³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m
02.06.2023	68	34	19	26	0.80	N.D.
05.06.2023	66	33	18	25	0.73	N.D.
09.06.2023	65	31	17	24	0.58	N.D.
12.06.2023	64	29	18	25	0.84	N.D.
16.06.2023	63	30	17	23	0.63	N.D.
19.06.2023	68	29	19	24	0.41	N.D.
23.06.2023	51	27	16	24	0.67	N.D.
30.06.2023	62	28	17	25	0.56	N.D.

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

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Name & Address Of The Custo	mer	REPORT NO	UES/TR/23-24/0305	54	
то,		LAB REF NO	UES/23-24/AAQM/05854-05861		
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE, VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF SAMPLING	03/07/2023 to 28,	/07/2023	
		DATE OF RECEIPT	04/07/2023 to 29/07/2023 31/07/2023		
		DATE OF REPORT			
		DATE OF ANALYSIS	START:04/07/2023 END:31/07/2		
		SAMPLE DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED:07.09.2022		
SAMPLING LOCATION	MAIN OFFICE AREA, MILUPAL	RA			
DURATION OF SAMPLING	24 HOURS SAMPLE COLLECTED BY LABORATORY CHEM		LABORATORY CHEMIST		
SAMPLING PROCEDURE	AS PER METHOD REFERENCE				
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM10): 1X1 NO., FILTER PAPER (PM2.5): 1X1 NO. SO2: 30MLX1 NO. PVC BOTTLE, NO2: 30MLX1 NO. PVC BOTTLE RUBBER BLADDER: 1X1 NO.				

Test Method and NAAQM Standard for Ambient Air Quality Monitoring

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM2.5)	IS 5182 (Part 24): 2019CPCBGuidelinesVolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0
Mercury (Hg)	EPA Method IO-5	

TEST REPORT						
Date of Sampling	ΡM ₁₀ μg/m ³	ΡM _{2.5} μg/m ³	SO ₂ µg/m ³	NO₂ µg/m³	CO* mg/m ³	Hg ng/m ³
03.07.2023	45	26	16	23	0.70	N.D.
07.07.2023	47	28	17	24	0.62	N.D.
10.07.2023	43	23	15	22	0.47	N.D.
14.07.2023	. 44	26	17	22	0.73	N.D.
17.07.2023	47	23	15	24	0.53	N.D.
21.07.2023	42	24	17	23	0.32	N.D.
24.07.2023	44	26	16	25	0.51	N.D.
28.07.2023	44	26	18	21	0.44	N.D.

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

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Name & Address Of The Custon	mor	REPORT NO	UES/TR/23-24/0386	55
то,		LAB REF NO	UES/23-24/AAQM/07340-7347	
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE, VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF SAMPLING	03/08/2023 to 28/	08/2023
		DATE OF RECEIPT	04/08/2023 to 29/08/2023 31/08/2023	
		DATE OF REPORT		
		DATE OF ANALYSIS	START:04/08/2023 END:31/08/20	
		SAMPLE DETAILS		
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED:07.09.2022	
SAMPLING LOCATION	MAIN OFFICE AREA, MILUPAL	RA		
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST	
SAMPLING PROCEDURE	AS PER METHOD REFERENCE			
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM10): 1X1 NO., FILTER PAPER (PM2.5): 1X1 NO. SO2: 30MLX1 NO. PVC BOTTLE, NO2: 30MLX1 NO. PVC BOTTLE BURBER BLADDER: 1X1 NO.			

Test Method and NAAQM Standard for Ambient Air Quality Monitoring						
Parameter	Method Reference	NAAQM Standard				
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100				
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelinesVolI	60				
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80				
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80				
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0				
Mercury (Hg)	EPA Method IO-5					

TEST REPORT							
Date of Sampling	ΡΜ ₁₀ μg/m ³	ΡM _{2.5} μg/m ³	SO₂ µg/m³	NO₂ µg/m³	CO* mg/m ³	Hg ng/m ³	
03.08.2023	40	24	19	22	0.64	N.D.	
07.08.2023	39	28	16	22	0.41	N.D.	
11.08.2023	38	29	17	26	0.26	N.D.	
14.08.2023	40	25	16	26	0.57	N.D.	
18.08.2023	43	27	19	26	0.34	N.D.	
21.08.2023	42	29	15	26	0.26	N.D.	
25.08.2023	41	25	18	25	0.37	N.D.	
28.08.2023	44	27	16	24	0.21	N.D.	

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

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Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
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Name & Address Of The Custo	nner	REPORT NO	UES/TR/23-24/04671 UES/23-24/AAQM/08578-08585		
	TRIES LIMITED CARE	LAB REF NO			
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE, VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF SAMPLING	01/09/2023 to 25,	/09/2023	
		DATE OF RECEIPT	02/09/2023 to 26/09/2023 27/09/2023		
		DATE OF REPORT			
		DATE OF ANALYSIS	START:02/09/2023	END:27/09/2023	
		SAMPLE DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & P.O.13552310212, DATED:07.09.20.		ATED:07.09.2022	
SAMPLING LOCATION	MAIN OFFICE AREA, MILUPAN	RA.			
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLING PROCEDURE	AS PER METHOD REFERENCE				
SAMPLE QUANTITY/PACKING	FILTER PAPER (PMI0): 1X1 SO2: 30MLX1 NO. PVC BOTTI RUBBER BLADDER: 1X1 NO.	NO., FILTER PAPER (PM2 E, NO2: 30MLX1 NO. PVC	2.5): 1X1 NO. C BOTTLE		

Test Method and NAAQM Standard for Ambient Air Quality Monitoring						
Parameter	Method Reference	NAAQM Standard				
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100				
Particulate Matter size less than 2.5 microns (PM2.5)	IS 5182 (Part 24): 2019CPCBGuidelinesVolI	60				
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80				
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80				
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0				
Mercury (Hg)	EPA Method IO-5					

TEST REPORT						
Date of Sampling	ΡΜ ₁₀ μg/m ³	РМ _{2.5} µg/m ³	SO₂ µg/m³	NO₂ µg/m³	CO* mg/m ³	Hg ng/m ²
01.09.2023	44	24	19	27	0.51	N.D.
04.09.2023	44	24	16	26	0.34	N.D.
08.09.2023	42	24	22	28	0.22	N.D.
11.09.2023	44	24	20	26	0.41	N.D.
15.09.2023	44	24	17	26	0.20	N.D.
19.09.2023	44	25	22	27	0.18	N.D.
22.09.2023	38	27	18	28	0.25	N.D.
25.09.2023	41	29	22	24	0.16	N.D.

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

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Name & Address Of The Custom	ner	REPORT NO	UES/TR/23-24/055	/0558		
то,		LAB REF NO	UES/23-24/AAQM/0	ES/23-24/AAQM/01373-1380		
	RIES LIMITED, GARE	DATE OF SAMPLING	03/04/2023 to 27	/04/2023		
PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF RECEIPT	04/04/2023 to 28	/04/2023		
		DATE OF REPORT	02/05/2023			
		DATE OF ANALYSIS	START: 04/04/2023	END: 30/04/2023		
		SAMPLE DETAILS				
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212	,DATED:07.09.2022		
SAMPLING LOCATION	HIL STAFF QUARTER, MILUN	PARA				
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEM	IST		
SAMPLING PROCEDURE	AS PER METHOD REFERENCE					
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTT RUBBER BLADDER: 1X1 NO.					

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO2)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0
Mercury (Ha)	EPA Method IO-5	

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Date of Sampling	ΡΜ ₁₀ μg/m ³	ΡM _{2.5} μg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³
03.04.2023	63	33	18	25	0.53	N.D.
06.04.2023	63	33	17	26	0.79	N.D.
10.04.2023	67	30	16	25	0.87	N.D.
13.04.2023	65	33	16	25	0.43	N.D.
17.04.2023	69	31	17	24	0.54	N.D.
20.04.2023	69	35	18	26	0.81	N.D.
24.04.2023	68	33	17	26	0.72	N.D.
27.04.2023	64	35	16	24	0.63	N.D.

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

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Name & Address Of The Custor	ner	REPORT NO	UES/TR/23-24/0904 UES/23-24/AAQM/02090-02097		
TO,		LAB REF NO			
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF SAMPLING	01/05/2023 to 26	5/05/2023	
		DATE OF RECEIPT	02/05/2023 to 27	/05/2023	
		DATE OF REPORT	DATE OF REPORT 31/05/2023		
		DATE OF ANALYSIS START: 02/05/2023		END: 30/05/2023	
		SAMPLE DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212	,DATED:07.09.2022	
SAMPLING LOCATION	HIL STAFF QUARTER, MILUF	'ARA		900 (900 900) a Barta da manana manana mangan sa	
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEM	IST	
SAMPLING PROCEDURE	AS PER METHOD REFERENCE	nishini soomaani in prosenta in 1999 (1994) 1994 - 1997 - 1997 (1994)	ana adama ana ana ana ana ana ana ana ana ana		
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTT. RUBBER BLADDER: 1X1 NO.				

Test Method and NAAQM Standard for Ambient Air Quality Monitoring

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO2)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0
Mercury (Hg)	EPA Method IO-5	

TEST REPORT						
Date of Sampling	РМ ₁₀ µg/m ³	ΡM _{2.5} μg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³
01.05.2023	65	34	19	26	0.64	N.D.
05.05.2023	67	35	18	27	0.81	N.D.
08.05.2023	69	31	17	26	0.94	N.D.
12.05.2023	67	34	18	24	0.52	N.D.
15.05.2023	71	32	19	25	0.60	N.D.
19.05.2023	72	36	20	27	0.96	N.D.
22.05.2023	70	34	19	26	0.88	N.D.
26.05.2023	66	36	18	_ 25	0.72	N.D.

Terms & conditions

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Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.

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Name & Address Of The Custon	ner	REPORT NO	UES/TR/23-24/02011 UES/23-24/AAQM/04370-04377		
то,		LAB REF NO			
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF SAMPLING	02/06/2023 to 30)/06/2023	
		DATE OF RECEIPT	03/06/2023 to 01	/07/2023	
		DATE OF REPORT	04/07/2023		
		DATE OF ANALYSIS	START:03/06/2023 END:04/07/202		
		SAMPLE DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212	,DATED:07.09.2022	
SAMPLING LOCATION	HIL STAFF QUARTER, MILUF	ARA			
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEM	IST	
SAMPLING PROCEDURE	AS PER METHOD REFERENCE				
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTT RUBBER BLADDER: 1X1 NO.			ninan (mata-daharinan asaran an asaran dari kasarina dari yengen	

Test Method and NAAQM Standard for Ambient Air Quality Monitoring						
Parameter	Method Reference	NAAQM Standard				
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100				
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Pa <mark>rt 24):</mark> 2019 CPCB Guidelines VolI	60				
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80				
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80				
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0				
Mercury (Hg)	EPA Method IO-5					

TEST REPORT							
Date of Sampling	РМ ₁₀ µg/m ³	ΡM _{2.5} μg/m ³	SO₂ µg/m³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³	
02.06.2023	64	34	18	25	0.41	N.D.	
05.06.2023	66	33	17	26	0.73	N.D.	
09.06.2023	68	30	16	27	0.82	N.D.	
12.06.2023	66	33	17	25	0.45	N.D.	
16.06.2023	70	31	18	24	0.56	N.D.	
19.06.2023	71	35	19	26	0.85	N.D.	
23.06.2023	50	26	15	23	0.73	N.D.	
30.06.2023	63	27	17	24	0.61	N.D.	

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

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Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.

This is for information as the party has asked for above test(s) only



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Name & Address Of The Custon	ner	REPORT NO	UES/TR/23-24/03055		
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		LAB REF NO	UES/23-24/AAQM/05862-05869		
		DATE OF SAMPLING	03/07/2023 to 28	/07/2023	
		DATE OF RECEIPT	04/07/2023 to 29	0/07/2023	
		DATE OF REPORT	31/07/2023		
		DATE OF ANALYSIS	START: 04/07/2023 END: 31/07/20		
	Contraction of the second second	SAMPLE DETAILS		Star L. Star	
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212	,DATED:07.09.2022	
SAMPLING LOCATION	HIL STAFF QUARTER, MILUF	PARA			
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEM	IIST	
SAMPLING PROCEDURE	AS PER METHOD REFERENCE				
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTT RUBBER BLADDER: 1X1 NO.			n	

Test Method and NAAQM Standard for Ambient Air Quality Monitoring						
Parameter Method Reference						
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100				
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelinesVolI	60				
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80				
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80				
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0				
Mercury (Hg)	EPA Method 10-5					

TEST REPORT						
Date of Sampling	ΡM ₁₀ μg/m ³	ΡM _{2.5} μg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³
03.07.2023	47	28	17	22	0.32	N.D.
07.07.2023	42	27	18	23	0.65	N.D.
10.07.2023	47	25	15	22	0.70	N.D.
14.07.2023	43	29	17	26	0.35	N.D.
17.07.2023	43	26	16	24	0.41	N.D.
21.07.2023	43	29	15	25	0.71	N.D.
24.07.2023	45	28	17	22	0.63	N.D.
28.07.2023	43	27	14	23	0.54	N.D.

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

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Rdu 31/07/23

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AUTHORIZED SIGNATORY

-End of the test report.....



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Name & Address Of The Custon	ner	REPORT NO	UES/TR/23-24/03866			
то,		LAB REF NO	UES/23-24/AAQM/07348-07355			
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF SAMPLING	03/08/2023 to 28	/08/2023		
		DATE OF RECEIPT	04/08/2023 to 29	/08/2023		
		DATE OF REPORT 31/08/2023				
		DATE OF ANALYSIS	START:04/08/2023	END: 31/08/2023		
		SAMPLE DETAILS				
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	& P.O.13552310212, DATED:07.09.202			
SAMPLING LOCATION	HIL STAFF QUARTER, MILUF	YARA				
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEM	IST		
SAMPLING PROCEDURE	AS PER METHOD REFERENCE					
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTT RUBBER BLADDER: 1X1 NO.					

Test Method and NAAQM Standard for Ambient Air Quality Monitoring						
Parameter	Method Reference	NAAQM Standard				
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100				
Particulate Matter size less than 2.5 microns (PM2.5)	IS 5182 (Part 24): 2019CPCBGuidelinesVolI	60				
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80				
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80				
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0				
Mercury (Hg)	EPA Method IO-5					

TEST REPORT						
Date of Sampling	ΡM ₁₀ μg/m ³	ΡΜ _{2.5} μg/m ³	SO₂ µg/m³	NO₂ µg/m³	CO* mg/m ³	Hg ng/m ³
03.08.2023	39	27	15	23	0.14	N.D.
07.08.2023	39	28	21	25	0.46	N.D.
11.08.2023	41	24	15	25	0.54	N.D.
14.08.2023	39	27	20	23	0.18	N.D.
18.08.2023	42	28	21	22	0.22	N.D.
21.08.2023	43	24	21	26	0.59	N.D.
25.08.2023	41	29	15	25	0.40	N.D.
28.08.2023	42	30	21	24	0.36	N.D.

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

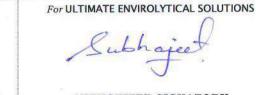
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-----End of the test report.....



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Name & Address Of The Custor TO ,	ner	REPORT NO	UES/TR/23-24/04672		
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		LAB REF NO	UES/23-24/AAQM/08586-08593		
		DATE OF SAMPLING	01/09/2023 to 25	5/09/2023	
		DATE OF RECEIPT	02/09/2023 to 26	5/09/2023	
		DATE OF REPORT	27/09/2023		
		DATE OF ANALYSIS	START:02/09/2023	END:27/09/2023	
		SAMPLE DETAILS	and all and a second	Reference and the second	
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212	,DATED:07.09.2022	
SAMPLING LOCATION	HIL STAFF QUARTER, MILUP	ARA			
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLING PROCEDURE	AS PER METHOD REFERENCE		· · · · · · · · · · · · · · · · · · ·		
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTT. RUBBER BLADDER: 1X1 NO.			*********	

Test Method and NAAQM Standard for Ambient Air Quality Monitoring					
Parameter	Method Reference	NAAQM Standard			
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100			
Particulate Matter size less than 2.5 microns (PM2.5)	IS 5182 (Part 24): 2019CPCBGuidelinesVolI	60			
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80			
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80			
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0			
Mercury (Hg)	EPA Method IO-5				

TEST REPORT						
Date of Sampling	РМ ₁₀ µg/m ³	ΡΜ _{2.5} μg/m ³	SO₂ µg/m³	NO₂ µg/m³	CO* mg/m ³	Hg ng/m ³
01.09.2023	38	28	18	28	0.09	N.D.
04.09.2023	38	25	20	26 .	0.31	N.D.
08.09.2023	38	28	21	28	0.42	N.D.
11.09.2023	44	27	17	25	0.11	N.D.
15.09.2023	38	29	16	26	0.18	N.D.
19.09.2023	38	28	16	26	0.42	N.D.
22.09.2023	41	27	15	25	0.34	N.D.
25.09.2023	44	24	17	24	0.26	N.D.

Terms & conditions

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Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer. ×

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Name & Address Of The Custom	ster	REPORT NO	UES/TR/23-24/0559		
то,		LAB REF NO	UES/23-24/AAQM/0	1381-1388	
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF SAMPLING	03/04/2023 to 27	/04/2023	
		DATE OF RECEIPT	04/04/2023 to 28	/04/2023	
		DATE OF REPORT	02/05/2023		
		DATE OF ANALYSIS	START: 04/04/2023 END: 30/04		
		SAMPLE DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DA	TED:07.09.2022	
SAMPLING LOCATION	HIL COLONY, KONDKEL	. Kalenne in the second s			
DURATION OF SAMPLING	24 HOURS SAMPLE COLLECTED BY		LABORATORY CHEMIST		
SAMPLING PROCEDURE	AS PER METHOD REFERENCE				
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTT RUBBER BLADDER: 1X1 NO.				

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM2.5)	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0
Mercury (Hg)	EPA Method IO-5	

TEST REPORT						
Date of Sampling	ΡM ₁₀ μg/m ³	ΡM _{2.5} μg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³
03.04.2023	64	30	17	24	0.65	N.D.
06.04.2023	65	33	18	24	0.72	N.D.
10.04.2023	68	34	17	25	0.81	N.D.
13.04.2023	69	29	16	24	0.66	N.D.
17.04.2023	69	35	16	25	0.43	N.D.
20.04.2023	64	32	18	24	0.51	N.D.
24.04.2023	65	31	17	26	0.84	N.D.
27.04.2023	64	35	16	24	0.56	N.D.

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

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HDD-272, Phase III - Near JP Chowk Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099 Ph : 0771 - 4027777 I Email : ultimatenviro@gmail.com

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Name & Address Of The Custon	ner	REPORT NO	UES/TR/23-24/0905		
то,		LAB REF NO	UES/23-24/AAQM/02098-02105		
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF SAMPLING	01/05/2023 to 26	/05/2023	
		DATE OF RECEIPT	02/05/2023 to 27	/05/2023	
		DATE OF REPORT	31/05/2023		
		DATE OF ANALYSIS	START:02/05/2023	END: 30/05/2023	
		SAMPLE DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	R REF. NO. P.O.13552310212, DATED:07.09.202		
SAMPLING LOCATION	HIL COLONY, KONDKEL				
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLING PROCEDURE	AS PER METHOD REFERENCE	a decisión a companya a			
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTT. RUBBER BLADDER: 1X1 NO.			annan an a	

Test Method and NAAQM Standard for Ambient Air Quality Monitoring NAAQM Parameter **Method Reference** Standard Particulate Matter size less IS 5182 (Part 23): 2006 & CPCB 100 than 10 microns (PM10) Guidelines Vol.-I Particulate Matter size less IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I 60 than 2.5 microns (PM2.5) IS 5182 (Part 2): 2001, RA 2006 & Sulphur Dioxide (SO2) 80 CPCB Guidelines Vol.-I IS 5182 (Part 6): 2006 & CPCB Nitrogen Dioxide (NO₂) 80 Guidelines Vol.-I

IS 5182(Part 10):1999, RA 2003

Mercury (Hg) EPA Method IO-5 **TEST REPORT** Date of PM2.5 **SO**₂ **PM**₁₀ NO₂ **CO*** Hq Sampling $\mu g/m^3$ $\mu g/m^3$ ng/m³ $\mu g/m^3$ µg/m³ mg/m^3 01.05.2023 66 31 18 25 0.74 N.D. 05.05.2023 67 34 19 24 0.82 N.D. 08.05.2023 70 35 18 26 0.96 N.D. 12.05.2023 69 30 17 25 0.71 N.D. 15.05.2023 71 36 19 24 0.53 N.D. 19.05.2023 66 34 17 25 0.60 N.D. 22.05.2023 67 33 27 18 0.92 N.D. 26.05.2023 66 32 17 25 0.65 N.D. Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

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Carbon Monoxide (CO)*

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Name & Address Of The Custor	ner	REPORT NO	UES/TR/23-24/020	UES/TR/23-24/02012		
то,		LAB REF NO	UES/23-24/AAQM/04378-04385			
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF SAMPLING	02/06/2023 to 30	/06/2023		
		DATE OF RECEIPT	03/06/2023 to 01	/07/2023		
		DATE OF REPORT	04/07/2023			
		DATE OF ANALYSIS	START:03/06/2023	END:04/07/2023		
a series and the series and		SAMPLE DETAILS				
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED:07.09.2022			
SAMPLING LOCATION	HIL COLONY, KONDKEL					
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST			
SAMPLING PROCEDURE	AS PER METHOD REFERENCE					
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTT RUBBER BLADDER: 1X1 NO.					

Test Method and NAAQM Standard for Ambient Air Quality Monitoring

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM2.5)	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0
Mercury (Hg)	EPA Method IO-5	

TEST REPORT

Date of Sampling	PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³
02.06.2023	65	32	17	24	0.63	N.D.
05.06.2023	66	33 -	18	23	0.71	N.D.
09.06.2023	69	34	19	25	0.84	N.D.
12.06.2023	68	31	18	24	0.67	N.D.
16.06.2023	70	35	17	23	0.46	N.D.
19.06.2023	65	33	18	26	0.58	N.D.
23.06.2023	52	28	15	22	0.84	N.D.
30.06.2023	64	30	16	23	0.53	N.D.

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

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Parameter		Method F	Reference	NAAQM	
Test Me	thod and NAAQM Sta	andard for Ambie	ent Air Quality M	Ionitoring	
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTT RUBBER BLADDER: 1X1 NO.				
SAMPLING PROCEDURE	AS PER METHOD REFERENCE				
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLING LOCATION	HIL COLONY, KONDKEL				
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DA	TED:07.09.2022	
		SAMPLE DETAILS			
DISTT RAIGARH	(C.G.) 496107	DATE OF ANALYSIS	START:04/07/2023	END: 31/07/2023	
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR,		DATE OF REPORT	31/07/2023		
		DATE OF RECEIPT	04/07/2023 to 29	/07/2023	
		DATE OF SAMPLING	03/07/2023 to 28	/07/2023	
TO,	DIES LIMITED CAPE	LAB REF NO	UES/23-24/AAQM/05870-5877		
Name & Address Of The Custor	ner	REPORT NO	UES/TR/23-24/030	'03056	

Parameter	Method Reference	Standard
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0
Mercury (Hg)	EPA Method IO-5	

TEST REPORT						
Date of Sampling	ΡΜ ₁₀ μg/m ³	ΡM _{2.5} μg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³
03.07.2023	44	28	15	22	0.51	N.D.
07.07.2023	43	25	19	23	0.65	N.D.
10.07.2023	46	29	15	21	0.72	N.D.
14.07.2023	42	26	14	25	0.56	N.D.
17.07.2023	42	27	17	26	0.31	N.D.
21.07.2023	42	24	15	23	0.46	N.D.
24.07.2023	43	24	16	24	0.73	N.D.
28.07.2023	47	25	19	20	0.41	N.D.

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Name & Address Of The Custon	ner	REPORT NO	67		
то,		LAB REF NO	UES/23-24/AAQM/0	7356-7383	
	RIES LIMITED, GARE	DATE OF SAMPLING	03/08/2023 to 28	/08/2023	
PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF RECEIPT	04/08/2023 to 29	/08/2023	
		DATE OF REPORT	31/08/2023		
		DATE OF ANALYSIS	START:04/08/2023	END: 31/08/2023	
		SAMPLE DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED:07.09.2022		
SAMPLING LOCATION	HIL COLONY, KONDKEL	- Lease control of the second s			
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLING PROCEDURE	AS PER METHOD REFERENCE				
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTT RUBBER BLADDER: 1X1 NO.	NO., FILTER PAPER (PI LE, NO ₂ : 30MLX1 NO. P	M _{2.5}): 1X1 NO. VC BOTTLE		

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM2.5)	IS 5182 (Part 24): 2019CPCBGuidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxi <mark>d</mark> e (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0
Mercury (Hg)	EPA Method IO-5	

TEST REPORT							
Date of Sampling	ΡΜ ₁₀ μg/m ³	ΡΜ _{2.5} μg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³	
03.08.2023	40	25	17	22	0.31	N.D.	
07.08.2023	42	26	16	26	0.46	N.D.	
11.08.2023	41	24	19	23	0.53	N.D.	
14.08.2023	44	25	19	24	0.34	N.D.	
18.08.2023	39	29	16	22	0.14	N.D.	
21.08.2023	38	30	17	23	0.20	N.D.	
25.08.2023	41	24	16	23	0.53	Ν.Ο.	
28.08.2023	38	24	17	23	0.25	N.D.	

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Name & Address Of The Custor	ner	REPORT NO	73			
	RIES LIMITED, GARE	LAB REF NO	UES/23-24/AAQM/0	UES/23-24/AAQM/08594-08601		
		DATE OF SAMPLING	01/09/2023 to 25	/09/2023		
PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF RECEIPT	02/09/2023 to 26	/09/2023		
		DATE OF REPORT	27/09/2023			
		DATE OF ANALYSIS	START:02/09/2023	END:27/09/2023		
		SAMPLE DETAILS		AP IN IN		
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DA	TED:07.09.2022		
SAMPLING LOCATION	HIL COLONY, KONDKEL					
DURATION OF SAMPLING	24 HOURS	1 HOURS SAMPLE COLLECTED LABORATORY CHEMIST				
SAMPLING PROCEDURE	AS PER METHOD REFERENCE					
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTT. RUBBER BLADDER: 1X1 NO.					

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM2.5)	IS 5182 (Part 24): 2019CPCBGuidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0
Mercury (Hg)	EPA Method IO-5	

TEST REPORT						
Date of Sampling	ΡΜ ₁₀ μg/m ³	ΡΜ _{2.5} μg/m ³	SO₂ µg/m³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³
01.09.2023	41	24	16	26	0.21	N.D.
04.09.2023	44	25	17	25	0.32	N.D.
08.09.2023	42	26	20	26	0.43	N.D.
11.09.2023	41	28	16	25	0.22	N.D.
15.09.2023	41	24	18	24	0.09	N.D.
19.09.2023	39	29	21	24	0.15	N.D.
22.09.2023	39	25	17	26	0.43	N.D.
25.09.2023	40	27	15	28	0.17	N.D.

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End of the test report.....



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Name & Address Of The Custor	ner	REPORT NO	UES/TR/23-24/0560 UES/23-24/AAQM/01389-1396		
то,		LAB REF NO			
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF SAMPLING	03/04/2023 to 27	/04/2023	
		DATE OF RECEIPT	04/04/2023 to 28	/04/2023	
		DATE OF REPORT	ATE OF REPORT 02/05/2023		
		DATE OF ANALYSIS	START:04/04/2023	END: 30/04/2023	
		SAMPLE DETAILS		Contraction of the	
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212,D	ATED:07.09.2022	
SAMPLING LOCATION	ETP AREA, KONDKEL				
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLING PROCEDURE	AS PER METHOD REFERENCE	าง สั้นกระบบสระบบสระบบสระบบสระบบสระบบสระบบสระบบ	agonateron on constraint and constraint of the second second second second second second second second second s		
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTT RUBBER BLADDER: 1X1 NO.	· [19] 20 · [19] · [19] 20 · [10] 20 · [10] 20 · [10] 20 · [10] 2			

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0
Mercury (Hg)	EPA Method IO-5	

TEST REPORT						
Date of Sampling	ΡΜ ₁₀ μg/m ³	ΡM _{2.5} μg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³
03.04.2023	64	29	18	2.5	0.58	N.D.
06.04.2023	63	31	16	26	0.61	N.D.
10.04.2023	67	30	18	25	0.53	N.D.
13.04.2023	62	32	16	24	0.63	N.D.
17.04.2023	68	32	17	26	0.70	N.D.
20.04.2023	67	34	16	24	0.85	N.D.
24.04.2023	66	32	18	25	0.76	N.D.
27.04.2023	69	34	17	24	0.44	N.D.

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions



End of the test report.....



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Custo	mer	REPORT NO	UES/TR/23-24/090	ES/TR/23-24/0906		
TO,		LAB REF NO	UES/23-24/AAQM/02106-2113			
	RIES LIMITED, GARE	DATE OF SAMPLING	01/05/2023 to 26	5/05/2023		
PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF RECEIPT	02/05/2023 to 27	/05/2023		
		DATE OF REPORT	31/05/2023			
		DATE OF ANALYSIS	START:02/05/2023	END: 30/05/2023		
	the second s	SAMPLE DETAILS		l and the second		
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DA	TED:07.09.2022		
SAMPLING LOCATION	ETP AREA, KONDKEL	and an an and an and an an an and an and an and an and an	- Alexandra and a second and a second and a second s	19900 - 066 - 06 - 16 - 16 - 17 - 18 - 18		
DURATION OF SAMPLING	24 HOURS	LABORATORY CHEMISI	1			
SAMPLING PROCEDURE	AS PER METHOD REFERENCE	nalonum				
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTTI RUBBER BLADDER: 1X1 NO.					

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM2,5)	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0
Mercury (Hg)	EPA Method IO-5	

TEST REPORT							
Date of Sampling	ΡΜ ₁₀ μg/m ³	РМ _{2.5} µg/m ³	SO₂ µg/m ³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³	
01.05.2023	66	30	19	26	0.63	N.D.	
05.05.2023	65	32	17	27	0.75	N.D.	
08.05.2023	69	31	19	26	0.61	N.D.	
12.05.2023	64	33	18	25	0.72	N.D.	
15.05.2023	70	30	16	27	0.84	N.D.	
19.05.2023	69	35	17	26	0.90	N.D.	
22.05.2023	68	34	19	24	0.81	N.D.	
26.05.2023	71	33	18	25	0.52	N.D.	

Terms & conditions

The report for publication, arbitration or as legal dispute is forbidden.

Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer. This is for information as the party has asked for above test(s) only.







AUTHORIZED SIGNATORY

-End of the test report.....



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Custor	ner	REPORT NO	UES/TR/23-24/02013		
то,		LAB REF NO	UES/23-24/AAQM/0	24/AAQM/04386-04393	
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF SAMPLING	02/06/2023 to 30	/06/2023	
		DATE OF RECEIPT	03/06/2023 to 01/07/2023 04/07/2023 START:03/06/2023 END:04/07/2023		
		DATE OF REPORT			
		DATE OF ANALYSIS			
and the second second		SAMPLE DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212,D#	ATED:07.09.2022	
SAMPLING LOCATION	ETP AREA, KONDKEL	- 10, 000 - 100 - 100 000 000 00 - 00 -		on an	
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST	C	
SAMPLING PROCEDURE	AS PER METHOD REFERENCE		-E		
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM10): 1X1 NO., FILTER PAPER (PM25): 1X1 NO. SO2: 30MLX1 NO. PVC BOTTLE, NO2: 30MLX1 NO. PVC BOTTLE RUBBER BLADER: 1X1 NO.				

Test Method and NAAQM Standard for Ambient Air Quality Monitoring

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM2.5)	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0
Mercury (Hg)	EPA Method IO-5	

TEST REPORT

Date of Sampling	ΡM ₁₀ μg/m ³	PM _{2.5} μg/m ³	SO₂ µg/m³	NO ₂ μg/m ³	CO* mg/m ³	Hg ng/m ³
02.06.2023	65	29	18	25	0.51	N.D.
05.06.2023	64	31	20	26	0.63	N.D.
09.06.2023	68	30	18	25	0.52	N.D.
12.06.2023	63	32	19	24	0.69	N.D.
16.06.2023	69	29	17	26	0.78	N.D.
19.06.2023	68	34	18	25	0.86	N.D.
23.06.2023	50	26	16	22	0.74	N.D.
30.06.2023	70	32	17	23	0.41	N.D.

Terms & conditions

The report for publication, arbitration or as legal dispute is forbidden. Test sample will be retained for 1.5 days after issue of test report unless otherwise agreed with customer.

This is for information as the party has asked for above test(s) only.

REVIEWED BY	1 0 m	AUTHORIZED SIGNATORY
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	And Standard and Stand	For ULTIMATE ENVIROLYTICAL SOLUTION

-----End of the test report.....



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Custo	mer	REPORT NO	UES/TR/23-24/03057		
TO,		LAB REF NO UES/23-24/AAQM/		05878-05885	
	TRIES LIMITED, GARE	DATE OF SAMPLING	03/07/2023 to 28	3/07/2023	
PALMA - IV/5, MIL		DATE OF RECEIPT	04/07/2023 to 29	0/07/2023	
MINE, VILLAGE - M BLOCK-TAMNAR,	ILUPARA,	DATE OF REPORT 31/07/2023			
DISTT RAIGARH (C.G.) 496107		DATE OF ANALYSIS	START:04/07/2023	END: 31/07/2023	
a second status and a second		SAMPLE DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212,DA	ATED:07.09.2022	
SAMPLING LOCATION	ETP AREA, KONDKEL				
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST	P. 1	
SAMPLING PROCEDURE	AS PER METHOD REFERENCE		alpennon-mennennonnennennennennennen		
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTT. RUBBER BLADDER: 1X1 NO.				

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM2.5)	IS 5182 (Part 24): 2019CPCBGuidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0
Mercury (Hg)	EPA Method IO-5	

TEST REPORT						
Date of Sampling	ΡΜ ₁₀ μg/m ³	ΡM _{2.5} μg/m ³	SO₂ µg/m³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³
03.07.2023	43	27	19	25	0.43	N.D.
07.07.2023	42	25	20	22	0.51	N.D.
10.07.2023	45	24	15	23	0.46	N.D.
14.07.2023	44	27	19	24	0.58	N.D.
17.07.2023	44	23	17	25	0.64	N.D.
21.07.2023	44	26	19	21	0.72	N.D.
24.07.2023	44	24	16	23	0.65	N.D.
28.07.2023	43	26	18	22	0.38	N.D.

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

The report for publication, arbitration or as legal dispute is forbidden. Test sample will be retained for 15 days after issue of test report unless of This is for information as the party has asked for above test(s) only.

31/07/23

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

-----End of the test report.....



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Custo	ner	REPORT NO	UES/TR/23-24/038	168	
то,		LAB REF NO	UES/23-24/AAQM/07364-07371		
	RIES LIMITED, GARE	DATE OF SAMPLING	03/08/2023 to 28	3/08/2023	
PALMA - IV/5, MIL		DATE OF RECEIPT	04/08/2023 to 29	/08/2023	
MINE, VILLAGE - M	ILUPARA,	DATE OF REPORT	31/08/2023		
BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF ANALYSIS	IS START:04/08/2023 END::		
		SAMPLE DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DA	ATED:07.09.2022	
SAMPLING LOCATION	ETP AREA, KONDKEL				
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST	7	
SAMPLING PROCEDURE	AS PER METHOD REFERENCE				
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTT. RUBBER BLADDER: 1X1 NO.			20000000000000000000000000000000000000	

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0
Mercury (Hg)	EPA Method IO-5	

Date of Sampling	PM ₁₀ µg/m ³	ΡM _{2.5} μg/m ³	SO₂ µg/m³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³
03.08.2023	40	27	16	22	0.21	N.D.
07.08.2023	42	25	15	23	0.33	N.D.
11.08.2023	44	29	19	24	0.27	N.D.
14.08.2023	43	24	20	23	0.34	N.D.
18.08.2023	39	26	15	26	0.46	N.D.
21.08.2023	45	25	21	22	0.55	N.D.
25.08.2023	43	29	21	22	0.42	N.D.
28.08.2023	41	24	21	26	0.17	N.D.

Terms & conditions

The report for publication, arbitration or as legal dispute is forbidden. Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.

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AUTHORIZED SIGNATORY



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Name & Address Of The Custor	ner	REPORT NO	UES/TR/23-24/046	674
TO,		LAB REF NO	LAB REF NO UES/23-24/AAQM/08602-8 DATE OF SAMPLING 01/09/2023 to 25/09/20	
	RIES LIMITED, GARE	DATE OF SAMPLING		
PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF RECEIPT	DATE OF RECEIPT 02/09/2023 to 26/09/202 DATE OF REPORT 27/09/2023	
		DATE OF REPORT		
		DATE OF ANALYSIS	START:02/09/2023	END:27/09/2023
trans the second	A Contraction of the second	SAMPLE DETAILS	The second s	
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED:07.09.2022	
SAMPLING LOCATION	ETP AREA, KONDKEL	KONDKEL		
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY LABORATORY CHEM		· · · · · · · · · · · · · · · · · · ·
SAMPLING PROCEDURE	AS PER METHOD REFERENCE			
SAMPLE QUANTITY/PACKING		(PM ₁₀): 1X1 NO., FILTER PAPER (PM _{2.5}): 1X1 NO. D. PVC BOTTLE, NO ₂ : 30MLX1 NO. PVC BOTTLE B: 1X1 NO		
Test Me	thod and NAAQM St	andard for Ambier	nt Air Quality M	onitoring
Parameter		Method Reference		NAAQM Standard
Particulate Matter : than 10 microns (PM	(o) Guide	182 (Part 23): 2006 & CPCB elines VolI		100
Particulate Matter s than 2.5 microns (PM		182 (Part 24): 2019CP	CBGuidelines Vol	-I 60
Sulphur Dioxide (SO ₂		82 (Part 2): 2001, R Guidelines VolI	A 2006 &	80
Nitrogon Diswide (N	IS 51	82 (Part 6): 2006 &	CPCB	

Sulphur Dioxide (SO ₂)	CPCB Guidelines VolI	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4 - 0
Mercury (Hg)	EPA Method IO-5	

Date of Sampling	ΡM ₁₀ μg/m ³	ΡM _{2.5} μg/m ³	SO₂ µg/m³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³
01.09.2023	42	28	18	26	0.10	N.D.
04.09.2023	42	28	17	25	0.27	N.D.
08.09.2023	38	25	18	26	0.19	N.D.
11.09.2023	39	25	21	27	0.28	N.D.
15.09.2023	44	26	15	26	0.32	N.D.
19.09.2023	44	25	20	28	0.46	N.D.
22.09.2023	41	25	19	28	0.35	N.D.
25.09.2023	43	26	15	26	0.12	N.D.

Terms & conditions

The report for publication, arbitration or as legal dispute is forbidden. Test sample will be retained for 15 days after issue of test report unless otherwise agreed with custon

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End of the test report.....

AAQM Report – Buffer Zone



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT	NO	UES/TR/23-24/0530			
		LAB REF NO		UES/23-24/AAQM/01283-01290			
		DATE OF	SAMPLING	03/04/2023 to 2	7/04/2023		
		DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS		04/04/2023 to 28/04/2023 02/05/2023			
							START:04/04/2023 END:30/04/20
						SAMPLE I	DETAILS
MONITORING FOR	AMBIENT AIR QUALITY MONITORING		CUSTOMER RE	F NO C DATE	.13552310211, ED:07.09.2022		
SAMPLING LOCATION	OFFICE AREA, BANJIKH	OL	o Annon - rogenzonis et e nadem set en				
DURATION OF SAMPLING	24 HOURS	SAMPLE	COLLECTED BY	LABORATORY CHEMIS	T		
SAMPLING PROCEDURE	AS PER METHOD REFERENCE						
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 NO., FILTER PAPER (PM _{2.5}): 1X1 NO. SO ₂ : 30MLX1 NO. PVC BOTTLE, NO ₂ : 30MLX1 NO. PVC BOTTLE RUBBER BLADDER: 1X1 NO.						

Test Method and NAAQM Standard for Ambient Air Quality Monitoring							
Parameter	Method Reference	NAAQM Standard					
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100					
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60					
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80					
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80					
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0					
Mercury (Hg)	EPA Method IO-5						

TEST REPORT								
Date of Sampling	ΡM ₁₀ μg/m ³	ΡM _{2.5} μg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³		
03.04.2023	68	35	17	26	0.51	N.D.		
06.04.2023	64	31	16	25	0.64	N.D.		
10.04.2023	69	33	15	26	0.89	N.D.		
13.04.2023	66	33	16	27	0.73	N.D.		
17.04.2023	65	35	17	25	0.66	N.D.		
20.04.2023	69	32	18	26	0.80	N.D.		
24.04.2023	62	34	15	24	0.55	N.D.		
27.04.2023	64	29	14	23	0.43	N.D.		

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

The report for publication, arbitration or as legal dispute is forbidden. Test sample will be retained for 15 days after issue of test report unless otherwise a This is for information as the party has asked for above test(s) only (IROLY).







End of the test report-

AN ISO : 9001:2015 / ISO: 14001:2015 / ISO 45001:2018 CERTIFIED LABORATORY

d with customer



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA,		REPORT NO LAB REF NO DATE OF SAMPLING DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS		UES/TR/23-24/0881 UES/23-24/AAQM/02006-02013 01/05/2023 to 26/05/2023 02/05/2023 to 27/05/2023 31/05/2023		
DISTT RAIGARH	(C.G.) 496107	SAMPLE I		START:02/05/2	2023	END: 30/05/2023
MONITORING FOR	AMBIENT AIR QUALITY MONITORING		CUSTOMER RE	R REF. NO. & DATE		13552310211, D:07.09.2022
SAMPLING LOCATION	OFFICE AREA, BANJIKHC	DL				
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY		LABORATORY CHEMIST		
SAMPLING PROCEDURE	AS PER METHOD REFEREN	ICE				
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1 SO ₂ : 30MLX1 NO. PVC B RUBBER BLADDER: 1X1 N	OTTLE, NO2: 3				

Test Method and NAAQM Standard for Ambient Air Quality Monitoring					
Parameter	Method Reference	NAAQM Standard			
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100			
Particulate Matter size less than 2.5 microns (PM2.5)	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60			
Sulphur Díoxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80			
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80			
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0			
Mercury (Hg)	EPA Method IO-5				

TEST REPORT								
Date of Sampling	ΡΜ ₁₀ μg/m ³	ΡM _{2.5} μg/m ³	SO ₂ μg/m ³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³		
01.05.2023	70	36	18	27	0.63	N.D.		
05.05.2023	66	32	17	26	0.74	N.D.		
08.05.2023	71	34	16	27	0.90	N.D.		
12.05.2023	68	33	17	28	0.81	N.D.		
15.05.2023	67	36	18	26	0.72	N.D.		
19.05.2023	72	33	19	27	0.93	N.D.		
22.05.2023	65	35	16	25	0.64	N.D.		
26.05.2023	67	31	15	24	0.56	N.D.		

Terms & conditions

- The report for publication, arbitration or as legal dispute is forbidden.

Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.



-----End of the test report-----



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT	REPORT NO		UES/TR/23-24/01988		
		LAB REF NO DATE OF SAMPLING - DATE OF RECEIPT		UES/23-24/AAQM/04286-04293 - 02/06/2023 to 30/06/2023			
				DATE OF	DATE OF REPORT		04/07/2023
		DATE OF ANALYSIS		START:03/06/2023 END:0		END:04/07/2023	
				SAMPLE I	DETAILS	1-1-2- 1-2	
MONITORING FOR	AMBIENT AIR QUALITY	MONITORING	CUSTOMER RE	F. NO. & DATE		13552310211, D:07.09.2022	
SAMPLING LOCATION	OFFICE AREA, BANJIKH	OL		and a second		0.07.09.2022	
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY		LABORATORY CHEMIST		•	
SAMPLING PROCEDURE	AS PER METHOD REFERE	NCE					
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): SO ₂ : 30MLX1 NO. PVC H RUBBER BLADDER: 1X1	BOTTLE, NO2: 3	ER PAPER (PM2. OMLX1 NO. PVC	5): 1X1 NO. BOTTLE	*****		

Test Method and NAAQM Standard for Ambient Air Quality Monitoring

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCBGuidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0
Mercury (Hg)	EPA Method IO-5	

TEST REPORT

Date of Sampling	ΡM ₁₀ μg/m ³	ΡM _{2.5} μg/m ³	SO ₂ µg/m ³	NO₂ µg/m³	CO* mg/m ³	Hg ng/m ³
02.06.2023	69	35	17	26	0.58	N.D.
05.06.2023	67	30	16	25	0.71	N.D.
09.06.2023	70	32	15	26	0.82	N.D.
12.06.2023	69	31	16	27	0.70	N.D.
16.06.2023	68	35	18	25	0.62	N.D.
19.06.2023	71	32	17	26	0.81	N.D.
23.06.2023	50	26	13	21	0.53	N.D.
30.06.2023	58	30	14	22	0.48	N.D.

arks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

The report for publication, arbitration or as legal dispute is forbidden.

Test sample will be retained for 15 days after issue of test report unless otherwise ac

This is for information as the party has asked for above test(s) on the second s





AUTHORIZED SIGNATORY

-----End of the test report-----End of the test report-----



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		LAB REP DATE OF DATE OF DATE OF	REPORT NO LAB REF NO DATE OF SAMPLING DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS		UES/TR/23-24/03032 UES/23-24/AAQM/05778-05785 03/07/2023 to 28/07/2023 04/07/2023 to 29/07/2023 31/07/2023 START:04/07/2023 END:31/07/2023		
	(0.0.) 490107	SAMPLE I			.025	END: 31/07/2023	
MONITORING FOR	AMBIENT AIR QUALITY	MONITORING	CUSTOMER REF. NO. & DATE		P.O.13552310211, DATED:07.09.2022		
SAMPLING LOCATION	OFFICE AREA, BANJIK	HOL			DAIL	10:07.09.2022	
DURATION OF SAMPLING	24 HOURS	100 minutestantes	COLLECTED BY	LABORATORY CH	TEMTS		
SAMPLING PROCEDURE	AS PER METHOD REFER						
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): SO ₂ : 30MLX1 NO. PVC RUBBER BLADDER: 1X1	BOTTLE, NO2: 3	ER PAPER (PM ₂ OMLX1 NO. PVC	5): 1X1 NO. BOTTLE		ntanot	

Test Method and NAAQM Standard for	Ambient Air Quality Monitoring
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Parameter	Method Reference	NAAQM	
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100	
Particulate Matter size less than 2.5 microns (PM2.5)	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60	
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80	
Nitro <mark>gen Di</mark> oxide (<mark>N</mark> O ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80	
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0	
Mercury (Hg)	EPA Method IO-5	4.0	

TEST REPORT								
Date of Sampling	ΡΜ ₁₀ μg/m ³	ΡM _{2.5} μg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³		
03.07.2023	47	28	13	24	0.41	N.D.		
07.07.2023	44	27	17	22	0.52	N.D.		
10.07.2023	42	24	13	21	0.60	N.D.		
14.07.2023	42	26	15	20	0.57	N.D.		
17.07.2023	44	25	16	21	0.59	N.D.		
21.07.2023	42	26	17	19	0.64	N.D.		
24.07.2023	42	25	16	19	0.49	N.D.		
28.07.2023	42	26	15	25	0.38	N.D.		

Terms & conditions

d with customer

The report for publication, arbitration or as legal dispute is forbidden. Test sample will be retained for 15 days after issue of test report unless This is for information as the party has asked for above test(s) only. OLYTIC

Ret 31/07/23 **REVIEWED BY**



For ULTIMATE ENVIROLYTICAL SOLUTIONS bha

AUTHORIZED SIGNATORY

-End of the test report-----



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT NO LAB REF NO DATE OF SAMPLING DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS		UES/TR/23-24/03828 UES/23-24/AAQM/07254-07261						
								03/08/2023 to 28/08/2023 04/08/2023 to 29/08/2023		
				31/08/2023 START:04/08/2023 END:31/08/						
						END: 31/08/2023				
						SAMPLE	DETAILS		1-#15-0-	
				MONITORING FOR	AMBIENT AIR QUALITY	CTICTOMED DEE NO C DATE			3552310211, :07.09.2022	
SAMPLING LOCATION	OFFICE AREA, BANJIKH	IOL								
DURATION OF SAMPLING	24 HOURS	COLLECTED BY	Y LABORATORY CHEMIST							
SAMPLING PROCEDURE	AS PER METHOD REFERENCE									
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 NO., FILTER PAPER (PM _{2.5}): 1X1 NO. SO ₂ : 30MLX1 NO. PVC BOTTLE, NO ₂ : 30MLX1 NO. PVC BOTTLE RUBBER BLADDER: 1X1 NO.									

Test Method and NAAQM Standard for Ambient Air Quality Monitoring

Parameter	Method Reference	NAAQM Standard	
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100	
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60	
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80	
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80	
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0	
Mercury (Hg)	EPA Method IO-5		

TEST REPORT							
Date of Sampling	ΡΜ ₁₀ μg/m ³	ΡΜ2.5 μg/m ³	SO₂ µg/m³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³	
03.08.2023	38	24	15	26	0.48	N.D.	
07.08.2023	44	25	18	22	0.56	N.D.	
11.08.2023	43	26	18	22	0.64	N.D.	
14.08.2023	41	29	21	25	0.50	N.D.	
18.08.2023	43	25	15	25	0.61	N.D.	
21.08.2023	38	27	18	25	0.58	N.D.	
25.08.2023	38	26	15	26	0.42	N.D.	
28.08.2023	39	29	16	24	0.31	N.D.	

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

The report for publication, arbitration or as legal dispute is forbidden.

Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.

This is for information as the party has asked for above test(s) g





For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY

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-----End of the test report-----



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT	REPORT NO		UES/TR/23-24/04648			
		LAB REF NO DATE OF SAMPLING DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS		UES/23-24/AAQM/08500-08507				
				01/09/2023 to 25/09/2023 02/09/2023 to 26/09/2023				
							27/09/2023 START:02/09/2023 END:27/09	
				END:27/09/2023				
						SAMPLE I	DETAILS	State State
MONITORING FOR	AMBIENT AIR QUALITY	MONITORING	CUSTOMER REF. NO. & DATE		P.O.13552310211, DATED:07.09.2022			
SAMPLING LOCATION	OFFICE AREA, BANJIKH	OL						
DURATION OF SAMPLING	SAMPLE COLLECTED BY LABORATORY CHEMIST			P.				
SAMPLING PROCEDURE	AS PER METHOD REFERE	NCE						
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM10): 1X1 NO., FILTER PAPER (PM2.5): 1X1 NO. SO2: 30MLX1 NO. PVC BOTTLE, NO2: 30MLX1 NO. PVC BOTTLE RUBBER BLADDER: 1X1 NO.							

Test Method and NAAQM Standard for Ambient Air Quality Monitoring

Parameter	Method Reference	NAAQM Standard	
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100	
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60	
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80	
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80	
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0	
Mercury (Hg)	EPA Method IO-5		

TEST REPORT								
Date of Sampling	ΡΜ ₁₀ μg/m ³	ΡΜ _{2.5} μg/m ³	SO₂ µg/m³	NO₂ µg/m³	CO* mg/m ³	Hg ng/m ³		
01.09.2023	41	25	17	26	0.39	N.D.		
04.09.2023	43	24	22	26	0.44	N.D.		
08.09.2023	43	26	18	26	0.52	N.D.		
11.09.2023	39	27	16	25	0.43	N.D.		
15.09.2023	39	28	18	24	0.54	N.D.		
19.09.2023	44	29	21	27	0.47	N.D.		
22.09.2023	43	27	20	24	0.31	N.D.		
25.09.2023	41	29	15	26	0.22	N.D.		

Terms & conditions

The report for publication, arbitration or as legal dispute is forbidden.

Fest sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.

> This is for information as the party has asked for above test(s) only



-----End of the test report-----



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT NO LAB REF NO DATE OF SAMPLING DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS	31 01291-01298 7/04/2023 8/04/2023 END: 30/04/2023		
MONITORING FOR	SAME AMBIENT AIR QUALITY MONITORIN	PLE DETAILS	NO. & DATE		D.13552310211, TED:07.09.2022
SAMPLING LOCATION	ETP AREA, BANJIKHOL			DAI	ED.07.09.2022
DURATION OF SAMPLING	24 HOURS	BY LABORATORY CHEMIST		EMIST	
SAMPLING PROCEDURE	AS PER METHOD REFERENCE				
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 NO., SO ₂ : 30MLX1 NO. PVC BOTTLE, N RUBBER BLADDER: 1X1 NO.				

Test Method	and NAAOM	Standard for	Ambient Air C	Duality M	Ionitorina

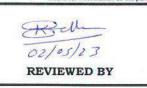
Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0
Mercury (Hg)	EPA Method IO-5	

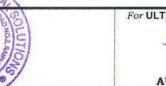
TEST REPORT							
Date of Sampling	Ρ Μ 10 μg/m ³	ΡM _{2.5} μg/m ³	SO₂ µg/m³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³	
03.04.2023	68	29	16	23	0.63	N.D.	
06.04.2023	66	34	17	24	0.74	N.D.	
10.04.2023	69	35	16	25	0.81	N.D.	
13.04.2023	68	33	18	24	0.67	N.D.	
17.04.2023	67	31	17	26	0.55	N.D.	
20.04.2023	65	32	18	25	0.62	N.D.	
24.04.2023	63	29	16	23	0.56	N.D.	
27.04.2023	69	35	14	22	0.41	N.D.	

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

The report for publication, arbitration or as legal dispute is forbidated Test sample will be retained for 15 days after issue of test report where burkes are This is for information as the party has asked for above tended with a chall Ren ed with customer.







End of the test report-



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT NO LAB REF NO DATE OF SAMPLING DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS	UES/TR/23-24/0882 UES/23-24/AAQM/02014-02021 01/05/2023 to 26/05/2023 02/05/2023 to 27/05/2023 31/05/2023 START:02/05/2023 END:30/05/2023		
	SAMP	LE DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORIN	G CUSTOMER REF.	NO. & DATE	10.000 (10.000)	0.13552310211, ED:07.09.2022
SAMPLING LOCATION	ETP AREA, BANJIKHOL			and a second second	
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED H	Y LABORATO	EMIST	
SAMPLING PROCEDURE	AS PER METHOD REFERENCE		netondoor-rijnin-rijn		
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM16): 1X1 NO., SO2: 30MLX1 NO. PVC BOTTLE, N RUBBER BLADDER: 1X1 NO.				

Test Method and NAAQM Standard for Ambient Air Quality Monitoring					
Parameter	Method Reference	NAAQM Standard			
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100			
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCBGuidelines VolI	60			
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80			
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80			
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0			
Mercury (Hg)	EPA Method IO-5				

TEST REPORT							
Date of Sampling	ΡΜ ₁₀ μg/m ³	ΡM _{2.5} μg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³	
01.05.2023	70	30	17	24	0.71	N.D.	
05.05.2023	68	35	18	25	0.82	N.D.	
08.05.2023	71	36	17	26	0.90	N.D.	
12.05.2023	72	34	19	25	0.74	N.D.	
15.05.2023	69	32	18	27	0.62	N.D.	
19.05.2023	68	33	19	26	0.73	N.D.	
22.05.2023	66	30	17	24	0.66	N.D.	
26.05.2023	71	36	15	23	0.58	N.D.	

Terms & conditions

The report for publication, arbitration or as legal dispute is forbidden

· Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.



-----End of the test report-----



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HDD-272, Phase III - Near JP Chowk Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099 Ph : 0771 - 4027777 I Email : ultimatenviro@gmail.com

Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Custor TO, HINDALCO INDUST GARE PALMA - IV/4 VILLAGE - BANKHI POST -MILUPARA, DISTT RAIGARH	TRIES LIMITED, 4, COAL MINE, ETA,	REPORT NO LAB REF NO DATE OF SAMPLING DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS	UES/TR/23-: UES/23-24/2 02/06/2023 03/06/2023 04/07/2023 START:03/06/	to 3 to 0	04294-04301 0/06/2023
	In some state of the second	PLE DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORIN	G CUSTOMER REF.	NO. & DATE		0.13552310211, TED:07.09.2022
SAMPLING LOCATION	ETP AREA, BANJIKHOL				ED.07.03.2022
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED E	Y LABORATO	DRY CH	EMTST
SAMPLING PROCEDURE	AS PER METHOD REFERENCE		na oriented in the second of t		
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 NO., SO ₂ : 30MLX1 NO. PVC BOTTLE, N RUBBER BLADDER: 1X1 NO.	FILTER PAPER (PM2 5 02: 30MLX1 NO. PVC): 1X1 NO. BOTTLE		an a

Test Method and NA	AQM Standard for Ambient Air Quality M	onitoring
Parameter	Method Reference	NAAQM Standard
ticulate Matter size less	IS 5182 (Part 23): 2006 & CPCB	100

than 10 microns (PM10)	Guidelines VolI	100
Particulate Matter size less than 2.5 microns $(PM_{2.5})$	IS 5182 (Part 24): 2019 CPCBGuidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4 0
Mercury (Hg)	EPA Method IO-5	

TEST REPORT							
Date of Sampling	ΡΜ ₁₀ μg/m ³	ΡM _{2.5} μg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³	
02.06.2023	69	29	16	23	0.60	N.D.	
05.06.2023	67	34	17	24	0.78	N.D.	
09.06.2023	70	35	15	25	0.89	N.D.	
12.06.2023	71	33	18	24	0.67	N.D.	
16.06.2023	68	30	17	26	0.56	N.D.	
19.06.2023	67	32	18	25	0.67	N.D.	
23.06.2023	52	28	14	21	0.52	N.D.	
30.06.2023	59	27	15	22	0.45	N.D.	

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

The report for publication, arbitration or as legal dispute is forbidden

Test sample will be retained for 15 days after issue of test report unless ptherwise agreed with customer.



-----End of the test report-----



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

	Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT NO LAB REF NO DATE OF SAMPLING DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS	03/07/2023 t	AQM/05786-05793 co 28/07/2023 co 29/07/2023
	MONITORING FOR	AMBIENT AIR QUALITY MONITORI	ING CUSTOMER REF.	NO. & DATE	P.O.13552310211, DATED:07.09.2022
MONITORING FOR AMBIENT AIR QUALITY MONITORING CUSTOMER REF NO & DATE	SAMPLING LOCATION	ETP AREA, BANJIKHOL	e some nore done in en in some menne an ar some	en i prestanta da construcción da construcción de la construcción de la construcción de la construcción de la c	
MUNITORING FOR AMBIENT AIR QUALITY MONITORING CUSTOMER REF. NO. & DATE DATED:07.09.2022	DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED	BY LABORATORY CHEMIST	
ADDITIONING FOR ADDIENT AIR QUALITY MONITORING CUSTOMER REF. NO. & DATE DATED:07.09.2022 SAMPLING LOCATION ETP AREA, BANJIKHOL DATED:07.09.2022 DATED:07.09.2022	SAMPLING PROCEDURE	AS PER METHOD REFERENCE			
MONITORING FOR AMBIENT AIR QUALITY MONITORING CUSTOMER REF. NO. & DATE DATED:07.09.2022 SAMPLING LOCATION ETP AREA, BANJIKHOL DURATION OF SAMPLING 24 HOURS SAMPLE COLLECTED BY LABORATORY CHEMIST	SAMPLE QUANTITY/PACKING	FILTER PAPER (PM10): 1X1 NO., SO2: 30MLX1 NO. PVC BOTTLE, RUBBER BLADDER: 1X1 NO.			

Test Method and NAAQM Standard for Ambient Air Quality Monitoring						
Parameter	Method Reference	NAAQM Standard				
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100				
Particulate Matter size less than 2.5 microns (PM2.5)	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60				
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80				
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80				
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0				
Mercury (Hg)	EPA Method IO-5					

TEST REPORT									
Date of Sampling	ΡΜ ₁₀ μg/m ³	ΡΜ _{2.5} μg/m ³	SO₂ µg/m³	NO₂ µg/m³	CO* mg/m ³	Hg ng/m ³			
03.07.2023	47	23	18	21	0.54	N.D.			
07.07.2023	42	26	16	26	0.61	N.D.			
10.07.2023	42	26	17	25	0.70	N.D.			
14.07.2023	46	28	18	23	0.53	N.D.			
17.07.2023	45	23	15	25	0.48	N.D.			
21.07.2023	43	25	17	26	0.51	N.D.			
24.07.2023	47	27	18	23	0.47	N.D.			
28.07.2023	46	27	16	26	0.39	N.D.			

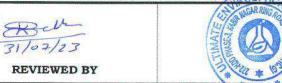
Duration of sampling for CO I Hour, N.D. Not Detected

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Terms & conditions

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The report for publication, arbitration or as legal dispute is forbidden. Test sample will be retained for 15 days after issue of test report unless otherwise This is for information as the party has asked for above test(s) only 600LY776se agreed with customer



For ULTIMATE ENVIROLYTICAL SOLUTIONS **AUTHORIZED SIGNATORY**

End of the test report-



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA,		REPORT NO LAB REF NO DATE OF SAMPLING DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS	UES/TR/23-24/03829 UES/23-24/AAQM/07262-7269 03/08/2023 to 28/08/2023 04/08/2023 to 29/08/2023 31/08/2023 START:04/08/2023 END:31/08/2023		
DISTT RAIGARH	Construction of the second	PLE DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORI	ING CUSTOMER REF.	NO. & DATE	201 200 2040	D.13552310211, TED:07.09.2022
SAMPLING LOCATION	ETP AREA, BANJIKHOL				
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED 1	BY LABORATORY CHEMIST		
SAMPLING PROCEDURE	AS PER METHOD REFERENCE				
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM10): 1X1 NO., SO2: 30MLX1 NO. PVC BOTTLE, RUBBER BLADDER: 1X1 NO.				

Test Method and NAAQM Standard for Ambient Air Quality Monitoring							
Parameter	Method Reference	NAAQM Standard					
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100					
Particulate Matter size less than 2.5 microns (PM2.5)	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60					
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80					
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80					
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0					
Mercury (Hg)	EPA Method IO-5						

TEST REPORT									
Date of Sampling	ΡΜ10 μg/m ³	ΡΜ2.5 μg/m ³	SO ₂ μg/m ³	NO₂ µg/m³	CO* mg/m ³	Hg ng/m ³			
03.08.2023	39	29	15	23	0.43	N.D.			
07.08.2023	42	26	19	26	0.56	N.D.			
11.08.2023	41	30	18	22	0.61	N.D.			
14.08.2023	38	24	17	25	0.45	N.D.			
18.08.2023	42	27	15	25	0.37	N.D.			
21.08.2023	45	26	21	22	0.52	N.D.			
25.08.2023	43	25	18	26	0.36	N.D.			
28.08.2023	40	28	15	22	0.28	N.D.			

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

> The report for publication, arbitration or as legal dispute is forbidden.

> Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.

- This is for information as the party has asked for above test(s) any OLYTIC

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For ULTIMATE ENVIROLYTICAL SOLUTIONS 00

AUTHORIZED SIGNATORY

-----End of the test report-----End of the test report-----



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA,		REPORT NO LAB REF NO DATE OF SAMPLING DATE OF RECEIPT DATE OF REPORT	UES/TR/23-24/04649 UES/23-24/AAQM/08508-08515 01/09/2023 to 25/09/2023 02/09/2023 to 26/09/2023 27/09/2023				
DISTT RAIGARH		DATE OF ANALYSIS	START:02/09/2	2023	END:27/09/2023		
	SAMP	LE DETAILS					
MONITORING FOR	AMBIENT AIR QUALITY MONITORIN	G CUSTOMER REF.	NO. & DATE	1	0.13552310211, ED:07.09.2022		
SAMPLING LOCATION	ETP AREA, BANJIKHOL						
DURATION OF SAMPLING	24 HOURS SAMPLE COLLECTED BY LABORATORY CHEMIST						
SAMPLING PROCEDURE	AS PER METHOD REFERENCE						
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 NO., SO ₂ : 30MLX1 NO. PVC BOTTLE, NO RUBBER BLADDER: 1X1 NO.						

Test Method and NAAQM Standard for Ambient Air Quality Monitoring						
Parameter	Method Reference	NAAQM Standard				
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100				
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCBGuidelines VolI	60				
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80				
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80				
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0				
Mercury (Hg)	EPA Method IO-5					

TEST REPORT									
Date of Sampling	Ρ Μ 10 μg/m ³	ΡM _{2.5} μg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³			
01.09.2023	41	27	18	24	0.24	N.D.			
04.09.2023	43	25	16	25	0.31	N.D.			
08.09.2023	38	27	20	28	0.49	N.D.			
11.09.2023	40	26	19	24	0.30	N.D.			
15.09.2023	44	29	15	27	0.27	N.D.			
19.09.2023	41	25	15	25	0.46	N.D.			
22.09.2023	43	29	20	24	0.25	N.D.			
25.09.2023	44	26	19	26	0.20	N.D.			

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

> The report for publication, arbitration or as legal dispute is forbidden.

Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.

This is for information as the party has asked for above test(s) only.



-----End of the test report-----



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT N	REPORT NO LAB REF NO		UES/TR/23-24/0532 UES/23-24/AAQM/01299-01306			
		LAB REF						
		DATE OF .	SAMPLING	03/04/2023 to	27/	04/2023		
		DATE OF	DATE OF RECEIPT DATE OF REPORT		04/04/2023 to 28/04/2023 02/05/2023			
		DATE OF						
		DATE OF ANALYSIS		START:04/04/2023		END: 30/04/2023		
and the second second		SAMPLE DI	TAILS					
MONITORING FOR	AMBIENT AIR QUALITY	MONITORING	CUSTOMER 1	REF. NO. & DATE	P.O.	.13552310211,DATED:07. 2022		
SAMPLING LOCATION	OFFICE AREA, BANKHE	TA	*					
DURATION OF SAMPLING	24 HOURS SAMPLE COLLECTED BY LABORATORY CHEMIST							
SAMPLING PROCEDURE	AS PER METHOD REFER	ENCE						
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): SO ₂ : 30MLX1 NO. PVC RUBBER BLADDER: 1X1	BOTTLE, NO2: 301				0		

Test Method and NAAQM Standard for Ambient Air Quality Monitoring

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0
Mercury (Hg)	EPA Method IO-5	

TEST REPORT								
Date of Sampling	ΡM ₁₀ μg/m ³	ΡΜ _{2.5} μg/m ³	SO₂ µg/m³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³		
03.04.2023	63	35	16	26	0.46	N.D.		
06.04.2023	67	34	18	25	0.80	N.D.		
10.04.2023	68	33	16	24	0.75	N.D.		
13.04.2023	63	31	17	26	0.69	N.D.		
17.04.2023	62	33	18	25	0.81	N.D.		
20.04.2023	68	33	18	26	0.74	N.D.		
24.04.2023	65	29	17	24	0.52	N.D.		
27.04.2023	64	31	16	23	0.33	N.D.		

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

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 Test sample will be retained for 15 days after issue of test report upters bifferwise agriced with custo
 This is for information as the party has asked for above test(s) offices



-----End of the test report-----



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT NO	REPORT NO		UES/TR/23-24/0883			
		LAB REF 1	NO	UES/23-24/AA	QM/02	2022-02029		
		DATE OF	SAMPLING	01/05/2023 to	o 26,	/05/2023		
		DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS		02/05/2023 to 27/05/2023 31/05/2023				
							START: 02/05/2023	
						SAMPLE DE	TAILS	
MONITORING FOR	AMBIENT AIR QUALITY	MONITORING	CUSTOMER 1	REF. NO. & DATE		.13552310211,DATED:07. 2022		
SAMPLING LOCATION	OFFICE AREA, BANKHET	'A		and a second				
DURATION OF SAMPLING	24 HOURS	LLECTED BY	Y LABORATORY CHEMIST					
SAMPLING PROCEDURE	AS PER METHOD REFERE	INCE		alaa aa ahaa ahaa ahaa ahaa ahaa ahaa a				
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): SO ₂ : 30MLX1 NO. PVC I RUBBER BLADDER: 1X1	BOTTLE, NO2: 30M						

Test Method and NAAQM Sta	andard for Ambient A	lir Quality	Monitoring

Parameter	Method Reference	NAAQM Standard	
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100	
Particulate Matter size less than 2.5 microns (PM2.5)	IS 5182 (Part 24): 2019 CPCBGuidelines VolI	60	
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80	
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80	
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0	
Mercury (Hg)	EPA Method IO-5		

TEST REPORT

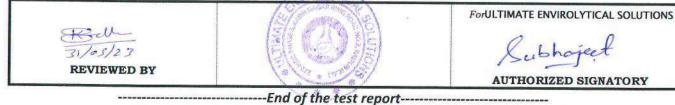
Date of Sampling	ΡM ₁₀ μg/m ³	ΡM _{2.5} μg/m ³	SO₂ µg/m³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m
01.05.2023	65	36	17	27	0.57	N.D.
05.05.2023	69	35	19	26	0.88	N.D.
08.05.2023	70	32	18	25	0.84	N.D.
12.05.2023	66	33	16	27	0.76	N.D.
15.05.2023	65	34	17	26	0.92	N.D.
19.05.2023	71	36	19	27	0.81	N.D.
22.05.2023	67	31	18	2.5	0.63	N.D.
26.05.2023	66	32	17	24	0.48	N.D.

Terms & conditions

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Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer. This is for information as the party has asked for above test(s) only.

This is for information as the party has asked for above test(s) gety.





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Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT NO		UES/TR/23-24/01990				
		LAB REF	LAB REF NO		UES/23-24/AAQM/04302-04309			
		DATE OF	SAMPLING	02/06/2023 to	o 30,	/06/2023		
		DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS		03/06/2023 to 01/07/2023 04/07/2023				
							START:03/06/2023	
						SAMPLE D	ETAILS	
MONITORING FOR	AMBIENT AIR QUALITY MONITORING CUSTOMER			REF. NO. & DATE		.13552310211,DATED:07. 2022		
SAMPLING LOCATION	OFFICE AREA, BANKHET	"A						
DURATION OF SAMPLING	24 HOURS	SAMPLE C	COLLECTED BY	LABORATORY CHE	MIST			
SAMPLING PROCEDURE	AS PER METHOD REFERE	INCE	· ··· ································	Anternation and a second s	(0)	n or on a state of the state second state s		
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): SO ₂ : 30MLX1 NO. PVC RUBBER BLADDER: 1X1	BOTTLE, NO2: 30			10-110-11-1	ne ann an Ann		

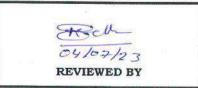
Test Method and NAAQM Standard for Ambient Air Quality Monitoring						
Parameter	Method Reference	NAAQM Standard				
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100				
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCBGuidelines VolI	60				
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80				
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80				
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0				
Mercury (Hg)	EPA Method IO-5					

TEST REPORT								
Date of Sampling	ΡΜ ₁₀ μg/m ³	ΡM _{2.5} μg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³		
02.06.2023	64	34	16	26	0.42	N.D.		
05.06.2023	68	32	18	25	0.73	N.D.		
09.06.2023	69	30	17	24	0.70	N.D.		
12.06.2023	65	31	15	26	0.63	N.D.		
16.06.2023	64	32	16	25	0.80	N.D.		
19.06.2023	70	33	18	26	0.72	N.D.		
23.06.2023	51	26	14	23	0.54	N.D.		
30.06.2023	61	30	15	24	0.37	N.D.		

Terms & conditions

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Test sample will be retained for 15 days after issue of test report unless after one agreed with customer.
 This is for information as the party has asked for above rests form



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhajee,

AUTHORIZED SIGNATORY

-----End of the test report-----



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT N LAB REF DATE OF DATE OF DATE OF DATE OF	NO SAMPLING RECEIPT REPORT	UES/TR/23-24/03034 UES/23-24/AAQM/05794-05801 03/07/2023 to 28/07/2023 04/07/2023 to 29/07/2023 31/07/2023 START:04/07/2023 END:31/07/2023		
		SAMPLE DI	ETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING		CUSTOMER 1	REE NO & DATE	.0.13552310211,DATED:07 9.2022	
SAMPLING LOCATION	OFFICE AREA, BANKHI					
DURATION OF SAMPLING	24 HOURS	SAMPLE C	OLLECTED BY	LABORATORY CHEMIS	T	
SAMPLING PROCEDURE	AS PER METHOD REFER	RENCE				
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀) SO ₂ : 30MLX1 NO. PVC RUBBER BLADDER: 1X	BOTTLE, NO2: 301				

Test Method and NAAQM Standard for Ambient Air Quality Monitoring						
Parameter	Method Reference	NAAQM Standard				
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100				
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60				
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80				
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80				
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0				
Mercury (Hg)	EPA Method IO-5					

TEST REPORT								
Date of Sampling	ΡΜ ₁₀ μg/m ³	ΡM _{2.5} μg/m ³	SO₂ µg/m³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³		
03.07.2023	42	24	14	24	0.34	N.D.		
07.07.2023	47	24	18	25	0.65	N.D.		
10.07.2023	45	26	16	26	0.60	N.D.		
14.07.2023	43	26	15	22	0.58	N.D.		
17.07.2023	47	23	15	21	0.72	N.D.		
21.07.2023	44	27	14	24	0.61	N.D.		
24.07.2023	42	27	17	25	0.47	N.D.		
28.07.2023	44	23	14	23	0.25	N.D.		

Terms & conditions

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For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

End of the test report--



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Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT NO LAB REF NO DATE OF SAMPLING DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS		UES/TR/23-24/03830 UES/23-24/AAQM/07270-07277						
								03/08/2023 to	5 28,	/08/2023
				04/08/2023 to 29/08/2023 31/08/2023						
							START:04/08/2023		END:31/08/2023	
						SAMPLE DI	TAILS			
				MONITORING FOR	AMBIENT AIR QUALITY MONITORING CUSTOMER			USTOMER REF. NO. & DATE		.13552310211,DATED:07. 2022
SAMPLING LOCATION	OFFICE AREA, BANKHET	'A			L					
DURATION OF SAMPLING	24 HOURS	SAMPLE C	OLLECTED BY	LABORATORY CHE	MIST					
SAMPLING PROCEDURE	AS PER METHOD REFERE	INCE								
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM10): SO2: 30MLX1 NO. PVC. RUBBER BLADDER: 1X1	BOTTLE, NO2: 301								

Test Method and NAAQM Standard for Ambient Air Quality Monitoring						
Parameter	Method Reference	NAAQM Standard				
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100				
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60				
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80				
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80				
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0				
Mercury (Hg)	EPA Method IO-5					

TEST REPORT								
Date of Sampling	ΡΜ ₁₀ μg/m ³	ΡM _{2.5} μg/m ³	SO₂ µg/m³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³		
03.08.2023	41	26	16	22	0.27	N.D.		
07.08.2023	42	24	20	26	0.51	N.D.		
11.08.2023	44	26	16	24	0.46	N.D.		
14.08.2023	42	24	19	22	0.37	N.D.		
18.08.2023	41	26	21	25	0.58	N.D.		
21.08.2023	39	24	17	23	0.44	N.D.		
25.08.2023	43	28	18	25	0.25	N.D.		
28.08.2023	40	29	16	2.5	0.18	N.D.		

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

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Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.

This is for information as the party has asked for above test(s) only



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Name & Address Of The Customer		REPORT N	REPORT NO		UES/TR/23-24/04650					
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		LAB REF NO DATE OF SAMPLING DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS		UES/23-24/AAQM/08516-08523						
				01/09/2023 to 25/09/2023 02/09/2023 to 26/09/2023 27/09/2023						
							START:02/09/2023		END:27/09/2023	
									SAMPLE DI	ETAILS
				MONITORING FOR	AMBIENT AIR QUALITY	CUSTOMER REF. NO. & DATE		P.O.13552310211, DATED:07 09.2022		
SAMPLING LOCATION	OFFICE AREA, BANKHE	TA			kinnennen					
DURATION OF SAMPLING	24 HOURS	SAMPLE C	OLLECTED BY	LABORATORY CHE	MIST					
SAMPLING PROCEDURE	AS PER METHOD REFER	ENCE								
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM10): SO2: 30MLX1 NO. PVC RUBBER BLADDER: 1X1	BOTTLE, NO2: 30								

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCBGuidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0
Mercury (Hg)	EPA Method IO-5	

TEST REPORT									
Date of Sampling	ΡΜ ₁₀ μg/m ³	ΡΜ _{2.5} μg/m ³	SO₂ µg/m³	NO₂ µg/m³	CO* mg/m ³	Hg ng/m ³			
01.09.2023	41	27	16	28	0.23	N.D.			
04.09.2023	44	26	17	27	0.44	N.D.			
08.09.2023	40	27	15	26	0.37	N.D.			
11.09.2023	39	24	18	27	0.29	N.D.			
15.09.2023	44	26	22	28	0.46	N.D.			
19.09.2023	41	28	19	26	0.38	N.D.			
22.09.2023	44	27	16	24	0.21	N.D.			
25.09.2023	42	28	22	25	0.10	N.D.			

Terms & conditions

The report for publication, arbitration or as legal dispute is forbidden.

Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.

This is for information as the party has asked for above test(s) only.



Lind of the test report



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Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		DATE C DATE C	101101 (01000 (01)	UES/TR/23-24/0533 UES/23-24/AAQM/01307-01314 03/04/2023 to 27/04/2023 04/04/2023 to 28/04/2023 02/05/2023 START:04/04/2023 END:30/04/2023			
		SAMPLE	DETAILS				
MONITORING FOR	AMBIENT AIR QUALITY MO	NITORING	CUSTOMER REF.	CUSTOMER REF. NO. & DATE		P.O.13552310211, DATED:0 09.2022	
SAMPLING LOCATION	PIT OFFICE AREA, BANKH	ETA	стологион-летично-тольков обстаний алектийн				
DURATION OF SAMPLING	24 HOURS	SAMPLE	COLLECTED BY	LABORATORY	CHEMIS	T	
SAMPLING PROCEDURE	AS PER METHOD REFERENCE	E					
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM10): 1X SO2: 30MLX1 NO. PVC BOT RUBBER BLADDER: 1X1 NO	TLE, NO2:	SALEES (1995) 201 703				

Test Method and NAAQM Standard for Ambient Air Quality Monitoring							
Parameter	Method Reference	NAAQM Standard					
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100					
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Par <mark>t 24): 2</mark> 019 CPCB Guidelines VolI	60					
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80					
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80					
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0					
Mercury (Hg)	EPA Method IO-5						

TEST REPORT									
Date of Sampling	ΡΜ ₁₀ μg/m ³	Ρ <mark>Μ</mark> 2.5 μg/m ³	SO₂ µg/m³	NO₂ µg/m³	CO* mg/m ³	Hg ng/m ²			
03.04.2023	64	33	18	26	0.65	N.D.			
06.04.2023	66	29	17	26	0.83	N.D.			
10.04.2023	65	30	18	24	0.76	N.D.			
13.04.2023	63	30	16	25	0.88	N.D.			
17.04.2023	67	33	16	24	0.49	N.D.			
20.04.2023	68	34	17	26	0.67	N.D.			
24.04.2023	63	35	16	24	0.46	N.D.			
27.04.2023	69	31	15	23	0.58	N.D.			

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

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wise agreed with customer.



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---End of the test report-----



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VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS		02/05/2023 to 27/05/2023 31/05/2023 START: 02/05/2023 END: 30/05/2023			
Idition Idition	(0.0.) 430107	SAMPLE	DETAILS				
ONITORING FOR		AMBIENT AIR QUALITY MONITORING CUS			P.O.13552310211, DATED:07 09.2022		
and the second	and a second						
states and the state of the sta	The second se	SAMPLE COLLECTED BY LABORATORY			P		
ONITORING FOR AMPLING LOCATION URATION OF SAMPLING AMPLING PROCEDURE	AMBIENT AIR QUALITY PIT OFFICE AREA, BAN 24 HOURS AS PER METHOD REFERE	ikheta Sample	CUSTOMER REF.		09.20	022	

Test Method and NAAQM Standard for Ambient Air Quality Monitoring							
Parameter	Method Reference	NAAQM Standard					
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100					
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelines VolI	60					
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80					
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80					
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0					
Mercury (Hg)	EPA Method IO-5						

TEST REPORT									
Date of Sampling	ΡM ₁₀ μg/m ³	Ρ <mark>Μ</mark> _{2.5} μg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³			
01.05.2023	66	34	19	27	0.77	N.D.			
05.05.2023	69	30	18	27	0.94	N.D.			
08.05.2023	68	31	19	25	0.82	N.D.			
12.05.2023	66	32	17	26	0.70	N.D.			
15.05.2023	69	34	18	25	0.58	N.D.			
19.05.2023	70	35	19	27	0.71	N.D.			
22.05.2023	65	36	17	25	0.50	N.D.			
26.05.2023	72	32	16	24	0.63	N.D.			

Terms & conditions

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Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer This is for information as the party has asked for above test(s) only.



-End of the test report-----



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Custo TO,	REPORT NO LAB REF NO DATE OF SAMPLING DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS		UES/TR/23-24/01991 UES/23-24/AAQM/04310-04317 02/06/2023 to 30/06/2023 03/06/2023 to 01/07/2023							
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107										
							04/07/2023			
							START:03/06/2023		END:04/07/2023	
					SAMPLE	DETAILS	9.2			
			MONITORING FOR	AMBIENT AIR QUALITY M	ONITORING	CUSTOMER REF.	NO 6 DATE	P.O.	13552310211, DATED:07	
SAMPLING LOCATION	PIT OFFICE AREA, BANK					9.2022				
DURATION OF SAMPLING	24 HOURS		COLLECTED BY LABORATORY C							
SAMPLING PROCEDURE	AS PER METHOD REFEREN	CE CE	COLLECTED BY	LABORATORY (CHEMIST	r				
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM10): 1 SO2: 30MLX1 NO. PVC BC RUBBER BLADDER: 1X1 NO.	X1 NO., FIL DTTLE, NO ₂ :	TER PAPER (PM2.5 30MLX1 NO. PVC): 1X1 NO. BOTTLE						

Test Method and NAAQM Standard for Ambient Air Quality Monitoring

Parameter	Method Reference	NAAQM
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB	Standard
Particulate Matter size less	Guidelines VolI	100
than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182 (Part 10):1999, RA 2003	00
Mercury (Hg)	EPA Method 10-5	4.0
and the second		

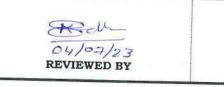
TEST REPORT										
Date of Sampling	ΡΜ ₁₀ μg/m ³	PM _{2.5} μg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	CO* mg/m ³	Hg				
02.06.2023	65	32	17	26		ng/m ³				
05.06.2023	68	29	19		0.61	N.D.				
09.06.2023	67	30		2.5	0.84	N.D.				
12.06.2023	-		18	24	0.73	N.D.				
16.06.2023	65	31	16	27	0.62	N.D.				
- CONTRACTOR OF	68	33	17	24	0.44	N.D.				
19.06.2023	69	34	18	26	0.64					
23.06.2023	60	31	15	22		N.D.				
30.06.2023	62	22	in		0.43	N.D.				
marks: * Duratio			16	23	0.51	N.D.				

Terms & conditions

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Test sample will be retained for 15 days after issue of test report unless otherwise agri-

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End of the test report------End of the test report-----

AN ISO : 9001:2015 / ISO: 14001:2015 / ISO 45001:2018 CERTIFIED LABORATORY

ed with customer.



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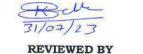
Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		LAB RE DATE C DATE C DATE C	REPORT NO UES/TR/23-24/03035 LAB REF NO UES/23-24/AAQM/05802-05809 DATE OF SAMPLING 03/07/2023 to 28/07/2023 DATE OF RECEIPT 04/07/2023 to 29/07/2023 DATE OF REPORT 31/07/2023 DATE OF ANALYSIS START: 04/07/2023			05802-05809 8/07/2023
	An of any particular second	SAMPLE	DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MON		CUSTOMER REF. NO. & DATE		P.O.13552310211,DATED:(09.2022	
SAMPLING LOCATION	PIT OFFICE AREA, BANKHE					
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED 1		LABORATORY CHEMIST		
SAMPLING PROCEDURE	AS PER METHOD REFERENCE					101110-0012-00110-101100-001100-001100-001
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTT RUBBER BLADDER: 1X1 NO.					

Test Method and NAAQM Standard for Ambient Air Quality Monitoring						
Parameter	Method Reference	NAAQM Standard				
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100				
Particulate Matter size less than 2.5 microns (PM2.5)	IS 5182 (Part 24): 2019CPCBGuidelines VolI	60				
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80				
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80				
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0				
Mercury (Hg)	EPA Method IO-5					

TEST REPORT								
Date of Sampling	ΡΜ ₁₀ μg/m ³	ΡM _{2.5} μg/m ³	SO₂ µg/m³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m ³		
03.07.2023	43	24	- 18	22	0.56	N.D.		
07.07.2023	44	26	16	23	0.72	N.D.		
10.07.2023	43	29	15	24	0.61	N.D.		
14.07.2023	45	26	16	23	0.54	N.D.		
17.07.2023	46	24	15	25	0.32	N.D.		
21.07.2023	47	29	19	22	0.58	N.D.		
24.07.2023	45 -	27	18	23	0.34	N.D.		
28.07.2023	44	28	15	25	0.48	N.D.		

Terms & conditions

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End of the test report-



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Name & Address Of The Customer TO,		REPORT	REPORT NO		UES/TR/23-24/03939			
		LAB REF NO		UES/23-24/AAQM/07492-7499				
HINDALCO INDUST	Contraction of the second second second second	DATE OF SAMPLING		03/08/2023	to 2	8/08/2023		
GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS		04/08/2023 to 29/08/2023 31/08/2023				
							START:04/08/2023 END:31/0	
						SAMPLE	DETAILS	
MONITORING FOR	AMBIENT AIR QUALITY 1	MONITORING	CUSTOMER REF.	NO. & DATE	P.O.13552310211, DATED:0 09.2022			
SAMPLING LOCATION	PIT OFFICE AREA, BANK	KHETA						
DURATION OF SAMPLING	24 HOURS	COLLECTED BY	LABORATORY CHEMIST					
SAMPLING PROCEDURE	AS PER METHOD REFEREN	NCE						
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM10): SO2: 30MLX1 NO. PVC E RUBBER BLADDER: 1X1 N	NO2:	Carpender (Carpender) (Carpender)					

Test Method and NAAQM Standard for Ambient Air Quality Monitoring					
Parameter	Method Reference	NAAQM Standard			
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100			
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelines VolI	60			
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80			
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80			
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0			
Mercury (Hg)	EPA Method IO-5				

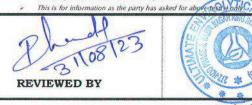
TEST REPORT								
Date of Sampling	ΡΜ ₁₀ μg/m ³	Ρ <mark>Μ</mark> 2.5 μg/m ³	SO₂ µg/m³	NO₂ µg/m³	CO* mg/m ³	Hg ng/m ³		
03.08.2023	43	27	18	25	0.34	N.D.		
07.08.2023	39	24	19	25	0.52	N.D.		
11.08.2023	40	28	18	24	0.47	N.D.		
14.08.2023	39	27	21	26	0.30	N.D.		
18.08.2023	42	25	19	24	0.16	N.D.		
21.08.2023	39	26	16	23	0.39	N.D.		
25.08.2023	44	30	18	23	0.19	N.D.		
28.08.2023	41	30	21	25	0.24	N.D.		

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

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Test sample will be retained for 15 days after issue of test upport miless otherwise agreed with customer.



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Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT NO LAB REF NO DATE OF SAMPLING DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS		UES/TR/23-24/04651 UES/23-24/AAQM/08524-08531 01/09/2023 to 25/09/2023 02/09/2023 to 26/09/2023 27/09/2023		
				START: 02/09/2023 END: 27/09/2		END:27/09/2023
		SAMPLE	DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY M	ONITORING	CUSTOMER REF.	NO. & DATE	P.O.13552310211,DATED: 09.2022	
SAMPLING LOCATION	PIT OFFICE AREA, BANK	HETA				
DURATION OF SAMPLING	24 HOURS	SAMPLE	COLLECTED BY	LABORATORY CHEMIST		
SAMPLING PROCEDURE	AS PER METHOD REFEREN	CE				
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1 SO ₂ : 30MLX1 NO. PVC BC RUBBER BLADDER: 1X1 N	OTTLE, NO2:				

Test Method and NAAQM Standard for Ambient Air Quality Monitoring						
Parameter	Method Reference	NAAQM Standard				
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100				
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelines VolI	60				
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80				
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80				
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0				
Mercury (Hg)	EPA Method IO-5					

TEST REPORT								
Date of Sampling	ΡΜ ₁₀ μg/m ³	ΡM _{2.5} μg/m ³	SO₂ µg/m³	NO₂ µg/m³	CO* mg/m ³	Hg ng/m ³		
01.09.2023	39	25	16	26	0.29	N.D.		
04.09.2023	44	27	16	24	0.43	N.D.		
08.09.2023	40	26	17	27	0.41	N.D.		
11.09.2023	42	25	15	27	0.25	N.D.		
15.09.2023	40	27	21	27	0.11	N.D.		
19.09.2023	41	26	20	25	0.36	N.D.		
22.09.2023	43	28	16	25	0.12	N.D.		
25.09.2023	44	29	18	27	0.18	N.D.		

Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

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This is for information as the party has asked for above test(s) only.



Annexure – 6A



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Name & Address Of The Customer To,	÷	REPORT NO.	UES/TR/23-24/0577 UES/23-24/FE/01423-01425 26/04/2023		
HINDALCO INDUSTRIES L	and a second statement of the second statement of the	LAB REF NO. DATE OF SAMPLING			
PALMA – IV/5, MILUPARA U/G COAL MINE, VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF RECEIPT 27/04/2023			
		DATE OF REPORT	02/05/2023		
		DATE OF ANALYSIS	START:27/04/2023	END:02/05/2023	
	SAM	LE DETAILS			
MONITORING FOR	FUGITIVE EMISSIC	DN .	2	6	
SAMPLING LOCATION	Gare Palma-IV/5	COAL MINE			
DURATION OF SAMPLING	8 HOURS				
SAMPLE COLLECTED BY	LABORATORY CHEMI	ST			
SAMPLING PROCEDURE	AS PER METHOD RE	FERENCE			
SAMPLE QUANTITY/PACKING	GMF FILTER PAPER (8 X 10 INCH): 1X10 NO.				

TEST REPORT								
Locations	Unit	Suspended Particulate Matter SPM	Moef& CC Notification (350-1)	Method Reference				
Weighbridge area Kondkel	µg/m ³	149	500					
Workshop area Kondkel	μg/m ³	168	500	EPA Method IO-2.1				
Stowing plant area kondkel	µg/m ³	126	500					

REMARKS:

Terms & conditions

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Name & Address Of The Customer		REPORT NO. UES/TR/23-24/01296				
То,		LAB REF NO. UES/23-24/FE/02539-02		9-02541		
HINDALCO INDUSTRIES I	and the second second second second second second	DATE OF SAMPLING	19/05/2023	1		
PALMA – IV/5, MILUPARA U/G COAL MINE, VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF RECEIPT 20/05/2023				
		DATE OF REPORT	24/05/2023			
		DATE OF ANALYSIS	START:20/05/2023	END: 24/05/2023		
		PLE DETAILS				
MONITORING FOR	FUGITIVE EMISSIC	DN .				
SAMPLING LOCATION	Gare Palma-IV/5	COAL MINE				
DURATION OF SAMPLING	8 HOURS	8 HOURS				
SAMPLE COLLECTED BY	LABORATORY CHEMI	ST				
SAMPLING PROCEDURE	AS PER METHOD REFERENCE					
SAMPLE QUANTITY/PACKING	GMF FILTER PAPER (8 X 10 INCH): 1X10 NO.					

TEST REPORT						
Locations	Unit	Suspended Particulate Matter SPM	Moef& CC Notification (350-1)	Method Reference		
Weighbridge area Kondkel	µg/m³	152	500			
Workshop area Kondkel	µg/m ³	176	500	EPA Method IO-2.1		
Stowing plant area kondkel	µg/m ³	134 ⁻	500			

REMARKS:

Terms & conditions

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- > Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- > This is for information as the party has asked for above test(s) only.



-----End of the test report-----



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Customer		REPORT NO. UES/TR/23-24/02030			
То,		LAB REF NO.	UES/23-24/FE/0441	9-04421	
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE, VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF SAMPLING	29/06/2023		
		DATE OF RECEIPT 30/06/2023			
		DATE OF REPORT	04/07/2023		
		DATE OF ANALYSIS	START: 30/06/2023	END: 04/07/2023	
The second s		PLE DETAILS			
MONITORING FOR	FUGITIVE EMISSIC	DN			
SAMPLING LOCATION	Gare Palma-IV/5	COAL MINE			
DURATION OF SAMPLING	8 HOURS				
SAMPLE COLLECTED BY	LABORATORY CHEMIST				
SAMPLING PROCEDURE	AS PER METHOD REFERENCE				
SAMPLE QUANTITY/PACKING	GMF FILTER PAPER (8 X 10 INCH): 1X10 NO.				

TEST REPORT						
Locations	Unit	Suspended Particulate Matter SPM	Moef& CC Notification (350-1)	Method Reference		
Weighbridge area Kondkel	µg/m³	161	500			
Workshop area Kondkel	ug/m ² 178 500		EPA Method IO-2.1			
Stowing plant area kondkel	µg/m ³	137	500			

REMARKS:

Terms & conditions

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-----End of the test report-----



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Customer		REPORT NO.	UES/TR/23-24/03074	4
To, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE, VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		LAB REF NO.	UES/23-24/FE/0591:	2-05914
		DATE OF SAMPLING	26/07/2023	
		DATE OF RECEIPT	DATE OF RECEIPT 27/07/2023	
		DATE OF REPORT	31/07/2023	
		DATE OF ANALYSIS	START:27/07/2023	END: 31/07/2023
		PLE DETAILS		
MONITORING FOR	FUGITIVE EMISSIC	DN .		
SAMPLING LOCATION	Gare Palma-IV/5	COAL MINE		-
DURATION OF SAMPLING	8 HOURS			
SAMPLE COLLECTED BY	LABORATORY CHEMIST			
SAMPLING PROCEDURE	AS PER METHOD REFERENCE			
SAMPLE QUANTITY/PACKING	GMF FILTER PAPER	(8 X 10 INCH): 1X	10 NO.	

TEST REPORT						
Locations	Unit	Suspended Particulate Matter SPM	Moef& CC Notification (350-1)	Method Reference		
Weighbridge area Kondkel	µg/m³	160	500			
Workshop area Kondkel	µg∕m³	185 500		EPA Method IO-2.1		
Stowing plant area kondkel	µg/m ³	131	500			

REMARKS:

Terms & conditions

- > The report for publication, arbitration or as legal dispute is forbidden.
- > Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- > This is for information as the party has asked for above test(s) only.



-----End of the test report------End of the test report------



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Customer		REPORT NO.	UES/TR/23-24/03902	2
To, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE, VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		LAB REF NO.	UES/23-24/FE/0741	7-07419
		DATE OF SAMPLING	23/08/2023	
		DATE OF RECEIPT	24/08/2023	
		DATE OF REPORT	31/08/2023	
		DATE OF ANALYSIS	START:24/08/2023	END: 28/08/2023
	SAMI	LE DETAILS		
MONITORING FOR	FUGITIVE EMISSION			
SAMPLING LOCATION	Gare Palma-IV/5	COAL MINE		
DURATION OF SAMPLING	8 HOURS			
SAMPLE COLLECTED BY	LABORATORY CHEMIST			
SAMPLING PROCEDURE	AS PER METHOD REFERENCE			
SAMPLE QUANTITY/PACKING	GMF FILTER PAPER	GMF FILTER PAPER (8 X 10 INCH): 1X10 NO.		

TEST REPORT						
Locations	Unit	Suspended Particulate Matter SPM	Moef& CC Notification (350-1)	Method Reference		
Weighbridge area Kondkel	µg/m³	138	500			
Workshop area Kondkel	µg/m³	161	500	EPA Method IO-2.1		
Stowing plant area kondkel	µg/m ³	109	500			

REMARKS:

Terms & conditions

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-----End of the test report-----End of the test report-----



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Name & Address Of The Customer		REPORT NO.	UES/TR/23-24/04693	1
To, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE, VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		LAB REF NO.	UES/23-24/FE/08638	8-08640
		DATE OF SAMPLING	21/09/2023	
		DATE OF RECEIPT 22/09/2023		
		DATE OF REPORT	27/09/2023	
		DATE OF ANALYSIS	START:22/09/2023	END:26/09/2023
		PLE DETAILS		
MONITORING FOR	FUGITIVE EMISSIC	N		
SAMPLING LOCATION	Gare Palma-IV/5	COAL MINE		
DURATION OF SAMPLING	8 HOURS			
SAMPLE COLLECTED BY	IST			
SAMPLING PROCEDURE	AS PER METHOD REFERENCE			
SAMPLE QUANTITY/PACKING	GMF FILTER PAPER	GMF FILTER PAPER (8 X 10 INCH): 1X10 NO.		

TEST REPORT						
Locations	Unit	Suspended Particulate Matter SPM	Moef& CC Notification (350-1)	Method Reference		
Weighbridge area Kondkel	µg/m ³	140	500			
Workshop area Kondkel	μg/m ³	165	500	EPA Method IO-2.1		
Stowing plant area kondkel	µg/m ³	118	500			

REMARKS:

Terms & conditions

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-----End of the test report-----

Annexure – 6B

Photographs of Fixed type and truck mounted water sprinklers at Gare Palma IV/5 Underground Coal Mine of M/s Hindalco Industries Limited

















Annexure-7



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Name & Address of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE, VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		REPORT NO. LAB REF NO. DATE OF REPORT DATE OF SAMPLING	UES/TR/23-24/0561 UES/23-24/N/01397-01406 02/05/2023 26/04/2023 to 27/04/2023		
	SI	MPLE DETAILS			
MONITORING FOR	NOISE LEVEL MONITORING	NOISE LEVEL MONITORING			
CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED:07.09	9.2022			
SAMPLING LOCATION	INSIDE COAL MINE & OUTSIDE COAL MINE (AS DESCRIBED BELOW)				
SAMPLE COLLECTED BY	LABORATORY CHEMIST				
SAMPLE QUANTITY/ PACKING	NOT APPLICABLE		Nora.		

	Т	EST REF	PORT				
	RESULT		LIMIT (INDUSTRIAL ZONE)				
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME		
OFFICE AREA, MILUPARA	dB(A)	61	49		9		
MILUPARA AREA NEAR INCLINE	dB(A)	65	55	75	70		
BUNKER AREA, MILUPARA	dB(A)	67	56				
DG SET AREA, KONDKEL	dB(A)	60	49				
MILUPARA MINES WEIGHBRIDGE	dB(A)	66	54				
OFFICE AREA, KONDKEL	dB(A)	59	47				
BUNKER AREA, KONDKEL	dB(A)	62	51				
		RESULT		RESULT		LIMIT (RESI	DENTIAL ZONE)
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME			
Outside Plant					10		
SIDARPARA VILLAGE (GOVT. SCHOOL)	dB(A)	50	41	55	45		
HIL COLONY, KONDKEL	dB(A)	48	37	33	45		
HIL STAFF QUARTER, MILUPARA	dB(A)	51	39				

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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- > Test sample will be retained for 15days after issue of test report unless otherwise agreed with customer.
- > This is for information as the party has asked to above test(s) only.

Sterch 02/05/23

REVIEWED BY



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For ULTIMATE ENVIROLYTICAL SOLUTIONS

-----End of the test report-----



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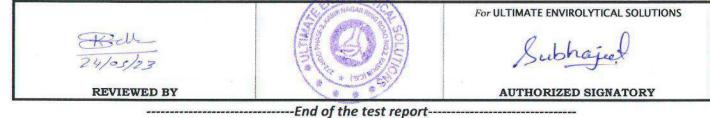
Name & Address of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE, VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		REPORT NO. LAB REF NO. DATE OF REPORT DATE OF SAMPLING	UES/TR/23-24/0907 UES/23-24/N/02114-02123 24/05/2023 19/05/2023 - 20/05/2023		
	SZ	MPLE DETAILS			
MONITORING FOR	NOISE LEVEL MONITORING	NOISE LEVEL MONITORING			
CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED:07.09	9.2022			
SAMPLING LOCATION	OCATION INSIDE COAL MINE & OUTSIDE COAL MINE (AS DESCRIBED BELOW)				
SAMPLE COLLECTED BY	LABORATORY CHEMIST				
SAMPLE QUANTITY/ PACKING	NOT APPLICABLE				

	TI	EST REI	PORT		
A BUT PERSON SUBJECT	UNIT	RES	BULT	LIMIT (INDUSTRIAL ZONE)	
LOCATION		DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
OFFICE AREA, MILUPARA	dB(A)	62	50	Testing I	
MILUPARA AREA NEAR INCLINE	dB(A)	66	56		70
BUNKER AREA, MILUPARA	dB(A)	68	57		
DG SET AREA, KONDKEL	dB(A)	61	50	75	
MILUPARA MINES WEIGHBRIDGE	dB(A)	67	55		
OFFICE AREA, KONDKEL	dB(A)	60	48		
BUNKER AREA, KONDKEL	dB(A)	63	52		
	RES		SULT	LIMIT (RESIDENTIAL ZONE)	
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
Outside Plant	- and a constant				45
SIDARPARA VILLAGE (GOVT. SCHOOL)	dB(A)	51	42	55	
HIL COLONY, KONDKEL	dB(A)	49	38		
HIL STAFF QUARTER, MILUPARA	dB(A)	52	40		

REMARKS: RESULTS ARE AS ABOVE

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Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE, VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		REPORT NO. LAB REF NO. DATE OF REPORT	UES/TR/23-24/02014 UES/23-24/N/04394-04403 04/07/2023	
		DATE OF SAMPLING	28/06/2023	
	SZ	MPLE DETAILS		
MONITORING FOR	NOISE LEVEL MONITORING			
CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED:07.09	9.2022	n per serie de la companya de la com La companya de la comp	
SAMPLING LOCATION	INSIDE COAL MINE & OUTSIDE	COAL MINE (AS DESCRIP	BED BELOW)	
SAMPLE COLLECTED BY	LABORATORY CHEMIST			
SAMPLE QUANTITY/ PACKING	NOT APPLICABLE			

	TI	EST REI	PORT		
ta des det de la seguera :		RESULT		LIMIT (INDUSTRIAL ZONE)	
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
OFFICE AREA, MILUPARA	dB(A)	61	51		
MILUPARA AREA NEAR INCLINE	dB(A)	63	- 55		70
BUNKER AREA, MILUPARA	dB(A)	65	56		
DG SET AREA, KONDKEL	dB(A)	60	49	75	
MILUPARA MINES WEIGHBRIDGE	dB(A)	63	53		
OFFICE AREA, KONDKEL	dB(A)	59	48		
BUNKER AREA, KONDKEL	dB(A)	61	52		
		RESULT		LIMIT (RESIDENTIAL ZONE)	
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
Outside Plant					
SIDARPARA VILLAGE (GOVT. SCHOOL)	dB(A)	50	41	FC	45
HIL COLONY, KONDKEL	dB(A)	48	38	55	40
HIL STAFF QUARTER, MILUPARA	dB(A)	49	40		

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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> This is for information as the party has asked for above test(s) only.

For ULTIMATE ENVIROLYTICAL SOLUTIONS Rede 04/07/23 **REVIEWED BY** AUTHORIZED SIGNATORY

-----End of the test report-----



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		REPORT NO.	UES/TR/23-24/03116 UES/23-24/N/06013-06026 31/07/2023	
		DATE OF REPORT		
		DATE OF SAMPLING	27/07/2023	
		SAMPLE DETAILS		
MONITORING FOR	NOISE LEVEL MONITORING			
CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED:07.0	09.2022		
SAMPLING LOCATION	INSIDE COAL MINE & OUTSIDE	E COAL MINE (AS DESCRIE	BED BELOW)	
SAMPLE COLLECTED BY	LABORATORY CHEMIST			
SAMPLE QUANTITY/ PACKING	NOT APPLICABLE	a solar second a second		

TEST REPORT								
SR. NO.			RE	SULT	LIMIT (INDUSTRIAL ZONE)			
	LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME		
1	NEAR OFFICE AREA, MILUPARA	dB(A)	62	52				
2	NEAR HIL STAFF QUARTER, MILUPARA	dB(A)	53	45		70		
3	NEAR HIL COLONY, KONDKEL	dB(A)	51	43				
4	NEAR ETP AREA, KONDKEL	dB(A)	58	49				
5	NEAR INCLINE AREA MILUPARA	dB(A)	64	56	76			
6	NEAR BUNKER AREA, MILUPARA	dB(A)	66	57	75			
7	NEAR DG SET AREA, KONDKEL	dB(A)	61	50				
8	NEAR WEIGHBRIDGE AREA MILUPARA	dB(A)	64	54				
9	NEAR OFFICE AREA, KONDKEL	dB(A)	60	49				
10	NEAR BUNKER AREA, KONDKEL	dB(A)	62	53				
			RESULT		LIMIT (RESIDENTIAL ZONE			
	LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME		
Outs	side Mines Premises							
1	NEAR GOVT. SCHOOL SIDARPARA VILLAGE	dB(A)	51	42	55	45		
2	NEAR GOVT. SCHOOL KONDKEL VILLAGE	dB(A)	50	41				

REMARKS: RESULTS ARE AS ABOVE

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This is for information as the party has asked for above test(s) only.

Bur 31/07/23



For ULTIMATE ENVIROLYTICAL SOLUTIONS

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-----End of the test report-----



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Name & Address of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		REPORT NO. LAB REF NO. DATE OF REPORT	UES/TR/23-24/03869 UES/23-24/N/07372-07383 31/08/2023 23/08/2023 to 24/08/2023	
		DATE OF SAMPLING		
	5	SAMPLE DETAILS		
MONITORING FOR	NOISE LEVEL MONITORING			
CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED:07.0	09.2022		
SAMPLING LOCATION	INSIDE COAL MINE & OUTSID	E COAL MINE (AS DESCRII	BED BELOW)	
SAMPLE COLLECTED BY	LABORATORY CHEMIST			
SAMPLE QUANTITY/ PACKING	NOT APPLICABLE			

		TI	EST REF	PORT			
SR.			RES	SULT	LIMIT (INDUSTRIAL ZONE)		
NO.	LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME	
1	NEAR OFFICE AREA, MILUPARA	dB(A)	61	50			
2	NEAR HIL STAFF QUARTER, MILUPARA	dB(A)	52	44		70	
3	NEAR HIL COLONY, KONDKEL	dB(A)	63	54			
4	NEAR ETP AREA, KONDKEL	dB(A)	65	57			
5	NEAR INCLINE AREA MILUPARA	dB(A)	62	51	75		
6	NEAR BUNKER AREA, MILUPARA	dB(A)	59	51	75		
7	NEAR DG SET AREA, KONDKEL	dB(A)	54	46			
8	NEAR WEIGHBRIDGE AREA MILUPARA	dB(A)	63	54			
9	NEAR OFFICE AREA, KONDKEL	dB(A)	65	55			
10	NEAR BÜNKER AREA, KONDKEL	dB(A)	67	58			
			RESULT		LIMIT (RESIDENTIAL ZON		
	LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME	
Outs	side Mines Premises						
1	NEAR GOVT. SCHOOL SIDARPARA VILLAGE	dB(A)	50	40	55	45	
2	NEAR GOVT. SCHOOL KONDKEL VILLAGE	dB(A)	49	41			

REMARKS: RESULTS ARE AS ABOVE

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For ULTIMATE ENVIROLYTICAL SOLUTIONS 31108 AUTHORIZED SIGNATORY **REVIEWED BY** -End of the test report-



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		REPORT NO. LAB REF NO.	UES/TR/23-24/04675 UES/23-24/N/08610-08621			
		DATE OF REPORT	27/09/2023			
		DATE OF SAMPLING	21/09/2023 to 23/09/2023			
		SAMPLE DETAILS				
MONITORING FOR	NOISE LEVEL MONITORING					
CUSTOMER REF. NO. & DATE	P.O.13552310212,DATED:07.0	09.2022				
SAMPLING LOCATION	INSIDE COAL MINE & OUTSIDE	E COAL MINE (AS DESCRIE	BED BELOW)			
SAMPLE COLLECTED BY	LABORATORY CHEMIST					
SAMPLE QUANTITY/ PACKING	NOT APPLICABLE	NOT APPLICABLE				

	TEST REPORT							
SR. NO.	LOCATION		RESULT		LIMIT (INDUSTRIAL ZONE)			
		UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME		
1	NEAR OFFICE AREA, MILUPARA	dB(A)	62	51				
2	NEAR HIL STAFF QUARTER, MILUPARA	dB(A)	51	40				
3	NEAR HIL COLONY, KONDKEL	dB(A)	53	42		70		
4	NEAR ETP AREA, KONDKEL	dB(A)	66	58				
5	NEAR INCLINE AREA MILUPARA	dB(A)	63	52				
6	NEAR BUNKER AREA, MILUPARA	dB(A)	61	53	75			
7	NEAR DG SET AREA, KONDKEL	dB(A)	57	45				
8	NEAR WEIGHBRIDGE AREA MILUPARA	dB(A)	64	55				
9	NEAR OFFICE AREA, KONDKEL	dB(A)	66	56				
10	NEAR BUNKER AREA, KONDKEL	dB(A)	69	59				
			RESULT		LIMIT (RESIDENTIAL ZON			
	LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME		
Outs	ide Mines Premises							
1	NEAR GOVT. SCHOOL SIDARPARA VILLAGE	dB(A)	51	39	55	45		
2	NEAR GOVT. SCHOOL KONDKEL VILLAGE	dB(A)	47	40		.5		

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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This is for information as the party has asked for above test(s) only





ForULTIMATE ENVIROLYTICAL SOLUTIONS

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Annexure-8



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zto Name & Address Of The TO ,	Customer	Report No Lab Ref No	UES/TR/23 UES/23-24	the second se		
	STRIES LIMITED, GAR		Date Of Sampling	26/04/202	3	
and a standard for the second	LUPARA U/G COAL M	INE,	Date Of Receipt	27/04/202	3	an a
VILLAGE - MILUF	VIAG ENGINE.		Date Of Report	02/05/202	5/2023	
BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107			Date Of Analysis	START: 27/04/2023 END: 01/05/20		
		SAMP	LE DETAILS			
Sample Type	WASTE WATER		Customer Ref. No.	& Date	P.O.13552 2022	2310212, DATED:07.09
Customer Sample ID	ETP INLET, KONDKEL		Sample Condition at Receipt		Ok	
Packing Of Sample 3 L X 1 NO. PVC CAN 1 L X 1 NO. FVC CAN 1 L X 1 NO. GLASS BOTTLE Sealed		Sample Collected 1	φy	Laboratory Chemist		
Sampling Procedure IS: 3025 (PART-I): 1987 RA 2003; APHA 22 ND ED. 2021, 1060-B, 1-39		Quantity Received		Approx. 5Ltr.		

			TEST REPORT		
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable
3	Temperature	°C	АРНА 22 nd Ed.2012,2130-В,2-13	Shall not exceed 5°C above the receiving water temperature	25.3
4	На	-	APHA 22 nd Ed.2012,4500-H*-B,4-92	5.5 to 9.0	7.28
5	Total Residual Chlorine	mg/L	АРНА 22 nd Ed.2012,4500-C1-G, 4 - 69	1.0	N.D.
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	85.9
7	Dissolved Phosphate (as P)	mg/L	APHA 22 nd Ed.2012,4500-P-C, 4-153	5.0	N.D.
8	Fluoride (as F)	mg/L	APHA 22nd Ed. 2012, 4500-F-B&D, 4-84&87	2.0	0.23
9	Lead (as Pb)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	N.D.
10	Zinc (as Zn)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	5.0	0.17
11	Copper (as Cu)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	3.0	N.D.
12	Cadmium (as Cd)	mg/L	APHA 22 nd Ed.2012,3500-Cd, 3-105	2.0	N.D.
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed. 2012, 3112-B, 3-23	0.01	N.D.
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.
15	Selenium (as Se)	mg/L	APHA 22 nd Ed. 2012, 3114-C, 3-38	0.05	N.D.
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B,5-17	250	136.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	22.6
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003	10.0	N.D.
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.

Note: mg/lit.: milligram per liter, N.D. - Not Detected.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

The report for publication, arbitration or as legal dispute is forbidden. Test sample will be retained for 15 days after issue of test report prices otherwise agreed with customer. This is for information as the party has asked for above test (spars)

For ULTIMATE ENVIROLYTICAL SOLUTIONS Holl -Subhajeet 02/05/23 AUTHORIZED SIGNATORY **REVIEWED BY** -End of the test report------



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

zto Name & Address Of The Customer To, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE, VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		Report No Lab Ref No Date Of Sampling Date Of Receipt Date Of Report Date Of Analysis LE DETAILS	UES/23-24 19/05/202 20/05/202 24/05/202	UES/TR/23-24/0908 UES/23-24/W/02124 19/05/2023 20/05/2023 24/05/2023 START:20/05/2023 END: 24/05/20		
Sample Type	WASTE WATER		Customer Ref. No.	& Date	P.O.13552 2022	2310212,DATED:07.09.
Customer Sample ID	ETP INLET, KONDKEL		Sample Condition a	at Receipt	Ok	
Packing Of Sample 3 L X 1 NO. FVC CAN 1 L X 1 NO. FVC CAN 1 L X 1 NO. CLASS BOTTLE Sealed			Sample Collected	ьу	Laboratory Chemist	
Sampling Procedure IS: 3025 (PART-I): 1987 RA 2003; APHA 22 ^{MD} ED. 2021, 1060-B, 1-39			Quantity Received Approx. 5Ltr.			īltr.

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable
3	Temperature	•c	арна 22 nd ed.2012,2130-в,2-13	Shall not exceed 5'C above the receiving water temperature	25.4
4	рН	-	APHA 22 nd Ed.2012,4500-H ⁺ -B,4-92	5.5 to 9.0	7.30
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-C1-G, 4 - 69	1.0	N.D.
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	86.1
7	Dissolved Phosphate (as P)	mg/L	APHA 22 nd Ed.2012,4500-P-C, 4-153	5.0	N.D.
8	Fluoride (as F)	mg/L	APHA 22 nd Ed.2012,4500-F-B&D,4-84&87	2.0	0.25
9	Lead (as Pb)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	N.D.
10	Zinc (as Zn)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	5.0	0.18
11	Copper (as Cu)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	3.0	N.D.
12	Cadmium (as Cd)	mg/L	APHA 22 nd Ed.2012,3500-Cd, 3-105	2.0	N.D.
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-B, 3-23	0.01	N.D.
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B,5-17	250	140.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	23.3
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003	10.0	N.D.
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

- The report for publication, arbitration or as legal dispute is forbidden.

Fest sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.

This is for information as the party has asked for above test(s) only.OL For ULTIMATE ENVIROLYTICAL SOLUTIONS Red 24/05/23 **REVIEWED BY** AUTHORIZED SIGNATORY

-----End of the test report-----



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

tto Name & Address Of The Customer To, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE, VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107			Report No Lab Ref No Date Of Sampling Date Of Receipt Date Of Report Date Of Analysis	UES/TR/23-24/02015 UES/23-24/W/04404 29/06/2023 30/06/2023 04/07/2023 START:30/06/2023 END: 04/07/2023			
		SAMP	LE DETAILS				
Sample Type	WASTE WATER		Customer Ref. No.	& Date	P.O.13552 2022	310212, DATED:07.09	
Customer Sample ID	ETP INLET, KONDKEL		Sample Condition at Receipt		Ok Laboratory Chemist		
Packing Of Sample 3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE Sealed		Sealed	Sample Collected 1	by			
Sampling Procedure IS: 3025 (PART-I): 1987 RA 2003; APHA 22 ND ED. 2021, 1060-B, 1-39		Quantity Received	**************************************	Approx. 5	iLtr.		

	TEST REPORT									
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT					
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1					
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-1	Agreeabl					
3	Temperature	°C	арна 22 nd ed.2012,2130-в,2-13	Shall not exceed 5°C above the receiving water temperature	25.5					
4	pH		APHA 22 nd Ed.2012,4500-H'-B,4-92	5.5 to 9.0	7.27					
5	Total Residual Chlorine	mg/L	APHA 22 rd Ed.2012,4500-C1-G, 4 - 69	1.0	N.D.					
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	67.2					
7	Dissolved Phosphate (as P)	mg/L	APHA 22 nd Ed.2012,4500-P-C, 4-153	5.0	N.D.					
8	Fluoride (as F)	mg/L	APHA 22 nd Ed.2012,4500-F-B&D,4-84&87	2.0	0.22					
9	Lead (as Pb)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	N.D.					
10	Zinc (as Zn)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	5.0	0.18					
11	Copper (as Cu)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	3.0	N.D.					
12	Cadmium (as Cd)	mg/L	APHA 22 nd Ed.2012,3500-Cd, 3-105	2.0	N.D.					
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-B, 3-23	0.01	N.D.					
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.					
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.					
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.					
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B,5-17	250	116.0					
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	19.4					
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003	10.0	N.D.					
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.					

Note: mg/lit.: milligram per liter, N.D. - Not Detected.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

The report for publication, arbitration or as legal dispute is forbidden.

Test sample will be retained for 15 days after issue of test report antess otherwise agreed with customer. This is for information as the party has asked for above test(scont).



-End of the test report-----



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

rteName& Address Of The Customer To, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107			Report No Lab Ref No Date Of Sampling Date Of Receipt Date Of Report Date Of Analysis	UES/23-24 26/07/202 27/07/202 31/07/202	UES/TR/23-24/03059 UES/23-24/W/05896 26/07/2023 27/07/2023 31/07/2023 START:27/07/2023 <i>END:31</i> /07/2023		
		SAMP	LE DETAILS			an and the second second second second second	
Sample Type	WASTE WATER		Customer Ref. No.	& Date	P.O.13552 2022	2310212,DATED:07.09	
Customer Sample ID	ETP INLET, KONDKEL		Sample Condition a	at Receipt	Ok		
Packing Of Sample 31 X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE Sealed		Sealed	Sample Collected 1	⊳ <i>y</i>	Laboratory Chemist		
Sampling Procedure IS: 3025(PART-I):1987 RA 2003; APHA 22ND ED. 2021, 1060-B, 1-39			Quantity Received		Approx. 1	bLtr.	

			TEST REPORT			
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT	
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1	
2	Odour		APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-1	Agreeable	
3	Temperature	°C	APHA 22 ^{m4} Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.2	
4	pH	-	APHA 22 th Ed.2012,4500-H'-B,4-92	5.5 to 9.0	7.29	
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-C1+G, 4 - 69	1.0	N.D.	
6	Total Suspended Solids	mg/L	APHA 22 ⁻¹ Ed.2012,2540- D, 2-66	100	68.3	
7	Dissolved Phosphate (as P)	mg/L	APHA 22 ⁿ⁴ Ed.2012,4500-P-C, 4-153	5.0	N.D.	
8	Fluoride (as F)	mg/L	APHA 22 nd Ed.2012,4500-F-B&D,4-84&87	2.0	0.23	
9	Lead (as Pb)	mg/L	APHA 22 ^{bd} Ed.2012,3111-B, 3-18	0.1	N.D.	
10	Zinc (as Zn)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	5.0	0.19	
11	Copper (as Cu)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	3.0	N.D.	
12	Cadmium (as Cd)	mg/L	APHA 22 nd Ed.2012,3500-Cd, 3-105	2.0	N.D.	
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-B, 3-23	0.01	N.D.	
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.	
1,5	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N,D.	
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.	
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B,5-17	250	120.0	
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	20.3	
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003	10.0	N.D.	
20	Phenolic Compounds(as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.	

Note: mg/lit.: milligram per liter, N.D. - Not Detected.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

* The report for publication, arbitration or as legal dispute is forbidden

r Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer

- This is for information as the party has asked for above testislogly vr

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31/07/23		Subhajeet
REVIEWED BY		AUTHORIZED SIGNATORY

-----End of the test report-----



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name& Address Of The Customer To, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107			Report No Lab Ref No Date Of Sampling Date Of Receipt Date Of Report Date Of Analysis	UES/23-24 23/08/202 24/08/202 31/08/202	UES/TR/23-24/03870 UES/23-24/W/07384 23/08/2023 24/08/2023 31/08/2023 START:24/08/2023 END:28/08/2023			
Sample Type	WASTE WATER	SAMP.	LE DETAILS Customer Ref. No.	& Date	P.O.13552	2310212,DATED:07.09		
Customer Sample ID	ETP INLET, KONDKEL		Sample Condition at Receipt		-			
Packing Of Sample 3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE Sealed			Sample Collected 1	by	Laboratory Chemist			
Sampling Procedure IS: 3025 (PART-I): 1987 RA 2003; APHA 22 ND ED. 2021, 1060-B, 1-39			Quantity Received Approx. 5Ltr.			ltr.		

	TEST REPORT									
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT					
1	Colour	Hazen	APHA 23rd Ed. 2017,2120-B,2-6	See 6 of Annexure-I	<1					
2	Odour	-	APHA 23rd Ed. 2017,2120-B,2-6	See 6 of Annexure-I	Agreeable					
3	Temperature	°C	APHA 23 rd Ed. 2017,2130-B,2-13	Shall not exceed 5'C above the receiving water temperature	25.4					
4	рН	-	APHA 23 rd Ed. 2017,4500-H ⁺ -B,4-92	5.5 to 9.0	7.31					
5	Total Residual Chlorine	mg/L	APHA 23 rd Ed. 2017,4500-Cl-G, 4 - 69	1.0	N.D.					
6	Total Suspended Solids	mg/L	APHA 23 rd Ed. 2017,2540- D, 2-66	100	70.5					
7	Dissolved Phosphate (as P)	mg/L	APHA 23 rd Ed. 2017,4500-P-C, 4-153	5.0	N.D.					
8	Fluoride (as F)	mg/L	APHA 23 rd Ed. 2017,4500-F-B&D,4-84&87	2.0	0.26					
9	Lead (as Pb)	mg/L	APHA 23 rd Ed. 2017,3111-B, 3-18	0.1	N.D.					
10	Zinc (as Zn)	mg/L	APHA 23rd Ed. 2017,3111-B, 3-18	5.0	0.20					
11	Copper (as Cu)	mg/L	APHA 23rd Ed. 2017,3111-B, 3-18	3.0	N.D.					
12	Cadmium (as Cd)	mg/L	APHA 23 rd Ed. 2017,3500-Cd, 3-105	2.0	N.D.					
13	Mercury (as Hg)	mg/L	APHA 23 rd Ed. 2017,3112-B, 3-23	0.01	N.D.					
14	Arsenic (as As)	mg/L	APHA 23 rd Ed. 2017,3114-C, 3-38	0.2	N.D.					
15	Selenium (as Se)	mg/L	APHA 23 rd Ed. 2017,3114-C, 3-38	0.05	N.D.					
16	Total Chromium (as Cr)	mg/L	APHA 23 rd Ed. 2017,3500-Cr-B,3-69	2.0	N.D.					
17	Chemical Oxygen Demand (COD)	mg/L	APHA 23 rd Ed. 2017, 5520-B,5-17	250	124.0					
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	20.9					
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003	10.0	N.D.					
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.					

Note: mg/lit.: milligram per liter, N.D. - Not Detected.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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Fest sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.

This is for information as the party has asked for above testisi only

For ULTIMATE ENVIROLYTICAL SOLUTIONS bhajee **REVIEWED BY** AUTHORIZED SIGNATORY

-----End of the test report-----



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name& Address Of The Customer To, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/5, MILUPARA U/G COAL MINE,VILLAGE - MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107			Report No Lab Ref No Date Of Sampling Date Of Receipt Date Of Report	UES/TR/23 UES/23-24 21/09/202 22/09/202 27/09/202	:3 :3	
			Date Of Analysis START:22/09/2023 END:26/09			END:26/09/2023
Sample Type	WASTE WATER	Of Life	Customer Ref. No.	& Date	P.O.13552 2022	2310212,DATED:07.09.
Customer Sample ID	ETP INLET, KONDKEL		Sample Condition at Receipt		Ok	
Packing Of Sample 3 L X 1 NO. FVC CAN 1 L X 1 NO. FVC CAN 1 L X 1 NO. GLASS BOTTLE Sealed			Sample Collected 1	¢y	Laboratory Chemist	
Sampling Procedure IS: 3025 (PART-I): 1987 RA 2003; APHA 22 ND ED. 2021, 1060-B, 1-39		Quantity Received		Approx. 5Ltr.		

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT
1	Colour	Hazen	APHA 23rd Ed. 2017,2120-B,2-6	See 6 of Annexure-I	<1
2	Odour	-	APHA 23rd Ed. 2017,2120-B,2-6	See 6 of Annexure-I	Agreeable
3	Temperature	*c	АРНА 23 rd Ed. 2017,2130-В,2-13	Shall not exceed 5°C above the receiving water temperature	25.2
4	pH	-	APHA 23rd Ed. 2017,4500-H*-B,4-92	5.5 to 9.0	7.46
5	Total Residual Chlorine	mg/L	APHA 23 rd Ed. 2017,4500-C1-G, 4 - 69	1.0	N.D.
6	Total Suspended Solids	mg/L	APHA 23 rd Ed. 2017,2540- D, 2-66	100	65.4
7	Dissolved Phosphate (as P)	mg/L	APHA 23 rd Ed. 2017,4500-P-C, 4-153	5.0	N.D.
8	Fluoride (as F)	mg/L	APHA 23rd Ed. 2017,4500-F-B&D,4-84&87	2.0	0.21
9	Lead (as Pb)	mg/L	APHA 23 rd Ed. 2017,3111-B, 3-18	0.1	N.D.
10	Zinc (as Zn)	mg/L	APHA 23rd Ed. 2017,3111-B, 3-18	5.0	0.16
11	Copper (as Cu)	mg/L	APHA 23rd Ed. 2017,3111-B, 3-18	3.0	N.D.
12	Cadmium (as Cd)	mg/L	APHA 23rd Ed. 2017,3500-Cd, 3-105	2.0	N.D.
13	Mercury (as Hg)	mg/L	APHA 23rd Ed. 2017,3112-B, 3-23	0.01	N.D.
14	Arsenic (as As)	mg/L	APHA 23rd Ed. 2017,3114-C, 3-38	0.2	N.D.
15	Selenium (as Se)	mg/L	APHA 23rd Ed. 2017,3114-C, 3-38	0.05	N.D.
16	Total Chromium (as Cr)	mg/L	APHA 23 rd Ed. 2017,3500-Cr-B,3-69	2.0	N.D.
17	Chemical Oxygen Demand (COD)	mg/L	APHA 23 rd Ed. 2017, 5520-B,5-17	250	132.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	24.8
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003	10.0	N.D.
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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· Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.

This is for information as the party has asked for above test(s) only.

For ULTIMATE ENVIROLYTICAL SOLUTIONS Belle 27/09/23 **REVIEWED BY** AUTHORIZED SIGNATORY

-----End of the test report-----End of the test report-----



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

to Name & Address Of The C To,	Customer		Report No Lab Ref No	UES/TR/23-24/0563 UES/23-24/W/01408			
	STRIES LIMITED, GA		Date Of Sampling	26/04/202		and a second design of the second	
	LUPARA U/G COAL	MINE,	Date Of Receipt	27/04/202	27/04/2023		
VILLAGE - MILUF			Date Of Report	02/05/2023			
BLOCK-TAMNAR			Date Of Analysis	START: 27/04/2023 END: 01/05/2			
		SAMP	LE DETAILS				
Sample Type	WASTE WATER		Customer Ref. No.	& Date	P.O.13552 DATED:07		
Customer Sample ID	ETP OUTLET, KONDKEL	Sample Condition At Recei	At Receipt	t Ok			
Packing Of Sample	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected	Ву	Laborato	ry Chemist	
Sampling Procedure	IS: 3025 (PART-I): 1987 APHA 22 ND ED. 2021, 10	Quantity Received	Quantity Received Approx.		5Ltr.		

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT
1	Colour	Hazeh	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable
3	Temperature	۰c	APHA 22 nd Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.4
4	pH	-	APHA 22 nd Ed.2012,4500-H*-B,4-92	5.5 to 9.0	7.60
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-Cl-G, 4 - 69	1.0	N.D.
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	33.41
7	Dissolved Phosphate (as P)	mg/L	APHA 22 nd Ed.2012,4500-P-C, 4-153	5.0	N.D.
8	Fluoride (as F)	mg/L	APHA 22 nd Ed.2012,4500-F-B&D,4-84 & 87	2.0	0.15
9	Lead (as Pb)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	N.D.
10	Zinc (as Zn)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	5.0	0.13
11	Copper (as Cu)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	3.0	N.D.
12	Cadmium (as Cd)	mg/L	APHA 22 nd Ed. 2012, 3500-Cd, 3-105	2.0	N.D.
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-B, 3-23	0.01	N.D.
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B,5-17	250	56.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	10.2
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003,	10.0	N.D.
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

The report for publication, arbitration or as legal dispute is forbidden. Test sample will be retained for 15 days after issue of test report unless other This is for information as the party has asked for above test(s) only. ise agreed with customer.



AUTHORIZED SIGNATORY

-End of the test report-



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

	STRIES LIMITED, GAI LUPARA U/G COAL M PARA,	Report No UES/TR/23-24/0909 Lab Ref No UES/23-24/W/02125 Date Of Sampling 19/05/2023 Date Of Receipt 20/05/2023 Date Of Report 24/05/2023				
DISTT RAIGAR		SAMP	Date Of Analysis	START:20/	05/2023 END:24/05/2023	
Sample Type	WASTE WATER		Customer Ref. No.	& Date	P.O.13552 DATED:07.	
Customer Sample ID	ETP OUTLET, KONDKEL		Sample Condition 2	At Receipt	Ok	
Packing Of Sample	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected 1	By	Laborator	ry Chemist
Sampling Procedure IS: 3025 (PART-I): 1987 RA 2003; APHA 22 ND ED. 2021, 1060-B, 1-39			Quantity Received	er er er en en en en er er er en en er	Approx. 5	öLtr.

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1
2	Odour		APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable
3	Temperature *C APHA 22 nd Ed.2012,2130-B,2-13		Shall not exceed 5°C above the receiving water temperature	25.3	
4	pH	-	APHA 22 nd Ed.2012,4500-H [*] -B,4-92	5.5 to 9.0	7.62
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-C1-G, 4 - 69	1.0	N.D.
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	34.50
7	Dissolved Phosphate (as P)	mg/L	APHA 22 nd Ed.2012,4500-P-C, 4-153	5.0	N.D.
8	Fluoride (as F)	mg/L	APHA 22 nd Ed.2012,4500-F-B&D,4-84 & 87	2.0	0.17
9	Lead (as Pb)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	N.D.
10	Zinc (as Zn)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	5.0	0.14
11	Copper (as Cu)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	3.0	N.D.
2	Cadmium (as Cd)	mg/L	APHA 22 nd Ed.2012,3500-Cd, 3-105	2.0	N.D.
3	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-B, 3-23	0.01	N.D.
4	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.
7	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B,5-17	250	60.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	10.9
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003,	10.0	N.D.
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.

Note: mg/lit.: milligram per liter, N.D. - Not Detected.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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- > Test sample will be retained for 15 days after issue of test report-unless otherwise agreed with customer.
- > This is for information as the party has asked for above test(s) only.





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	STRIES LIMITED, GAF LUPARA U/G COAL M PARA, ,	INE,	Report No Lab Ref No Date Of Sampling Date Of Receipt Date Of Report Date Of Analysis	UES/TR/23-24/02016 UES/23-24/W/04405 29/06/2023 30/06/2023 04/07/2023 START:30/06/2023 END: 04/07/		
Sample Type	WASTE WATER	SAMP.	LE DETAILS Customer Ref. No.	& Date	P.O.13552 DATED:07	
Customer Sample ID	ETP OUTLET, KONDKEL		Sample Condition 2	At Receipt	Ok	
Packing Of Sample	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected 1	Зу	Laborator	ry Chemist
Sampling Procedure	IS:3025(PART-I):1987 RA АРНА 22™ ED. 2021, 1060	Quantity Received Approx. 5Ltr.			5Ltr.	

	TEST REPORT								
SR. NO.	PARAMETER	PARAMETER UNIT ME		THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT				
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1				
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable				
3	Temperature	*c	APHA 22 nd Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.4				
4	рН	-	APHA 22nd Ed. 2012, 4500-H'-B, 4-92	5.5 to 9.0	7.58				
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-C1-G, 4 - 69	1.0	N.D.				
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	31.6				
7	Dissolved Phosphate (as P)	mg/L	APHA 22 nd Ed.2012,4500-P-C, 4-153	5.0	N.D.				
8	Fluoride (as F)	mg/L	APHA 22 nd Ed.2012,4500-F-B&D,4-84 & 87	2.0	0.13				
9	Lead (as Pb)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	N.D.				
10	Zinc (as Zn)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	5.0	0.11				
11	Copper (as Cu)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	3.0	N.D.				
12	Cadmium (as Cd)	mg/L	APHA 22 nd Ed.2012,3500-Cd, 3-105	2.0	N.D.				
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-B, 3-23	0.01	N.D.				
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.				
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.				
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.				
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B,5-17	250	52.0				
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	9.4				
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003,	10.0	N.D.				
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.				

REMARKS: RESULTS ARE AS ABOVE

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-End of the test report---



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	STRIES LIMITED, GAR LUPARA U/G COAL MILUPARA,	E	Report No UES/TR/23-24/03060 Lab Ref No UES/23-24/W/05897 Date Of Sampling 26/07/2023 Date Of Receipt 27/07/2023 Date Of Report 31/07/2023 Date Of Analysis START:27/07/2023			
DISTT RAIGAR	H (C.G.) 496107	SAMP	Date Of Analysis	START:27/	07/2023	END: 31/07/2023
Sample Type	WASTE WATER		Customer Ref. No.	& Date	P.O.13552 DATED:07.	NS 55 (
Customer Sample ID	ETP OUTLET, KONDKEL		Sample Condition 2	At Receipt	Ok	
Packing Of Sample	3 L X 1 NO. FVC CAN 3 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected 1	∃у	Laborator	y Chemist
Sampling Procedure	IS:3025(PART-I):1987 RA APHA 22™ ED. 2021, 1060		Quantity Received		Approx. 5	Ltr.

SR THE ENVIRONMENT (PROTECTION)									
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT				
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1				
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-1	Agreeable				
3	Temperature	'c	APHA 22 nd Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.2				
4	PH	-	APHA 22 nd Ed.2012,4500-H'-B,4-92	5.5 to 9.0	7.60				
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-C1-G, 4 = 69	1.0	N.D.				
6	Total Suspended Solids	mg/L	APHA 22"4 Ed.2012,2540- D, 2-66	100	32.2				
7	Dissolved Phosphate (as P)	mg/L	APHA 22 nd Ed.2012,4500-P-C, 4-153	5.0	N.D.				
8	Fluoride (as F)	mg/L	APHA 22"3 Ed.2012,4500-F-B&D,4-84 & 87	2.0	0.14				
9	Lead (as Pb)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	N.D.				
10	Zinc (as Zn)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	5.0	0.12				
11	Copper (as Cu)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	3.0	N.D.				
12	Cadmium (as Cd)	mg/L	APHA 22° Ed.2012,3500-Cd, 3-105	2.0	N.D.				
13	Mercury (as Hg)	mg/L	APHA 22nd Ed.2012,3112-B, 3-23	0.01	N.D.				
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.				
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.				
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.				
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B,5-17	250	56.0				
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	10.18				
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003,	10.0	N.D.				
20	Phenolic Compounds(as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.				

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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- The report for publication, arbitration or as legal dispute is forbidden.
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- Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
 This is for information as the party has asked for above test of other Tices.



-----End of the test report-----End of the test report-----



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	STRIES LIMITED, GAR LUPARA U/G COAL MILUPARA,	Report No Lab Ref No Date Of Sampling Date Of Receipt Date Of Report	Ref No UES/23-24/W/07385 Of Sampling 23/08/2023 Of Receipt 24/08/2023			
DISTT RAIGAR		SAMP	Date Of Analysis	START:24/08/2023 END:28/0		END:28/08/2023
Sample Type	WASTE WATER	Crart.	Customer Ref. No.	& Date	P.O.13552 DATED:07.	The second second second second
Customer Sample ID	ETP OUTLET, KONDKEL		Sample Condition A	At Receipt	Ok	
Packing Of Sample	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected H	3y	Laborator	y Chemist
Sampling Procedure IS: 3025 (PART-I): 1987 RA 2003; APHA 22ND ED. 2021, 1060-B, 1-39			Quantity Received		Approx. 5Ltr.	

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT				
1	Colour	Hazen	APHA 23rd Ed. 2017,2120-B,2-6	See 6 of Annexure-I	<1				
2	Odour	-	APHA 23rd Ed. 2017,2120-B,2-6	See 6 of Annexure-I	Agreeable				
3	Temperature 'C APHA 23 rd Ed. 2017, 2130-B, 2-13		Shall not exceed 5°C above the receiving water temperature	25.0					
4	PH	-	APHA 23rd Ed. 2017,4500-H*-B,4-92	5.5 to 9.0	7.58				
5	Total Residual Chlorine	mg/L	APHA 23 rd Ed. 2017,4500-Cl-G, 4 - 69	1.0	N.D.				
6	Total Suspended Solids	mg/L	APHA 23 rd Ed. 2017,2540- D, 2-66	100	30.1				
7	Dissolved Phosphate (as P)	mg/L	APHA 23 rd Ed. 2017,4500-P-C, 4-153	5.0	N.D.				
8	Fluoride (as F)	mg/L	APHA 23 rd Ed. 2017,4500-F-B&D,4-84 & 87	2.0	0.13				
9	Lead (as Pb)	mg/L	APHA 23rd Ed. 2017, 3111-B, 3-18	0.1	N.D.				
.0	Zinc (as Zn)	mg/L	APHA 23 rd Ed. 2017, 3111-B, 3-18	5.0	0.11				
11	Copper (as Cu)	mg/L	APHA 23 rd Ed. 2017,3111-B, 3-18	3.0	N.D.				
12	Cadmium (as Cd)	mg/L	APHA 23rd Ed. 2017,3500-Cd, 3-105	2.0	N.D.				
13	Mercury (as Hg)	mg/L	APHA 23rd Ed. 2017, 3112-B, 3-23	0.01	N.D.				
14	Arsenic (as As)	mg/L	APHA 23rd Ed. 2017,3114-C, 3-38	0.2	N.D.				
15	Selenium (as Se)	mg/L	APHA 23rd Ed. 2017,3114-C, 3-38	0.05	N.D.				
16	Total Chromium (as Cr)	mg/L	APHA 23 rd Ed. 2017,3500-Cr-B,3-69	2.0	N.D.				
17	Chemical Oxygen Demand (COD)	mg/L	APHA 23 rd Ed. 2017, 5520-B,5-17	250	52.0				
.8	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	9.4				
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003,	10.0	N.D.				
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.				

REMARKS: RESULTS ARE AS ABOVE

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-----End of the test report-----End of the test report-----



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to Name & Address Of The To.	Customer		Report No	UES/TR/23-24/04677				
	STRIES LIMITED, GAR	E	Lab Ref No	UES/23-24	UES/23-24/W/08623			
	LUPARA U/G COAL		Date Of Sampling	21/09/202	!3			
MINE,VILLAGE -			Date Of Receipt 22/09/2023		:3			
BLOCK-TAMNAR			Date Of Report	27/09/2023 START:22/09/2023 END:26/09/20				
DISTT RAIGAR			Date Of Analysis					
		SAMP:	LE DETAILS					
Sample Type	WASTE WATER		Customer Ref. No.	& Date	P.O.13552 DATED:07.			
Customer Sample ID	ETP OUTLET, KONDKEL		Sample Condition	At Receipt	Ok	e and the second production of the second		
Packing Of Sample	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. FVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected B	Зу	Laborator	ry Chemist		
Sampling Procedure	IS:3025(PART-I):1987 RA APHA 22™ ED. 2021, 1060		Quantity Received		Approx. 5	5Ltr.		

			TEST REPORT		
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT <1 Agreeable 25.3 7.82
1	Colour	Hazen	APHA 23rd Ed. 2017,2120-B,2-6	See 6 of Annexure-I	<1
2	Odour	-	APHA 23 rd Ed. 2017,2120-B,2-6	See 6 of Annexure-I	Agreeable
3	Temperature	°c	APHA 23 rd Ed. 2017,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.3
4	рН	-	APHA 23 rd Ed. 2017,4500-H*-B,4-92	5.5 to 9.0	7.82
5	Total Residual Chlorine	mg/L	APHA 23 rd Ed. 2017,4500-Cl-G, 4 - 69	1.0	N.D.
6	Total Suspended Solids	mg/L	APHA 23 rd Ed. 2017,2540- D, 2-66	100	28.6
7	Dissolved Phosphate (as P)	mg/L	APHA 23 rd Ed. 2017,4500-P-C, 4-153	5.0	N.D.
8	Fluoride (as F)	mg/L	APHA 23 rd Ed. 2017,4500-F-B&D,4-84 & 87	2.0	0.11
9	Lead (as Pb)	mg/L	APHA 23rd Ed. 2017, 3111-B, 3-18	0.1	N.D.
10	Zinc (as Zn)	mg/L	APHA 23rd Ed. 2017,3111-B, 3-18	5.0	0.09
11	Copper (as Cu)	mg/L	APHA 23rd Ed. 2017,3111-B, 3-18	3.0	N.D.
12	Cadmium (as Cd)	mg/L	APHA 23 rd Ed. 2017,3500-Cd, 3-105	2.0	N.D.
13	Mercury (as Hg)	mg/L	APHA 23rd Ed. 2017, 3112-B, 3-23	0.01	N.D.
14	Arsenic (as As)	mg/L	APHA 23rd Ed. 2017,3114-C, 3-38	0.2	N.D.
15	Selenium (as Se)	mg/L	APHA 23rd Ed. 2017,3114-C, 3-38	0.05	N.D.
16	Total Chromium (as Cr)	mg/L	APHA 23 rd Ed. 2017,3500-Cr-B,3-69	2.0	N.D.
17	Chemical Oxygen Demand (COD)	mg/L	APHA 23 rd Ed. 2017, 5520-B,5-17	250	60.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	12.8
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003,	10.0	N.D.
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.

REMARKS: RESULTS ARE AS ABOVE

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-----End of the test report-----End of the test report-----

Annexure-8A

Photographs of Treatment facilities at Gare Palma IV/5 Under Ground Coal Mines of M/s Hindalco Industries Limited



Settling Pond # 05



Settling Pond # 01



Settling Pond # 02



Settling Pond # 03



Settling Pond # 04



Effluent Treatment Plant # 01



Effluent Treatment Plant # 02



Water Treatment Plant # 01



Water Treatment Plant # 02



Reverse Osmosis Plant



Reverse Osmosis Plant # 01



Reverse Osmosis Plant # 02

Annexure-9



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to Name & Address Of The C To,			Report No Lab Ref No	UES/TR/23-24/0564 UES/23-24/W/01409			
	STRIES LIMITED, GAR		Date Of Sampling	26/04/202	3		
ANTERNA THE COMPANY AND STATEMENT OF COMPANY	/5, MILUPARA U/G COAL MINE,		Date Of Receipt	27/04/202	3		
VILLAGE - MILUF	Construction of the		Date Of Report	02/05/202	02/05/2023		
BLOCK-TAMNAR, DISTT RAIGAR	Construction and the second seco	Date Of Analysis	START:27/04/2023 END:01/05/2				
		SAMP	LE DETAILS				
Sample Type	WASTE WATER		Customer Ref. No. & Date P.O.13552 DATED:07.				
Customer Sample ID	STP INLET, PORTACABIN		Sample Condition	At Receipt	ok		
Packing Of Sample	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected By		Laboratory Chemist		
Sampling Procedure	Quantity Received Approx. 5Ltr.		5Ltr.				

			TEST REPORT		
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable
3	Temperature	°C	арна 22 nd Ed.2012,2130-В,2-13	Shall not exceed 5°C above the receiving water temperature	25.5
4	рH	-	APHA 22 nd Ed.2012,4500-H*-B,4-92	5.5 to 9.0	7.38
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-Cl-G, 4 - 69	1.0	N.D.
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	49.5
7	Dissolved Phosphate (as P)	mg/L	APHA 22 nd Ed.2012,4500-P-C, 4-153	5.0	N.D.
8	Fluoride (as F)	mg/L	APHA 22 nd Ed.2012,4500-F-B&D,4-84 & 87	2.0	0.58
9	Lead (as Pb)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	N.D.
10	Zinc (as Zn)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	5.0	0.16
11	Copper (as Cu)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	3.0	N.D.
12	Cadmium (as Cd)	mg/L	APHA 22 nd Ed.2012,3500-Cd, 3-105	2.0	N.D.
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-B, 3-23	0.01	N.D.
14	Arsenic (as As)	mg/L	APHA 22 nd Ed. 2012, 3114-C, 3-38	0.2	N.D.
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.
17	Chemical Oxygen Demand (COD)	mg/L	АРНА 22 nd Ed.2012, 5520-B,5-17	250	144.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	20.4
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003,	10.0	N.D.
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.

Note: mg/lit.: milligram per liter, N.D. - Not Detected.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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End of the test report-



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	STRIES LIMITED, GAI LUPARA U/G COAL M PARA, ,		Report No Lab Ref No Date Of Sampling Date Of Receipt Date Of Report Date Of Analysis	UES/TR/23-24/0910 UES/23-24/W/02126 19/05/2023 20/05/2023 24/05/2023 START:20/05/2023 END: 24/05/2			
Sample Type	WASTE WATER	SAMP:	LE DETAILS Customer Ref. No.	& Date	P.O.13552 DATED:07		
Customer Sample ID	STP INLET, PORTACABIN	<u>en 1960 - 100 - 1000</u>	Sample Condition A	At Receipt	Ok	1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -	
Packing Of Sample	3 L X I NO. PVC CAN 1 L X I NO. PVC CAN 1 L X I NO. GLASS BOTTLE	Sealed	Sample Collected By		Laboratory Chemist		
Sampling Procedure	IS:3025(PART-I):1987 RA APHA 22 ND ED. 2021, 106	Quantity Received Approx. 5Ltr.			5Ltr.		

			TEST REPORT		
SR. NO.	PARAMETER	PARAMETER UNIT METHOD OF TEST		THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1
2	Odour		APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeabl
3	Temperature	°C	арна 22 nd Ed.2012,21 <mark>30-в,2-1</mark> 3	Shall not exceed 5°C above the receiving water temperature	25.4
4	рH	-	APHA 22 nd Ed.2012,4500-H ⁺ -B,4-92	5.5 to 9.0	7.41
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-C1-G, 4 - 69	1.0	N.D.
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	50.2
7	Dissolved Phosphate (as P)	mg/L	APHA 22 nd Ed.2012,4500-P-C, 4-153	5.0	N.D.
8	Fluoride (as F)	mg/L	APHA 22 nd Ed.2012,4500-F-B&D,4-84 &	2.0	0.60
9	Lead (as Pb)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	N.D.
10	Zinc (as Zn)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	5.0	0.18
11	Copper (as Cu)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	3.0	N.D.
12	Cadmium (as Cd)	mg/L	APHA 22 nd Ed.2012,3500-Cd, 3-105	2.0	N.D.
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-B, 3-23	0.01	N.D.
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B,5-17	250	148.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	20.9
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003,	10.0	N.D.
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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-----End of the test report-----



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	STRIES LIMITED, GA LUPARA U/G COAL M PARA,	MINE,	Report No Lab Ref No Date Of Sampling Date Of Receipt Date Of Report Date Of Analysis LE DETAILS	UES/TR/2: UES/23-24 29/06/202 30/06/202 04/07/202 START: 30/	23 13 13	END: 04/07/2023
Sample Type	WASTE WATER		Customer Ref. No. & Date		P.O.13552310212, DATED:07.09.2022	
Customer Sample ID	STP INLET, PORTA CABIN	V	Sample Condition #	At Receipt	Ok.	
Packing Of Sample	3 L X 1 NO PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sample Collected By		Laboratory Chemist		
Sampling Procedure	IS:3025(PART-I):1987 R APHA 22 ND ED. 2021, 10€	Quantity Received Approx. 5Ltr.			Ltr.	

			TEST REPORT		
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 (SCHEDULE-VI) PART-A INLAND SURFACE WATER	RESULT
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeabl
3	Temperature	•C	APHA 22 nd Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.6
4	рн	-	APHA 22nd Ed. 2012, 4500-H*-B, 4-92	5.5 to 9.0	7.36
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-C1-G, 4 - 69	1.0	N.D.
6	Total Suspended Solids	mg/L	APHA 22nd Ed.2012,2540- D, 2-66	100	45.4
7	Dissolved Phosphate (as P)	mg/L	АРНА 22 nd Ed.2012,4500-P-C, 4-153	5.0	N.D.
8	Fluoride (as F)	mg/L	APHA 22 nd Ed.2012,4500-F-B&D,4-84 &	2.0 ,	0.52
9	Lead (as Pb)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	N.D.
10	Zinc (as Zn)	mg/L	APHA 22nd Ed. 2012, 3111-B, 3-18	5.0	0.21
11	Copper (as Cu)	mg/L	APHA 22nd Ed. 2012, 3111-B, 3-18	3.0	N.D.
12	Cadmium (as Cd)	mg/L	APHA 22 nd Ed.2012,3500-Cd, 3-105	2.0	N.D.
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed. 2012, 3112-B, 3-23	0.01	N.D.
14	Arsenic (as As)	mg/L	APHA 22 nd Ed. 2012, 3114-C, 3-38	0.2	N.D.
15	Selenium (as Se)	mg/L	APHA 22 nd Ed. 2012, 3114-C, 3-38	0.05	N.D.
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.
17	Chemical Oxygen Demand (COD)	mg/L	АРНА 22 nd Ed.2012, 5520-B,5-17	250	140.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	19.7
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003,	10.0	
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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-End of the test report-



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	STRIES LIMITED, GA LUPARA U/G COAL M PARA,		Report No UES/TR/23-24/03061 Lab Ref No UES/23-24/W/05898 Date Of Sampling 26/07/2023 Date Of Receipt 27/07/2023 Date Of Report 31/07/2023			
DISTT RAIGAR		SAMP	Date Of Analysis	START:27/	07/2023	END: 31/07/2023
Sample Type Customer Sample ID	WASTE WATER STP INLET, PORTACABIN		Customer Ref. No. Sample Condition A		P.O.13552 DATED:07. Ok	
Packing Of Sample	3 L X I NO PVC CAN I L X I NO PVC CAN I L X I NO. GLASS BOTTLE	Sample Collected By		Laboratory Chemist		
Sampling Procedure	IS:3025(PART-I):1987 R APHA 22 ND ED. 2021, 106	Quantity Received Approx. 5Ltr.			5Ltr.	

Margares Ma			TEST REPORT		THE R. O. LOW PROPERTY AND IN	
SR. NO.	PARAMETER	PARAMETER UNIT METH		THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	, 1986 VIJ PART-A RESULT FACE WATER	
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1	
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-1	Agreeabl	
3	Temperature	°C	арна 22 ⁿ 'Ed.2012,2130-в, <mark>2-</mark> 13	Shall not exceed 5°C above the receiving water temperature	25.4	
4	pH		APHA 22 ⁿ⁴ Ed.2012,4500-H*-B,4-92	5.5 to 9.0	7.39	
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-Cl-G, 4 - 69	1.0	N.D.	
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	46.1	
7	Dissolved Phosphate (as P)	mg/L	APHA 22 nd Ed.2012,4500-P-C, 4-153	5.0	N.D.	
8	Fluoride (as F)	mg/L	APHA 22 nd Ed.2012,4500-F-B&D,4-84 & 87	2.0	0.53	
9	Lead (as Pb)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	N.D.	
10	Zinc (as Zn)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	5.0	0.22	
11	Copper (as Cu)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	3.0	N.D.	
12	Cadmium (as Cd)	mg/L	APHA 22nd Ed.2012,3500-Cd, 3-105	2.0	N.D.	
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-B, 3-23	0.01	N.D.	
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.	
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.	
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.	
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B,5-17	250	144.0	
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	20.2	
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003,	10.0	N.D.	
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.	

Note: mg/lit.: milligram per liter, N.D. - Not Detecte

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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F Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.

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End of the test report-----



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	STRIES LIMITED, GAR LUPARA U/G COAL M PARA,		Report No Lab Ref No Date Of Sampling Date Of Receipt Date Of Report	UES/23-24 23/08/202 24/08/202	UES/TR/23-24/03872 UES/23-24/W/07386 23/08/2023 24/08/2023 31/08/2023		
DISTT RAIGAR	H (C.G.) 496107	SAMD	Date Of Analysis	START:24/08/2023		END:28/08/2023	
Sample Type	WASTE WATER	OAMF.	Customer Ref. No.	& Date	P.O.13552		
Customer Sample ID	STP INLET, PORTACABIN		Sample Condition A	0.000	DATED:07.	TED:07.09.2022	
Packing Of Sample	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected By		Laboratory Chemist		
Sampling Procedure	IS:3025(PART-I):1987 RA APHA 22™ ED. 2021, 1060	Quantity Received		Approx. 5	Approx. 5Ltr.		

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT
1	Colour	Hazen	APHA 23rd Ed. 2017,2120-B,2-6	See 6 of Annexure-I	<1
2	Odour		APHA 23rd Ed. 2017,2120-B,2-6	See 6 of Annexure-I	Agreeable
3	Temperature	°C	АРНА 23 ^{zd} ed. 2017, <mark>2130-в,2</mark> -13	Shall not exceed 5°C above the receiving water temperature	25.2
4	рн	-	APHA 23rd Ed. 2017,4500-H+-B,4-92	5.5 to 9.0	7.42
5	Total Residual Chlorine	mg/L	APHA 23 rd Ed. 2017,4500-C1-G, 4 - 69	1.0	N.D.
6	Total Suspended Solids	mg/L	APHA 23 rd Ed. 2017,2540- D, 2-66	100	48.3
7	Dissolved Phosphate (as P)	mg/L	APHA 23 rd Ed. 2017,4500-P-C, 4-153	5.0	N.D.
8	Fluoride (as F)	mg/L	APHA 23 rd Ed. 2017,4500-F-B&D,4-84 &	2.0	0.55
9	Lead (as Pb)	mq/L	APHA 23rd Ed. 2017,3111-B, 3-18	0.1	N.D.
10	Zinc (as Zn)	mg/L	APHA 23rd Ed. 2017, 3111-B, 3-18	5.0	0.23
11	Copper (as Cu)	mg/L	APHA 23rd Ed. 2017,3111-B, 3-18	3.0	N.D.
12	Cadmium (as Cd)	mg/L	APHA 23rd Ed. 2017,3500-Cd, 3-105	2.0	N.D.
13	Mercury (as Hg)	mg/L	APHA 23rd Ed. 2017,3112-B, 3-23	0.01	N.D.
14	Arsenic (as As)	mg/L	APHA 23rd Ed. 2017, 3114-C, 3-38	0.2	N.D.
15	Selenium (as Se)	mg/L	APHA 23rd Ed. 2017, 3114-C, 3-38	0.05	N.D.
16	Total Chromium (as Cr)	mg/L	APHA 23 rd Ed. 2017,3500-Cr-B,3-69	2.0	N.D.
17	Chemical Oxygen Demand (COD)	mg/L	APHA 23 rd Ed. 2017, 5520-B,5-17	250	148.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	20.7
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003,	10.0	N.D.
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.

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-----End of the test report-----



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	STRIES LIMITED, GAR LUPARA U/G COAL M PARA,	Report No Lab Ref No Date Of Sampling Date Of Receipt Date Of Report	UES/23-24 21/09/202 22/09/202	UES/TR/23-24/04678 UES/23-24/W/08624 21/09/2023 22/09/2023 27/09/2023		
DISTT RAIGAR	H (C.G.) 496107		Date Of Analysis	START: 22/09/2023 END:		END:26/09/2023
		SAMP.	LE DETAILS			
Sample Type	WASTE WATER		Customer Ref. No. & Date P.O.13552 DATED:07.			
Customer Sample ID	STP INLET, PORTA CABIN		Sample Condition 2	At Receipt	Ok	
Packing Of Sample	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected By		Laboratory Chemist	
Sampling Procedure	IS:3025(PART-I):1987 RA APHA 22™ ED. 2021, 1060	Quantity Received		Approx. 5Ltr.		

			TEST REPORT		
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT
1	Colour	Hazen	APHA 23rd Ed. 2017,2120-B,2-6	See 6 of Annexure-I	<1
2	Odour	-	APHA 23rd Ed. 2017,2120-B,2-6	See 6 of Annexure-I	Agreeabl
3	Temperature	*C	APHA 23 rd Ed. 2017,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.4
4	pH	-	APHA 23rd Ed. 2017,4500-H+-B,4-92	5.5 to 9.0	7.38
5	Total Residual Chlorine	mg/L	APHA 23 rd Ed. 2017,4500-C1-G, 4 - 69	1.0	N.D.
6	Total Suspended Solids	mg/L	APHA 23rd Ed. 2017,2540- D, 2-66	100	42.4
7	Dissolved Phosphate (as P)	mg/L	APHA 23 rd Ed. 2017,4500-P-C, 4-153	5.0	N.D.
8	Fluoride (as F)	mg/L	APHA 23 rd Ed. 2017,4500-F-B&D,4-84 &	2.0	0.42
9	Lead (as Pb)	mg/L	APHA 23rd Ed. 2017,3111-B, 3-18	0.1	N.D.
10	Zinc (as Zn)	mg/L	APHA 23rd Ed. 2017, 3111-B, 3-18	5.0	0.18
11	Copper (as Cu)	mg/L	APHA 23rd Ed. 2017, 3111-B, 3-18	3.0	N.D.
12	Cadmium (as Cd)	mg/L	APHA 23rd Ed. 2017,3500-Cd, 3-105	2.0	N.D.
13	Mercury (as Hg)	mg/L	APHA 23rd Ed. 2017, 3112-B, 3-23	0.01	N.D.
14	Arsenic (as As)	mg/L	APHA 23rd Ed. 2017, 3114-C, 3-38	0.2	N.D.
15	Selenium (as Se)	mg/L	APHA 23rd Ed. 2017, 3114-C, 3-38	0.05	N.D.
16	Total Chromium (as Cr)	mg/L	APHA 23 rd Ed. 2017,3500-Cr-B,3-69	2.0	N.D.
17	Chemical Oxygen Demand (COD)	mg/L	APHA 23 rd Ed. 2017, 5520-B,5-17	250	152.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	18.8
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003,	10.0	N.D.
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.

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to Name & Address Of The C	Customer		Report No	UES/TR/23	-24/0565	
То,			Lab Ref No	UES/23-24	/w/01410	
	STRIES LIMITED, GAR		Date Of Sampling	26/04/202	3	
	LUPARA U/G COAL MI	NE,	Date Of Receipt	27/04/202	3	00
VILLAGE - MILUF			Date Of Report	02/05/202	3	
BLOCK-TAMNAR, DISTT RAIGARI	A		Date Of Analysis	START:27/04/2023 END:01/05/		END:01/05/2023
		SAMPI	LE DETAILS		4 Parts	1 1 1 1 1 1
Sample Type	WASTE WATER		Customer Ref. No.	. & Date	P.O.13552 DATED:07.	
Customer Sample ID	STP OUTLET, PORTA CABIN		Sample Condition	At Receipt	Ok	
Packing Of Sample	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected	Ву	Laboratory Chemist	
Sampling Procedure	IS:3025(PART-I):1987 RA APHA 22 ND ED. 2021, 1060		Quantity Received	a	Approx. 5	5Ltr.

			TEST REPORT		
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 (SCHEDULE-VIJ PART-A INLAND SURFACE WATER	SUMP WATER PIT-D
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-1	<1
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-1	Agreeable
3	Temperature	°C	APHA 22 nd Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.3
4	Hq	-	APHA 22 nd Ed. 2012, 4500-H*-B, 4-92	5.5 to 9.0	7.48
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-Cl-G, 4 - 69	1.0	N.D.
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	34.1
7	Dissolved Phosphate (as P)	mg/L	APHA 22 nd Ed.2012,4500-P-C, 4-153	5.0	N,D.
8	Fluoride (as F)	mg/L	APHA 22 nd Ed.2012,4500-F-B&D,4-84 & 87	2.0	0.24
9	Lead (as Pb)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	N.D.
10	Zinc (as Zn)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	5.0	0.14
11	Copper (as Cu)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	3.0	N.D.
12	Cadmium (as Cd)	mg/L	APHA 22 nd Ed.2012,3500-Cd, 3-105	2.0	N.D.
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-B, 3-23	0.01	N.D.
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D. N.D.
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B,5-17	250	40.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	9.6
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003,	10.0	N.D.
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.

Note: mg/lit.: milligram per liter, N.D. - Not Detected.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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Rede 02/05/23

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End of the test report----



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	STRIES LIMITED, GAR LUPARA U/G COAL MI PARA,	INE,	Report No Lab Ref No Date Of Sampling Date Of Receipt Date Of Report Date Of Analysis LE DETAILS	UES/TR/23 UES/23-24 19/05/202 20/05/202 24/05/202 START:20/	/W/02127 23 3 3	END: 24/05/2023
Sample Type	WASTE WATER		Customer Ref. No.	& Date	P.O.13552 DATED:07.	
Customer Sample ID	STP OUTLET, PORTA CABIN		Sample Condition	At Receipt	Ok	
Packing Of Sample	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected	1 * 100 meter et 100 	Laborator	ry Chemist
Sampling Procedure	IS:3025(PART-I):1987 RA АРНА 22 ^{№D} ED. 2021, 1060		Quantity Received		Approx. 5	ōLtr.

				THE ENVIRONMENT	
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	(PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	SUMP WATER PIT-D
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable
3	Temperature 'C APHA 22 nd Ed.2012,2130-B,2-13		Shall not exceed 5°C above the receiving water temperature	25.4	
4	рн	-	APHA 22 nd Ed.2012,4500-H*-B,4-92	5.5 to 9.0	7.50
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-C1-G, 4 - 69	1.0	N.D.
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	35.2
7	Dissolved Phosphate (as P)	mg/L	APHA 22 nd Ed.2012,4500-P-C, 4-153	5.0	N.D.
8	Fluoride (as F)	mg/L	APHA 22 nd Ed.2012,4500-F-B&D,4-84 &	2.0	0.26
9	Lead (as Pb)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	0,1	N .D.
10	Zinc (as Zn)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	5.0	0.16
11	Copper (as Cu)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	3.0	N.D.
12	Cadmium (as Cd)	mg/L	APHA 22 nd Ed.2012,3500-Cd, 3-105	2.0	N.D.
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-B, 3-23	0.01	N.D.
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B,5-17	250	44.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	10.5
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003,	10.0	N.D.
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.

Note: mg/lit.: milligram per liter, N.D. - Not Detected.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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ibhajeet

AUTHORIZED SIGNATORY

-----End of the test report-----End of the test report-----



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	STRIES LIMITED, GAR LUPARA U/G COAL MI PARA,	INE,	Report No Lab Ref No Date Of Sampling Date Of Receipt Date Of Report Date Of Analysis LE DETAILS	UES/TR/23 UES/23-24 29/06/202 30/06/202 04/07/202 START: 30/	23 23 23	END: 04/07/2023
Sample Type	WASTE WATER		Customer Ref. No.	& Date	P.O.13552 DATED:07.	
Customer Sample ID	STP OUTLET, PORTA CABIN	р.	Sample Condition	At Receipt	Ok	
Packing Of Sample	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected By		Laboratory Chemist	
Sampling Procedure	IS:3025(PART-I):1987 RA APHA 22 ND ED. 2021, 1060		Quantity Received	1	Approx. 5	iltr.

	TEST REPORT								
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-V]] PART-A INLAND SURFACE WATER	SUMP WATER PIT-D				
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1				
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable				
3	Temperature	*C APHA 22 nd Ed.2012,2130-B,2-13 above the re water tempe		Shall not exceed 5°C above the receiving water temperature	25.6				
4	рН	-	APHA 22 nd Ed.2012,4500-H'-B,4-92	5.5 to 9.0	7,47				
5	Total Residual Chlorine	mg/L	APHA 22 rd Ed.2012,4500-C1-G, 4 - 69	1.0	N.D.				
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	31.6				
7	Dissolved Phosphate (as P)	mg/L	APHA 22 nd Ed.2012,4500-P-C, 4-153	5.0	N.D.				
8	Fluoride (as F)	mg/L	APHA 22 nd Ed.2012,4500-F-B&D,4-84 & 87	2.0	0.24				
9	Lead (as Pb)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	0,1	N.D.				
10	Zinc (as Zn)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	5.0	0.13				
11	Copper (as Cu)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	3.0	N.D.				
12	Cadmium (as Cd)	mg/L	APHA 22 nd Ed.2012,3500-Cd, 3-105	2.0	N.D.				
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-B, 3-23	0.01	N.D.				
14	Arsenic (as As)	mg/L	APHA 22nd Ed. 2012, 3114-C, 3-38	0.2	N.D.				
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.				
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.				
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B,5-17	250	40.0				
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	9.5				
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003,	10.0	N.D.				
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.				

Note: mg/itt.: milligram per liter, N.D. - Not Detected.

REMARKS: RESULTS ARE AS ABOVE

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This is for information as the party has asked for above test(s) only $\mathbb{R}O($

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Subhojeet

AUTHORIZED SIGNATORY

-----End of the test report-----End of the test report-----



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	STRIES LIMITED, GAR LUPARA U/G COAL MI PARA,		Report No Lab Ref No Date Of Sampling Date Of Receipt Date Of Report	UES/TR/23 UES/23-24 26/07/202 27/07/202 31/07/202	3	
DISTT RAIGAR	*	SAMP	Date Of Analysis	START:27/	07/2023	END: 31/07/2023
Sample Type	WASTE WATER		Customer Ref. No.	& Date	P.O.13552 DATED:07	
Customer Sample ID	STP OUTLET, PORTA CABIN		Sample Condition	At Receipt	Ok	
Packing Of Sample	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected	Ву	Laborator	ry Chemist
Sampling Procedure	IS:3025(PART-I):1987 RA APHA 22™ ED. 2021, 1060		Quantity Received	1	Approx. 5	5Ltr.

		1	TEST REPORT		
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	SUMP WATER PIT-D
1	Colour	Hazen	APHA 22 ¹⁴ Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-1	Agreeable
3	Temperature	¢	АРНА 22 ^{ng} Ed.2012,2130-В,2-13	Shall not exceed 5°C above the receiving water temperature	25.3
4	рН	-	APHA 22 nd Ed.2012,4500-H*-B,4-92	5.5 to 9.0	7.50
$\underline{\underline{F}}_{i}$	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-C1-G, 4 - 69	1.0	N.D.
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	32.2
7	Dissolved Phosphate (as P)	mg/L	APHA 22 nd Ed. 2012,4500-P-C, 4-153	5.0	N.D.
8	Fluoride (as F)	mg/L	APHA 22 nd Ed.2012,4500-F-B&D,4-84 & 87	2.0	0.25
9	Lead (as Pb)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	N.D.
10	Zinc (as Zn)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	5.0	0.14
11	Copper (as Cu)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	3.0	N.D.
12	Cadmium (as Cd)	mg/L	APHA 22 nd Ed.2012,3500-Cd, 3-105	2.0	N.D.
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-B, 3-23	0.01	N.D.
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B,5-17	250	44.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	10.4
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003,	10.0	N.D.
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1,0	N.D.

Note: mg/lit.: milligram per liter, N.D. - Not Detected.

REMARKS: RESULTS ARE AS ABOVE

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	STRIES LIMITED, GAR LUPARA U/G COAL M PARA,		Report No Lab Ref No Date Of Sampling Date Of Receipt Date Of Report	UES/TR/23 UES/23-24 23/08/202 24/08/202 31/08/202	:3 :3	
DISTT RAIGAR	H (C.G.) 496107		Date Of Analysis	START: 24/08/2023		END:28/08/2023
		SAMP	LE DETAILS			
Sample Type	WASTE WATER	-	Customer Ref. No.	& Date	P.O.13552 DATED:07.	
Customer Sample ID	STP OUTLET, PORTA CABIN		Sample Condition	At Receipt	Ok	and a second
Packing Of Sample	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected By		Laboratory Chemist	
Sampling Procedure	IS:3025(PART-I):1987 RA APHA 22™ ED. 2021, 1060		Quantity Received	1	Approx. 5	iLtr.

			TEST REPORT		
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	SUMP WATER PIT-D
1	Colour	Hazen	APHA 23rd Ed. 2017,2120-B,2-6	See 6 of Annexure-I	<1
_2	Odour		APHA 23rd Ed. 2017,2120-B,2-6	See 6 of Annexure-I	Agreeable
3	Temperature	*c	APHA 23 rd Ed. 2017,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.1
4	PH	-	APHA 23rd Ed. 2017,4500-H+-B,4-92	5.5 to 9.0	7.47
5	Total Residual Chlorine	mg/L	APHA 23 rd Ed. 2017,4500-C1-G, 4 - 69	1.0	N.D.
6	Total Suspended Solids	mg/L	APHA 23 rd Ed. 2017,2540- D, 2-66	100	29.40
7	Dissolved Phosphate (as P)	mg/L	APHA 23 rd Ed. 2017,4500-P-C, 4-153	5.0	N.D.
8	Fluoride (as F)	mg/L	APHA 23 rd Ed. 2017,4500-F-B&D,4-84 & 87	2.0	0.24
9	Lead (as Pb)	mg/L	APHA 23 rd Ed. 2017, 3111-B, 3-18	0.1	N.D.
10	Zinc (as Zn)	mg/L	APHA 23 rd Ed. 2017, 3111-B, 3-18	5.0	0.13
11	Copper (as Cu)	mg/L	APHA 23rd Ed. 2017, 3111-B, 3-18	3.0	N.D.
12	Cadmium (as Cd)	mg/L	APHA 23rd Ed. 2017, 3500-Cd, 3-105	2.0	N.D.
13	Mercury (as Hg)	mg/L	APHA 23 rd Ed. 2017, 3112-B, 3-23	0.01	N.D.
14	Arsenic (as As)	mg/L	APHA 23rd Ed. 2017,3114-C, 3-38	0.2	N.D.
15	Selenium (as Se)	mg/L	APHA 23rd Ed. 2017,3114-C, 3-38	0.05	N.D.
16	Total Chromium (as Cr)	mg/L	APHA 23 rd Ed. 2017,3500-Cr-B,3-69	2.0	N.D.
17	Chemical Oxygen Demand (COD)	mg/L	APHA 23 rd Ed. 2017, 5520-B,5-17	250	40.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	9.5
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003,	10.0	N.D.
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.

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		STRIES LIMITED, GAF LUPARA U/G COAL M PARA,		Report No Lab Ref No Date Of Sampling Date Of Receipt Date Of Report Date Of Analysis	UES/TR/23 UES/23-24 21/09/202 22/09/202 27/09/202 START: 22/	:3 :3 :3	END:26/09/2023
	Sample Type	WASTE WATER			& Date		
SAMPLE DETAILS Sample Type WASTE WATER Customer Ref. No. & Date P.O.13552310212, DATED:07.09.2022	Customer Sample ID	STP OUTLET, PORTA CABIN	T	Sample Condition	At Receipt	Ok Laboratory Chemist	
Sample Type WASTE WATER Customer Ref. No. & Date P.O.13552310212, DATED:07.09.2022	Packing Of Sample	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected	Ву		
Sample Type WASTE WATER Customer Ref. No. & Date P.O.13552310212, DATED:07.09.2022 Customer Sample ID STP OUTLET, PORTA CABIN Sample Condition At Receipt Ok Packing Of Sample 3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN Sealed Sample Collected By Laboratory Chemist	Sampling Procedure	IS:3025(PART-I):1987 RA APHA 22™ ED. 2021, 1060		Quantity Received	1	Approx. 5	5Ltr.

TEST REPORT									
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	SUMP WATER PIT-D				
1	Colour	Hazen	APHA 23 rd Ed. 2017,2120-B,2-6	See 6 of Annexure-I	<1				
2	Odour	-	APHA 23rd Ed. 2017,2120-B,2-6	See 6 of Annexure-I	Agreeable				
3	Temperature	°c	APHA 23 rd Ed. 2017, <mark>2130-B,</mark> 2-13	Shall not exceed 5°C above the receiving water temperature	25.3				
4	pH	-	APHA 23rd Ed. 2017,4500-H+-B,4-92	5.5 to 9.0	7.57				
5	Total Residual Chlorine	mg/L	APHA 23 rd Ed. 2017,4500-Cl-G, 4 - 69	1.0	N.D.				
6	Total Suspended Solids	mg/L	APHA 23 rd Ed. 2017,2540- D, 2-66	100	32.4				
7	Dissolved Phosphate (as P)	mg/L	APHA 23 rd Ed. 2017,4500-P-C, 4-153	5.0	N.D.				
8	Fluoride (as F)	mg/L	APHA 23 ^{zd} Ed. 2017,4500-F-B&D,4-84 & 87	2.0	0.21				
9	Lead (as Pb)	mg/L	APHA 23 rd Ed. 2017, 3111-B, 3-18	0.1	N.D.				
10	Zinc (as Zn)	mg/L	APHA 23rd Ed. 2017, 3111-B, 3-18	5.0	0.11				
11	Copper (as Cu)	mg/L	APHA 23rd Ed. 2017, 3111-B, 3-18	3.0	N.D.				
12	Cadmium (as Cd)	mg/L	APHA 23 rd Ed. 2017,3500-Cd, 3-105	2.0	N.D.				
13	Mercury (as Hg)	mg/L	APHA 23rd Ed. 2017, 3112-B, 3-23	0.01	N.D.				
14	Arsenic (as As)	mg/L	APHA 23rd Ed. 2017,3114-C, 3-38	0.2	N.D.				
15	Selenium (as Se)	mg/L	APHA 23 rd Ed. 2017,3114-C, 3-38	0.05	N.D.				
16	Total Chromium (as Cr)	mg/L	APHA 23 rd Ed. 2017,3500-Cr-B,3-69	2.0	N.D.				
17	Chemical Oxygen Demand (COD)	mg/L	APHA 23 rd Ed. 2017, 5520-B,5-17	250	48.0				
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	8.6				
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003,	10.0	N.D.				
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.				

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Annexure – 9A

Photographs of Sewage Treatment Plant at Gare Palma IV/5 Under Ground Coal Mines of M/s Hindalco Industries Limited



Sewage Treatment Plant

Annexure – 9B



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Name & Address Of The Cus	tomer	REPORT NO.	UES/TR/23-24/0575		
To,		LAB REF NO.	UES/23-24/W/01420		
	RIES LIMITED, GARE	DATE OF SAMPLING	27/04/2023		
VILLAGE - MILUPA		DATE OF RECEIPT	28/04/2023		
BLOCK-TAMNAR,		DATE OF REPORT	02/05/2023		
DISTT RAIGARH	(C.G.) 496107	DATE OF ANALYSIS	START: 28/04/2023 END: 02/05/2023		
	S	AMPLE DETAILS			
SAMPLE TYPE	OUTLET OF WTP	ORDER /REFERENCE:	P.O.13552310212, DATED: 07.09.2022		
CUSTOMER SAMPLE ID	WTP OUTLET KONDKEL VILLAGE	SAMPLE CONDITION AT RECEIPT	ОК		
PACKING OF SAMPLE 3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTLE L X 1 NO. GLASS BOTLE		SAMPLE COLLECTED BY	CHEMIST		
SAMPLING PROCEDURE	IS:3025(PART I):1987 RA 2003; APHA 22ND ED. 2012,	QUANTITY RECEIVED	5 LTR		

Report No.0575

TEST REPORT									
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT			
				ACCEPTABLE	PERMISSIBLE				
1	Colour	Hazen	IS 3025(part-4)	5	15	<1			
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable			
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable			
4	рН	-	APHA 22 nd Ed.2012,4500-H ⁺ - B, 4-92	6.5 To 8.5	No Relaxation	7.46			
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2- 13	1	5	0.70			
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	//		278.3			
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-CI-G, 4 - 69	0.2	1	N.D.			
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2-64			170.0			
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	167.0			
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2-66	and the stand of		3.0			
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	90.0			
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2- 44,45	200	600	116.0			
13	Calcium Hardness (as CaCO3)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca- B, 3-67			60.0			
14	Magnesium Hardness (as CaCO3)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg- B, 3-84			56.0			
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca- B, 3-67	75	200	24.05			
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg- B, 3-84	30	100	13.61			
17	Chloride (as Cl)	mg/Lit	APHA 22 nd Ed.2012,4500-CI-B, 4-72	250	1000	25.1			
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ - E, 4-190	200	400	21.9			



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Report No.0575

			TEST REPORT			
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS	10500:2012 PERMISSIBLE	RESULT
	A President President		·····································	LIMIT	LIMIT	
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ - B, 4-122	45	No Relaxation	1.71
20	Phosphate (as P)	mg/Lit	APHA 22nd Ed.2012,4500-P- C, 4-153			N.D.
21	Sodium (as Na)	mg/Lit	APHA 22nd Ed.2012,3500-Na- B, 3-97			8.3
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87			0.85
23	Boron (as B)	mg/Lit	APHA 22 nd Ed.2012,4500-B-B, 4-25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 22 nd Ed.2012,3111-B,3- 18	0.3	No Relaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1.0	1.5	0.16
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 22 nd Ed.2012,3500-Ni, 3-108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	5.0	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 22 nd Ed.2012,3500-Cd, 3-105	0.003	No Relaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3- 23	0.001	No Relaxation	N.D.
33	Arsenic (as As)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3- 38	0.01		N.D.
34	Selenium (as Se)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3- 38	0.01	No Relaxation	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B, 3-69	0.05	No Relaxation	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 22 nd Ed.2012,5540-C, 5- 53	0.02	1.0	N.D.
37	Phenolic Compound (as C_6H_5OH)	mg/Lit	APHA 22 nd Ed.2012,5540-B & C, 5-47	0.001	0.002	N.D.
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	µg/Lit	APHA 22 nd Ed.2012,6440-6-93	0.0001	No Relaxation	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003, Ed. 2.1	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003, Ed 2.1		1	N.D.
Mic	obiological Analysis					030-1410- 4 -1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
1	Total Coliforms	MPN/ 100 ML	IS: 1622:1981:RA:2019		detectable in ml sample	Absent
2	Faecal Coliforms	MPN/ 100 ML	IS: 1622:1981:RA:2019		detectable in ml sample	Absent



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Report No 0575

			TEST REPORT			
SR.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS	10500:2012	RESULT
NO.				ACCEPTABLE LIMIT	PERMISSIBLE LIMIT	
3	E-coli	MPN/ 100 ML	IS: 1622:1981:RA:2019		detectable in ml sample	Absent
Pest	ticides					
1	p,p DDT	µg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	µg/L	US EPA 508-1995		1	N.D.
4	p,p DDD	µg/L	US EPA 508-1995		1	N.D.
5	O,p DDD	µg/L	US EPA 508-1995		1	N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995		2	N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995		.01	N.D.
8	Beta-HCH	µg/L	US EPA 508-1995		.04	N.D.
9	Delta HCH	µg/L	US EPA 508-1995		.04	N.D.
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	and a second).4	N.D.
11	Beta-Endosulfan	µg/L	US EPA 508-1995).4	N.D.
12	Endosulfansulphate	µg/L	US EPA 508-1995	and have been and the second se).4	N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994	i	1	N.D.
14	Ethion	µg/L	US EPA 8141A-1994	and an	3	N.D.
15	Chloropyrifos	µg/L	US EPA 8141A-1994		30	N.D.
16	Phorate	µg/L	US EPA 8141A-1994		2	N.D.
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994		-	N.D.
18	Phoratesulphone	µg/L	US EPA 8141A-1994		-	N.D.
19	2,4-D	µg/L	US EPA515.1-1995	in the second se	30	N.D.
20	Alachlor	µg/L	US EPA 508- 1995	and a supersonance of the superson supe	20	N.D.
21	Atrazine	µg/L	US EPA 532-2000		2	N.D.
22	Methyl parathion	µg/L	US EPA 8141A-1994).3	N.D.
23	Methyl paraxone	µg/L	US EPA 8141A-1994		-	N.D.
24	Malathion	µg/L	US EPA 8141A-1994	one town i town one of a common one of the	90	N.D.
25	Malaoxon	µg/L	US EPA 8141A-1994		-	N.D.
26	Aldrin	µg/L	US EPA 508- 1995		.03	N.D.
27	Dieldrin	µg/L	US EPA 508-1995	0	.03	N.D.

Note: mg/lit.: milligram per liter, N.D.- Not Detected.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

The report foror publication, arbitration or as legal dispute is forbidden. Test sample will be retained for 07 days after issue of test report unless otherwise agreed with customer. This is for information as the party has asked for above test(s) only.

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

Subhajcet

Relle 02/05/27

REVIEWED BY

End of the test report---



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Name & Address Of The Cus		REFORT NO.	UES/TR/23-24/0921 UES/23-24/W/02137		
	RIES LIMITED, GARE JPARA U/G COAL MINE,	DATE OF SAMPLING	18/05/2023		
VILLAGE - MILUPA		DATE OF RECEIPT	19/05/2023		
BLOCK-TAMNAR,		DATE OF REPORT	24/05/2023		
DISTT RAIGARH	(C.G.) 496107	DATE OF ANALYSIS	START:19/05/2023 END: 23/05		
SAMPLE TYPE	OUTLET OF WTP	ORDER /REFERENCE:	P.O.13552310212,D	ATED:07.09.2022	
CUSTOMER SAMPLE ID	WTP OUTLET KONDKEL VILLAGE	SAMPLE CONDITION AT RECEIPT	OK		
PACKING OF SAMPLE 1 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE		SAMPLE COLLECTED BY	CHEMIST		
	IS: 3025 (PART I): 1987 RA		5 LTR		

TEST REPORT

		1				
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
NO.	at and an an	5.247.A-1.		ACCEPTABLE LIMIT	PERMISSIBLE LIMIT	
1	Colour	Hazen	IS 3025(part-4)	5	15	<1
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
4	рН	- 10	APHA 22 nd Ed.2012,4500-H ⁺ - B, 4-92	6.5 To 8.5	No Relaxation	7.48
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2- 13	1	5	0.72
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013		-	285.0
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-CI-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2-64			176.2
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	171.0
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2-66			4.3
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	94.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2- 44,45	200	600	122.0
13	Calcium Hardness (as CaCO3)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca- B, 3-67	-		64.0
14	Magnesium Hardness (as CaCO3)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg- B, 3-84			58.0
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca- B, 3-67	75	200	25.65
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg- B, 3-84	30	100	14.09
17	Chloride (as CI)	mg/Lit	APHA 22 nd Ed.2012,4500-CI-B, 4-72	250	1000	27.9
18	Sulphate (as SO₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ - E, 4-190	200	400	22.8



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Report	No.0921

	A State State		TEST REPORT		in a starter	
SR. NO.	PARAMETER	UNIT	METHOD OF TEST		10500:2012	RESUL
				ACCEPTABLE LIMIT	PERMISSIBLE LIMIT	
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ - B, 4-122	45	No Relaxation	1.73
20	Phosphate (as P)	mg/Lit	APHA 22nd Ed.2012,4500-P- C, 4-153			N.D.
21	Sodium (as Na)	mg/Lit	APHA 22nd Ed.2012,3500-Na- B, 3-97			9.2
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87			0.87
23	Boron (as B)	mg/Lit	APHA 22 nd Ed.2012,4500-B-B, 4-25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 22 nd Ed.2012,3111-B,3- 18	0.3	No Relaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1.0	1.5	0.18
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 22 nd Ed.2012,3500-Ni, 3-108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	5.0	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 22 nd Ed.2012,3500-Cd, 3-105	0.003	No Relaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3- 23	0.001	No Relaxation	N.D.
33	Arsenic (as As)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3- 38	0.01		N.D.
34	Selenium (as Se)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3- 38	0.01	No Relaxation	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B, 3-69	0.05	No Relaxation	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 22 nd Ed.2012,5540-C, 5- 53	0.02	1.0	N.D.
37	Phenolic Compound (as C_6H_5OH)	mg/Lit	APHA 22 nd Ed.2012,5540-B & C, 5-47	0.001	0.002	N.D.
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	µg/Lit	APHA 22 nd Ed.2012,6440-6-93	0.0001	No Relaxation	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003, Ed. 2.1	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003, Ed 2.1			N.D.
Micr	obiological Analysis	1				
1	Total Coliforms	MPN/ 100 ML	IS: 1622:1981:RA:2019	Shall not be any 100 r	and the second	Absent
2	Faecal Coliforms	MPN/ 100 ML	IS: 1622:1981:RA:2019	Shall not be any 100 r	and particular and the states of the	Absent



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Report No.0921

			TEST REPORT	ALC: ALC: A SOL		
SR.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
NO.				ACCEPTABLE LIMIT	PERMISSIBLE	
3	E-coli	MPN/ 100 ML	IS: 1622:1981:RA:2019	Shall not be any 100 r		Absent
Pest	ticides			0,1,0,0,000000000000000000000000000	and the second	
1	p,p DDT	µg/L	US EPA 508-1995	1	1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995	1	L	N.D.
3	p,pDDE	µg/L	US EPA 508-1995	1		N.D.
4	p,p DDD	µg/L	US EPA 508-1995			N.D.
5	O,p DDD	µg/L	US EPA 508-1995]	L I	N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995	2	2	N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	0.0	01	N.D.
8	Beta-HCH	µg/L	US EPA 508-1995	0.0	04	N.D.
9	Delta HCH	µg/L	US EPA 508-1995	0.0	04	N.D.
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0.	4	N.D.
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0.	4	N.D.
12	Endosulfansulphate	µg/L	US EPA 508-1995	0.	4	N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994	1		N.D.
14	Ethion	µg/L	US EPA 8141A-1994	3	3	N.D.
15	Chloropyrifos	µg/L	US EPA 8141A-1994	3	0	N.D.
16	Phorate	µg/L	US EPA 8141A-1994	2		N.D.
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994	-		N.D.
18	Phoratesulphone	µg/L	US EPA 8141A-1994	-		N.D.
19	2,4-D	µg/L	US EPA515.1-1995	3	0	N.D.
20	Alachlor	µg/L	US EPA 508- 1995	2	0	N.D.
21	Atrazine	µg/L	US EPA 532-2000	2		N.D.
22	Methyl parathion	µg/L	US EPA 8141A-1994	0.	3	N.D.
23	Methyl paraxone	µg/L	US EPA 8141A-1994			N.D.
24	Malathion	µg/L	US EPA 8141A-1994	19	0	N.D.
25	Malaoxon	µg/L	US EPA 8141A-1994			N.D.
26	Aldrin	µg/L	US EPA 508- 1995	0.0)3	N.D.
27	Dieldrin	µg/L	US EPA 508-1995	0.0	13	N.D.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

- > There port for or publication, arbitration or as legal dispute is forbidden.
- > Test sample will be retained for 07 days after issue of test report unless otherwise agreed with customer.
- This is for information as the party has asked for above test(s) only.

For ULTIMATE ENVIROLYTICAL SOLUTIONS Relle Subhajeet 24/05/23 **REVIEWED BY** AUTHORIZED SIGNATORY

-----End of the test report-----



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Cu	tomer	REPORT NO.	UES/TR/23-24/02028		
To, HINDALCO INDUST	RIES LIMITED, GARE	LAB REF NO.	UES/23-24/W/04417		
	JPARA U/G COAL MINE,	DATE OF SAMPLING	29/06/2023		
VILLAGE - MILUPA		DATE OF RECEIPT	30/06/2023		
BLOCK-TAMNAR,		DATE OF REPORT	04/07/2023		
DISTT RAIGARH	(C.G.) 496107	DATE OF ANALYSIS	START: 30/06/2023 END: 04/07/2023		
all parties of	S	AMPLE DETAILS	sales - dit -		
SAMPLE TYPE	OUTLET OF WTP	ORDER /REFERENCE:	P.O.13552310212, DATED:07.09.2022		
CUSTOMER SAMPLE ID	WTP OUTLET KONDKEL VILLAGE	SAMPLE CONDITION AT RECEIPT	OK		
CODICIENT DAME IN ID	PACKING OF SAMPLE 3 L X 1 NO. PVC CAN 1 L X 1 NO. FVC CAN SEAL 1 L X 1 NO. GLASS BOTTLE				
	1 L X 1 NO. PVC CAN SEALED	SAMPLE COLLECTED BY	CHEMIST		

Report No.02028

			TEST REPORT			
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS	AS PER IS 10500:2012	
NU.				ACCEPTABLE	PERMISSIBLE	
1	Colour	Hazen	IS 3025(part-4)	5	15	<1
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
4	рН	-	APHA 22 nd Ed.2012,4500-H ⁺ - B, 4-92	6.5 To 8.5	No Relaxation	7.49
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2- 13	1	5	0.73
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013			253.5
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-CI-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2-64	16		156.7
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	152.0
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2-66			4.7
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	84.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2- 44,45	200	600	110.0
13	Calcium Hardness (as CaCO3)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca- B, 3-67			58.0
14	Magnesium Hardness (as CaCO3)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg- B, 3-84			52.0
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca- B, 3-67	75	200	23.25
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg- B, 3-84	30	100	12.64
17	Chloride (as Cl)	mg/Lit	APHA 22 nd Ed.2012,4500-CI-B, 4-72	250	1000	25.9
18	Sulphate (as SO₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ - E, 4-190	200	400	20.99



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Report No.02028

-			TEST REPORT			_
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS	RESULT	
				ACCEPTABLE LIMIT	PERMISSIBLE LIMIT	
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ - B, 4-122	45	No Relaxation	1.59
20	Phosphate (as P)	mg/Lit	APHA 22nd Ed.2012,4500-P- C, 4-153			N.D.
21	Sodium (as Na)	mg/Lit	APHA 22nd Ed.2012,3500-Na- B, 3-97			8.96
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87			0.86
23	Boron (as B)	mg/Lit	APHA 22 nd Ed.2012,4500-B-B, 4-25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 22 nd Ed.2012,3111-B,3- 18	0.3	No Relaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1.0	1.5	0.17
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 22 nd Ed.2012,3500-Ni, 3-108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	5.0	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 22 nd Ed.2012,3500-Cd, 3-105	0.003	No Relaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3- 23	0.001	No Relaxation	N.D.
33	Arsenic (as As)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3- 38	0.01		N.D.
34	Selenium (as Se)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3- 38	0.01	No Relaxation	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B, 3-69	0.05	No Relaxation	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 22 nd Ed.2012,5540-C, 5- 53	0.02	1.0	N.D.
37	Phenolic Compound (as C_6H_5OH)	mg/Lit	APHA 22 nd Ed.2012,5540-B & C, 5-47	0.001	0.002	N.D.
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	µg/Lit	APHA 22 nd Ed.2012,6440-6-93	0.0001	No Relaxation	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003, Ed. 2.1	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003, Ed 2.1			N.D.
Micr	obiological Analysis		4			
1	Total Coliforms	MPN/ 100 ML	IS: 1622:1981:RA:2019	Shall not be any 100 n		Absent
2	Faecal Coliforms	MPN/ 100 ML	IS: 1622:1981:RA:2019	Shall not be a any 100 n		Absent



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Report No.02028

-			TEST REPORT			-
SR.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS	10500:2012	RESULT
				ACCEPTABLE	PERMISSIBLE LIMIT	
3	E-coli	MPN/ 100 ML	IS: 1622:1981:RA:2019		detectable in ml sample	Absent
Pest	ticides	an a		-k		
1	p,p DDT	µg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	µg/L	US EPA 508-1995	9 790000000 000000000000000000000000000	1	N.D.
4	p,p DDD	µg/L	US EPA 508-1995		1	N.D.
5	O,p DDD	µg/L	US EPA 508-1995		1	N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995		2	N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	The second state in the second state of the second state in the se	01	N.D.
8	Beta-HCH	µg/L	US EPA 508-1995		04	N.D.
9	Delta HCH	μg/L	US EPA 508-1995	0.	04	N.D.
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.
12	Endosulfansulphate	µg/L	US EPA 508-1995	0	.4	N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994		L	N.D.
14	Ethion	µg/L	US EPA 8141A-1994		3	N.D.
15	Chloropyrifos	µg/L	US EPA 8141A-1994	3	0	N.D.
16	Phorate	µg/L	US EPA 8141A-1994		2	N.D.
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994			N.D.
18	Phoratesulphone	µg/L	US EPA 8141A-1994	-	·	N.D.
19	2,4-D	µg/L	US EPA515.1-1995	3	0	N.D.
20	Alachlor	µg/L	US EPA 508- 1995	2	0	N.D.
21	Atrazine	µg/L	US EPA 532-2000	2		N.D.
22	Methyl parathion	µg/L	US EPA 8141A-1994	0.	3	N.D.
23	Methyl paraxone	µg/L	US EPA 8141A-1994	-		N.D.
24	Malathion	µg/L	US EPA 8141A-1994	19	0	N.D.
25	Malaoxon	µg/L	US EPA 8141A-1994		10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N.D.
26	Aldrin	µg/L	US EPA 508- 1995	0.0)3	N.D.
27	Dieldrin	µg/L	US EPA 508-1995	0.0)3	N.D.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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For the sample will be retained for 07 days after issue of test report unless otherwise agreed with customer.

This is for information as the party has asked for above test(s) only.

For ULTIMATE ENVIROLYTICAL SOLUTIONS Ret ubha 04/07/23 **REVIEWED BY** AUTHORIZED SIGNATORY End of the test report-



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Cus	tamer	REPORT NO.	UES/TR/23-24/0307	2	
To,	RIES LIMITED, GARE	LAB REF NO.	UES/23-24/W/05909		
	JPARA U/G COAL MINE,	DATE OF SAMPLING	26/07/2023		
VILLAGE - MILUPA		DATE OF RECEIPT	27/07/2023		
BLOCK-TAMNAR,		DATE OF REPORT	31/07/2023		
DISTT RAIGARH	(C.G.) 496107	DATE OF ANALYSIS	START: 27/07/2023	END: 31/07/2023	
	SZ	AMPLE DETAILS			
SAMPLE TYPE	OUTLET OF WTP	ORDER /REFERENCE:	P.O.13552310212,D	ATED:07.09.2022	
CUSTOMER SAMPLE ID	WTP OUTLET KONDKEL VILLAGE	SAMPLE CONDITION AT RECEIPT	OK		
PACKING OF SAMPLE 3 L X 1 NO. PVC CAN SEALE 1 L X 1 NO. PVC CAN SEALE 1 L X 1 NO. GLASS BOTTLE		SAMPLE COLLECTED BY	CHEMIST		
SAMPLING PROCEDURE	IS:3025(PART I):1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39	QUANTITY RECEIVED	5 LTR		

Report No.03072

TEST REPORT

SR.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS	RESULT	
NO.				ACCEPTABLE LIMIT	PERMISSIBLE	
1	Colour	Hazen	IS 3025(part-4)	5	15	<1
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	Taste	+	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
4	рН	-	APHA 22 nd Ed.2012,4500-H ⁺ - B, 4-92	6.5 To 8.5	No Relaxation	7.53
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2- 13	1	5	0.75
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013			260.0
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-CI-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2-64			161.1
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	156.0
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2-66			5.1
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	86.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2- 44,45	200	600	114.0
13	Calcium Hardness (as CaCO3)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca- B, 3-67	7.7		60.0
14	Magnesium Hardness (as CaCO3)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg- B, 3-84			54.0
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca- B, 3-67	75	200	23.25
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg- B, 3-84	30	100	13.12
17	Chloride (as Cl)	mg/Lit	APHA 22 nd Ed.2012,4500-CI-B, 4-72	250	1000	26.9
18	Sulphate (as SO₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ - E, 4-190	200	400	21.06



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Report No.03072

TEST REPORT								
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS	RESULT			
NU.				ACCEPTABLE LIMIT	PERMISSIBLE LIMIT			
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ - B, 4-122	45	No Relaxation	1.62		
20	Phosphate (as P)	mg/Lit	APHA 22nd Ed.2012,4500-P- C, 4-153	n		N.D.		
21	Sodium (as Na)	mg/Lit	APHA 22nd Ed.2012,3500-Na- B, 3-97			8.99		
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87			0.88		
23	Boron (as B)	mg/Lit	APHA 22 nd Ed.2012,4500-B-B, 4-25	0.5	1.0	N.D.		
24	Iron (as Fe)	mg/Lit	APHA 22 nd Ed.2012,3111-B,3- 18	0.3	No Relaxation	N.D.		
25	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1.0	1.5	0.18		
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	0.1	0.3	N.D.		
27	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	0.01	No Relaxation	N.D.		
28	Nickel (as Ni)	mg/Lit	APHA 22 nd Ed.2012,3500-Ni, 3-108	0.02	No Relaxation	N.D.		
29	Zinc (as Zn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	5.0	15	N.D.		
30	Copper (as Cu)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-	0.05	1.5	N.D.		
31	Cadmium (as Cd)	mg/Lit	APHA 22 nd Ed.2012,3500-Cd, 3-105	0.003	No Relaxation	N.D.		
32	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3- 23	0.001	No Relaxation	N.D.		
33	Arsenic (as As)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3- 38	0.01		N.D.		
34	Selenium (as Se)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3- 38	0.01	No Relaxation	N.D.		
35	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B, 3-69	0.05	No Relaxation	N.D.		
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 22 nd Ed.2012,5540-C, 5- 53	0.02	1.0	N.D.		
37	Phenolic Compound (as C_6H_5OH)	mg/Lit	APHA 22 nd Ed.2012,5540-B & C, 5-47	0.001	0.002	N.D.		
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	µg/Lit	APHA 22 nd Ed.2012,6440-6-93	0.0001	No Relaxation	N.D.		
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003, Ed. 2.1	0.5	No Relaxation	N.D.		
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003, Ed 2.1			N.D.		
Micr	obiological Analysis	and the second second			tere in a second de			
1	Total Coliforms	MPN/ 100 ML	IS: 1622:1981:RA:2019		detectable in ml sample	Absent		
2	Faecal Coliforms	MPN/ 100 ML	IS: 1622:1981:RA:2019		detectable in ml sample	Absent		



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Report No.03072

			TEST REPORT			the weather the second s
SR.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS	RESULT	
				ACCEPTABLE LIMIT	PERMISSIBLE LIMIT	
3	E-coli	MPN/ 100 ML	IS: 1622:1981:RA:2019		detectable in ml sample	Absent
Pest	ticides					
1	p,p DDT	µg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	µg/L	US EPA 508-1995		1	N.D.
4	p,p DDD	µg/L	US EPA 508-1995		1	N.D.
5	O,p DDD	µg/L	US EPA 508-1995		1	N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995		2	N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	0.	01	N.D.
8	Beta-HCH	µg/L	US EPA 508-1995	0.04		N.D.
9	Delta HCH	µg/L	US EPA 508-1995	0.04		N.D.
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0.4		N.D.
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.
12	Endosulfansulphate	µg/L	US EPA 508-1995	0	.4	N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994		1	N.D.
14	Ethion	µg/L	US EPA 8141A-1994		3	N.D.
15	Chloropyrifos	µg/L	US EPA 8141A-1994	3	0	N.D.
16	Phorate	µg/L	US EPA 8141A-1994		2	N.D.
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994		-	N.D.
18	Phoratesulphone	µg/L	US EPA 8141A-1994		-	N.D.
19	2,4-D	µg/L	US EPA515.1-1995	3	0	N.D.
20	Alachlor	µg/L	US EPA 508- 1995	2	0	N.D.
21	Atrazine	µg/L	US EPA 532-2000		2	N.D.
22	Methyl parathion	µg/L	US EPA 8141A-1994	0	.3	N.D.
23	Methyl paraxone	µg/L	US EPA 8141A-1994		-	N.D.
24	Malathion	µg/L	US EPA 8141A-1994	19	90	N.D.
25	Malaoxon	µg/L	US EPA 8141A-1994	the same state and		N.D.
26	Aldrin	µg/L	US EPA 508- 1995	0.	03	N.D.
27	Dieldrin	µg/L	US EPA 508-1995	0.	03	N.D.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

· Thereport foror publication, arbitration or as legal dispute is forbidden.

➤ Test sample will be retained for 07 days after issue of test report unless otherwise agreed with customer.

- This is for information as the party has asked for above test(s) only.





For ULTIMATE ENVIROLYTICAL SOLUTIONS ha AUTHORIZED SIGNATORY

REVIEWED BY

-----End of the test report-----



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3883Name & Address Of Th	e Customer		REPORT NO.	UES/TR/23-24/0388	3	
To,7397	RIES LIMITED, GARE		LAB REF NO.	UES/23-24/W/07397		
	JPARA U/G COAL MIN		DATE OF SAMPLING	23/08/2023		
VILLAGE - MILUPA		,	DATE OF RECEIPT	24/08/2023		
BLOCK-TAMNAR,			DATE OF REPORT	31/08/2023		
DISTT RAIGARH	(C.G.) 496107		DATE OF ANALYSIS	START:24/08/2023 END:28/08		
		SZ	AMPLE DETAILS			
SAMPLE TYPE	OUTLET OF WTP		ORDER /REFERENCE:	P.O.13552310212, DATED:07.09.2022		
CUSTOMER SAMPLE ID	WTP OUTLET KONDKEL V	ILLAGE	SAMPLE CONDITION AT RECEIPT	OK		
	3 L X 1 NO. PVC CAN		SAMPLE COLLECTED	CHEMIST		
PACKING OF SAMPLE	1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	SEALED	BY			

Report No.03	883
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	TEST REPORT								
SR.	PARAMETER	UNIT	IT METHOD OF TEST	AS PER IS	RESULT				
NO.				ACCEPTABLE LIMIT	PERMISSIBLE				
1	Colour	Hazen	IS 3025(part-4)	5	15	<1			
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable			
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable			
4	рН	-	APHA 23 rd Ed. 2017,4500-H ⁺ - B, 4-92	6.5 To 8.5	No Relaxation	7.48			
5	Turbidity	NTU	APHA 23 rd Ed. 2017,2130-B,2- 13	1	5	0.63			
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013			254.5			
7	Residual Chlorine	mg/Lit	APHA 23 rd Ed. 2017,4500-Cl- G, 4 - 69	0.2	1	N.D.			
8	Total Solid	mg/Lit	APHA 23 rd Ed. 2017,2540- B, 2-64			156.4			
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	152.7			
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2-66			3.7			
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	84.0			
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed. 2017,2340-C, 2-44,45	200	600	108.0			
13	Calcium Hardness (as CaCO3)	mg/Lit	APHA 23 rd Ed. 2017,3500-Ca- B, 3-67			56.0			
14	Magnesium Hardness (as CaCO3)	mg/Lit	APHA 23 rd Ed. 2017,3500-Mg- B, 3-84			22.44			
15	Calcium (as Ca)	mg/Lit	APHA 23 rd Ed. 2017,3500-Ca- B, 3-67	75	200	12.63			
16	Magnesium (as Mg)	mg/Lit	APHA 23 rd Ed. 2017,3500-Mg- B, 3-84	30	100	13.12			
17	Chloride (as Cl)	mg/Lit	APHA 23 rd Ed. 2017,4500-Cl- B, 4-72	250	1000	25.9			
18	Sulphate (as SO₄)	mg/Lit	APHA 23 rd Ed. 2017,4500-SO ₄ - E, 4-190	200	400	19.85			



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			TEST REPORT			
SR.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS	RESULT	
NO.				ACCEPTABLE LIMIT	PERMISSIBLE LIMIT	
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 rd Ed. 2017,4500- NO ₃ -B, 4-122	45	No Relaxation	1.53
20	Phosphate (as P)	mg/Lit	APHA 23 rd Ed. 2017,4500-P-C, 4-153			N.D.
21	Sodium (as Na)	mg/Lit	APHA 23 rd Ed. 2017,3500-Na- B, 3-97			7.56
22	Potassium (as K)	mg/Lit	APHA 23 rd Ed. 2017,3500-K-B, 3-87			0.74
23	Boron (as B)	mg/Lit	APHA 23 rd Ed. 2017,4500-B-B, 4-25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 23 rd Ed. 2017,3111-B,3- 18	0.3	No Relaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 23 rd Ed. 2017,4500-F-B &D, 4-84 & 87	1.0	1.5	0.17
26	Manganese (as Mn)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3- 18	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3- 18	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 23 rd Ed. 2017,3500-Ni, 3-108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3- 18	5.0	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3- 18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 23 rd Ed. 2017,3500-Cd, 3-105	0.003	No Relaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 23 rd Ed. 2017,3112-B, 3- 23	0.001	No Relaxation	N.D.
33	Arsenic (as As)	mg/Lit	APHA 23 rd Ed. 2017,3114-C, 3- 38	0.01		N.D.
34	Selenium (as Se)	mg/Lit	APHA 23 rd Ed. 2017,3114-C, 3- 38	0.01	No Relaxation	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 23 rd Ed. 2017,3500-Cr- B, 3-69	0.05	No Relaxation	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 23 rd Ed. 2017,5540-C, 5- 53	0.02	1.0	N.D.
37	Phenolic Compound (as C_6H_5OH)	mg/Lit	APHA 23 rd Ed. 2017,5540-B & C, 5-47	0.001	0.002	N.D.
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	µg/Lit	APHA 23rd Ed. 2017,6440-6-93	0.0001	No Relaxation	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003, Ed. 2.1	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003, Ed 2.1			N.D.
Micr	obiological Analysis		r			
1	Total Coliforms	MPN/ 100 ML	IS: 1622:1981:RA:2019	Shall not be any 100 r		Absent
2	Faecal Coliforms	MPN/ 100 ML	IS: 1622:1981:RA:2019	Shall not be any 100 r		Absent



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			TEST REPORT			
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				ACCEPTABLE LIMIT	PERMISSIBLE	
3	E-coli	MPN/ 100 ML	IS: 1622:1981:RA:2019		detectable in ml sample	Absent
Pest	icides					
1	p,p DDT	µg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	µg/L	US EPA 508-1995		1	N.D.
4	p,p DDD	µg/L	US EPA 508-1995		1	N.D.
5	O,p DDD	µg/L	US EPA 508-1995		1	N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995		2	N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	0.01		N.D.
8	Beta-HCH	µg/L	US EPA 508-1995	0.04		N.D.
9	Delta HCH	µg/L	US EPA 508-1995	0.04		N.D.
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.
12	Endosulfansulphate	µg/L	US EPA 508-1995	0	.4	N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994		1	N.D.
14	Ethion	µg/L	US EPA 8141A-1994		3	N.D.
15	Chloropyrifos	µg/L	US EPA 8141A-1994	3	0	N.D.
16	Phorate	µg/L	US EPA 8141A-1994		2	N.D.
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994		-	N.D.
18	Phoratesulphone	µg/L	US EPA 8141A-1994			N.D.
19	2,4-D	µg/L	US EPA515.1-1995	3	0	N.D.
20	Alachlor	µg/L	US EPA 508- 1995	2	0	N.D.
21	Atrazine	µg/L	US EPA 532-2000		2	N.D.
22	Methyl parathion	µg/L	US EPA 8141A-1994	0	.3	N.D.
23	Methyl paraxone	µg/L	US EPA 8141A-1994		-	N.D.
24	Malathion	µg/L	US EPA 8141A-1994	19	90	N.D.
25	Malaoxon	µg/L	US EPA 8141A-1994		-	N.D.
26	Aldrin	µg/L	US EPA 508- 1995	0.	03	N.D.
27	Dieldrin	µg/L	US EPA 508-1995	0.	03	N.D.

REMARKS: RESULTS ARE AS ABOVE

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This is for information as the party has asked for above test(s) only.

For ULTIMATE ENVIROLYTICAL SOLUTIONS 31108 **REVIEWED BY** AUTHORIZED SIGNATORY

End of the test report-



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Name & Address Of The Cu	tomer	REPORT NO.	UES/TR/23-24/0468	9	
To, HINDALCO INDUST	RIES LIMITED, GARE	LAB REF NO.	UES/23-24/W/08635		
	JPARA U/G COAL MINE,	DATE OF SAMPLING	21/09/2023		
VILLAGE - MILUPA		DATE OF RECEIPT	DATE OF RECEIPT 22/09/2023 DATE OF REPORT 27/09/2023 DATE OF ANALYSIS START:22/09/2023 END:26/09/2023		
BLOCK-TAMNAR,		DATE OF REPORT			
DISTT RAIGARH	(C.G.) 496107	DATE OF ANALYSIS			
	S	AMPLE DETAILS			
SAMPLE TYPE	OUTLET OF WTP	ORDER /REFERENCE:	P.O.13552310212, DATED:07.09.2022		
CUSTOMER SAMPLE ID	WTP OUTLET KONDKEL VILLAGE	SAMPLE CONDITION AT RECEIPT	OK		
	3 L X 1 NO. PVC CAN	SAMPLE COLLECTED	CHEMIST		
PACKING OF SAMPLE	1 L X 1 NO. PVC CAN SEALED 1 L X 1 NO. GLASS BOTTLE	BY	CHEMIST		

Report No.04689 **TEST REPORT** AS PER IS 10500:2012 SR. PARAMETER UNIT METHOD OF TEST RESULT NO. ACCEPTABLE PERMISSIBLE LIMIT LIMIT 1 Colour Hazen IS 3025(part-4) 5 15 <1 Odour 2 IS 3025(part-5) Agreeable Agreeable Agreeable 3 Taste IS 3025(part-8) Agreeable Agreeable Agreeable APHA 23rd Ed. 2017,4500-H+-No 4 pH _ 6.5 To 8.5 7.56 B, 4-92 Relaxation APHA 23rd Ed. 2017,2130-B,2-5 Turbidity NTU 5 0.72 1 13 IS 3025(part-14):1984, RA 6 Electrical Conductivity µS/cm 286.4 -----2013 APHA 23rd Ed. 2017,4500-CI-7 **Residual Chlorine** mg/Lit 0.2 1 N.D. G, 4 - 69 APHA 23rd Ed. 2017,2540- B, 8 Total Solid mg/Lit 165.4 ------2-64 IS 3025(part-16):1984, RA 9 Total Dissolved Solids mg/Lit 500 2000 162.0 2006 APHA 22nd Ed.2012,2540- D, 10 Total Suspended Solids mg/Lit ------3.4 2-66 IS 3025(part-23):1986, RA 11 Alkalinity Total (as CaCO₃) mg/Lit 200 600 88.0 2003 APHA 23rd Ed. 2017,2340-C, 12 Total Hardness (as CaCO₃) mg/Lit 200 600 102.0 2-44,45 Calcium Hardness (as APHA 23rd Ed. 2017,3500-Ca-13 mg/Lit --76.0 ---CaCO3) B, 3-67 Magnesium Hardness (as APHA 23rd Ed. 2017,3500-Mg-14 mg/Lit 26.0 ------CaCO3) B, 3-84 APHA 23rd Ed. 2017,3500-Ca-15 Calcium (as Ca) mg/Lit 75 200 30.46 B, 3-67 APHA 23rd Ed. 2017,3500-Mg-16 Magnesium (as Mg) mg/Lit 30 100 6.32 B, 3-84 APHA 23rd Ed. 2017,4500-CI-17 Chloride (as Cl) mg/Lit 250 1000 24.9 B, 4-72 APHA 23rd Ed. 2017,4500-SO4-18 Sulphate (as SO₄) mg/Lit 200 400 16.41

E, 4-190



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HDD-272, Phase III - Near JP Chowk Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099 Ph : 0771 - 4027777 I Email : ultimatenviro@gmail.com

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			TEST REPORT			
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS	RESULT	
NU.				ACCEPTABLE LIMIT	PERMISSIBLE LIMIT	
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 rd Ed. 2017,4500- NO ₃ -B, 4-122	45	No Relaxation	1.63
20	Phosphate (as P)	mg/Lit	APHA 23 rd Ed. 2017,4500-P-C, 4-153	1-1-1-1		N.D.
21	Sodium (as Na)	mg/Lit	APHA 23 rd Ed. 2017,3500-Na- B, 3-97			7.21
22	Potassium (as K)	mg/Lit	APHA 23 rd Ed. 2017,3500-K-B, 3-87			0.52
23	Boron (as B)	mg/Lit	APHA 23 rd Ed. 2017,4500-B-B, 4-25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 23 rd Ed. 2017,3111-B,3- 18	0.3	No Relaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 23 rd Ed. 2017,4500-F-B &D, 4-84 & 87	1.0	1.5	0.13
26	Manganese (as Mn)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3- 18	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3- 18	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 23 rd Ed. 2017,3500-Ni, 3-108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3- 18	5.0	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 23 rd Ed. 2017,3111-B, 3- 18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 23 rd Ed. 2017,3500-Cd, 3-105	0.003	No Relaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 23 rd Ed. 2017,3112-B, 3- 23	0.001	No Relaxation	N.D.
33	Arsenic (as As)	mg/Lit	APHA 23 rd Ed. 2017,3114-C, 3- 38	0.01		N.D.
34	Selenium (as Se)	mg/Lit	APHA 23 rd Ed. 2017,3114-C, 3- 38	0.01	No Relaxation	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 23 rd Ed. 2017,3500-Cr- B, 3-69	0.05	No Relaxation	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 23 rd Ed. 2017,5540-C, 5- 53	0.02	1.0	N.D.
37	Phenolic Compound (as C_6H_5OH)	mg/Lit	APHA 23 rd Ed. 2017,5540-B & C, 5-47	0.001	0.002	N.D.
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	µg/Lit	APHA 23rd Ed. 2017,6440-6-93	0.0001	No Relaxation	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003, Ed. 2.1	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003, Ed 2.1			N.D.
Micr	obiological Analysis		• • • • • • • • • • • • • • • • • • •			
1	Total Coliforms	MPN/ 100	IS: 1622:1981:RA:2019	Shall not be any 100 r		Absent
2	Faecal Coliforms	ML MPN/ 100 ML	IS: 1622:1981:RA:2019	Shall not be any 100 n	detectable in	Absent



Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

			TEST REPORT			
SR. NO.	DADAMETED	UNIT	METHOD OF TEST	AS PER IS	10500:2012	RESULT
				ACCEPTABLE LIMIT	PERMISSIBLE LIMIT	
3	E-coli	MPN/ 100 ML	IS: 1622:1981:RA:2019	Shall not be any 100 n		Absent
Pes	ticides					
1	p,p DDT	µg/L	US EPA 508-1995	1		N.D.
2	o.p DDT	µg/L	US EPA 508-1995	1		N.D.
3	p,pDDE	µg/L	US EPA 508-1995	11		N.D.
4	p,p DDD	µg/L	US EPA 508-1995	1		N.D.
5	O,p DDD	µg/L	US EPA 508-1995	1		N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995	2		N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	0.01		N.D.
8	Beta-HCH	µg/L	US EPA 508-1995	0.04		N.D.
9	Delta HCH	µg/L	US EPA 508-1995	0.04		N.D.
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0.4		N.D.
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0.4		N.D.
12	Endosulfansulphate	µg/L	US EPA 508-1995	0.4	4	N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994	1		N.D.
14	Ethion	µg/L	US EPA 8141A-1994	3		N.D.
15	Chloropyrifos	µg/L	US EPA 8141A-1994	30		N.D.
16	Phorate	µg/L	US EPA 8141A-1994	2		N.D.
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994	-		N.D.
18	Phoratesulphone	µg/L	US EPA 8141A-1994	-		N.D.
19	2,4-D	µg/L	US EPA515.1-1995	30)	N.D.
20	Alachlor	µg/L	US EPA 508- 1995	20		N.D.
21	Atrazine	µg/L	US EPA 532-2000	2		N.D.
22	Methyl parathion	µg/L	US EPA 8141A-1994	0.3		N.D.
23	Methyl paraxone	µg/L	US EPA 8141A-1994	-		N.D.
24	Malathion	µg/L	US EPA 8141A-1994	190	0	N.D.
25	Malaoxon	µg/L	US EPA 8141A-1994	-		N.D.
26	Aldrin	µg/L	US EPA 508- 1995	0.0	3	N.D.
27	Dieldrin	µg/L	US EPA 508-1995	0.0		N.D.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

> 2

Thereportforor publication, arbitration or as legal dispute is forbidden. Test sample will be retained for 07 days after issue of test report unless otherwise agreed with customer. This is for information as the party has asked for above test(s) only.

Redu 27/03/23 **REVIEWED BY**

For ULTIMATE ENVIROLYTICAL SOLUTIONS bhar AUTHORIZED SIGNATORY

-End of the test report-----

Annexure-10



National Accreditation Board for Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

ULTIMATE ENVIROLYTICAL SOLUTIONS

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

HDD 272, PHASE-III, KABIR NAGAR, RAIPUR, CHHATTISGARH, INDIA

in the field of

TESTING

Certificate Number:

TC-6065

Issue Date:

27/10/2021

Valid Until:

26/10/2023

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL. (To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Identity : ULTIMATE ENVIROLYTICAL SOLUTIONS

Signed for and on behalf of NABL



N. Venkateswaran Chief Executive Officer

महोत्सव



छत्तीसगढ़ पर्यावरण संरक्षण मंडल <u>पर्यावास भवन, सेक्टर – 19,</u>

नवा रायपुर अटल नगर, जिला-रायपुर (छ.ग.) 492002

Email add - hocecb@gmail.com

क्रमांक 1607 मुख्या/वैज्ञा./छ.ग.प.सं.मं./2022 नवा रायपुर, अटल नगर, दिनांक 12/5/2022 प्रति,

श्री अनुराग श्रीवास्तव,

मैर्नजिंग पार्टनर / क्वालिटी मैनेजर,

मेसर्स अल्टीमेट इन्वायरोलाईटिकल सॉल्यूशन्स,

272-एच.डी.डी., फेस-3, कबीर नगर, रिंग रोड नं. 2,

जिला - रायपुर (छ.ग.)

मान्यता के संबंध में।

विषय :--

संदर्भ :--

1. आपका आवेदन पत्र कमांक UES/22-23/027 दिनांक 04/05/2022.

2. मंडल मुख्यालय का पत्र कमांक 3398 दिनांक 17/08/2021.

3. National Accreditation Board for Testing and Calibration Laboratories का सर्टिफिकेट नं. TC-6065 दिनांक 27/10/2021.

प्रदेश में संचालित निजी प्रयोगशाला को छत्तीसगढ़ पर्यावरण संरक्षण मंडल द्वारा प्रदत्त

उपरोक्त विषयांर्तगत संदर्भित पत्रों का अवलोकन करें। लेख है कि मंडल मुख्यालय द्वारा पत्र कमांक 3398 दिनांक 17/08/2021 के माध्यम से आपके निजी प्रयोगशाला को जल (प्रदूषण निवारण तथा नियंत्रण) अधिनियम, 1974 की धारा 17 (2) एवं वायु (प्रदूषण निवारण तथा नियंत्रण) अधिनियम, 1981 की धारा 17 (2) के अंतर्गत मान्यता प्रदान की गई थी, जिसकी वैधता दिनांक 25/06/2022 तक है। संदर्भ – 3 पर उल्लेखित सर्टिफिकेट नं. TC-6065 दिनांक 27/10/2021 के अनुकम में छत्तीसगढ़ पर्यावरण संरक्षण मंडल द्वारा जल (प्रदूषण निवारण तथा नियंत्रण) अधिनियम, 1974 की धारा 17 (2) एवं वायु (प्रदूषण निवारण तथा नियंत्रण) अधिनियम, 1981 की धारा 17 (2) के अंतर्गत प्रदत्त मान्यता की वैधता दिनांक 26/10/2023 तक बढ़ाई जाती है। कृपया आपकी प्रयोगशाला में प्रचालकों की अघतन विश्लेषण दर सूची से मंडल को अवगत कराते हुए इस पत्र की पावती भेजे।

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संदरस्य सचिव छन्नीसगढ़ पर्यावरण संरक्षण मंडल, नवा रायपुर अटल नगर, रायपुर (छ.ग.)

पृ.क्रमांक मुख्या/वैज्ञा./छ.ग.प.सं.मं./2022 नवा रायपुर अटल नगर, दिनांक / /2022 प्रतिलिपिः क्षेत्रीय अधिकारी, क्षेत्रीय कार्यालय, छत्तीसगढ़ पर्यावरण संरक्षण मंडल, रायपुर/भिलाई–दुर्ग/बिलासपुर/कोरबा/रायगढ़/अंबिकापुर/जगदलपुर की ओर सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

> सदस्य सचिव छत्तीसगढ़ पर्यावरण संरक्षण मंडल, नवा रायपुर अटल नगर, रायपुर (छ.ग.)

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पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE GOVT. OF INDIA

F. No. LB/99/7/2021-INST LAB-HO-CPCB-HO/ Pvt/ 4564

Dated: 28th September, 2022

Provisional Certificate

To,

वयांखिण को

Head of Laboratory, M/s Ultimate Envirolytical Solutions, HDD272, Phase-III, Kabir Nagar, Raipur -492099, Chhattisgarh.

Subject: Recognition of M/s Ultimate Envirolytical Solutions, HDD272, Phase-III, Kabir Nagar, Raipur -492099, Chhattisgarh, as Environmental laboratory under the Environmental (Protection) Act-1986.

Sir,

I am directed to refer the online application, dated 24/05/2022 for recognition of your laboratory under Environmental (Protection) Act, 1986. Based on the recommendations of the concerned Division, approval of Competent Authority for recognition of Environmental laboratories and your acceptance of the revised terms and conditions at Annexure-III & IV of the guidelines for recognition of environmental laboratories, CPCB approves the renewal of recognition of M/s Ultimate Envirolytical Solutions, HDD272, Phase-III, Kabir Nagar, Raipur -492099, Chhattisgarh, as shall be notified in the Gazette of India. Considering the current requirement of mandatory accreditation/ certifications of the laboratory, this recognition shall be valid up to 26/10/2023 in continuation to earlier recognition.

- 2. As sought in the aforementioned application M/s Ultimate Envirolytical Solutions, HDD272, Phase-III, Kabir Nagar, Raipur -492099, Chhattisgarh, may undertake the following tests:
 - i. **Physical Tests-** Conductivity, Colour, pH, Fixed & Volatile Solids, Total Solids, Total Dissolved Solids, Total Suspended Solids, Turbidity, Temperature, Velocity & Discharge measurement, Flocculation test (Jar test), Odour, Salinity, Settleable Solids and Sludge Volume Index (SVI).
 - ii. Inorganic (General and Non-Metallic): Acidity, Alkalinity, Ammonical Nitrogen, Chloride, Chlorine residual, Dissolved Oxygen, Fluoride, Total Hardness, Total Kjeldahl Nitrogen (TKN), Nitrite Nitrogen, Nitrate Nitrogen, Phosphate, Sulphate, Bromide, Chlorine Demand, Iodine, Sulphite, Silica, Cyanide and Sulphide.
 - iii. Inorganic (Trace Metals): Boron, Cadmium, Calcium, Chromium Total, Chromium Hexavalent, Copper, Iron, Lead, Magnesium, Mercury, Nickel, Potassium, Sodium, Sodium Absorption Ratio (SAR), Zinc, Arsenic, Aluminium, Barium, Manganese, Selenium and Vanadium.
 - iv. Organics (General) and Trace Organics: Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Oil and Grease, Phenolic Compounds, Pesticides (each) (Organochlorine and Organo nitrogen-phosphorus), Total Organic Carbon, Poly-Chlorinated Biphenyl (PCB's) each, Polynuclear Aromatic Hydrocarbon (PAH) each, and Organic Carbon (in solid).
 - v. Microbiological Test: Total Coliform, Faecal Coliform, E. coli, Faecal Streptococci and Total Plate Count.
 - vi. **Toxicological Tests:** Bioassay method for evaluation of toxicity using fish and Measurement of toxicity using Daphnia or Other Organism.
 - vii. Characterization of Hazardous waste: Preparation of Leachate (TCLP extract/water extract), Corrosivity, Ignibility (Flash point), Reactivity and Measurement of heavy metals/ pesticides in the waste and leachate.

Contd.

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032 Parivesh Bhawan, East Arjun Nagar, Delhi-110032 दूरभाष/Tel : 43102030, 22305792, वेबसाईट/Website : www.cpcb.nic.in

- viii.Soil/Sludge/Sediment and Solid Waste: Boron, Cation Exchange Capacity (CEC), Electrical Conductivity, Nitrogen (available), Organic Carbon/matter (Chemical method), pH, Phosphorous (available), Phosphate (ortho), Phosphate (total), Potassium, SAR in Soil Extract, Sodium, Soil Moisture, TKN, Calorific Value, Ammonia, Bicarbonate, Calcium, Calcium Carbonate, Chloride, Colour, Exchangeable Sodium Percentage (ESP), Heavy metal, Magnesium, Nitrate, PAH, Pesticide and Sulphate.
- ix. Ambient Air/ Fugitive Emissions: Nitrogen Dioxide (NO₂), Sulphur Dioxide (SO₂), Total Suspended Particulate Matter, Respirable Suspended Particulate Matter (PM₁₀), Ammonia, Carbon Monoxide, Chlorine, Fluoride, Lead, Ozone, and PM_{2.5}.
- x. Stack Gases/ Source Emission: Particulate Matter, Sulphur Dioxide, Velocity & Flow, Carbon Dioxide, Carbon Monoxide, Temperature, Oxygen, Oxides of Nitrogen, Acid mist, Ammonia, Fluoride (Gaseous), Chlorine and Hydrogen Sulphide.
- xi. Noise Level: Noise Level Measurement (20-140 dBa) and Ambient Noise and Source Specific Noise.
- xii. Meteorological: Ambient Temperature, Wind Direction, Wind Speed, Relative Humidity, and Rainfall.
- 3. Further, the following analysts have been approved as Government Analysts.
 - i. Sh. Anurag K. Shrivastava
 - ii. Smt. Snehal Akulwar
 - iii. Sh. Pramod Choubey
- 2. The laboratory shall compulsorily participate in the Analytical Quality Exercise conducted by the Central Pollution Control Board (CPCB) to ascertain the capability of the laboratory and analysis carried out and shall submit quarterly progress report to CPCB.
- 3. The surprise inspection/periodic surveillance of the recognized environment laboratory will be undertaken by CPCB to assess its proper functioning systematic operation and reliability of data generated at the laboratory.
- 4. It is also mandatory for the laboratory to have requisite accreditations of the ISO: 17025 (NABL) and ISO:45001 (OH&SMS) and its renewal as per accreditation rules. This recognition is subject to such accreditations and renewals as applicable. The laboratory is required to apply online for further renewal of recognition through CPCB web portal after renewal of the mandatory accreditations / certifications concerned.
- 5. The laboratory should compulsorily follow the accepted terms and conditions. In case of serious non-compliance of any of the terms and conditions, the laboratory may be black listed for a minimum period of two years and civil/criminal proceedings, as applicable, may be initiated for performing functions on behalf of the Government in an unauthorized manner.

Yours faithfully,

K.PJ1 28 9122

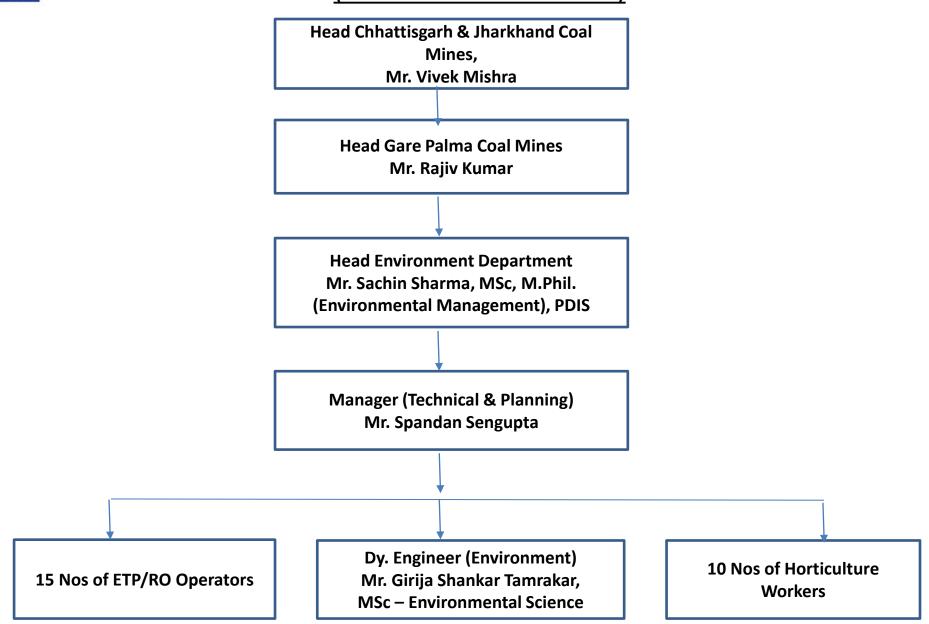
(Dr. K. Ranganathan) Scientist-E & Divisional Head Instrumentation Laboratory

Annexure – 10A



Organisation Chart of Environment Management Cell

(Gare Palma Coal Mines)



Annexure-11

Environmental Expenditure Details for FY 2023-24 (From April 2023 to September 2023)

M/s Hindalco Industries Limited, Gare Palma Mines IV/5

Particulars	Amount (Lakh)
Water Quality Management	133.14
Air Quality Management	6.00
Plantation, Green Belt Development	0.43
Others	0.24
Total	139.81