



HIL/ENV/GP- IV/5/EC/2023-24/1/251

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,

Rajiv Kumar
(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
4. 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 (IV/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

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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. 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, Sirius, 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	The project proponent will construct "Check 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.- 3.</u>

		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>
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.	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. General 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.
iii	Four ambient air quality stations should be established in the core zone as well as the buffer zone for RPM, SPM, SO ₂ , NO _x & 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, SO ₂ , NO _x & 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 extractors	Presently Gare Palma IV/5 Coal mine is not in operation

vi	<p>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.</p>	<p>Fugitive dust emission from all the sources is being monitored regularly.</p> <p>Fugitive dust emission report is attached as Annexure – 6A.</p> <p>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.</p> <p>Photographs of fixed type of water sprinklers & truck mounted water sprinkling system at GP IV/5 Coal Mines is attached as Annexure – 6B.</p>
vii	<p>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</p>	<p>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 Annexure - 7.</p>
viii	<p>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.</p>	<p>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).</p> <p>The treated water quality is maintained well within the prescribed standards all the time.</p> <p>Analysis reports (Inlet & Outlet) are being periodically furnished to CECB/CPCB/MoEF & CC, carried out through CECB & MoEF & CC approved & NABL accredited Laboratory.</p> <p>Copy of Analysis Report (ETP Inlet & Outlet) for the period from April 2023 to September 2023 is attached as Annexure – 8.</p> <p>Photograph of Treatment Facility at GP IV/5 Coal Mines is attached as Annexure – 8A.</p> <p>HIL also provided the Sewage Treatment Plant of capacity 50 m3/day at Kondkel to treat the domestic wastewater generated from Toilets, bathroom etc.</p>

		<p>Copy of Analysis Report (Inlet & Outlet of STP) for the period from April 2023 to September 2023 is attached as <u>Annexure – 9.</u></p> <p>Photograph of Sewage Treatment Plant installed at GP IV/5 Coal Mines (Kondkel) is attached as <u>Annexure – 9A.</u></p> <p>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).</p> <p>Copy of Analysis Report for the period from April 2023 to September 2023 is enclosed above.</p>
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 m ³ / 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	<p>We have engaged CECB & MoEF&CC approved and NABL accredited Laboratory i.e. M/s Ultimate Enviroltysical Solutions Raipur to carried out the mine environmental quality parameters monitoring.</p> <p>Approval letter of Monitoring Agency from CECB Raipur, MoEF&CC & NABL accredited Laboratory certificates are attached as <u>Annexure No. – 10.</u></p>
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.	<p>A separate Environmental Management Department is functioning at Coal Mine under the direct control of a senior executive.</p> <p>EMD organization Chart is attached as <u>Annexure No. – 10A</u></p>
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 <u>Annexure – 11.</u>

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

To

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



Dear Sirs,

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:

1. 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 de-allocation by the Hon'ble Supreme Court vide judgments dated 25.08.2014 and 24.09.2014 in WP (CrI.) 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: Tamnar Dist: Raigarh- 496107, Chhattisgarh
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Registered Office: Ahura Centre, 1st Floor, B Wing, Mahakali Caves Road Andheri (East), Mumbai 400093, India
T: + 91 22 4601 2000

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.
7. 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.

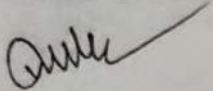
- (vi) Since the mine was developed by conventional bord and pillar underground method of mining, steel roof bolts of 1.8 m length and Steel W-straps have been installed at a distance of 1 m all along the mine to support the roof for which deployment of continuous miners is very difficult. De-pillaring 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

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 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

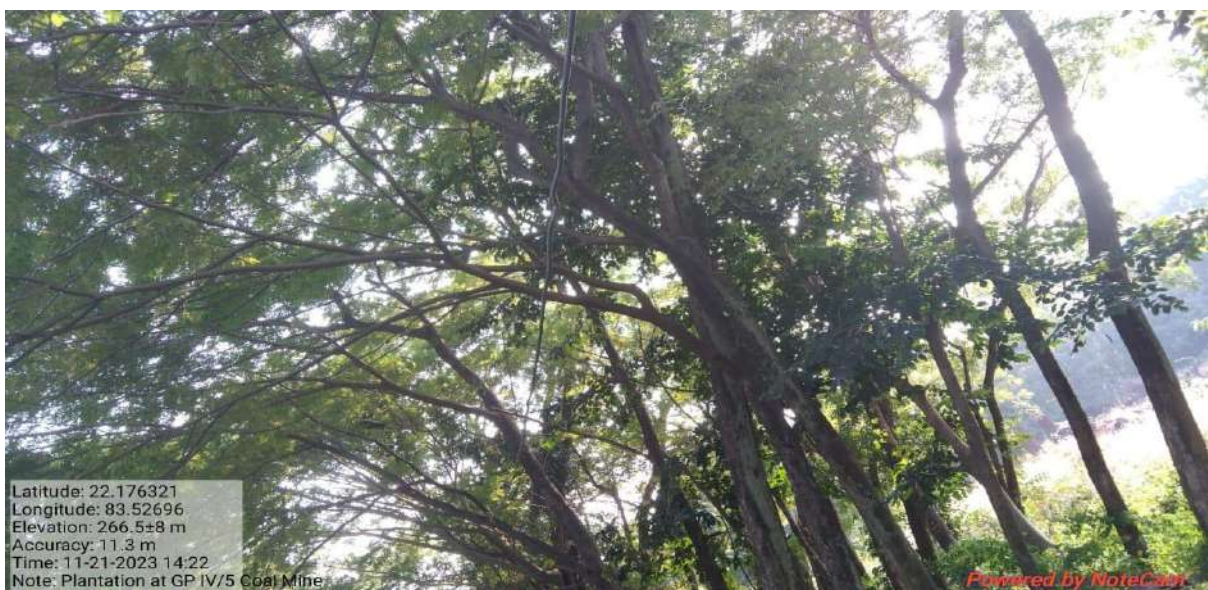
**Plantation details of Gare Palma IV/5 Under Ground Coal Mine of
M/s Hindalco Industries Limited**

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	Coal mine lease area	30000	82.00	24600	9.84	Neem, Mahua, Jamun, Mango, Guava, Imli, Drumstick, Teak, Shivan / Ghamar, Sisham, Sirus, Bamboo, Peltafarm, Nilgiri, Amla etc
2016		2000	85.00	1700	0.68	
2017		5000	80.00	4000	1.60	
2018		5000	92.00	4600	1.84	
2019		5000	93.00	4650	1.86	
2020		1100	95.00	1045	0.42	
2021		1504	91.00	1369	0.55	
2022		2500	95.00	2375	0.95	
2023		500	100.00	500	0.20	
Total			52604	90.33	44839	

Note: Gap filling of plants is a continuous process

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. No.	Location	Types of Structure	In Meters		
			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, Banjikhoh	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



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

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

Name & Address Of The Customer		REPORT NO	UES/TR/23-24/01263	
TO,		LAB REF NO	UES/23-24/W/02506	
HINDALCO INDUSTRIES LIMITED,		DATE OF SAMPLING	20/05/2023	
GARE PALMA - IV/4, COAL MINE,		DATE OF RECEIPT	22/05/2023	
VILLAGE - BANKHETA,		DATE OF REPORT	26/05/2023	
POST -MILUPARA,		DATE OF ANALYSIS	START:22/05/2023	END:26/05/2023
DISTT. - RAIGARH (C.G.) 496107.				
SAMPLE DETAILS				
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:	P.O.13552310211, DATED:07.09.2022
CUSTOMER 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. GLASS BOTTLE	SEALED	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.01263

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				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	pH	-	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-Cl-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 Cl)	mg/Lit	APHA 23 nd Ed.2012,4500-Cl-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



HDD-272, Phase III - Near JP Chowk
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Report No.01263

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
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	0.07
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, 3-105	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 ₆ H ₅ OH)	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.

Microbiological Analysis

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 100ml sample	Absent

Pesticides

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.



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Report No.01263

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible 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.

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		For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY
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-----End of the test report-----



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<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/23-24/01264	
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107.		LAB REF NO	UES/23-24/W/02507	
		DATE OF SAMPLING	20/05/2023	
		DATE OF RECEIPT	22/05/2023	
		DATE OF REPORT	26/05/2023	
		DATE OF ANALYSIS	START: 22/05/2023	END: 26/05/2023
SAMPLE DETAILS				
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:	P.O.13552310211, DATED: 07.09.2022
CUSTOMER SAMPLE ID	NEAR MINE OFFICE - BANJIKHOL 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. GLASS BOTTLE	SEALED	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.01264

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				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	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	-	-	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 23 nd Ed.2012,4500-P-C, 4-153	-	-	N.D.
21	Sodium (as Na)	mg/Lit	APHA 23 nd Ed.2012,3500-Na-B, 3-97	-	-	9.1



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Report No.01264

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
22	Potassium (as K)	mg/Lit	APHA 23 rd Ed.2012,3500-K-B, 3-87	-	-	0.32
23	Boron (as B)	mg/Lit	APHA 23 rd Ed.2012,4500-B-B, 4-25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 23 rd Ed.2012,3111-B,3-18	0.3	No Relaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 23 rd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.08
26	Manganese (as Mn)	mg/Lit	APHA 23 rd Ed.2012,3111-B, 3-18	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 23 rd Ed.2012,3111-B, 3-18	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 23 rd Ed.2012,3500-Ni, 3-108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 23 rd Ed.2012,3111-B, 3-18	5	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 23 rd Ed.2012,3111-B, 3-18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 23 rd Ed.2012,3500-Cd, 3-105	0.003	No Relaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 23 rd Ed.2012,3112-B, 3-23	0.001	No Relaxation	N.D.
33	Arsenic (as As)	mg/Lit	APHA 23 rd Ed.2012,3114-C, 3-38	0.01	0.05	N.D.
34	Selenium (as Se)	mg/Lit	APHA 23 rd Ed.2012,3114-C, 3-38	0.01	No Relaxation	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 23 rd Ed.2012,3500-Cr-B, 3-69	0.05	No Relaxation	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 23 rd Ed.2012,5540-C, 5-53	0.2	1.0	N.D.
37	Phenolic Compound (as C ₆ H ₅ OH)	mg/Lit	APHA 23 rd Ed.2012,5540-B & C, 5-47	0.001	0.002	N.D.
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	µg/Lit	APHA 23 rd 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.

Microbiological Analysis

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 100ml sample	Absent

Pesticides

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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Report No.01264

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
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.

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 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.

R. Bell
26/05/23

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhajeet

AUTHORIZED SIGNATORY

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



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<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/23-24/01281	
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/W/02524	
		DATE OF SAMPLING	20/05/2023	
		DATE OF RECEIPT	22/05/2023	
		DATE OF REPORT	26/05/2023	
		DATE OF ANALYSIS	START:22/05/2023	END:26/05/2023
		SAMPLE DETAILS		
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:	VERBAL COMMUNICATION.
CUSTOMER SAMPLE ID	NEAR MILUPARA MINES OFFICE 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. GLASS BOTTLE	SEALED	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. 01281

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				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	pH	-	APHA 22 nd Ed.2012,4500-H ⁺ -B, 4-92	6.5-8.5	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	-	-	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 Cl)	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-B, 4-72	250	1000	20.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ -	200	400	17.2



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REPORT NO. 01281

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
			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 22 nd Ed.2012,4500-P-C, 4-153	-	-	N.D.
20	Sodium (as Na)	mg/Lit	APHA 22 nd Ed.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 ₆ H ₅ OH)	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.
Microbiological Analysis						
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 100ml sample		Absent
Pesticides						



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REPORT NO. 01281

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
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		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	Malaaxon	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

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

Rekha
28/05/23

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For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhajeet

AUTHORIZED SIGNATORY

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

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



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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/01280	
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/W/02523	
		DATE OF SAMPLING	18/05/2023	
		DATE OF RECEIPT	19/05/2023	
		DATE OF REPORT	23/05/2023	
		DATE OF ANALYSIS	START:19/05/2023	END:23/05/2023
SAMPLE DETAILS				
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:	P.O.13552310212,DATED:07.09.2022
CUSTOMER SAMPLE ID	STAFF QUARTER- MILUPARA 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. GLASS BOTTLE	SEALED	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.01280

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	ACCEPTABLE LIMIT FOR DRINKING WATER (IS 10500:2012)		RESULT
				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	pH	-	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	-	-	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-Cl-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 22 nd Ed.2012,4500-P-C, 4-153	-	-	N.D.



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REPORT NO. 01280

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	ACCEPTABLE LIMIT FOR DRINKING WATER (IS 10500:2012)		RESULT
				Acceptable Limit	Permissible limit	
21	Sodium (as Na)	mg/Lit	APHA 22nd Ed.2012,3500-Na-B, 3-97	-	-	6.2
22	Potassium (as K)	mg/Lit	APHA 22nd Ed.2012,3500-K-B, 3-87	-	-	3.7
23	Boron (as B)	mg/Lit	APHA 22nd Ed.2012,4500-B-B, 4-25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 22nd Ed.2012,3111-B,3-18	0.3	No Relaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 22nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.19
26	Manganese (as Mn)	mg/Lit	APHA 22nd Ed.2012,3111-B, 3-18	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 22nd Ed.2012,3111-B, 3-18	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 22nd Ed.2012,3500-Ni, 3-108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 22nd Ed.2012,3111-B, 3-18	5	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 22nd Ed.2012,3111-B, 3-18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 22nd Ed.2012,3500-Cd, 3-105	0.003	No Relaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 22nd Ed.2012,3112-B, 3-23	0.001	No Relaxation	N.D.
33	Arsenic (as As)	mg/Lit	APHA 22nd Ed.2012,3114-C, 3-38	0.01	0.05	N.D.
34	Selenium (as Se)	mg/Lit	APHA 22nd Ed.2012,3114-C, 3-38	0.01	No Relaxation	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 22nd Ed.2012,3500-Cr-B, 3-69	0.05	No Relaxation	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 22nd Ed.2012,5540-C, 5-53	0.2	1.0	N.D.
37	Phenolic Compound (as C ₆ H ₅ OH)	mg/Lit	APHA 22nd Ed.2012,5540-B & C, 5-47	0.001	0.002	N.D.
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	µg/Lit	APHA 22nd 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.
Microbiological Analysis						
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 100ml sample		Absent
Pesticides						
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.



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REPORT NO. 01280

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	ACCEPTABLE LIMIT FOR DRINKING WATER (IS 10500:2012)		RESULT
				Acceptable Limit	Permissible limit	
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.

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.

R. Ch
23/05/23

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhojeet

AUTHORIZED SIGNATORY

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



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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/01282	
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/W/02525	
		DATE OF SAMPLING	19/05/2023	
		DATE OF RECEIPT	20/05/2023	
		DATE OF REPORT	24/05/2023	
		DATE OF ANALYSIS	START:20/05/2023	END:24/05/2023
SAMPLE DETAILS				
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:	VERBAL COMMUNICATION.
CUSTOMER SAMPLE ID	MILUPARA VILLAGE NEAR PHC-HIL (DUGWELL)		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	CHEMIST
SAMPLING PROCEDURE	IS:3025(PART 1):1987 RA 2003; APHA 22ND ED. 2012,1060-B,1-39		QUANTITY RECEIVED	5 LTR

REPORT NO. 01282

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				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	pH	-	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	-	-	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 CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B,3-67	-	-	52.0
14	Magnesium Hardness (as CaCO ₃)	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-Cl-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 22 nd Ed.2012,4500-P-C, 4-153	-	-	N.D.
21	Sodium (as Na)	mg/Lit	APHA 22 nd 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

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
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, 3-18	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	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 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 2003	-	-	N.D.
Microbiological Analysis						
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 100ml sample		Absent
Pesticides						
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.



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REPORT NO. 01282

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible 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		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

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.

[Signature]
24/05/23

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[Signature]

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



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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/01283	
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/W/02526	
		DATE OF SAMPLING	19/05/2023	
		DATE OF RECEIPT	20/05/2023	
		DATE OF REPORT	24/05/2023	
		DATE OF ANALYSIS	START:20/05/2023	END:24/05/2023
SAMPLE DETAILS				
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:	VERBAL COMMUNICATION.
CUSTOMER SAMPLE ID	NEAR PRIMARY SCHOOL - SAKTA VILLAGE (PIEZOMETER - DUGWELL)		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	CHEMIST
SAMPLING PROCEDURE	IS:3025 (PART I):1987 RA 2003; APHA 22ND ED. 2012,1060-B,1-39		QUANTITY RECEIVED	5 LTR

REPORT NO. 01283

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				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	pH	-	APHA 22 nd Ed.2012,4500-H ⁺ -B, 4-92	6.5-8.5	NoRelaxation	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	-	-	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 CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B,3-67	-	-	58.0
14	Magnesium Hardness (as CaCO ₃)	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-Cl-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	NoRelaxation	4.27
20	Phosphate (as P)	mg/Lit	APHA 22 nd Ed.2012,4500-P-C, 4-153	-	-	N.D.



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REPORT NO. 01283

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
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	NoRelaxation	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	NoRelaxation	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	NoRelaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3-23	0.001	NoRelaxation	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	NoRelaxation	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B, 3-69	0.05	NoRelaxation	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	NoRelaxation	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.

Microbiological Analysis

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 100ml sample	Absent

Pesticides

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.



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REPORT NO. 01283

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible 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.

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.

REK
24/05/23

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For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhajeet

AUTHORIZED SIGNATORY

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



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<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/23-24/01265	
TO,		LAB REF NO	UES/23-24/W/02508	
HINDALCO INDUSTRIES LIMITED,		DATE OF SAMPLING	19/05/2023	
GARE PALMA - IV/4, COAL MINE,VILLAGE -		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 DETAILS				
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:	P.O.13552310211, DATED: 07.09.2022
CUSTOMER SAMPLE ID	NEAR PRIMARY SCHOOL - SIDARPARA VILLAGE, (PIEZOMETER - DUGWELL)		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	CHEMIST
SAMPLING PROCEDURE	IS: 3025 (PART I): 1987 RA 2003; APHA 23RD ED. 2012, 1060-B, 1-39		QUANTITY RECEIVED	5 LTR

Report No.01265

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
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	-	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-Cl-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 23 nd Ed.2012,4500-P-C, 4-153	-	-	N.D.
21	Sodium (as Na)	mg/Lit	APHA 23 nd 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

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



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Report No.01265

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
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, 3-18	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 ₆ H ₅ OH)	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.

Microbiological Analysis

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 100ml sample	Absent

Pesticides

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.

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Report No.01265

TEST REPORT


SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible 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		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.

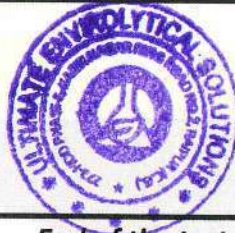
REMARKS: RESULTS ARE AS ABOVE

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.


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



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<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/23-24/01266	
TO,		LAB REF NO	UES/23-24/W/02509	
HINDALCO INDUSTRIES LIMITED,		DATE OF SAMPLING	19/05/2023	
GARE PALMA - IV/4, COAL MINE,VILLAGE -		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 DETAILS				
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:	P.O.13552310211, DATED:07.09.2022
CUSTOMER SAMPLE ID	NEAR PRIMARY SCHOOL - BELJOR VILLAGE (PIEZOMETER - DUGWELL)		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	CHEMIST
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. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				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	pH	-	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	-	-	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 Cl)	mg/Lit	APHA 23 nd Ed.2012,4500-Cl-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 23 nd Ed.2012,4500-P-C, 4-153	-	-	N.D.
21	Sodium (as Na)	mg/Lit	APHA 23 nd 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

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



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Report No.01266

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
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, 3-18	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 ₆ H ₅ OH)	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.

Microbiological Analysis

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

Pesticides

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.



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Report No.01266

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible 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		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.

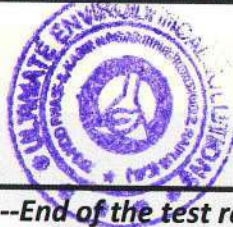
REMARKS: RESULTS ARE AS ABOVE

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.

Reck
24/05/23

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhajeet

AUTHORIZED SIGNATORY

-----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		
			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 Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107.		REPORT NO	UES/TR/23-24/03849	
		LAB REF NO	UES/23-24/W/07324	
		DATE OF SAMPLING	24/08/2023	
		DATE OF RECEIPT	25/08/2023	
		DATE OF REPORT	31/08/2023	
		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	
CUSTOMER 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. GLASS BOTTLE	SEALED	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. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				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	pH	-	APHA 23 rd Ed.2017,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	6.82
5	Turbidity	NTU	APHA 23 rd Ed.2017,2130-B,2-13	1	5	1.27
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	144.8
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	-	-	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-Cl-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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Report No.03849

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
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 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	-	-	N.D.
Microbiological Analysis						
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 100ml sample		Absent
Pesticides						
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.



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Report No. 03849

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible 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.

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

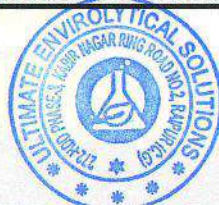
REMARKS: RESULTS ARE AS ABOVE

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.

Pluseff
3/10/23

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhajeet

AUTHORIZED SIGNATORY

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



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<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/23-24/03850	
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107.		LAB REF NO	UES/23-24/W/07325	
		DATE OF SAMPLING	24/08/2023	
		DATE OF RECEIPT	25/08/2023	
		DATE OF REPORT	31/08/2023	
		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
CUSTOMER SAMPLE ID	NEAR MINE OFFICE - BANJIKHOL 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. GLASS BOTTLE	SEALED	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.03850

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				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	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-Cl-G, 4-69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 23 rd Ed.2017,2540- B, 2-64	-	-	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-Cl-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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Report No.03850

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
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, 3-108	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 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	-	-	N.D.
Microbiological Analysis						
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 100ml sample		Absent
Pesticides						
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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Report No. 03850

TEST REPORT




SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
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	Malaaxon	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

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.

 31/08/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  AUTHORIZED SIGNATORY
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-----End of the test report-----



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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/03885	
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/W/07399	
		DATE OF SAMPLING	24/08/2023	
		DATE OF RECEIPT	25/08/2023	
		DATE OF REPORT	31/08/2023	
		DATE OF ANALYSIS	START:25/08/2023	END:29/08/2023
SAMPLE DETAILS				
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:	VERBAL COMMUNICATION.
CUSTOMER SAMPLE ID	NEAR MILUPARA MINES OFFICE 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. GLASS BOTTLE	SEALED	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. 03885

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				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	pH	-	APHA 23 rd Ed. 2017,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	7.32
5	Turbidity	NTU	APHA 23 rd 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 SO ₄)	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 23 rd Ed. 2017,3500-Na-B,	-	-	8.9

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



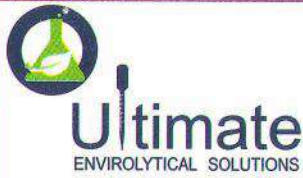
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REPORT NO. 03885

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
			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 23 rd 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	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, 3-69	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 ₆ H ₅ OH)	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.
Microbiological Analysis						
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 100ml sample		Absent
Pesticides						
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.



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REPORT NO. 03885

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
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		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

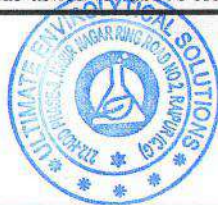
REMARKS: RESULTS ARE AS ABOVE

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

Subhajeet
31/08/23

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhajeet

AUTHORIZED SIGNATORY

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



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<i>Name & Address Of The Customer</i>		<i>REPORT NO</i>	UES/TR/23-24/03884	
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/5, MILUPARA U/G COAL MINE,VILLAGE - MILUPARA, BLOCK-TAMNAR, DISTT. - RAIGARH (C.G.) 496107		<i>LAB REF NO</i>	UES/23-24/W/07398	
		<i>DATE OF SAMPLING</i>	24/08/2023	
		<i>DATE OF RECEIPT</i>	25/08/2023	
		<i>DATE OF REPORT</i>	31/08/2023	
		<i>DATE OF ANALYSIS</i>	<i>START: 25/08/2023</i>	<i>END: 29/08/2023</i>
SAMPLE DETAILS				
<i>SAMPLE TYPE</i>	GROUND WATER		<i>ORDER /REFERENCE:</i>	P.O.13552310212, DATED:07.09.2022
<i>CUSTOMER SAMPLE ID</i>	STAFF QUARTER- MILUPARA PIEZOMETER (AWLR)		<i>SAMPLE CONDITION AT RECEIPT</i>	OK
<i>PACKING OF SAMPLE</i>	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	SEALED	<i>SAMPLE COLLECTED BY</i>	CHEMIST
<i>SAMPLING PROCEDURE</i>	IS:3025 (PART I):1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39		<i>QUANTITY RECEIVED</i>	5 LTR

REPORT NO. 03884

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	ACCEPTABLE LIMIT FOR DRINKING WATER (IS 10500:2012)		RESULT
				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	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-Cl-G, 4-69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 23 rd Ed. 2017,2540- B, 2-64	-	-	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-Cl-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 23 rd Ed. 2017,3500-K-B,	-	-	3.1



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REPORT NO. 03884

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	ACCEPTABLE LIMIT FOR DRINKING WATER (IS 10500:2012)		RESULT
				Acceptable Limit	Permissible limit	
			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 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 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	-	-	N.D.

Microbiological Analysis

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 100ml sample	Absent

Pesticides

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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REPORT NO. 03884

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	ACCEPTABLE LIMIT FOR DRINKING WATER (IS 10500:2012)		RESULT
				Acceptable Limit	Permissible limit	
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.

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

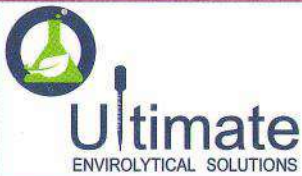
REMARKS: RESULTS ARE AS ABOVE

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.

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



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Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/03886	
TO,		LAB REF NO	UES/23-24/W/07400	
HINDALCO INDUSTRIES LIMITED,		DATE OF SAMPLING	24/08/2023	
GARE PALMA - IV/5, MILUPARA		DATE OF RECEIPT	25/08/2023	
U/G COAL MINE,VILLAGE - MILUPARA,		DATE OF REPORT	31/08/2023	
BLOCK-TAMNAR,		DATE OF ANALYSIS	START:25/08/2023	END:29/08/2023
DISTT. - RAIGARH (C.G.) 496107				
SAMPLE DETAILS				
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:	VERBAL COMMUNICATION.
CUSTOMER SAMPLE ID	MILUPARA VILLAGE NEAR PHC-HIL (DUGWELL)		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	CHEMIST
SAMPLING PROCEDURE	IS:3025(PART I):1987 RA 2003; APHA 22ND ED. 2012,1060-B,1-39		QUANTITY RECEIVED	5 LTR

REPORT NO.03886

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				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	pH	-	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	-	-	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	-	-	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	-	-	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 CaCO ₃)	mg/Lit	APHA 23 rd Ed. 2017,3500-Ca-B,3-67	-	-	62.0
14	Magnesium Hardness (as CaCO ₃)	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-Cl-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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REPORT NO. 03886

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
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, 3-18	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 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	-	-	N.D.
Microbiological Analysis						
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 100ml sample		Absent
Pesticides						
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.

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REPORT NO. 03886

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible 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	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.

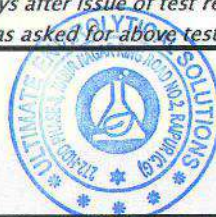
REMARKS: RESULTS ARE AS ABOVE

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.

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3/11/08/23

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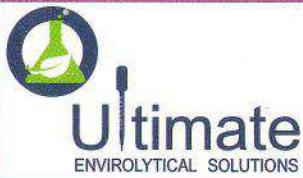


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-----End of the test report-----



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Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/03887	
TO,		LAB REF NO	UES/23-24/W/07401	
HINDALCO INDUSTRIES LIMITED,		DATE OF SAMPLING	24/08/2023	
GARE PALMA - IV/5, MILUPARA		DATE OF RECEIPT	25/08/2023	
U/G COAL MINE,VILLAGE - MILUPARA,		DATE OF REPORT	31/08/2023	
BLOCK-TAMNAR,		DATE OF ANALYSIS	START:25/08/2023	END:29/08/2023
DISTT. - RAIGARH (C.G.) 496107				
SAMPLE DETAILS				
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:	VERBAL COMMUNICATION.
CUSTOMER SAMPLE ID	NEAR PRIMARY SCHOOL - SAKTA VILLAGE (PIEZOMETER - DUGWELL)		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	CHEMIST
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

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				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	pH	-	APHA 23 rd Ed. 2017,4500-H ⁺ -B, 4-92	6.5-8.5	NoRelaxation	7.51
5	Turbidity	NTU	APHA 23 rd Ed. 2017,2130-B,2-13	1	5	1.26
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	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, 2-64	-	-	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	-	-	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 CaCO ₃)	mg/Lit	APHA 23 rd Ed. 2017,3500-Ca-B,3-67	-	-	64.0
14	Magnesium Hardness (as CaCO ₃)	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-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	26.4
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 rd Ed. 2017,4500-NO ₃ -B,4-122	45	NoRelaxation	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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REPORT NO. 03887

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
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	NoRelaxation	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	NoRelaxation	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	NoRelaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 23 rd Ed. 2017,3112-B, 3-23	0.001	NoRelaxation	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	NoRelaxation	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 23 rd Ed. 2017,3500-Cr-B, 3-69	0.05	NoRelaxation	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	NoRelaxation	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.
Microbiological Analysis						
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 100ml sample		Absent
Pesticides						
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.

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REPORT NO. 03887

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible 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		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	Malaaxon	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

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.

Reviewed
31/08/23

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhajeet

AUTHORIZED SIGNATORY

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



HDD-272, Phase III - Near JP Chowk
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<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/23-24/03851
TO,		LAB REF NO	UES/23-24/W/07326
HINDALCO INDUSTRIES 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
CUSTOMER SAMPLE ID	NEAR PRIMARY SCHOOL - SIDARPARA VILLAGE, (PIEZOMETER - DUGWELL)	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	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. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
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	-	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	-	-	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	-	-	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-Cl-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 23 rd Ed.2017,3500-K-B, 3-	-	-	0.67



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Report No.03851

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
			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	0.12
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 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 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	-	-	N.D.
Microbiological Analysis						
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 100ml sample		Absent
Pesticides						
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.



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Report No. 03851

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible 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		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

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.

Devi
31/08/23

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhajeet

AUTHORIZED SIGNATORY

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



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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/03944	
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE,VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107.		LAB REF NO	UES/23-24/W/07504	
		DATE OF SAMPLING	24/08/2023	
		DATE OF RECEIPT	25/08/2023	
		DATE OF REPORT	31/08/2023	
		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
CUSTOMER SAMPLE ID	NEAR PRIMARY SCHOOL - BELJOR VILLAGE (PIEZOMETER - DUGWELL)		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	CHEMIST
SAMPLING PROCEDURE	IS:3025(PART I):1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39		QUANTITY RECEIVED	5 LTR

Report No.03944

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				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	pH	-	APHA 23 rd Ed.2017,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	7.22
5	Turbidity	NTU	APHA 23 rd 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	-	-	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	-	-	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	1.12
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	-	-	7.13
22	Potassium (as K)	mg/Lit	APHA 23 rd Ed.2017,3500-K-B,	-	-	0.51



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Report No. 03944

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
			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 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 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	-	-	N.D.
Microbiological Analysis						
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
Pesticides						
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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Report No.03944

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
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	Malaaxon	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

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.

 31/08/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  AUTHORIZED SIGNATORY
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-----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,


12/07/23

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 (IV/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



dc

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,

Rajiv Kumar
(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).
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 (IV/4 & IV/5), VIII & 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: L27020MH1958PLC01238

Annexure-5

AAQM Report – Core Zone



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

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

<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/23-24/0557
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/01365-01372
		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:30/04/2023
		SAMPLE DETAILS	
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED:07.09.2022
SAMPLING LOCATION	MAIN OFFICE AREA, MILUPARA		
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 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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 agreed with customer.
- This is for information as the party has asked for above test(s) only.

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



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

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

<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/23-24/0903
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/02082-02089
		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	P.O.13552310212, DATED: 07.09.2022
SAMPLING LOCATION	MAIN OFFICE AREA, MILUPARA		
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 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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.

 31/05/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  AUTHORIZED SIGNATORY
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-----End of the test report-----



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

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

Name & Address Of The Customer		REPORT NO	UES/TR/23-24/02010
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/04362-04369
		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
SAMPLE DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED:07.09.2022
SAMPLING LOCATION	MAIN OFFICE AREA, MILUPARA		
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 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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	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

- 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.

 04/07/23 REVIEWED BY		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

<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/23-24/03054
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/05854-05861
		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 END:31/07/2023
SAMPLE DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED:07.09.2022
SAMPLING LOCATION	MAIN OFFICE AREA, MILUPARA		
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 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelinesVol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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

- > 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.

 31/07/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  AUTHORIZED SIGNATORY
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-----End of the test report-----



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

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

Name & Address Of The Customer		REPORT NO	UES/TR/23-24/03865
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/07340-7347
		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:07.09.2022
SAMPLING LOCATION	MAIN OFFICE AREA, MILUPARA		
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 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelinesVol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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

- 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.

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



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

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

Name & Address Of The Customer		REPORT NO	UES/TR/23-24/04671
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/08578-08585
		DATE OF SAMPLING	01/09/2023 to 25/09/2023
		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			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED:07.09.2022
SAMPLING LOCATION	MAIN OFFICE AREA, MILUPARA		
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 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelinesVol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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

- > 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.

Rd
27/09/23

REVIEWED BY



ForULTIMATE ENVIROLYTICAL SOLUTIONS

Subhajeet

AUTHORIZED SIGNATORY

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



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

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/23-24/0558	
	LAB REF NO	UES/23-24/AAQM/01373-1380	
	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: 30/04/2023

SAMPLE DETAILS

MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED: 07.09.2022
SAMPLING LOCATION	HIL STAFF QUARTER, MILUPARA		
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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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

- > 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 tests.

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



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

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/23-24/0904	
	LAB REF NO	UES/23-24/AAQM/02090-02097	
	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	P. O. 13552310212, DATED: 07.09.2022
SAMPLING LOCATION	HIL STAFF QUARTER, MILUPARA		
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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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.

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.

 31/05/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  AUTHORIZED SIGNATORY
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-----End of the test report-----



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

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<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/23-24/02011	
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/04370-04377	
		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
SAMPLE DETAILS				
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED: 07.09.2022	
SAMPLING LOCATION	HIL STAFF QUARTER, MILUPARA			
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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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	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

- ✓ 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.

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

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<i>Name & Address Of The Customer</i>		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 29/07/2023	
		DATE OF REPORT	31/07/2023	
		DATE OF ANALYSIS	START: 04/07/2023	END: 31/07/2023
		SAMPLE DETAILS		
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O. 13552310212, DATED: 07.09.2022	
SAMPLING LOCATION	HIL STAFF QUARTER, MILUPARA			
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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelinesVol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	80
Carbon Monoxide (CO)*	IS 5182 (Part 10): 1999, RA 2003	4.0
Mercury (Hg)	EPA Method IO-5	--



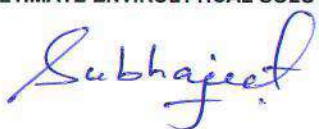
TEST REPORT

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
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

- 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.

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



HDD-272, Phase III - Near JP Chowk
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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/03866
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/07348-07355
		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:07.09.2022
SAMPLING LOCATION	HIL STAFF QUARTER, MILUPARA		
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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelinesVol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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

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.

 31/08/23 REVIEWED BY	 ENVIROLYTICAL SOLUTIONS	For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY
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-----End of the test report.....



HDD-272, Phase III - Near JP Chowk
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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/04672
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/08586-08593
		DATE OF SAMPLING	01/09/2023 to 25/09/2023
		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			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED:07.09.2022
SAMPLING LOCATION	HIL STAFF QUARTER, MILUPARA		
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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelinesVol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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.

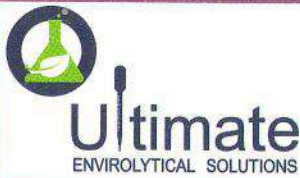
Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

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.

 27/09/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY
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-----End of the test report.-----



HDD-272, Phase III - Near JP Chowk
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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/0559
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/01381-1388
		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: 30/04/2023
		SAMPLE DETAILS	
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O. 13552310212, DATED: 07.09.2022
SAMPLING LOCATION	HIL COLONY, KONDKEL		
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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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

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.

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



HDD-272, Phase III - Near JP Chowk
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099
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<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/23-24/0905
TO,		LAB REF NO	UES/23-24/AAQM/02098-02105
HINDALCO INDUSTRIES LIMITED, GARE		DATE OF SAMPLING	01/05/2023 to 26/05/2023
PALMA - IV/5, MILUPARA U/G COAL		DATE OF RECEIPT	02/05/2023 to 27/05/2023
MINE,VILLAGE - MILUPARA,		DATE OF REPORT	31/05/2023
BLOCK-TAMNAR,		DATE OF ANALYSIS	START:02/05/2023 END:30/05/2023
DISTT. - RAIGARH (C.G.) 496107			
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 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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	18	27	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

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.

 31/05/23 REVIEWED BY	 ULTIMATE ENVIROLYTICAL SOLUTIONS PHASE-3, KABIR NAGAR RING ROAD, RAIPUR (C.G.)	For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY
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-----End of the test report-----



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

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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/02012
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/04378-04385
		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
		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 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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

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.

 04/07/23 REVIEWED BY		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/5, MILUPARA U/G COAL MINE,VILLAGE - MILUPARA, BLOCK-TAMNAR, DISTT. - RAIGARH (C.G.) 496107	REPORT NO	UES/TR/23-24/03056	
	LAB REF NO	UES/23-24/AAQM/05870-5877	
	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	END: 31/07/2023

SAMPLE DETAILS

MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED: 07.09.2022
SAMPLING LOCATION	HIL COLONY, KONDKEL		
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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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.

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.

 31/07/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  AUTHORIZED SIGNATORY
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-----End of the test report-----



HDD-272, Phase III - Near JP Chowk
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Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

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/23-24/03867	
	LAB REF NO	UES/23-24/AAQM/07356-7383	
	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:07.09.2022
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 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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	N.D.
28.08.2023	38	24	17	23	0.25	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.

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



HDD-272, Phase III - Near JP Chowk
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Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/04673
TO,		LAB REF NO	UES/23-24/AAQM/08594-08601
HINDALCO INDUSTRIES LIMITED, GARE		DATE OF SAMPLING	01/09/2023 to 25/09/2023
PALMA - IV/5, MILUPARA U/G COAL		DATE OF RECEIPT	02/09/2023 to 26/09/2023
MINE,VILLAGE - MILUPARA,		DATE OF REPORT	27/09/2023
BLOCK-TAMNAR,		DATE OF ANALYSIS	START:02/09/2023 END:27/09/2023
DISTT. - RAIGARH (C.G.) 496107			
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 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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.

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

 27/09/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  AUTHORIZED SIGNATORY
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-----End of the test report.....



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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	UES/TR/23-24/0560	
	LAB REF NO	UES/23-24/AAQM/01389-1396	
	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: 30/04/2023

SAMPLE DETAILS

MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED: 07.09.2022
SAMPLING LOCATION	ETP AREA, 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 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
03.04.2023	64	29	18	25	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

- 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.

 02/05/23 REVIEWED BY	 ULTIMATE ENVIROLYTICAL SOLUTIONS 27-CHAND PHASE-3, KABIR NAGAR RING ROAD NO.2, RAIPUR (C.G.)	For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY
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-----End of the test report-----



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

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/23-24/0906	
	LAB REF NO	UES/23-24/AAQM/02106-2113	
	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	P.O.13552310212, DATED:07.09.2022
SAMPLING LOCATION	ETP AREA, 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 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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.

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.

 31/05/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  AUTHORIZED SIGNATORY
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-----End of the test report.....



HDD-272, Phase III - Near JP Chowk
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099
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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	UES/TR/23-24/02013	
	LAB REF NO	UES/23-24/AAQM/04386-04393	
	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

SAMPLE DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED: 07.09.2022
SAMPLING LOCATION	ETP AREA, 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 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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	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.

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.

 04/07/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY
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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	UES/TR/23-24/03057	
	LAB REF NO	UES/23-24/AAQM/05878-05885	
	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	END: 31/07/2023

SAMPLE DETAILS

MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O. 13552310212, DATED: 07.09.2022
SAMPLING LOCATION	ETP AREA, 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 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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 otherwise agreed with customer.
- > 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
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-----End of the test report-----



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

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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	UES/TR/23-24/03868	
	LAB REF NO	UES/23-24/AAQM/07364-07371	
	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:07.09.2022
SAMPLING LOCATION	ETP AREA, 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 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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.

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.

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



HDD-272, Phase III - Near JP Chowk
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099
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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	UES/TR/23-24/04674	
	LAB REF NO	UES/23-24/AAQM/08602-8609	
	DATE OF SAMPLING	01/09/2023 to 25/09/2023	
	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			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED:07.09.2022
SAMPLING LOCATION	ETP AREA, 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 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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.

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.

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

AAQM Report – Buffer Zone



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Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/0530	
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107		LAB REF NO	UES/23-24/AAQM/01283-01290	
		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:30/04/2023
SAMPLE DETAILS				
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310211, DATED:07.09.2022	
SAMPLING LOCATION	OFFICE 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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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.
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- This is for information as the party has asked for above test(s) only.

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



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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/0881	
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107		LAB REF NO	UES/23-24/AAQM/02006-02013	
		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	P.O.13552310211, DATED: 07.09.2022	
SAMPLING LOCATION	OFFICE 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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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.

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.

 31/05/23 REVIEWED BY	 For ULTIMATE ENVIROLYTICAL SOLUTIONS	 AUTHORIZED SIGNATORY
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-----End of the test report-----



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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/01988
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107		LAB REF NO	UES/23-24/AAQM/04286-04293
		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
		SAMPLE DETAILS	
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P. O.13552310211, DATED:07.09.2022
SAMPLING LOCATION	OFFICE 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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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	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.

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.

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

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

<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/23-24/03032
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107		LAB REF NO	UES/23-24/AAQM/05778-05785
		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 END:31/07/2023
		SAMPLE DETAILS	
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310211, DATED:07.09.2022
SAMPLING LOCATION	OFFICE 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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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.

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.

 31/07/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  AUTHORIZED SIGNATORY
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-----End of the test report-----



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

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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/03828
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107		LAB REF NO	UES/23-24/AAQM/07254-07261
		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.13552310211, DATED:07.09.2022
SAMPLING LOCATION	OFFICE 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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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) only.

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



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

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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/04648	
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107		LAB REF NO	UES/23-24/AAQM/08500-08507	
		DATE OF SAMPLING	01/09/2023 to 25/09/2023	
		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		
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310211, DATED:07.09.2022	
SAMPLING LOCATION	OFFICE 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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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.

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.

 27/09/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY
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-----End of the test report-----



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

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

Name & Address Of The Customer		REPORT NO	UES/TR/23-24/0531	
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107		LAB REF NO	UES/23-24/AAQM/01291-01298	
		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: 30/04/2023
SAMPLE DETAILS				
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310211, DATED: 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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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 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.

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



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

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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/0882
TO,		LAB REF NO	UES/23-24/AAQM/02014-02021
HINDALCO INDUSTRIES LIMITED,		DATE OF SAMPLING	01/05/2023 to 26/05/2023
GARE PALMA - IV/4, COAL MINE,		DATE OF RECEIPT	02/05/2023 to 27/05/2023
VILLAGE - BANKHETA,		DATE OF REPORT	31/05/2023
POST -MILUPARA,		DATE OF ANALYSIS	START:02/05/2023 END:30/05/2023
DISTT. - RAIGARH (C.G.) 496107			
SAMPLE DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310211, DATED: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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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.

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.

 31/05/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY
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-----End of the test report-----



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

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

Name & Address Of The Customer		REPORT NO	UES/TR/23-24/01989	
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107		LAB REF NO	UES/23-24/AAQM/04294-04301	
		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
SAMPLE DETAILS				
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310211, DATED: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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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	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 otherwise agreed with customer.
- This is for information as the party has asked for above test(s) only.

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

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<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/23-24/03033	
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107		LAB REF NO	UES/23-24/AAQM/05786-05793	
		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	END: 31/07/2023
SAMPLE DETAILS				
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310211, DATED: 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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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.

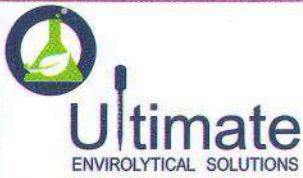
Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

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.

 31/07/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  AUTHORIZED SIGNATORY
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-----End of the test report-----



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

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

Name & Address Of The Customer		REPORT NO	UES/TR/23-24/03829	
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107		LAB REF NO	UES/23-24/AAQM/07262-7269	
		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.13552310211, DATED: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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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) only.

 31/08/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  AUTHORIZED SIGNATORY
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-----End of the test report-----



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

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

Name & Address Of The Customer		REPORT NO	UES/TR/23-24/04649	
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107		LAB REF NO	UES/23-24/AAQM/08508-08515	
		DATE OF SAMPLING	01/09/2023 to 25/09/2023	
		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		
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310211, DATED: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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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.

 27/09/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY
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-----End of the test report-----



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

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<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/23-24/0532	
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107		LAB REF NO	UES/23-24/AAQM/01299-01306	
		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:30/04/2023
SAMPLE DETAILS				
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310211, DATED: 07.09.2022	
SAMPLING LOCATION	OFFICE AREA, BANKHETA			
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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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

- 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.

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



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

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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/0883
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107		LAB REF NO	UES/23-24/AAQM/02022-02029
		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	P.O. 13552310211, DATED: 07.09.2022
SAMPLING LOCATION	OFFICE AREA, BANKHETA		
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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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	25	0.63	N.D.
26.05.2023	66	32	17	24	0.48	N.D.

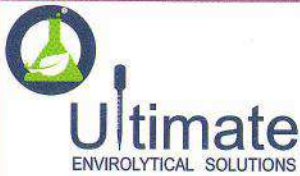
Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

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.

 31/05/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY
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-----End of the test report-----



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

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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/01990
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107		LAB REF NO	UES/23-24/AAQM/04302-04309
		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
		SAMPLE DETAILS	
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P. O.13552310211, DATED:07.09.2022
SAMPLING LOCATION	OFFICE AREA, BANKHETA		
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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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	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.

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 tests only.

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

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<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/23-24/03034	
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107		LAB REF NO	UES/23-24/AAQM/05794-05801	
		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	END:31/07/2023
		SAMPLE DETAILS		
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310211, DATED:07.09.2022	
SAMPLING LOCATION	OFFICE AREA, BANKHETA			
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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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.

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.

 31/07/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  AUTHORIZED SIGNATORY
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-----End of the test report-----



HDD-272, Phase III - Near JP Chowk
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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/03830	
TO,		LAB REF NO	UES/23-24/AAQM/07270-07277	
HINDALCO INDUSTRIES LIMITED,		DATE OF SAMPLING	03/08/2023 to 28/08/2023	
GARE PALMA - IV/4, COAL MINE,		DATE OF RECEIPT	04/08/2023 to 29/08/2023	
VILLAGE - BANKHETA,		DATE OF REPORT	31/08/2023	
POST -MILUPARA,		DATE OF ANALYSIS	START: 04/08/2023	END: 31/08/2023
DISTT. - RAIGARH (C.G.) 496107				
SAMPLE DETAILS				
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310211, DATED: 07.09.2022	
SAMPLING LOCATION	OFFICE AREA, BANKHETA			
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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	80
Carbon Monoxide (CO)*	IS 5182 (Part 10): 1999, RA 2003	4.0
Mercury (Hg)	EPA Method IO-5	--

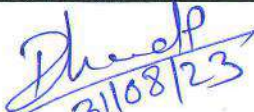

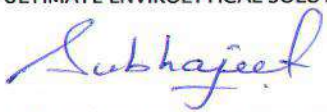
TEST REPORT

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
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	25	0.18	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.

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

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



HDD-272, Phase III - Near JP Chowk
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Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/04650
TO,		LAB REF NO	UES/23-24/AAQM/08516-08523
HINDALCO INDUSTRIES LIMITED,		DATE OF SAMPLING	01/09/2023 to 25/09/2023
GARE PALMA - IV/4, COAL MINE,		DATE OF RECEIPT	02/09/2023 to 26/09/2023
VILLAGE - BANKHETA,		DATE OF REPORT	27/09/2023
POST -MILUPARA,		DATE OF ANALYSIS	START:02/09/2023 END:27/09/2023
DISTT. - RAIGARH (C.G.) 496107			
SAMPLE DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310211, DATED:07.09.2022
SAMPLING LOCATION	OFFICE AREA, BANKHETA		
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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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.

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.

 27/09/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  AUTHORIZED SIGNATORY
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-----End of the test report-----



HDD-272, Phase III - Near JP Chowk
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Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/0533	
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107		LAB REF NO	UES/23-24/AAQM/01307-01314	
		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: 30/04/2023
SAMPLE DETAILS				
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310211, DATED: 07.09.2022	
SAMPLING LOCATION	PIT OFFICE AREA, BANKHETA			
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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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.

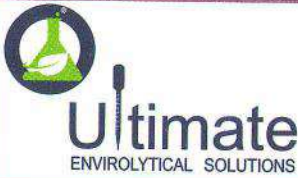
Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

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.

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



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

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

Name & Address Of The Customer		REPORT NO	UES/TR/23-24/0884	
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107		LAB REF NO	UES/23-24/AAQM/02030-02037	
		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	P.O.13552310211, DATED:07.09.2022	
SAMPLING LOCATION	PIT OFFICE AREA, BANKHETA			
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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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.

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.

 31/05/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY
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-----End of the test report-----



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

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

<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/23-24/01991	
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107		LAB REF NO	UES/23-24/AAQM/04310-04317	
		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
SAMPLE DETAILS				
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310211, DATED: 07.09.2022	
SAMPLING LOCATION	PIT OFFICE AREA, BANKHETA			
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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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	26	0.61	N.D.
05.06.2023	68	29	19	25	0.84	N.D.
09.06.2023	67	30	18	24	0.73	N.D.
12.06.2023	65	31	16	27	0.62	N.D.
16.06.2023	68	33	17	24	0.44	N.D.
19.06.2023	69	34	18	26	0.64	N.D.
23.06.2023	60	31	15	22	0.43	N.D.
30.06.2023	62	22	16	23	0.51	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.

RE
04/07/23
REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhajeet

AUTHORIZED SIGNATORY

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

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<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/23-24/03035	
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107		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	END: 31/07/2023
		SAMPLE DETAILS		
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310211, DATED: 07.09.2022	
SAMPLING LOCATION	PIT OFFICE AREA, BANKHETA			
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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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.

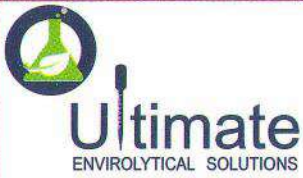
Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

Terms & conditions

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

 31/07/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  AUTHORIZED SIGNATORY
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-----End of the test report-----



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

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Name & Address Of The Customer		REPORT NO	UES/TR/23-24/03939	
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107		LAB REF NO	UES/23-24/AAQM/07492-7499	
		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. 13552310211, DATED: 07.09.2022	
SAMPLING LOCATION	PIT OFFICE AREA, BANKHETA			
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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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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- This is for information as the party has asked for above test only.

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

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



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Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099
Ph : 0771 - 4027777 | Email : ultimatenviron@gmail.com

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

Name & Address Of The Customer		REPORT NO	UES/TR/23-24/04651
TO,		LAB REF NO	UES/23-24/AAQM/08524-08531
HINDALCO INDUSTRIES LIMITED,		DATE OF SAMPLING	01/09/2023 to 25/09/2023
GARE PALMA - IV/4, COAL MINE,		DATE OF RECEIPT	02/09/2023 to 26/09/2023
VILLAGE - BANKHETA,		DATE OF REPORT	27/09/2023
POST -MILUPARA,		DATE OF ANALYSIS	START:02/09/2023 END:27/09/2023
DISTT. - RAIGARH (C.G.) 496107			
SAMPLE DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310211, DATED:07.09.2022
SAMPLING LOCATION	PIT OFFICE AREA, BANKHETA		
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., 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 Vol.-I	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019CPCBGuidelines Vol.-I	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	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
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

- 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.

 27/09/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY
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-----End of the test report-----

Annexure – 6A



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

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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.	UES/TR/23-24/0577	
	LAB REF NO.	UES/23-24/FE/01423-01425	
	DATE OF SAMPLING	26/04/2023	
	DATE OF RECEIPT	27/04/2023	
	DATE OF REPORT	02/05/2023	
	DATE OF ANALYSIS	START: 27/04/2023	END: 02/05/2023
SAMPLE 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	GME 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	$\mu\text{g}/\text{m}^3$	149	500	EPA Method IO-2.1
Workshop area Kondkel	$\mu\text{g}/\text{m}^3$	168	500	
Stowing plant area kondkel	$\mu\text{g}/\text{m}^3$	126	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.

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



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

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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.	UES/TR/23-24/01296	
	LAB REF NO.	UES/23-24/FE/02539-02541	
	DATE OF SAMPLING	19/05/2023	
	DATE OF RECEIPT	20/05/2023	
	DATE OF REPORT	24/05/2023	
	DATE OF ANALYSIS	START: 20/05/2023	END: 24/05/2023

SAMPLE 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 (8 X 10 INCH) : 1X10 NO.

TEST REPORT

Locations	Unit	Suspended Particulate Matter SPM	Moef& CC Notification (350-1)	Method Reference
Weighbridge area Kondkel	$\mu\text{g}/\text{m}^3$	152	500	EPA Method IO-2.1
Workshop area Kondkel	$\mu\text{g}/\text{m}^3$	176	500	
Stowing plant area kondkel	$\mu\text{g}/\text{m}^3$	134	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.

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



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

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/23-24/02030	
	LAB REF NO.	UES/23-24/FE/04419-04421	
	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

SAMPLE 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 (8 X 10 INCH) : 1X10 NO.

TEST REPORT

Locations	Unit	Suspended Particulate Matter SPM	Moef& CC Notification (350-1)	Method Reference
Weighbridge area Kondkel	$\mu\text{g}/\text{m}^3$	161	500	EPA Method IO-2.1
Workshop area Kondkel	$\mu\text{g}/\text{m}^3$	178	500	
Stowing plant area kondkel	$\mu\text{g}/\text{m}^3$	137	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.

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



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

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/23-24/03074	
	LAB REF NO.	UES/23-24/FE/05912-05914	
	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	END: 31/07/2023

SAMPLE 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	GME 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	$\mu\text{g}/\text{m}^3$	160	500	EPA Method IO-2.1
Workshop area Kondkel	$\mu\text{g}/\text{m}^3$	185	500	
Stowing plant area kondkel	$\mu\text{g}/\text{m}^3$	131	500	

REMARKS:

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



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

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/23-24/03902	
	LAB REF NO.	UES/23-24/FE/07417-07419	
	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

SAMPLE 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	GME 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	$\mu\text{g}/\text{m}^3$	138	500	EPA Method IO-2.1
Workshop area Kondkel	$\mu\text{g}/\text{m}^3$	161	500	
Stowing plant area kondkel	$\mu\text{g}/\text{m}^3$	109	500	

REMARKS:

Terms & conditions

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

 31/08/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY
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-----End of the test report-----



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

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/23-24/04691	
	LAB REF NO.	UES/23-24/FE/08638-08640	
	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

SAMPLE 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 (8 X 10 INCH) : 1X10 NO.

TEST REPORT

Locations	Unit	Suspended Particulate Matter SPM	Moef& CC Notification (350-1)	Method Reference
Weighbridge area Kondkel	$\mu\text{g}/\text{m}^3$	140	500	EPA Method IO-2.1
Workshop area Kondkel	$\mu\text{g}/\text{m}^3$	165	500	
Stowing plant area kondkel	$\mu\text{g}/\text{m}^3$	118	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.

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





Latitude: 22.161979
Longitude: 83.532092
Elevation: 206.19±58 m
Accuracy: 26.2 m
Time: 11-22-2023 12:44



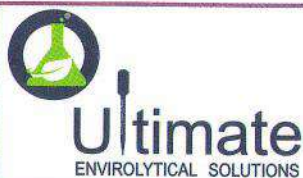
Latitude: 22.162039
Longitude: 83.532107
Elevation: 274.29±25 m
Accuracy: 20.3 m
Time: 11-22-2023 12:35



Latitude: 22.177833
Longitude: 83.525442
Elevation: 274.47±32 m
Accuracy: 6.3 m
Time: 11-22-2023 12:04



Annexure-7



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

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

<i>Name & Address of The Customer</i>		REPORT NO.	UES/TR/23-24/0561
TO,		LAB REF NO.	UES/23-24/N/01397-01406
HINDALCO INDUSTRIES LIMITED, GARE		DATE OF REPORT	02/05/2023
PALMA - IV/5, MILUPARA U/G COAL MINE,		DATE OF SAMPLING	26/04/2023 to 27/04/2023
VILLAGE - MILUPARA,			
BLOCK-TAMNAR,			
DISTT. - RAIGARH (C.G.) 496107			
SAMPLE DETAILS			
MONITORING FOR	NOISE LEVEL MONITORING		
CUSTOMER REF. NO. & DATE	P.O. 13552310212, DATED: 07.09.2022		
SAMPLING LOCATION	INSIDE COAL MINE & OUTSIDE COAL MINE (AS DESCRIBED BELOW)		
SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLE QUANTITY/ PACKING	NOT APPLICABLE		

TEST REPORT					
LOCATION	UNIT	RESULT		LIMIT (INDUSTRIAL ZONE)	
		DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
OFFICE AREA, MILUPARA	dB(A)	61	49	75	70
MILUPARA AREA NEAR INCLINE	dB(A)	65	55		
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		
LOCATION	UNIT	RESULT		LIMIT (RESIDENTIAL ZONE)	
		DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
Outside Plant					
SIDARPARA VILLAGE (GOVT. SCHOOL)	dB(A)	50	41	55	45
HIL COLONY, KONDKEL	dB(A)	48	37		
HIL STAFF QUARTER, MILUPARA	dB(A)	51	39		

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.

 02/05/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY
------------------------------------	--	---

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



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

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/23-24/0907
	LAB REF NO.	UES/23-24/N/02114-02123
	DATE OF REPORT	24/05/2023
	DATE OF SAMPLING	19/05/2023 - 20/05/2023

SAMPLE DETAILS

MONITORING FOR	NOISE LEVEL MONITORING
CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED:07.09.2022
SAMPLING LOCATION	INSIDE COAL MINE & OUTSIDE COAL MINE (AS DESCRIBED BELOW)
SAMPLE COLLECTED BY	LABORATORY CHEMIST
SAMPLE QUANTITY/ PACKING	NOT APPLICABLE

TEST REPORT

LOCATION	UNIT	RESULT		LIMIT (INDUSTRIAL ZONE)	
		DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
OFFICE AREA, MILUPARA	dB(A)	62	50	75	70
MILUPARA AREA NEAR INCLINE	dB(A)	66	56		
BUNKER AREA, MILUPARA	dB(A)	68	57		
DG SET AREA, KONDKEL	dB(A)	61	50		
MILUPARA MINES WEIGHBRIDGE	dB(A)	67	55		
OFFICE AREA, KONDKEL	dB(A)	60	48		
BUNKER AREA, KONDKEL	dB(A)	63	52		
LOCATION	UNIT	RESULT		LIMIT (RESIDENTIAL ZONE)	
		DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
Outside Plant					
SIDARPARA VILLAGE (GOVT. SCHOOL)	dB(A)	51	42	55	45
HIL COLONY, KONDKEL	dB(A)	49	38		
HIL STAFF QUARTER, MILUPARA	dB(A)	52	40		

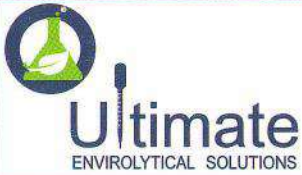
REMARKS: RESULTS ARE AS ABOVE

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 for above test(s) only.

 24/05/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  AUTHORIZED SIGNATORY
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-----End of the test report-----



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

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

Name & Address of The Customer		REPORT NO.	UES/TR/23-24/02014
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/N/04394-04403
		DATE OF REPORT	04/07/2023
		DATE OF SAMPLING	28/06/2023
		SAMPLE DETAILS	
MONITORING FOR	NOISE LEVEL MONITORING		
CUSTOMER REF. NO. & DATE	P.O. 13552310212, DATED: 07.09.2022		
SAMPLING LOCATION	INSIDE COAL MINE & OUTSIDE COAL MINE (AS DESCRIBED BELOW)		
SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLE QUANTITY/ PACKING	NOT APPLICABLE		

TEST REPORT					
LOCATION	UNIT	RESULT		LIMIT (INDUSTRIAL ZONE)	
		DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
OFFICE AREA, MILUPARA	dB(A)	61	51	75	70
MILUPARA AREA NEAR INCLINE	dB(A)	63	55		
BUNKER AREA, MILUPARA	dB(A)	65	56		
DG SET AREA, KONDKEL	dB(A)	60	49		
MILUPARA MINES WEIGHBRIDGE	dB(A)	63	53		
OFFICE AREA, KONDKEL	dB(A)	59	48		
BUNKER AREA, KONDKEL	dB(A)	61	52		
LOCATION	UNIT	RESULT		LIMIT (RESIDENTIAL ZONE)	
		DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
Outside Plant					
SIDARPARA VILLAGE (GOVT. SCHOOL)	dB(A)	50	41	55	45
HIL COLONY, KONDKEL	dB(A)	48	38		
HIL STAFF QUARTER, MILUPARA	dB(A)	49	40		

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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

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

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

<i>Name & Address of The Customer</i>		REPORT NO.	UES/TR/23-24/03116
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/N/06013-06026
		DATE OF REPORT	31/07/2023
		DATE OF SAMPLING	27/07/2023
SAMPLE DETAILS			
MONITORING FOR	NOISE LEVEL MONITORING		
CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED:07.09.2022		
SAMPLING LOCATION	INSIDE COAL MINE & OUTSIDE COAL MINE (AS DESCRIBED BELOW)		
SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLE QUANTITY/ PACKING	NOT APPLICABLE		

TEST REPORT						
SR. NO.	LOCATION	UNIT	RESULT		LIMIT (INDUSTRIAL ZONE)	
			DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
1	NEAR OFFICE AREA, MILUPARA	dB(A)	62	52	75	70
2	NEAR HIL STAFF QUARTER, MILUPARA	dB(A)	53	45		
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		
6	NEAR BUNKER AREA, MILUPARA	dB(A)	66	57		
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		
LIMIT (RESIDENTIAL ZONE)						
	LOCATION	UNIT	RESULT		LIMIT (RESIDENTIAL ZONE)	
			DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
Outside Mines Premises						
1	NEAR GOVT. SCHOOL SIDARPARA VILLAGE	dB(A)	51	42	55	45
2	NEAR GOVT. SCHOOL KONDKEL VILLAGE	dB(A)	50	41		

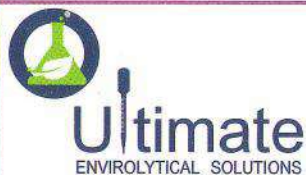
REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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- > This is for information as the party has asked for above tests only.

 31/07/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  AUTHORIZED SIGNATORY
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-----End of the test report-----



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

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<i>Name & Address of The Customer</i>		REPORT NO.	UES/TR/23-24/03869
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/N/07372-07383
		DATE OF REPORT	31/08/2023
		DATE OF SAMPLING	23/08/2023 to 24/08/2023
SAMPLE DETAILS			
MONITORING FOR	NOISE LEVEL MONITORING		
CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED: 07.09.2022		
SAMPLING LOCATION	INSIDE COAL MINE & OUTSIDE COAL MINE (AS DESCRIBED BELOW)		
SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLE QUANTITY/ PACKING	NOT APPLICABLE		

TEST REPORT

SR. NO.	LOCATION	UNIT	RESULT		LIMIT (INDUSTRIAL ZONE)		
			DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME	
1	NEAR OFFICE AREA, MILUPARA	dB(A)	61	50	75	70	
2	NEAR HIL STAFF QUARTER, MILUPARA	dB(A)	52	44			
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			
6	NEAR BUNKER AREA, MILUPARA	dB(A)	59	51			
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 BUNKER AREA, KONDKEL	dB(A)	67	58			
			RESULT		LIMIT (RESIDENTIAL ZONE)		
LOCATION			UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
Outside Mines Premises						55	45
1	NEAR GOVT. SCHOOL SIDARPARA VILLAGE	dB(A)	50	40			
2	NEAR GOVT. SCHOOL KONDKEL VILLAGE	dB(A)	49	41			

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.

 31/08/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY
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-----End of the test report-----



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

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

<i>Name & Address of The Customer</i>		REPORT NO.	UES/TR/23-24/04675
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/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: 07.09.2022		
SAMPLING LOCATION	INSIDE COAL MINE & OUTSIDE COAL MINE (AS DESCRIBED BELOW)		
SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLE QUANTITY/ PACKING	NOT APPLICABLE		

TEST REPORT						
SR. NO.	LOCATION	UNIT	RESULT		LIMIT (INDUSTRIAL ZONE)	
			DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
1	NEAR OFFICE AREA, MILUPARA	dB(A)	62	51	75	70
2	NEAR HIL STAFF QUARTER, MILUPARA	dB(A)	51	40		
3	NEAR HIL COLONY, KONDKEL	dB(A)	53	42		
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		
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		
LOCATION		UNIT	RESULT		LIMIT (RESIDENTIAL ZONE)	
			DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
Outside Mines Premises						
1	NEAR GOVT. SCHOOL SIDARPARA VILLAGE	dB(A)	51	39	55	45
2	NEAR GOVT. SCHOOL KONDKEL VILLAGE	dB(A)	47	40		

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.

 27/09/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  AUTHORIZED SIGNATORY
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-----End of the test report-----

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

Annexure-8



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

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

To Name & Address Of The Customer		Report No	UES/TR/23-24/0562	
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/W/01407	
		Date Of Sampling	26/04/2023	
		Date Of Receipt	27/04/2023	
		Date Of Report	02/05/2023	
		Date Of Analysis	START:27/04/2023	END:01/05/2023
SAMPLE DETAILS				
Sample Type	WASTE WATER	Customer Ref. No. & Date	P.O.13552310212, DATED:07.09.2022	
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. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected 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.	

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	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	7.28
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	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 22 ND 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

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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.

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



HDD-272, Phase III - Near JP Chowk
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Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

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<i>zto Name & Address Of The Customer</i>		Report No	UES/TR/23-24/0908	
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/W/02124	
		Date Of Sampling	19/05/2023	
		Date Of Receipt	20/05/2023	
		Date Of Report	24/05/2023	
		Date Of Analysis	START:20/05/2023	END: 24/05/2023
SAMPLE DETAILS				
Sample Type	WASTE WATER		Customer Ref. No. & Date	P.O.13552310212, DATED:07.09.2022
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. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected 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.

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	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	7.30
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.

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.

R. Balle
24/05/23

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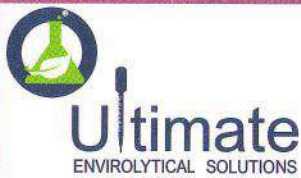


For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhojeet

AUTHORIZED SIGNATORY

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



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

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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	UES/TR/23-24/02015	
		Lab Ref No	UES/23-24/W/04404	
		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
SAMPLE DETAILS				
Sample Type	WASTE WATER		Customer Ref. No. & Date	P.O.13552310212, DATED:07.09.2022
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. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected 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.

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	APHA 22 nd Ed.2012,2130-B,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 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	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

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- This is for information as the party has asked for above tests only.

Redh
04/07/23

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Subhajeet

AUTHORIZED SIGNATORY

-----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 UES/TR/23-24/03059
		Lab Ref No UES/23-24/W/05896
		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 END:31/07/2023
SAMPLE DETAILS		
Sample Type	WASTE WATER	Customer Ref. No. & Date P.O.13552310212, DATED:07.09.2022
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. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sample Collected by Laboratory Chemist
Sealed		
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	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	7.29
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 ND Ed. 2012, 2540- D, 2-66	100	68.3
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	0.23
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	0.19
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.
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	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

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

Reh
31/07/23

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For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhajeet

AUTHORIZED SIGNATORY

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



HDD-272, Phase III - Near JP Chowk
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099
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Name & Address Of The Customer		Report No	UES/TR/23-24/03870
To,		Lab Ref No	UES/23-24/W/07384
HINDALCO INDUSTRIES LIMITED, GARE		Date Of Sampling	23/08/2023
PALMA - IV/5, MILUPARA U/G COAL		Date Of Receipt	24/08/2023
MINE,VILLAGE - MILUPARA,		Date Of Report	31/08/2023
BLOCK-TAMNAR,		Date Of Analysis	START:24/08/2023 END:28/08/2023
DISTT. - RAIGARH (C.G.) 496107			
SAMPLE DETAILS			
Sample Type	WASTE WATER	Customer Ref. No. & Date	P.O.13552310212, DATED:07.09.2022
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. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected 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.

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 23 rd 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	25.4
4	pH	-	APHA 23 rd Ed. 2017,4500-H ^r -B,4-92	5.5 to 9.0	7.31
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	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 23 rd Ed. 2017,3111-B, 3-18	5.0	0.20
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 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

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



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Name & Address Of The Customer		Report No	UES/TR/23-24/04676	
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/W/08622	
		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
SAMPLE DETAILS				
Sample Type	WASTE WATER		Customer Ref. No. & Date	P.O.13552310212, DATED:07.09.2022
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. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected 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.

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 23 rd 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	25.2
4	pH	-	APHA 23 rd 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-Cl-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 23 rd 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 23 rd Ed. 2017,3111-B, 3-18	5.0	0.16
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 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	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.

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

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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[Signature]
27/09/23

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AUTHORIZED SIGNATORY

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



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

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to Name & Address Of The Customer		Report No	UES/TR/23-24/0563	
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/W/01408	
		Date Of Sampling	26/04/2023	
		Date Of Receipt	27/04/2023	
		Date Of Report	02/05/2023	
		Date Of Analysis	START:27/04/2023	END:01/05/2023
SAMPLE DETAILS				
Sample Type	WASTE WATER		Customer Ref. No. & Date	P.O.13552310212, DATED:07.09.2022
Customer Sample ID	ETP OUTLET, KONDKEL		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 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	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	°C	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.

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

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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



HDD-272, Phase III - Near JP Chowk
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Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

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<i>to Name & Address Of The Customer</i>		Report No	UES/TR/23-24/0909	
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/W/02125	
		Date Of Sampling	19/05/2023	
		Date Of Receipt	20/05/2023	
		Date Of Report	24/05/2023	
		Date Of Analysis	START:20/05/2023	END:24/05/2023
SAMPLE DETAILS				
Sample Type	WASTE WATER		Customer Ref. No. & Date	P.O.13552310212, DATED:07.09.2022
Customer Sample ID	ETP OUTLET, KONDKEL		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 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	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 ¹ -B, 4-92	5.5 to 9.0	7.62
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	34.50
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.
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	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

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

[Signature]
24/05/23

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



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Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099
Ph : 0771 - 4027777 | Email : ultimatenviron@gmail.com

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to Name & Address Of The Customer		Report No	UES/TR/23-24/02016	
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/W/04405	
		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
SAMPLE DETAILS				
Sample Type	WASTE WATER		Customer Ref. No. & Date	P.O.13552310212, DATED: 07.09.2022
Customer Sample ID	ETP OUTLET, KONDKEL		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 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	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	7.58
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.

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

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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04/07/23

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

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Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

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to Name & Address Of The Customer		Report No	UES/TR/23-24/03060
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/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 END:31/07/2023
SAMPLE DETAILS			
Sample Type	WASTE WATER	Customer Ref. No. & Date	P.O.13552310212, DATED:07.09.2022
Customer Sample ID	ETP OUTLET, KONDKEL	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 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	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 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	0.14
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 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	10.18
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.

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

REMARKS: RESULTS ARE AS ABOVE

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[Signature]
31/07/23

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Ph : 0771 - 4027777 | Email : ultimatenviron@gmail.com

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<i>to Name & Address Of The Customer</i>		Report No	UES/TR/23-24/03871	
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/W/07385	
		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
SAMPLE DETAILS				
Sample Type	WASTE WATER		Customer Ref. No. & Date	P.O.13552310212, DATED:07.09.2022
Customer Sample ID	ETP OUTLET, KONDKEL		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 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 23 rd 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	25.0
4	pH	-	APHA 23 rd 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-C1-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 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	0.11
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 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	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.

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.

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For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhajeed

AUTHORIZED SIGNATORY

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

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Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

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<i>to Name & Address Of The Customer</i>		Report No	UES/TR/23-24/04677
To,		Lab Ref No	UES/23-24/W/08623
HINDALCO INDUSTRIES LIMITED, GARE		Date Of Sampling	21/09/2023
PALMA - IV/5, MILUPARA U/G COAL		Date Of Receipt	22/09/2023
MINE,VILLAGE - MILUPARA,		Date Of Report	27/09/2023
BLOCK-TAMNAR,		Date Of Analysis	START:22/09/2023 END:26/09/2023
DISTT. - RAIGARH (C.G.) 496107			
SAMPLE DETAILS			
Sample Type	WASTE WATER	Customer Ref. No. & Date	P.O.13552310212, DATED:07.09.2022
Customer Sample ID	ETP OUTLET, KONDKEL	Sample Condition At Receipt	Ok
Packing Of Sample	3 L X I NO. PVC CAN 1 L X I NO. PVC CAN 1 L X I NO. GLASS BOTTLE	Sample Collected By	Laboratory Chemist
Sealed		Quantity Received	Approx. 5Ltr.
Sampling Procedure	IS:3025(PART-I):1987 RA 2003; APHA 22 ND ED. 2021, 1060-B, 1-39		

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 23 rd 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	pH	-	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 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	0.09
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 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	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.

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

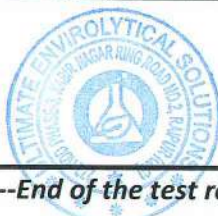
REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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

[Signature]
27/09/23

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

[Signature]

AUTHORIZED SIGNATORY

-----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



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

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To Name & Address Of The Customer		Report No	UES/TR/23-24/0564	
To,		Lab Ref No	UES/23-24/W/01409	
HINDALCO INDUSTRIES LIMITED, GARE		Date Of Sampling	26/04/2023	
PALMA - IV/5, MILUPARA U/G COAL MINE,		Date Of Receipt	27/04/2023	
VILLAGE - MILUPARA,		Date Of Report	02/05/2023	
BLOCK-TAMNAR,		Date Of Analysis	START:27/04/2023	END:01/05/2023
DISTT. - RAIGARH (C.G.) 496107				
SAMPLE DETAILS				
Sample Type	WASTE WATER		Customer Ref. No. & Date	P.O.13552310212, DATED:07.09.2022
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	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	APHA 22 ND Ed.2012,2130-B,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	7.38
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	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	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	20.4
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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 02/05/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  AUTHORIZED SIGNATORY
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-----End of the test report-----



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

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to Name & Address Of The Customer		Report No	UES/TR/23-24/0910	
To,		Lab Ref No	UES/23-24/W/02126	
HINDALCO INDUSTRIES LIMITED, GARE		Date Of Sampling	19/05/2023	
PALMA - IV/5, MILUPARA U/G COAL MINE,		Date Of Receipt	20/05/2023	
VILLAGE - MILUPARA,		Date Of Report	24/05/2023	
BLOCK-TAMNAR,		Date Of Analysis	START: 20/05/2023	END: 24/05/2023
DISTT. - RAIGARH (C.G.) 496107				
SAMPLE DETAILS				
Sample Type	WASTE WATER		Customer Ref. No. & Date	P.O.13552310212, DATED: 07.09.2022
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	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	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	7.41
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 & 87	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.

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

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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R. Bhatnagar
24/05/23
REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhajeet
AUTHORIZED SIGNATORY

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



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

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to Name & Address Of The Customer		Report No	UES/TR/23-24/02017	
To,		Lab Ref No	UES/23-24/W/04406	
HINDALCO INDUSTRIES LIMITED, GARE		Date Of Sampling	29/06/2023	
PALMA - IV/5, MILUPARA U/G COAL MINE,		Date Of Receipt	30/06/2023	
VILLAGE - MILUPARA,		Date Of Report	04/07/2023	
BLOCK-TAMNAR,		Date Of Analysis	START: 30/06/2023	END: 04/07/2023
DISTT. - RAIGARH (C.G.) 496107				
SAMPLE DETAILS				
Sample Type	WASTE WATER	Customer Ref. No. & Date	P.O.13552310212, DATED:07.09.2022	
Customer Sample ID	STP INLET, 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	Sample Collected By	Laboratory Chemist	
Sealed		Quantity Received	Approx. 5Ltr.	
Sampling Procedure	IS: 3025(PART-I):1987 RA 2003; APHA 22 ND ED. 2021, 1060-B, 1-39			

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	APHA 22 ND Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.6
4	pH	-	APHA 22 ND 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 22 ND Ed.2012,2540- D, 2-66	100	45.4
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	0.52
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 22 ND Ed.2012,3111-B, 3-18	5.0	0.21
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	19.7
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.

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

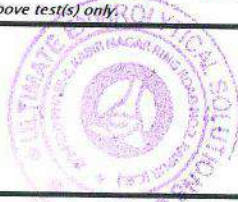
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Rohit
04/07/23

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For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhajeet

AUTHORIZED SIGNATORY

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



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

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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/23-24/03061	
		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	
		Date Of Analysis	START: 27/07/2023	END: 31/07/2023
SAMPLE DETAILS				
Sample Type	WASTE WATER	Customer Ref. No. & Date	P.O.13552310212, DATED: 07.09.2022	
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	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	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	7.39
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 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	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 Detected.

REMARKS: RESULTS ARE AS ABOVE

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

Behera
31/07/23

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhajeet

AUTHORIZED SIGNATORY

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



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

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to Name & Address Of The Customer		Report No	UES/TR/23-24/03872	
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/W/07386	
		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
SAMPLE DETAILS				
Sample Type	WASTE WATER		Customer Ref. No. & Date	P.O.13552310212, DATED:07.09.2022
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	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	RESULT
				[SCHEDULE-VI] PART-A INLAND SURFACE WATER	
1	Colour	Hazen	APHA 23 rd 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	25.2
4	pH	-	APHA 23 rd 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 & 87	2.0	0.55
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	0.23
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 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	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.

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

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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- This is for information as the party has asked for above tests only.

Subhajeet
31/08/23

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhajeet

AUTHORIZED SIGNATORY

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



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

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To Name & Address Of The Customer		Report No	UES/TR/23-24/04678	
To,		Lab Ref No	UES/23-24/W/08624	
HINDALCO INDUSTRIES LIMITED, GARE		Date Of Sampling	21/09/2023	
PALMA - IV/5, MILUPARA U/G COAL MINE,		Date Of Receipt	22/09/2023	
VILLAGE - MILUPARA,		Date Of Report	27/09/2023	
BLOCK-TAMNAR,		Date Of Analysis	START:22/09/2023	END:26/09/2023
DISTT. - RAIGARH (C.G.) 496107				
SAMPLE DETAILS				
Sample Type	WASTE WATER		Customer Ref. No. & Date	P.O.13552310212, DATED:07.09.2022
Customer Sample ID	STP INLET, 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 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.

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 23 rd 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	25.4
4	pH	-	APHA 23 rd 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 23 rd 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 & 87	2.0	0.42
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	0.18
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 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	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.

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

REMARKS: RESULTS ARE AS ABOVE

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Subhajit
27/09/23

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhajit

AUTHORIZED SIGNATORY

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



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

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To Name & Address Of The Customer		Report No	UES/TR/23-24/0565	
To,		Lab Ref No	UES/23-24/W/01410	
HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/5, MILUPARA U/G COAL MINE, VILLAGE - MILUPARA, BLOCK-TAMNAR, DISTT. - RAIGARH (C.G.) 496107		Date Of Sampling	26/04/2023	
		Date Of Receipt	27/04/2023	
		Date Of Report	02/05/2023	
		Date Of Analysis	START:27/04/2023	END:01/05/2023
SAMPLE DETAILS				
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 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected 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.

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 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	7.48
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	34.1
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.
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

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

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



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Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

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to Name & Address Of The Customer		Report No	UES/TR/23-24/0911	
To,		Lab Ref No	UES/23-24/W/02127	
HINDALCO INDUSTRIES LIMITED, GARE		Date Of Sampling	19/05/2023	
PALMA - IV/5, MILUPARA U/G COAL MINE,		Date Of Receipt	20/05/2023	
VILLAGE - MILUPARA,		Date Of Report	24/05/2023	
BLOCK-TAMNAR,		Date Of Analysis	START: 20/05/2023	END: 24/05/2023
DISTT. - RAIGARH (C.G.) 496107				
SAMPLE DETAILS				
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 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected 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.

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 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	pH	-	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 & 87	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

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24/05/23
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For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

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



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Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

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to Name & Address Of The Customer		Report No	UES/TR/23-24/02018	
To,		Lab Ref No	UES/23-24/W/04407	
HINDALCO INDUSTRIES LIMITED, GARE		Date Of Sampling	29/06/2023	
PALMA - IV/5, MILUPARA U/G COAL MINE,		Date Of Receipt	30/06/2023	
VILLAGE - MILUPARA,		Date Of Report	04/07/2023	
BLOCK-TAMNAR,		Date Of Analysis	START: 30/06/2023	END: 04/07/2023
DISTT. - RAIGARH (C.G.) 496107				
SAMPLE DETAILS				
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 1 L X 1 NO. GLASS BOTTLE	Sample Collected By	Laboratory Chemist	
Sealed		Quantity Received	Approx. 5Ltr.	
Sampling Procedure	IS:3025(PART-I):1987 RA 2003; APHA 22 ND ED. 2021, 1060-B, 1-39			

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 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	25.6
4	pH	-	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 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	0.24
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 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	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/lit.: milligram per liter, N.D. - Not Detected.

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R. K. Ch
04/07/23

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhojeet

AUTHORIZED SIGNATORY

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

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



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

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To Name & Address Of The Customer		Report No	UES/TR/23-24/03062
To,		Lab Ref No	UES/23-24/W/05899
HINDALCO INDUSTRIES LIMITED, GARE		Date Of Sampling	26/07/2023
PALMA - IV/5, MILUPARA U/G COAL MINE,		Date Of Receipt	27/07/2023
VILLAGE - MILUPARA,		Date Of Report	31/07/2023
BLOCK-TAMNAR,		Date Of Analysis	START:27/07/2023 END:31/07/2023
DISTT. - RAIGARH (C.G.) 496107			
SAMPLE DETAILS			
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 1 L X 1 NO. GLASS BOTTLE	Sample Collected By	Laboratory Chemist
Sealed		Quantity Received	Approx. 5Ltr.
Sampling Procedure	IS:3025(PART-I):1987 RA 2003; APHA 22 nd ED. 2021, 1060-B, 1-39		

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 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	7.50
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	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

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.

[Signature]
31/07/23

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[Signature]

AUTHORIZED SIGNATORY

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

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



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

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to Name & Address Of The Customer		Report No	UES/TR/23-24/03873	
To,		Lab Ref No	UES/23-24/W/07387	
HINDALCO INDUSTRIES LIMITED, GARE		Date Of Sampling	23/08/2023	
PALMA - IV/5, MILUPARA U/G COAL MINE,		Date Of Receipt	24/08/2023	
VILLAGE - MILUPARA,		Date Of Report	31/08/2023	
BLOCK-TAMNAR,		Date Of Analysis	START:24/08/2023	END:28/08/2023
DISTT. - RAIGARH (C.G.) 496107				
SAMPLE DETAILS				
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 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected 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.

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 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	25.1
4	pH	-	APHA 23 rd 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 23 rd 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	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/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.

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Subhajeet

AUTHORIZED SIGNATORY

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

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



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To Name & Address Of The Customer		Report No	UES/TR/23-24/04679	
To,		Lab Ref No	UES/23-24/W/08625	
HINDALCO INDUSTRIES LIMITED, GARE		Date Of Sampling	21/09/2023	
PALMA - IV/5, MILUPARA U/G COAL MINE,		Date Of Receipt	22/09/2023	
VILLAGE - MILUPARA,		Date Of Report	27/09/2023	
BLOCK-TAMNAR,		Date Of Analysis	START:22/09/2023	END:26/09/2023
DISTT. - RAIGARH (C.G.) 496107				
SAMPLE DETAILS				
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 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected 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.

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 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	pH	-	APHA 23 rd 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 rd 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 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 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	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.

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

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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R. B. D.
27/09/23

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Subhajeet

AUTHORIZED SIGNATORY

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

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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<i>Name & Address Of The Customer</i>		REPORT NO.	UES/TR/23-24/0575	
To,		LAB REF NO.	UES/23-24/W/01420	
HINDALCO INDUSTRIES LIMITED, GARE		DATE OF SAMPLING	27/04/2023	
PALMA - IV/5, MILUPARA U/G COAL MINE,		DATE OF RECEIPT	28/04/2023	
VILLAGE - MILUPARA,		DATE OF REPORT	02/05/2023	
BLOCK-TAMNAR,		DATE OF ANALYSIS	START: 28/04/2023	END: 02/05/2023
DISTT. - RAIGARH (C.G.) 496107				
SAMPLE 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	
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
SAMPLING PROCEDURE	IS: 3025 (PART I): 1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39	QUANTITY RECEIVED	5 LTR	

Report No.0575

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				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	pH	-	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-Cl-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	--	--	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 CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	--	--	60.0
14	Magnesium Hardness (as CaCO ₃)	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-Cl-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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TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		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	1.71
20	Phosphate (as P)	mg/Lit	APHA 22 nd Ed.2012,4500-P-C, 4-153	--	--	N.D.
21	Sodium (as Na)	mg/Lit	APHA 22 nd 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, 3-18	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 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, 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.
Microbiological Analysis						
1	Total Coliforms	MPN/100 ML	IS: 1622:1981:RA:2019	Shall not be detectable in any 100 ml sample		Absent
2	Faecal Coliforms	MPN/100 ML	IS: 1622:1981:RA:2019	Shall not be detectable in any 100 ml sample		Absent



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Report No.0575

TEST REPORT

SR. NO.	PARAMETER	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 detectable in any 100 ml sample		Absent
Pesticides						
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	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		N.D.
25	Malaaxon	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

Terms & conditions

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- > 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.

R. Bhatt
02/05/27

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Subhrajcet

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



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<i>Name & Address Of The Customer</i>		REPORT NO.	UES/TR/23-24/0921
To,		LAB REF NO.	UES/23-24/W/02137
HINDALCO INDUSTRIES LIMITED, GARE		DATE OF SAMPLING	18/05/2023
PALMA - IV/5, MILUPARA U/G COAL MINE,		DATE OF RECEIPT	19/05/2023
VILLAGE - MILUPARA,		DATE OF REPORT	24/05/2023
BLOCK-TAMNAR,		DATE OF ANALYSIS	START: 19/05/2023 END: 23/05/2023
DISTT. - RAIGARH (C.G.) 496107			
SAMPLE 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
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
SAMPLING PROCEDURE	IS: 3025 (PART I): 1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39	QUANTITY RECEIVED	5 LTR

Report No.0921

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				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	pH	-	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-Cl-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 CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	--	--	64.0
14	Magnesium Hardness (as CaCO ₃)	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 Cl)	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-B, 4-72	250	1000	27.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ -E, 4-190	200	400	22.8



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Report No.0921

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		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	1.73
20	Phosphate (as P)	mg/Lit	APHA 22 nd Ed.2012,4500-P-C, 4-153	--	--	N.D.
21	Sodium (as Na)	mg/Lit	APHA 22 nd 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 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, 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.
Microbiological Analysis						
1	Total Coliforms	MPN/100 ML	IS: 1622:1981:RA:2019	Shall not be detectable in any 100 ml sample		Absent
2	Faecal Coliforms	MPN/100 ML	IS: 1622:1981:RA:2019	Shall not be detectable in any 100 ml sample		Absent



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Report No.0921

TEST REPORT

SR. NO.	PARAMETER	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 detectable in any 100 ml sample		Absent
Pesticides						
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	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		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

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.

R. Bell
24/05/23

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhajeet

AUTHORIZED SIGNATORY

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



HDD-272, Phase III - Near JP Chowk
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<i>Name & Address Of The Customer</i>		REPORT NO.	UES/TR/23-24/02028	
To,		LAB REF NO.	UES/23-24/W/04417	
HINDALCO INDUSTRIES LIMITED, GARE		DATE OF SAMPLING	29/06/2023	
PALMA - IV/5, MILUPARA U/G COAL MINE,		DATE OF RECEIPT	30/06/2023	
VILLAGE - MILUPARA,		DATE OF REPORT	04/07/2023	
BLOCK-TAMNAR,		DATE OF ANALYSIS	START: 30/06/2023	END: 04/07/2023
DISTT. - RAIGARH (C.G.) 496107				
SAMPLE 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	
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	CHEMIST	
SAMPLING PROCEDURE	IS:3025 (PART I):1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39	QUANTITY RECEIVED	5 LTR	

Report No.02028

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				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	pH	-	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-Cl-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2-64	--	--	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 CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	--	--	58.0
14	Magnesium Hardness (as CaCO ₃)	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-Cl-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	20.99



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Report No.02028

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		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 22 nd Ed.2012,4500-P-C, 4-153	--	--	N.D.
21	Sodium (as Na)	mg/Lit	APHA 22 nd 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 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, 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.
Microbiological Analysis						
1	Total Coliforms	MPN/100 ML	IS: 1622:1981:RA:2019	Shall not be detectable in any 100 ml sample		Absent
2	Faecal Coliforms	MPN/100 ML	IS: 1622:1981:RA:2019	Shall not be detectable in any 100 ml sample		Absent

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Report No.02028

TEST REPORT

SR. NO.	PARAMETER	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 detectable in any 100 ml sample		Absent
Pesticides						
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	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		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.

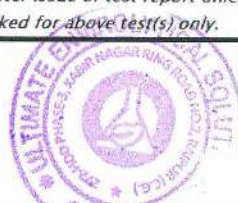
REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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- 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.

R. Bell
04/07/23

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhajeet

AUTHORIZED SIGNATORY

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



HDD-272, Phase III - Near JP Chowk
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Name & Address Of The Customer		REPORT NO.	UES/TR/23-24/03072
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/W/05909
		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 END: 31/07/2023
SAMPLE 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
PACKING OF SAMPLE	3 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
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. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				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	pH	-	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-Cl-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 CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	--	--	60.0
14	Magnesium Hardness (as CaCO ₃)	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-Cl-B, 4-72	250	1000	26.9
18	Sulphate (as SO ₄)	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 10500:2012		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	1.62
20	Phosphate (as P)	mg/Lit	APHA 22 nd Ed.2012,4500-P-C, 4-153	--	--	N.D.
21	Sodium (as Na)	mg/Lit	APHA 22 nd 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, 3-18	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 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, 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.
Microbiological Analysis						
1	Total Coliforms	MPN/100 ML	IS: 1622:1981:RA:2019	Shall not be detectable in any 100 ml sample		Absent
2	Faecal Coliforms	MPN/100 ML	IS: 1622:1981:RA:2019	Shall not be detectable in any 100 ml sample		Absent

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Report No.03072

TEST REPORT

SR. NO.	PARAMETER	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 detectable in any 100 ml sample		Absent
Pesticides						
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	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		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

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.

[Signature]
31/07/23

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For ULTIMATE ENVIROLYTICAL SOLUTIONS

[Signature]

AUTHORIZED SIGNATORY

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



HDD-272, Phase III - Near JP Chowk
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3883 Name & Address Of The Customer To, 7397 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/23-24/03883	
		LAB REF NO.	UES/23-24/W/07397	
		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
SAMPLE 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	
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	SEALED	CHEMIST
SAMPLING PROCEDURE	IS: 3025 (PART I): 1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39	QUANTITY RECEIVED	5 LTR	

Report No. 03883

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				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	pH	-	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 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	--	--	22.44
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 SO ₄)	mg/Lit	APHA 23 rd Ed. 2017,4500-SO ₄ -E, 4-190	200	400	19.85



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Report No.03883

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				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 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, 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.
Microbiological Analysis						
1	Total Coliforms	MPN/100 ML	IS: 1622:1981:RA:2019	Shall not be detectable in any 100 ml sample		Absent
2	Faecal Coliforms	MPN/100 ML	IS: 1622:1981:RA:2019	Shall not be detectable in any 100 ml sample		Absent



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Report No.03883

TEST REPORT

SR. NO.	PARAMETER	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 detectable in any 100 ml sample		Absent
Pesticides						
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	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		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

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.

Subhajeet
31/08/23

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Subhajeet

AUTHORIZED SIGNATORY

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



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Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099
Ph : 0771 - 4027777 | Email : ultimatenviron@gmail.com

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Name & Address Of The Customer		REPORT NO.	UES/TR/23-24/04689
To,		LAB REF NO.	UES/23-24/W/08635
HINDALCO INDUSTRIES LIMITED, GARE		DATE OF SAMPLING	21/09/2023
PALMA - IV/5, MILUPARA U/G COAL MINE,		DATE OF RECEIPT	22/09/2023
VILLAGE - MILUPARA,		DATE OF REPORT	27/09/2023
BLOCK-TAMNAR,		DATE OF ANALYSIS	START:22/09/2023 END:26/09/2023
DISTT. - RAIGARH (C.G.) 496107			
SAMPLE 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
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	CHEMIST
SAMPLING PROCEDURE	IS: 3025 (PART I): 1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39	QUANTITY RECEIVED	5 LTR

Report No.04689

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				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	pH	-	APHA 23 rd Ed. 2017,4500-H ⁺ -B, 4-92	6.5 To 8.5	No Relaxation	7.56
5	Turbidity	NTU	APHA 23 rd Ed. 2017,2130-B,2-13	1	5	0.72
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	--	--	286.4
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	--	--	165.4
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	162.0
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2-66	--	--	3.4
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	88.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed. 2017,2340-C, 2-44,45	200	600	102.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed. 2017,3500-Ca-B, 3-67	--	--	76.0
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	30.46
16	Magnesium (as Mg)	mg/Lit	APHA 23 rd Ed. 2017,3500-Mg-B, 3-84	30	100	6.32
17	Chloride (as Cl)	mg/Lit	APHA 23 rd Ed. 2017,4500-Cl-B, 4-72	250	1000	24.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 23 rd Ed. 2017,4500-SO ₄ -E, 4-190	200	400	16.41



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Report No. 04689

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				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	--	--	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 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, 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.
Microbiological Analysis						
1	Total Coliforms	MPN/100 ML	IS: 1622:1981:RA:2019	Shall not be detectable in any 100 ml sample		Absent
2	Faecal Coliforms	MPN/100 ML	IS: 1622:1981:RA:2019	Shall not be detectable in any 100 ml sample		Absent

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Report No. 04689

TEST REPORT

SR. NO.	PARAMETER	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 detectable in any 100 ml sample		Absent
Pesticides						
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	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		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

Terms & conditions

- 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.

[Signature]
27/05/23

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

[Signature]

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



छत्तीसगढ़ पर्यावरण संरक्षण मंडल
पर्यावास भवन, सेक्टर - 19,
नवा रायपुर अटल नगर, जिला-रायपुर (छ.ग.) 492002

Email add - hocecb@gmail.com

क्रमांक 1007 मुख्या/वैज्ञा./छ.ग.प.सं.मं./2022
प्रति,

नवा रायपुर, अटल नगर, दिनांक 12/5/2022

श्री अनुराग श्रीवास्तव,
मैनेजिंग पार्टनर/क्वालिटी मैनेजर,
मेसर्स अल्टीमेट इन्वायरोलाईटिकल सॉल्यूशन्स,
272-एच.डी.डी., फेस-3, कबीर नगर, रिंग रोड नं. 2,
जिला - रायपुर (छ.ग.)

विषय :- प्रदेश में संचालित निजी प्रयोगशाला को छत्तीसगढ़ पर्यावरण संरक्षण मंडल द्वारा प्रदत्त मान्यता के संबंध में।

संदर्भ :- 1. आपका आवेदन पत्र क्रमांक UES/22-23/027 दिनांक 04/05/2022.
2. मंडल मुख्यालय का पत्र क्रमांक 3398 दिनांक 17/08/2021.
3. National Accreditation Board for Testing and Calibration Laboratories का सर्टिफिकेट नं. TC-6065 दिनांक 27/10/2021.

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उपरोक्त विषयांतर्गत संदर्भित पत्रों का अवलोकन करें। लेख है कि मंडल मुख्यालय द्वारा पत्र क्रमांक 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 अनुक्रम 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 अद्यतन विश्लेषण दर सूची से मंडल को अवगत कराते हुए इस पत्र की पावती भेजे।



सदस्य सचिव

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

पृ.क्रमांक मुख्या/वैज्ञा./छ.ग.प.सं.मं./2022

प्रतिलिपि: क्षेत्रीय अधिकारी, क्षेत्रीय कार्यालय,
रायपुर/भिलाई-दुर्ग/बिलासपुर/कोरबा/रायगढ़/अंबिकापुर/जगदलपुर की ओर सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

नवा रायपुर अटल नगर, दिनांक / /2022

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

सदस्य सचिव

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



केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
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,
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, वेबसाइट/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.

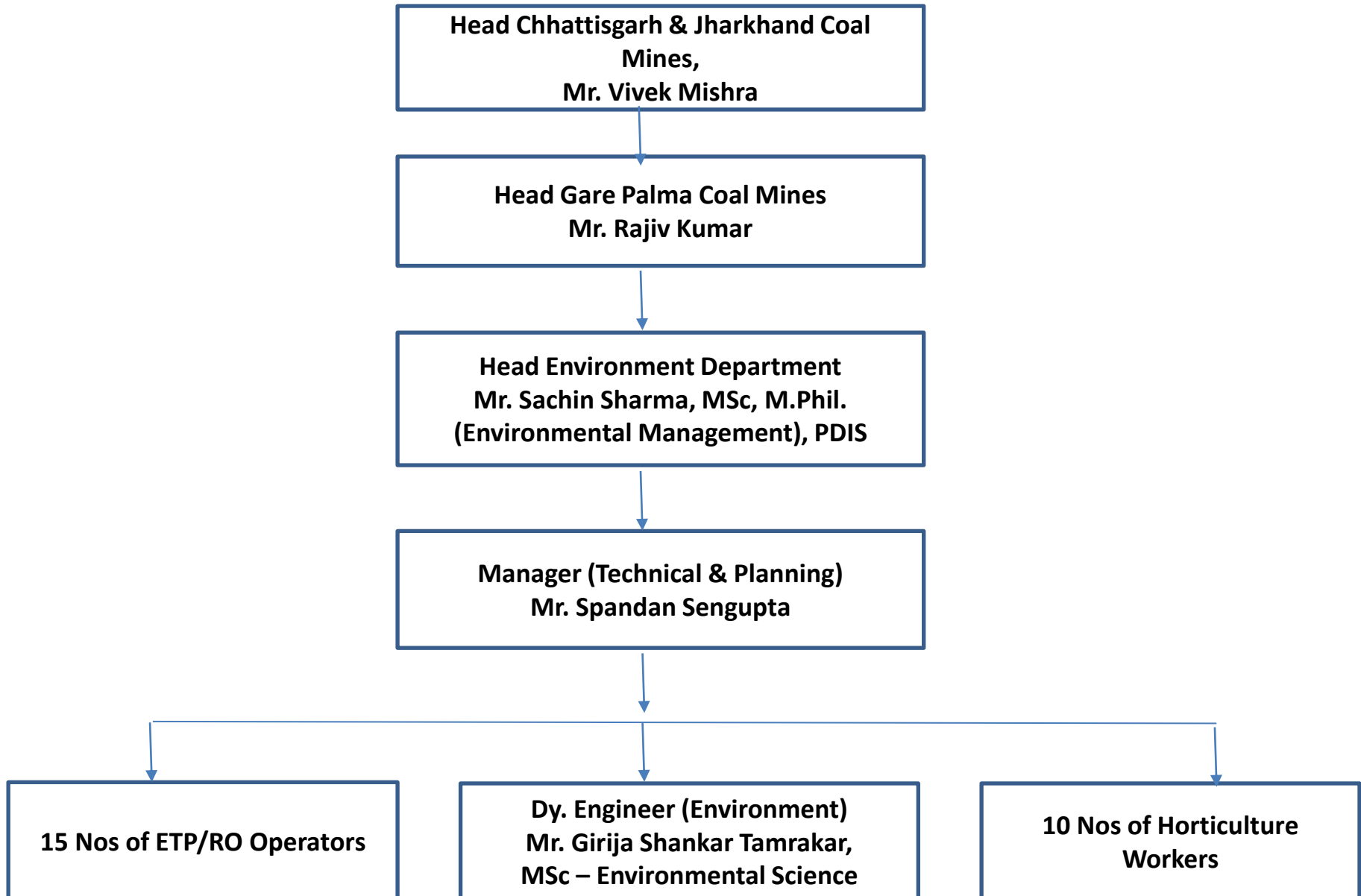
Yours faithfully,

 28/7/22

(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