

Letter No.: HIL/EC/GP- IV/5/II/2022-23/69

29th May, 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 Under Ground Captive Coal Mine, Gare Palma IV/5 Coal Mines of 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 Report (Hard & Soft) for the period from **October 2022 to March 2023** for your kind perusal please.

The receipt of the report may kindly be acknowledged.

Yours faithfully,
For **Hindalco Industries Limited**,

Govind Kumar
(Mine Agent- GP IV/5 CM)
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
T: + 912266917000 | Fax: + 912266917001
Corporate ID No: L27020MH1958PLC011238

Compliance Report on conditions of Environment Clearance for Gare-Palma IV/5 coal mining project Transfer by Ministry of Environment, Forests & Climate Change vide letter no. J-11015/8/1998-IA. II (M) Dated: - 16th April 2015 for Under Ground Mining 1.0 Million Ton/Annum Production Capacity.

Sr. No.	Conditions	Status
1	Any change in scope of work will attract the provisions of Environment Protection Act (EPA), 1986 and Environment 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 coal mining project given by Ministry of Environment, Forests & Climate Change vide letter no. J-11015/8/1998-IA. II (M) Dated: - 31st August 2000 for Under Ground Mining 1.0 Million Ton/Annum Production Capacity

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 expert. 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 have been constructed around the coal stock yard to prevent the surface run-off.
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 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 52104 nos. of trees have been planted within the Mine boundary and other places. Trees species planted are Neem, Mahua, Jamun, Mango, Guava, Imli,. Drumstick, Teak, Shivan / Ghamar, Sisham, Sirus, Bamboo, Peltafarm, Nilgiri, Amla, Saptaparni, Kathal, kassod tree, Arjuna & Kachnar etc. in consultation with DFO. Plantation has been carried out @2500 per hectare and will also be ensure in future. Plantation details enclosed as <u>Annexure -1.</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 with Ground water survey department, Government of MP (presently Chhattisgarh) and should have necessary financial provision and technical expertise. This 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 CGWA.
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 operations. The interval of monitoring should be four times a year- Pre	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 October 2022 to March 2023) and

	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.	quality Monitoring report of Post Monsoon (November) and winter (January) is attached as <u>Annexure No.-2.</u> Quarterly monitoring report of Ground Water Level (from October 2022 to December 2022) and (from January 2023 to March 2023) & GW Quality Monitoring for the month of November 2022 (Post Monsoon) and January 2023 (winter) has been submitted to MoEF & CC, CPCB and CECB on quarterly within one month of monitoring basis. Attached as <u>Annexure No. - 3.</u>
ix	Digital processing of the entire lease using remote sensing technique should be regularly once in three years for monitoring land use pattern and report submitted to MoEF and its regional officer.	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 office dated 11 January 2023. Attached as <u>Annexure - 4.</u>
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 meteorology data, topographical features and environmental 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 is being carried out. Reports are being periodically furnished to CECB. Copy of AAQ Monitoring Report from the period October 2022 to March 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	Four ambient air quality monitoring stations (Core Zone) & Four ambient air quality

	the Ministry including its Regional Officer at Bhopal (Currently Raipur) and the State Pollution Control Board & Central Pollution Control Board (Currently Raipur).	<p>monitoring stations (Buffer Zone) have been established and regular monitoring is being carried out.</p> <p>Reports are being periodically furnished to CECB.</p> <p>Copy of AAQ Monitoring Report from the period October 2022 to March 2023 is already enclosed.</p>
v	Drill should be wet operated.	Complied.
vi	Fugitive dust emission from all the sources should be controlled, regularly monitored and the data recorded properly. Water spraying arrangement on haul roads, Wagons, loading dump trucks (loading and unloading) should be provided and properly maintained.	<p>Fixed type water sprinkler has been provided at all along the roads, and loading points etc. to control the fugitive dust emission.</p> <p>Photographs of fixed type of water sprinklers at GP IV/5 Coal Mines is attached as <u>Annexure – 6.</u></p>
vii	Adequate measures should be taken for control of noise level below 80db in the work environment. Workers engaged in blasting and drilling operation, operations of HEMM etc. should be provided with ear plugs/muffs	<p>Ear muffs/plugs has been provided to the all workers engaged in blasting and drilling operations, operations of HEMM etc. The Noise monitoring report for the period from October 2022 to March 2023 is enclosed as <u>Annexure - 7.</u></p>
viii	Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform on the standards prescribed under GSR 422 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 in to the pond.	<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>Copy of Analysis Report (ETP Inlet & Outlet) for the period from October 2022 to March 2023 is attached as <u>Annexure – 8.</u></p> <p>Photographs of Treatment Facility at GP IV/5 Coal Mines is attached as <u>Annexure – 8A.</u></p> <p>Also HIL provided the Sewage Treatment Plant of capacity 50 m3/day at Kondkel to treat the domestic waste water generated from Toilets, bathroom etc.</p> <p>Copy of Analysis Report (Inlet & Out of STP) for the period from October 2022 to March 2023 is attached as <u>Annexure – 9.</u></p>

		Photographs of Sewage Treatment Plant installed at GP IV/5 Coal Mines (Kondkel) is attached as <u>Annexure – 9A.</u>
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 SPCB.
x	Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board	We have engaged CECB & MoEF&CC approved and NABL accredited Laboratory i.e. M/s Ultimate Enviroltysical Solutions Raipur to carried out the mine environmental parameters monitoring. Approval letter of Monitoring Agency from CECB Raipur, MoEF&CC & NABL accredited Laboratory certificate is attached as <u>Annexure No. – 10.</u>
xi	Personnel working in dust area should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance 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 are wearing protective respiratory devices and they have also been provided with adequate training and information on safety and health aspect. Occupational health surveillance program of the workers is being undertaken periodically to observe any contraction due to exposure to coal dust and corrective measures will be taken accordingly.
xii	A separate environmental management cell with suitable qualified personnel should be set up under the control of a senior executive who will report directly to the Head of the Organization.	A separate Environmental Management Department is functioning at Coal Mine under the direct control of a senior executive.
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 has been budgeted separately and not been diverted for other purposes. Environmental Expenditure details from October 2022 to March 2023 is enclosed as <u>Annexure – 11.</u>
xiv	The Regional Officer of the ministry located at Bhopal (currently Raipur) shall monitor compliance of the stipulated conditions. The project authorities should extent full co-operation to the officer (s) of the Regional	Agreed and cooperation will be extended on time to time.

	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

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, Sirius, Bamboo, Peltafarm, Nilgiri, Amla, Saptaparni, Kathal, kassod tree, Arjuna & Kachnar 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	
Total		52104	89.13	44339	17.7	

Note : Gap filling of plants is a continuous process







Annexure-2

**Ground Water Level Monitoring Report in and around the Coal Mine Area
(From October 2022 to December 2022)**

Sr. No.	Location	Types of Structure	In Meters		
			Ground Water level (BGL) Oct 2022	Ground Water level (BGL) Nov 2022	Ground Water level (BGL) Dec 2022
1	Bankheta (Near HIL Office)	Borewell/ AWLR	6.65	10.22	11.24
2	Banjikhol (Near Office)	Borewell/ AWLR	25.71	25.62	25.82
3	Milupara (Near Office)	Borewell/ AWLR	8.48	9.50	10.38
4	HIL Staff Quarter	Borewell/ AWLR	4.07	4.58	5.40
5	Milupara Village (PHC-HIL)	Dugwell	2.08	3.32	4.68
6	Sakta Village (Near Primary School)	Dugwell	2.17	2.70	3.05
7	Sidarpara Village (Near Primary School)	Dugwell	4.21	7.89	8.90
8	Beljor Village	Dugwell	4.20	5.48	6.13



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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/22-23/04749	
	LAB REF NO	UES/22-23/W/010915	
	DATE OF SAMPLING	26/11/2022	
	DATE OF RECEIPT	28/11/2022	
	DATE OF REPORT	02/12/2022	
	DATE OF ANALYSIS	START:28/11/2022	END:02/12/2022
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.04749

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	6.87
5	Turbidity	NTU	APHA 23 nd Ed.2012,2130-B,2-13	1	5	1.31
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	146.8
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	-	-	91.1
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	88.4
10	Total Suspended Solids	mg/Lit	APHA 23 nd Ed.2012,2540- D, 2-66	-	-	2.4
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 23 nd Ed.2012,2340-C, 2-44,45	200	600	60.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Ca-B, 3-67	-	-	38.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	-	-	22.0
15	Calcium (as Ca)	mg/Lit	APHA 23 nd Ed.2012,3500-Ca-B, 3-67	75	200	15.23
16	Magnesium (as Mg)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	30	100	5.34
17	Chloride (as Cl)	mg/Lit	APHA 23 nd Ed.2012,4500-Cl-B, 4-72	250	1000	12.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 23 nd Ed.2012,4500-SO ₄ -E, 4-190	200	400	15.7
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 nd Ed.2012,4500-NO ₃ -B, 4-122	45	No Relaxation	0.33
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	-	-	8.6

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



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				Acceptable Limit	Permissible limit	
22	Potassium (as K)	mg/Lit	APHA 23 nd Ed.2012,3500-K-B, 3-87	-	-	0.45
23	Boron (as B)	mg/Lit	APHA 23 nd Ed.2012,4500-B-B, 4-25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 23 nd Ed.2012,3111-B,3-18	0.3	No Relaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 23 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.08
26	Manganese (as Mn)	mg/Lit	APHA 23 nd Ed.2012,3111-B, 3-18	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 23 nd Ed.2012,3111-B, 3-18	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 23 nd Ed.2012,3500-Ni, 3-108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 23 nd Ed.2012,3111-B, 3-18	5	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 23 nd Ed.2012,3111-B, 3-18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 23 nd Ed.2012,3500-Cd, 3-105	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.



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TEST REPORT

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				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	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.


02/12/2022

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

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<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/22-23/04750	
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107.		LAB REF NO	UES/22-23/W/010916	
		DATE OF SAMPLING	26/11/2022	
		DATE OF RECEIPT	28/11/2022	
		DATE OF REPORT	02/12/2022	
		DATE OF ANALYSIS	START:28/11/2022	END:02/12/2022
		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.04750

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	7.18
5	Turbidity	NTU	APHA 23 nd Ed.2012,2130-B,2-13	1	5	1.3
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	174.9
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	-	-	107.9
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	105.6
10	Total Suspended Solids	mg/Lit	APHA 23 nd Ed.2012,2540- D, 2- 66	-	-	2.3
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 nd Ed.2012,2340-C, 2- 44,45	200	600	78.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Ca-B, 3-67	-	-	44.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	-	-	34.0
15	Calcium (as Ca)	mg/Lit	APHA 23 nd Ed.2012,3500-Ca-B, 3-67	75	200	17.63
16	Magnesium (as Mg)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	30	100	8.26
17	Chloride (as Cl)	mg/Lit	APHA 23 nd Ed.2012,4500-Cl-B, 4-72	250	1000	19.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 23 nd Ed.2012,4500-SO ₄ -E, 4-190	200	400	25.8



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Report No.04750

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 nd Ed.2012,4500-NO ₃ -B, 4-122	45	No Relaxation	2.1
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	-	-	8.4
22	Potassium (as K)	mg/Lit	APHA 23 nd Ed.2012,3500-K-B, 3-87	-	-	0.28
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	N.D.
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.

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



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Report No.04750

TEST REPORT

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

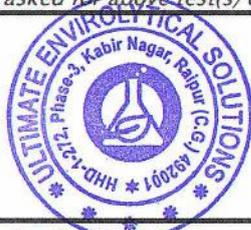
REMARKS: RESULTS ARE AS ABOVE

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.

[Signature]
02/12/2022

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[Signature]

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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/22-23/04788	
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/22-23/W/010991	
		DATE OF SAMPLING	27/11/2022	
		DATE OF RECEIPT	28/11/2022	
		DATE OF REPORT	02/12/2022	
		DATE OF ANALYSIS	START: 28/11/2022	END: 02/12/2022
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. 04788

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	7.19
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	2.75
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	269.4
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	-	-	169.5
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	163.0
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2-66	-	-	6.5
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 22 nd Ed.2012,2340-C, 2-44,45	200	600	64.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	-	-	34.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	-	-	30.0
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	75	200	13.63
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	18.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ -E,4-190	200	400	15.1
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ -B, 4-122	45	No Relaxation	2.9

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REPORT NO. 04788

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
20	Phosphate (as P)	mg/Lit	APHA 22nd Ed.2012,4500-P-C, 4-153	-	-	N.D.
20	Sodium (as Na)	mg/Lit	APHA 22ndEd.2012,3500-Na-B, 3-97	-	-	7.8
21	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87	-	-	0.29
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	0.20
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						
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.

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



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REPORT NO. 04788

TEST REPORT

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

RBell
02/12/2022

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PandA

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		REPORT NO	UES/TR/22-23/04787		
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/22-23/W/010990		
		DATE OF SAMPLING	27/11/2022		
		DATE OF RECEIPT	28/11/2022		
		DATE OF REPORT	02/12/2022		
		DATE OF ANALYSIS	START: 28/11/2022	END: 02/12/2022	
		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. 04787

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	6.97
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	-	-	215.8
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	-	-	138.3
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	130.4
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2-66	-	-	7.9
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 22 nd Ed.2012,2340-C, 2-44,45	200	600	86.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	-	-	56.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	-	-	30.0
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	75	200	22.44
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	23.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ -E,4-190	200	400	27.6
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ -B,4-122	45	No Relaxation	0.71
20	Phosphate (as P)	mg/Lit	APHA 22 nd Ed.2012,4500-P-C, 4-153	-	-	N.D.

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

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REPORT NO. 04787

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 22ndEd.2012,3500-Na-B, 3-97	-	-	5.4
22	Potassium (as K)	mg/Lit	APHA 22nd Ed.2012,3500-K-B, 3-87	-	-	2.9
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	0.18
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. 04787

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.

RBell
02/12/2022

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PandA

AUTHORIZED SIGNATORY

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



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Name & Address Of The Customer		REPORT NO	UES/TR/22-23/04789	
TO,		LAB REF NO	UES/22-23/W/010992	
HINDALCO INDUSTRIES LIMITED,		DATE OF SAMPLING	27/11/2022	
GARE PALMA - IV/5, MILUPARA		DATE OF RECEIPT	28/11/2022	
U/G COAL MINE, VILLAGE - MILUPARA,		DATE OF REPORT	02/12/2022	
BLOCK-TAMNAR,		DATE OF ANALYSIS	START: 28/11/2022	END: 02/12/2022
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. 04789

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	7.49
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	1.76
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	234.8
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	-	-	149.7
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	141.6
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	44.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2-44,45	200	600	102.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B,3-67	-	-	48.0
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	19.24
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	37.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ -E, 4-190	200	400	22.8
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ -B,4-122	45	No Relaxation	2.4
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-	-	-	5.9



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REPORT NO. 04789

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
			B, 3-97			
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87	-	-	1.41
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	0.13
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	0.3	0.19
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.



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REPORT NO. 04789

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.

R Bell
02/12/2022

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



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Name & Address Of The Customer		REPORT NO	UES/TR/22-23/04790	
TO,		LAB REF NO	UES/22-23/W/010993	
HINDALCO INDUSTRIES LIMITED,		DATE OF SAMPLING	27/11/2022	
GARE PALMA - IV/5, MILUPARA		DATE OF RECEIPT	28/11/2022	
U/G COAL MINE, VILLAGE - MILUPARA,		DATE OF REPORT	02/12/2022	
BLOCK-TAMNAR,		DATE OF ANALYSIS	START: 28/11/2022	END: 02/12/2022
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. 04790

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	7.42
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	1.17
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	304.6
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	-	-	188.7
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	184.4
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	56.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2-44,45	200	600	90.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B,3-67	-	-	54.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B,3-84	-	-	36.0
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B,3-67	75	200	21.64
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	30	100	8.75
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 -E, 4-190	200	400	27.6
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ -B,4-122	45	No Relaxation	4.1
20	Phosphate (as P)	mg/Lit	APHA 22 nd Ed.2012,4500-P-C, 4-153	-	-	N.D.

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REPORT NO. 04790

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
21	Sodium (as Na)	mg/Lit	APHA 22 nd Ed.2012,3500-Na-B, 3-97	-	-	18.7
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87	-	-	1.41
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	0.15
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	0.3	0.09
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.



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REPORT NO. 04790

TEST REPORT

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

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



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Name & Address Of The Customer		REPORT NO	UES/TR/22-23/04751	
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE,VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107.		LAB REF NO	UES/22-23/W/010917	
		DATE OF SAMPLING	26/11/2022	
		DATE OF RECEIPT	28/11/2022	
		DATE OF REPORT	02/12/2022	
		DATE OF ANALYSIS	START:28/11/2022	END:02/12/2022
		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.04751

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.2012,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	7.34
5	Turbidity	NTU	APHA 23 rd Ed.2012,2130-B,2-13	1	5	0.66
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	271.1
7	Residual Chlorine	mg/Lit	APHA 23 rd Ed.2012,4500-Cl-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 23 rd Ed.2012,2540- B, 2- 64	-	-	165.1
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	162.4
10	Total Suspended Solids	mg/Lit	APHA 23 rd Ed.2012,2540- D, 2- 66	-	-	2.7
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.2012,2340-C, 2- 44,45	200	600	112.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed.2012,3500-Ca-B, 3-67	-	-	76.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed.2012,3500-Mg-B, 3-84	-	-	36.0
15	Calcium (as Ca)	mg/Lit	APHA 23 rd Ed.2012,3500-Ca-B, 3-67	75	200	30.46
16	Magnesium (as Mg)	mg/Lit	APHA 23 rd Ed.2012,3500-Mg-B, 3-84	30	100	8.75
17	Chloride (as Cl)	mg/Lit	APHA 23 rd Ed.2012,4500-Cl-B, 4-72	250	1000	18.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 23 rd Ed.2012,4500-SO ₄ -E, 4-190	200	400	20.7

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Report No.04751

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 nd Ed.2012,4500-NO ₃ -B, 4-122	45	No Relaxation	0.69
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	-	-	12.9
22	Potassium (as K)	mg/Lit	APHA 23 nd Ed.2012,3500-K-B, 3-87	-	-	0.71
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	0.13
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.

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TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
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	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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Name & Address Of The Customer		REPORT NO	UES/TR/22-23/04752	
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE,VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107.		LAB REF NO	UES/22-23/W/010918	
		DATE OF SAMPLING	26/11/2022	
		DATE OF RECEIPT	28/11/2022	
		DATE OF REPORT	02/12/2022	
		DATE OF ANALYSIS	START:28/11/2022	END:02/12/2022
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.04752

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	7.32
5	Turbidity	NTU	APHA 23 nd Ed.2012,2130-B,2-13	1	5	0.57
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	276.3
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	-	-	168.1
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	165.6
10	Total Suspended Solids	mg/Lit	APHA 23 nd Ed.2012,2540- D, 2-66	-	-	2.5
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	98.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,2340-C, 2-44,45	200	600	114.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Ca-B, 3-67	-	-	72.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	-	-	42.0
15	Calcium (as Ca)	mg/Lit	APHA 23 nd Ed.2012,3500-Ca-B, 3-67	75	200	28.86
16	Magnesium (as Mg)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	30	100	10.21
17	Chloride (as Cl)	mg/Lit	APHA 23 nd Ed.2012,4500-Cl-B, 4-72	250	1000	21.9

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Report No.04752

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
18	Sulphate (as SO ₄)	mg/Lit	APHA 23 nd Ed.2012,4500-SO ₄ -E, 4-190	200	400	22.7
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 nd Ed.2012,4500-NO ₃ -B, 4-122	45	No Relaxation	1.23
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	-	-	7.4
22	Potassium (as K)	mg/Lit	APHA 23 nd Ed.2012,3500-K-B, 3-87	-	-	0.58
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	0.13
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.
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TEST REPORT

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

Bella
02/12/2022

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Panda

AUTHORIZED SIGNATORY

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

**Ground Water Level Monitoring Report in and around the Coal Mine Area
(From Jan 2023 to Mar 2023)**

Sr. No.	Location	Types of Structure	In Meters		
			Ground Water level (BGL) Jan 2023	Ground Water level (BGL) Feb 2023	Ground Water level (BGL) Mar 2023
1	Bankheta (Near HIL Office)	Borewell/ AWLR	11.90	12.31	12.63
2	Banjikhol (Near Office)	Borewell/ AWLR	26.04	26.25	26.59
3	Milupara (Near Office)	Borewell/ AWLR	11.21	11.98	12.57
4	HIL Staff Quarter	Borewell/ AWLR	6.83	7.73	8.21
5	Milupara Village (PHC-HIL)	Dugwell	5.25	5.64	5.92
6	Sakta Village (Near Primary School)	Dugwell	3.24	3.40	3.40
7	Sidarpara Village (Near Primary School)	Dugwell	8.90	9.02	8.96
8	Beljor Village	Dugwell	6.47	6.69	6.86

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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/22-23/06895	
		LAB REF NO	UES/22-23/W/014611	
		DATE OF SAMPLING	23/01/2023	
		DATE OF RECEIPT	25/01/2023	
		DATE OF REPORT	29/01/2023	
		DATE OF ANALYSIS	START: 25/01/2023	END: 29/01/2023
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.06895

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.2012,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	6.72
5	Turbidity	NTU	APHA 23 rd Ed.2012,2130-B,2-13	1	5	0.96
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	136.6
7	Residual Chlorine	mg/Lit	APHA 23 rd Ed.2012,4500-Cl-G, 4-69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 23 rd Ed.2012,2540- B, 2-64	-	-	84.0
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	82.0
10	Total Suspended Solids	mg/Lit	APHA 23 rd Ed.2012,2540- D, 2-66	-	-	2.0
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.2012,2340-C, 2-44,45	200	600	56.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed.2012,3500-Ca-B, 3-67	-	-	36.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed.2012,3500-Mg-B, 3-84	-	-	20.0
15	Calcium (as Ca)	mg/Lit	APHA 23 rd Ed.2012,3500-Ca-B, 3-67	75	200	14.42
16	Magnesium (as Mg)	mg/Lit	APHA 23 rd Ed.2012,3500-Mg-B, 3-84	30	100	4.86
17	Chloride (as Cl)	mg/Lit	APHA 23 rd Ed.2012,4500-Cl-B, 4-72	250	1000	10.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 23 rd Ed.2012,4500-SO ₄ -E, 4-190	200	400	9.4
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 rd Ed.2012,4500-NO ₃ -B, 4-122	45	No Relaxation	0.30
20	Phosphate (as P)	mg/Lit	APHA 23 rd Ed.2012,4500-P-C, 4-153	-	-	N.D.
21	Sodium (as Na)	mg/Lit	APHA 23 rd Ed.2012,3500-Na-B, 3-97	-	-	8.2

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Report No.06895

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	-	-	0.40
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	0.06
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.

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Report No.06895

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER 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

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- > 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-----

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

<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/22-23/06896
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107.		LAB REF NO	UES/22-23/W/014612
		DATE OF SAMPLING	23/01/2023
		DATE OF RECEIPT	25/01/2023
		DATE OF REPORT	29/01/2023
		DATE OF ANALYSIS	START:25/01/2023 END:29/01/2023
		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.06896

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	7.06
5	Turbidity	NTU	APHA 23 nd Ed.2012,2130-B,2-13	1	5	0.98
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	170
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	-	-	103.8
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	102.0
10	Total Suspended Solids	mg/Lit	APHA 23 nd Ed.2012,2540- D, 2-66	-	-	1.8
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 23 nd Ed.2012,2340-C, 2-44,45	200	600	70.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Ca-B, 3-67	-	-	48.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	-	-	22.0
15	Calcium (as Ca)	mg/Lit	APHA 23 nd Ed.2012,3500-Ca-B, 3-67	75	200	19.23
16	Magnesium (as Mg)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	30	100	5.34
17	Chloride (as Cl)	mg/Lit	APHA 23 nd Ed.2012,4500-Cl-B, 4-72	250	1000	12.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 23 nd Ed.2012,4500-SO ₄ -E, 4-190	200	400	11.6

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

Report No.06896

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.2012,4500-NO ₃ -B, 4-122	45	No Relaxation	1.8
20	Phosphate (as P)	mg/Lit	APHA 23 rd Ed.2012,4500-P-C, 4-153	-	-	N.D.
21	Sodium (as Na)	mg/Lit	APHA 23 rd Ed.2012,3500-Na-B, 3-97	-	-	7.8
22	Potassium (as K)	mg/Lit	APHA 23 rd Ed.2012,3500-K-B, 3-87	-	-	0.24
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	N.D.
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.

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

Report No.06896

TEST REPORT

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

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

B. Singh
29/10/2023

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

P. Singh

AUTHORIZED SIGNATORY

-----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/22-23/06923	
TO,		LAB REF NO	UES/22-23/W/014641	
HINDALCO INDUSTRIES LIMITED,		DATE OF SAMPLING	24/01/2023	
GARE PALMA - IV/5, MILUPARA		DATE OF RECEIPT	25/01/2023	
U/G COAL MINE, VILLAGE - MILUPARA,		DATE OF REPORT	29/01/2023	
BLOCK-TAMNAR,		DATE OF ANALYSIS	START: 25/01/2023	END: 29/01/2023
DISTT. - RAIGARH (C.G.) 496107				
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.06923

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	7.09
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	2.67
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	250
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	-	-	156.1
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	150.0
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2-66	-	-	6.1
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	68.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2-44,45	200	600	90.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	-	-	56.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	-	-	34.0
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	75	200	22.44
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	30	100	8.26
17	Chloride (as Cl)	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-B, 4-72	250	1000	15.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ -E,4-190	200	400	16.4
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ -B, 4-122	45	No Relaxation	2.7
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,	-	-	7.4

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

REPORT NO. 06923

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 22 nd Ed.2012,3500-K-B, 3-87	-	-	0.25
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	0.16
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						
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.

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REPORT NO. 06923

TEST REPORT

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

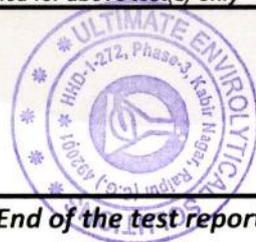
REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

- The report for publication, arbitration or as legal dispute is forbidden.
- Test sample will be retained for 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

Review
25/01/2023

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

PandA

AUTHORIZED SIGNATORY

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

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

Name & Address Of The Customer		REPORT NO	UES/TR/22-23/06922
TO,		LAB REF NO	UES/22-23/W/014640
HINDALCO INDUSTRIES LIMITED,		DATE OF SAMPLING	24/01/2023
GARE PALMA - IV/5, MILUPARA		DATE OF RECEIPT	25/01/2023
U/G COAL MINE, VILLAGE - MILUPARA,		DATE OF REPORT	29/01/2023
BLOCK-TAMNAR,		DATE OF ANALYSIS	START: 25/01/2023 END: 29/01/2023
DISTT. - RAIGARH (C.G.) 496107			
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	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. 06922

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	6.88
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	0.66
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	206.6
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	-	-	131.2
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	124
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2-66	-	-	7.2
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	46.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2-44,45	200	600	84.0
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	-	-	24.0
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	75	200	24.04
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	30	100	5.83
17	Chloride (as Cl)	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-B, 4-72	250	1000	12.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ -E,4-190	200	400	11.4
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ -B,4-122	45	No Relaxation	0.64
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	-	-	5.0
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-	-	-	2.6

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REPORT NO. 06922

TEST REPORT						
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	ACCEPTABLE LIMIT FOR DRINKING WATER (IS 10500:2012)		RESULT
				Acceptable Limit	Permissible limit	
			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	1.5	0.15
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 22 nd Ed.2012,3500-Ni, 3-108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	5	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 22 nd Ed.2012,3500-Cd, 3-105	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.
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.

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

REPORT NO. 06922

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.

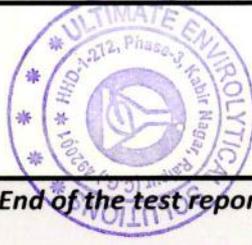
REMARKS: RESULTS ARE AS ABOVE

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.

Babu
29/04/2023

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

[Signature]

AUTHORIZED SIGNATORY

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

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

Name & Address Of The Customer		REPORT NO	UES/TR/22-23/06924
TO,		LAB REF NO	UES/22-23/W/014642
HINDALCO INDUSTRIES LIMITED,		DATE OF SAMPLING	24/01/2023
GARE PALMA - IV/5, MILUPARA		DATE OF RECEIPT	25/01/2023
U/G COAL MINE, VILLAGE - MILUPARA,		DATE OF REPORT	29/01/2023
BLOCK-TAMNAR,		DATE OF ANALYSIS	START:25/01/2023 END:29/01/2023
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.06924

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	7.36
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	1.58
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	216.6
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	-	-	137.4
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	130
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2-66	-	-	7.4
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 22 nd Ed.2012,2340-C, 2-44,45	200	600	90.0
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	-	-	38.0
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	9.23
17	Chloride (as Cl)	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-B, 4-72	250	1000	13.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ -E, 4-190	200	400	12.6
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ -B,4-122	45	No Relaxation	2.0
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	-	-	5.6
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87	-	-	1.34

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

REPORT NO. 06924

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	0.12
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	0.3	0.16
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. 06924

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]
29/01/2023

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

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Name & Address Of The Customer		REPORT NO	UES/TR/22-23/06925	
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/22-23/W/014643	
		DATE OF SAMPLING	24/01/2023	
		DATE OF RECEIPT	25/01/2023	
		DATE OF REPORT	29/01/2023	
		DATE OF ANALYSIS	START: 25/01/2023	END: 29/01/2023
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. 06925

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	7.32
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	1.08
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	293.3
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	-	-	180.0
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	176
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2-66	-	-	4.0
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	118.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B,3-67	-	-	68.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B,3-84	-	-	50.0
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B,3-67	75	200	27.25
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B,3-84	30	100	12.15
17	Chloride (as Cl)	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-B, 4-72	250	1000	17.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ -E, 4-190	200	400	18.8
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ -B,4-122	45	NoRelaxation	3.7
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	-	-	18.2
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87	-	-	1.36

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REPORT NO. 06925

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	0.13
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. 06925

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

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

Bull
29/01/2023

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

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<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/22-23/06897
TO,		LAB REF NO	UES/22-23/W/014613
HINDALCO INDUSTRIES LIMITED,		DATE OF SAMPLING	23/01/2023
GARE PALMA - IV/4, COAL MINE,VILLAGE -		DATE OF RECEIPT	25/01/2023
BANKHETA, POST -MILUPARA,		DATE OF REPORT	29/01/2023
DISTT. - RAIGARH (C.G.) 496107.		DATE OF ANALYSIS	START:25/01/2023 END:29/01/2023
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.06897

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.2012,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	7.27
5	Turbidity	NTU	APHA 23 rd Ed.2012,2130-B,2-13	1	5	0.60
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	260
7	Residual Chlorine	mg/Lit	APHA 23 rd Ed.2012,4500-Cl-G, 4-69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 23 rd Ed.2012,2540- B, 2-64	-	-	158.2
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	156
10	Total Suspended Solids	mg/Lit	APHA 23 rd 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	90.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed.2012,2340-C, 2-44,45	200	600	110.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed.2012,3500-Ca-B, 3-67	-	-	74.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 23 rd Ed.2012,3500-Mg-B, 3-84	-	-	36.0
15	Calcium (as Ca)	mg/Lit	APHA 23 rd Ed.2012,3500-Ca-B, 3-67	75	200	29.65
16	Magnesium (as Mg)	mg/Lit	APHA 23 rd Ed.2012,3500-Mg-B, 3-84	30	100	8.74
17	Chloride (as Cl)	mg/Lit	APHA 23 rd Ed.2012,4500-Cl-B, 4-72	250	1000	15.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 23 rd Ed.2012,4500-SO ₄ -E, 4-190	200	400	16.6
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 rd Ed.2012,4500-NO ₃ -B, 4-122	45	No Relaxation	0.62

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Report No.06897

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
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	-	-	12.0
22	Potassium (as K)	mg/Lit	APHA 23 nd Ed.2012,3500-K-B, 3-87	-	-	0.66
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	0.11
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.

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Report No.06897

TEST REPORT

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

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

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<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/22-23/06898
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE,VILLAGE - BANKHETA, POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107.		LAB REF NO	UES/22-23/W/014614
		DATE OF SAMPLING	23/01/2023
		DATE OF RECEIPT	25/01/2023
		DATE OF REPORT	29/01/2023
		DATE OF ANALYSIS	START:25/01/2023 END:29/01/2023
		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	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.06898

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	7.26
5	Turbidity	NTU	APHA 23 nd Ed.2012,2130-B,2-13	1	5	0.52
6	Electrical Conductivity	μS/cm	IS 3025(part-14):1984, RA 2013	-	-	263.3
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	-	-	160.0
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	158.0
10	Total Suspended Solids	mg/Lit	APHA 23 nd Ed.2012,2540- D, 2-66	-	-	2.0
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	80.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,2340-C, 2-44,45	200	600	98.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Ca-B, 3-67	-	-	68.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	-	-	30.0
15	Calcium (as Ca)	mg/Lit	APHA 23 nd Ed.2012,3500-Ca-B, 3-67	75	200	27.25
16	Magnesium (as Mg)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	30	100	7.29
17	Chloride (as Cl)	mg/Lit	APHA 23 nd Ed.2012,4500-Cl-B, 4-72	250	1000	15.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 23 nd Ed.2012,4500-SO ₄ -E, 4-190	200	400	16.8
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 nd Ed.2012,4500-NO ₃ -B, 4-122	45	No Relaxation	1.20
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,	-	-	7.1

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

Report No. 06898

TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
			3-97			
22	Potassium (as K)	mg/Lit	APHA 23 nd Ed.2012,3500-K-B, 3-87	-	-	0.52
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	0.11
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.

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

Report No.06898

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.

Babu
29/10/2023

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Ranjan

AUTHORIZED SIGNATORY

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

Annexure-3



HIL/GP-IV/5/EC/GW/Q3/2022-23/47L

03rd January, 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. 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 Oct'2022 to Dec'2022) & GW Quality for the month of November 2022 –
Post Monsoon Season of Gare Palma IV/5 Coal Mines, Hindalco Industries Limited, Village – Milupara,
Tehsil – Tamnar, District – Raigarh, Chhattisgarh.

Thanking you,

Yours faithfully,

47L
03/01/23

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

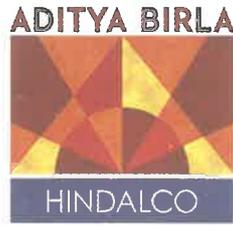


Encl: As above

- 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



o/e

Letter No.: HIL/EC/GP-IV/5 –Q4/2022-23/ 18

05TH April, 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 Jan'2023 to Mar'2023) & GW Quality for the month of January 2022 – **Winter Season** of Gare Palma IV/5 Coal Mines, Hindalco Industries Limited, Village – Milupara, Tehsil – Tamnar, District – Raigarh, Chhattisgarh.

Thanking you,

Yours faithfully,


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



Encl: As above

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

Hindalco Industries Limited

Gare Palma Mines (IV/4 & IV/5), Vill & Po: Milupara , Tehsil: Tamnar Dist: Raigarh- 496107 , Chhattisgarh
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T: + 912266917000 | Fax: + 912266917001
Corporate ID No: L27020MH1958PLC011238

Annexure-4



Letter No.: HIL/EC/GP- IV/5/2022-23/460

31st December, 2022

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: Environment Clearance Compliance of specific Condition no. (ix) for 1 MTPA Under Ground Captive Coal Mine, Gare Palma IV/5 Coal Mines of Hindalco Industries Limited, Village – Milupara, Tehsil – Tamnar, District – Raigarh, Chhattisgarh.

**Ref. No.: 1. Environment Clearance No. J-11015/8/98- IA-II.(M), dated 31th August, 2000
2. Environment Clearance No. J-11015/8/1998- IA-II.(M), dated 16th April, 2015**

Respected Sir,

With reference to the above subject, we would like to inform you that Report on Assessment of Land Use/Land Cover using High Resolution Satellite Imagery (on a scale of 1:5000) of the core zone & buffer zone has been carried out by IndiGEO Consultant, Bangalore in the month of December,2022.

The detailed report is attached in Annexure 1 for your future reference please.

Yours faithfully,
For **Hindalco Industries Limited**,

Govind Kumar
(Mine Agent- GP IV/5 CM)

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
T: + 912266917000 | Fax: + 912266917001
Corporate ID No: L27020MH1958PLC011238

Annexure-5



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 1986

<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/22-23/03912
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/22-23/AAQM/09578-09586
		DATE OF SAMPLING	03/10/2022 to 29/10/2022
		DATE OF RECEIPT	04/10/2022 to 31/10/2022
		DATE OF REPORT	02/11/2022
		DATE OF ANALYSIS	START: 04/10/2022 END: 01/11/2022
		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
03.10.2022	47	23	09	22	0.5	N.D.
07.10.2022	45	24	11	24	0.3	N.D.
10.10.2022	50	32	07	27	0.5	N.D.
14.10.2022	46	26	12	26	0.9	N.D.
17.10.2022	49	22	11	25	0.5	N.D.
21.10.2022	51	25	09	21	0.7	N.D.
26.10.2022	56	29	14	29	0.4	N.D.
29.10.2022	52	27	12	22	0.6	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
02/11/22

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Rand
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 : 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/22-23/04768
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/22-23/AAQM/010934-010941
		DATE OF SAMPLING	04/11/2022 to 28/11/2022
		DATE OF RECEIPT	05/11/2022 to 29/11/2022
		DATE OF REPORT	02/12/2022
		DATE OF ANALYSIS	START:05/11/2022 END:02/12/2022
		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
04.11.2022	48	24	10	26	0.6	N.D.
07.11.2022	47	26	13	25	0.5	N.D.
11.11.2022	51	32	9	28	0.7	N.D.
14.11.2022	49	28	14	27	0.9	N.D.
18.11.2022	50	23	12	28	0.6	N.D.
21.11.2022	52	25	11	23	0.8	N.D.
25.11.2022	46	28	15	29	0.5	N.D.
28.11.2022	49	29	14	24	0.8	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.

02/12/2022
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		REPORT NO	UES/TR/22-23/06127
TO,		LAB REF NO	UES/22-23/AAQM/013022-013029
HINDALCO INDUSTRIES LIMITED, GARE		DATE OF SAMPLING	02/12/2022 to 26/12/2022
PALMA - IV/5, MILUPARA U/G COAL		DATE OF RECEIPT	03/12/2022 to 27/12/2022
MINE,VILLAGE - MILUPARA,		DATE OF REPORT	31/12/2022
BLOCK-TAMNAR,		DATE OF ANALYSIS	START: 03/12/2022 END: 31/12/2022
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	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
02.12.2022	50	26	11	27	0.8	N.D.
05.12.2022	48	25	14	26	0.7	N.D.
09.12.2022	50	30	10	25	0.6	N.D.
12.12.2022	47	27	15	28	1.0	N.D.
16.12.2022	51	24	13	29	0.5	N.D.
19.12.2022	50	27	10	25	0.9	N.D.
23.12.2022	47	26	12	26	0.4	N.D.
26.12.2022	48	28	13	23	0.6	N.D.

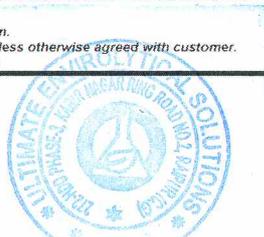
Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

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.

R. Belle
31/12/22

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Panda

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		REPORT NO	UES/TR/22-23/06822
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/22-23/AAQM/014378-014385
		DATE OF SAMPLING	02/01/2023 to 27/01/2023
		DATE OF RECEIPT	03/01/2023 to 28/01/2023
		DATE OF REPORT	31/01/2023
		DATE OF ANALYSIS	START:03/01/2023 END:31/01/2023
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
02.01.2023	49	25	12	26	0.7	N.D.
06.01.2023	47	24	13	25	0.6	N.D.
09.01.2023	51	29	11	23	0.5	N.D.
13.01.2023	46	28	14	27	0.9	N.D.
16.01.2023	52	23	12	28	0.6	N.D.
20.01.2023	48	26	11	24	0.8	N.D.
23.01.2023	46	27	10	25	0.3	N.D.
27.01.2023	47	24	14	22	0.5	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.

 31/01/23 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/22-23/08133
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/22-23/AAQM/016264-016271
		DATE OF SAMPLING	03/02/2023 to 27/02/2023
		DATE OF RECEIPT	04/02/2023 to 28/02/2023
		DATE OF REPORT	03/03/2023
		DATE OF ANALYSIS	START:04/02/2023 END:02/03/2023
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
03.02.2023	46	25	12	26	0.9	N.D.
06.02.2023	49	24	15	25	0.8	N.D.
10.02.2023	48	29	11	24	0.7	N.D.
13.02.2023	50	28	14	27	0.9	N.D.
17.02.2023	47	25	12	28	0.4	N.D.
20.02.2023	51	26	11	24	0.6	N.D.
24.02.2023	46	27	10	27	0.5	N.D.
27.02.2023	47	30	12	25	0.4	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.

 03/03/2023 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/22-23/09160	
LAB REF NO	UES/22-23/AAQM/017550-017557	
DATE OF SAMPLING	03/03/2023 to 27/03/2023	
DATE OF RECEIPT	04/03/2023 to 28/03/2023	
DATE OF REPORT	30/03/2023	
DATE OF ANALYSIS	START: 04/03/2023	END: 30/03/2023

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
03.03.2023	47	26	13	27	0.8	N.D.
06.03.2023	50	25	16	26	0.7	N.D.
10.03.2023	49	28	12	25	0.5	N.D.
13.03.2023	48	30	12	24	0.8	N.D.
17.03.2023	46	24	13	27	0.6	N.D.
20.03.2023	50	25	10	25	0.4	N.D.
24.03.2023	47	26	11	28	0.6	N.D.
27.03.2023	46	29	14	26	0.5	N.D.

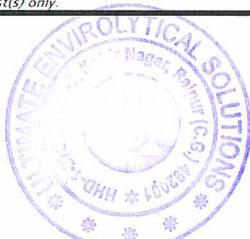
Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

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.

P. Chouhan
30/03/2023

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

R. B. B.
30/03/23

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		REPORT NO	UES/TR/22-23/03913
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/22-23/AAQM/09587-09594
		DATE OF SAMPLING	03/10/2022 to 29/10/2022
		DATE OF RECEIPT	04/10/2022 to 31/10/2022
		DATE OF REPORT	02/11/2022
		DATE OF ANALYSIS	START:04/10/2022 END:01/11/2022
		SAMPLE DETAILS	
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED: 07.09.2022
SAMPLING LOCATION	HILL 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
03.10.2022	48	22	18	27	0.6	N.D.
07.10.2022	55	26	11	21	0.7	N.D.
10.10.2022	43	21	09	29	0.4	N.D.
14.10.2022	47	26	12	24	0.5	N.D.
17.10.2022	51	29	15	23	0.6	N.D.
21.10.2022	46	21	14	27	0.8	N.D.
26.10.2022	49	25	13	22	0.5	N.D.
29.10.2022	42	24	11	26	0.6	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.

 02/11/22 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/22-23/04769
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/22-23/AAQM/010942-010949
		DATE OF SAMPLING	04/11/2022 to 28/11/2022
		DATE OF RECEIPT	05/11/2022 to 29/11/2022
		DATE OF REPORT	02/12/2022
		DATE OF ANALYSIS	START:05/11/2022 END:02/12/2022
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
04.11.2022	50	24	20	27	0.7	N.D.
07.11.2022	46	27	13	21	0.9	N.D.
11.11.2022	45	23	10	26	0.6	N.D.
14.11.2022	48	28	14	22	0.8	N.D.
18.11.2022	51	29	16	25	0.7	N.D.
21.11.2022	49	22	15	24	0.9	N.D.
25.11.2022	50	26	14	22	0.8	N.D.
28.11.2022	44	25	13	25	0.6	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.

 02/12/2022 REVIEWED BY	 ULTIMATE ENVIROLYTICAL SOLUTIONS HDD-272, Phase-3, Kabir Nagar, Raipur (C.G.) 492099	For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY
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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/22-23/06128
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/22-23/AAQM/013030-013037
		DATE OF SAMPLING	02/12/2022 to 26/12/2022
		DATE OF RECEIPT	03/12/2022 to 27/12/2022
		DATE OF REPORT	31/12/2022
		DATE OF ANALYSIS	START: 03/12/2022 END: 31/12/2022
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
02.12.2022	51	26	18	26	0.6	N.D.
05.12.2022	48	28	14	23	0.8	N.D.
09.12.2022	44	25	12	24	0.7	N.D.
12.12.2022	49	24	11	21	0.5	N.D.
16.12.2022	47	27	15	24	0.6	N.D.
19.12.2022	46	23	13	22	1.0	N.D.
23.12.2022	44	24	15	20	0.4	N.D.
26.12.2022	47	22	10	24	0.5	N.D.

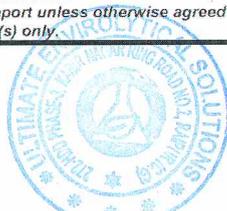
Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

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.

31/12/22

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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		REPORT NO	UES/TR/22-23/06823
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/22-23/AAQM/014386-014393
		DATE OF SAMPLING	02/01/2023 to 27/01/2023
		DATE OF RECEIPT	03/01/2023 to 28/01/2023
		DATE OF REPORT	31/01/2023
		DATE OF ANALYSIS	START:03/01/2023 END:31/01/2023
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
02.01.2023	50	25	16	24	0.5	N.D.
06.01.2023	47	27	13	22	0.6	N.D.
09.01.2023	45	23	11	23	0.5	N.D.
13.01.2023	48	22	10	20	0.4	N.D.
16.01.2023	46	26	14	25	0.7	N.D.
20.01.2023	47	25	12	23	0.8	N.D.
23.01.2023	45	26	16	21	0.5	N.D.
27.01.2023	44	28	12	22	0.6	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.

 31/01/23 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/22-23/08134	
	LAB REF NO	UES/22-23/AAQM/016272-016279	
	DATE OF SAMPLING	03/02/2023 to 27/02/2023	
	DATE OF RECEIPT	04/02/2023 to 28/02/2023	
	DATE OF REPORT	03/03/2023	
	DATE OF ANALYSIS	START:04/02/2023	END:02/03/2023

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
03.02.2023	50	25	17	25	0.5	N.D.
06.02.2023	47	27	13	22	0.7	N.D.
10.02.2023	45	24	11	23	0.6	N.D.
13.02.2023	48	25	10	20	0.4	N.D.
17.02.2023	46	28	16	25	0.5	N.D.
20.02.2023	47	22	14	23	0.9	N.D.
24.02.2023	45	23	15	21	0.8	N.D.
27.02.2023	46	24	12	26	0.4	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.

 03/03/2023 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/22-23/09161	
	LAB REF NO	UES/22-23/AAQM/017558-017565	
	DATE OF SAMPLING	03/03/2023 to 27/03/2023	
	DATE OF RECEIPT	04/03/2023 to 28/03/2023	
	DATE OF REPORT	30/03/2023	
	DATE OF ANALYSIS	START: 04/03/2023	END: 30/03/2023

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
03.03.2023	49	26	16	24	0.6	N.D.
06.03.2023	46	25	14	23	0.8	N.D.
10.03.2023	47	23	12	22	0.7	N.D.
13.03.2023	49	24	11	21	0.5	N.D.
17.03.2023	45	27	15	24	0.4	N.D.
20.03.2023	50	23	13	22	0.8	N.D.
24.03.2023	46	24	14	25	0.7	N.D.
27.03.2023	45	25	13	23	0.5	N.D.

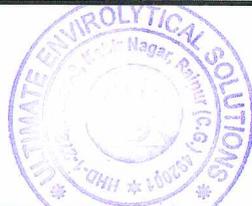
Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

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.

P. Chauhan
30/03/2023

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For ULTIMATE ENVIROLYTICAL SOLUTIONS

R. K. S.
30/03/23

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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<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/22-23/03914
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/22-23/AAQM/09595-9602
		DATE OF SAMPLING	03/10/2022 to 29/10/2022
		DATE OF RECEIPT	04/10/2022 to 31/10/2022
		DATE OF REPORT	02/11/2022
		DATE OF ANALYSIS	START:04/10/2022 END:01/11/2022
		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
03.10.2022	44	21	15	22	0.4	N.D.
07.10.2022	55	24	18	26	0.7	N.D.
10.10.2022	48	29	14	28	0.4	N.D.
14.10.2022	57	26	11	24	0.5	N.D.
17.10.2022	41	30	12	27	0.7	N.D.
21.10.2022	46	26	15	29	0.4	N.D.
26.10.2022	58	33	19	21	0.8	N.D.
29.10.2022	43	25	16	24	0.7	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.....



HDD-272, Phase III - Near JP Chowk
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Name & Address Of The Customer		REPORT NO	UES/TR/22-23/04770
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/22-23/AAQM/010950-010957
		DATE OF SAMPLING	04/11/2022 to 28/11/2022
		DATE OF RECEIPT	05/11/2022 to 29/11/2022
		DATE OF REPORT	02/12/2022
		DATE OF ANALYSIS	START: 05/11/2022 END: 02/12/2022
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
04.11.2022	46	23	17	20	0.6	N.D.
07.11.2022	47	25	19	24	0.7	N.D.
11.11.2022	50	29	15	27	0.5	N.D.
14.11.2022	48	28	13	22	0.6	N.D.
18.11.2022	44	30	14	26	0.8	N.D.
21.11.2022	48	27	16	27	0.6	N.D.
25.11.2022	49	32	19	20	0.9	N.D.
28.11.2022	45	26	18	23	0.8	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.

 02/12/2022 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/22-23/06129
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/22-23/AAQM/013038-013045
		DATE OF SAMPLING	02/12/2022 to 26/12/2022
		DATE OF RECEIPT	03/12/2022 to 27/12/2022
		DATE OF REPORT	31/12/2022
		DATE OF ANALYSIS	START: 03/12/2022 END: 31/12/2022
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
02.12.2022	48	21	19	22	0.5	N.D.
05.12.2022	46	23	17	21	0.6	N.D.
09.12.2022	50	27	16	26	0.7	N.D.
12.12.2022	49	26	14	24	0.8	N.D.
16.12.2022	46	28	15	23	0.4	N.D.
19.12.2022	44	25	13	28	0.5	N.D.
23.12.2022	45	30	18	22	0.8	N.D.
26.12.2022	47	25	16	24	0.9	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.

R. B. S.
31/12/22

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For ULTIMATE ENVIROLYTICAL SOLUTIONS

P. S. D.

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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/22-23/06824
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/22-23/AAQM/014394-014401
		DATE OF SAMPLING	02/01/2023 to 27/01/2023
		DATE OF RECEIPT	03/01/2023 to 28/01/2023
		DATE OF REPORT	31/01/2023
		DATE OF ANALYSIS	START: 03/01/2023 END: 31/01/2023
		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
02.01.2023	47	22	17	20	0.6	N.D.
06.01.2023	44	24	16	22	0.5	N.D.
09.01.2023	48	26	18	24	0.8	N.D.
13.01.2023	46	27	15	25	0.7	N.D.
16.01.2023	47	25	14	21	0.5	N.D.
20.01.2023	45	26	12	27	0.4	N.D.
23.01.2023	46	28	15	23	0.9	N.D.
27.01.2023	44	29	17	25	0.7	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.

 31/01/23 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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Name & Address Of The Customer		REPORT NO	UES/TR/22-23/08135
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/22-23/AAQM/016280-16287
		DATE OF SAMPLING	03/02/2023 to 27/02/2023
		DATE OF RECEIPT	04/02/2023 to 28/02/2023
		DATE OF REPORT	03/03/2023
		DATE OF ANALYSIS	START: 04/02/2023 END: 02/03/2023
		SAMPLE DETAILS	
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED:07.09.2022
SAMPLING LOCATION	HIL COLONY, KONDREL	SAMPLE COLLECTED BY	LABORATORY CHEMIST
DURATION OF SAMPLING	24 HOURS	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
03.02.2023	47	22	18	21	0.6	N.D.
06.02.2023	45	24	16	20	0.7	N.D.
10.02.2023	49	26	15	25	0.8	N.D.
13.02.2023	48	25	13	23	0.7	N.D.
17.02.2023	45	27	14	24	0.5	N.D.
20.02.2023	46	23	15	27	0.4	N.D.
24.02.2023	47	28	17	23	0.9	N.D.
27.02.2023	44	29	16	25	0.6	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.

P. Phouhas
03/03/2023

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For ULTIMATE ENVIROLYTICAL SOLUTIONS

Panda

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/22-23/09162	
	LAB REF NO	UES/22-23/AAQM/017566-017573	
	DATE OF SAMPLING	03/03/2023 to 27/03/2023	
	DATE OF RECEIPT	04/03/2023 to 28/03/2023	
	DATE OF REPORT	30/03/2023	
	DATE OF ANALYSIS	START: 04/03/2023	END: 30/03/2023

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
03.03.2023	48	23	17	22	0.7	N.D.
06.03.2023	46	25	15	21	0.8	N.D.
10.03.2023	47	27	14	26	0.9	N.D.
13.03.2023	46	26	16	24	0.6	N.D.
17.03.2023	47	25	13	23	0.4	N.D.
20.03.2023	45	22	16	26	0.5	N.D.
24.03.2023	44	27	15	24	0.8	N.D.
27.03.2023	46	28	17	23	0.5	N.D.

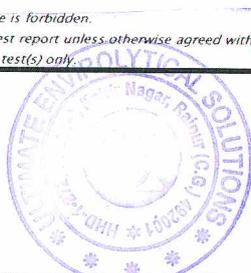
Remarks: * Duration of sampling for CO - 1 Hour, N.D. - Not Detected

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.

P. Bhouhan
30/03/2023

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R. Belle
30/03/23

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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<i>Name & Address Of The Customer</i>		REPORT NO	UES/TR/22-23/03915
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/22-23/AAQM/09603-09610
		DATE OF SAMPLING	03/10/2022 to 29/10/2022
		DATE OF RECEIPT	04/10/2022 to 31/10/2022
		DATE OF REPORT	02/11/2022
		DATE OF ANALYSIS	START: 04/10/2022 END: 01/11/2022
		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
03.10.2022	55	25	11	26	0.7	N.D.
07.10.2022	59	25	10	23	0.5	N.D.
10.10.2022	54	27	16	23	0.7	N.D.
14.10.2022	58	29	18	24	0.5	N.D.
17.10.2022	61	33	15	22	0.4	N.D.
21.10.2022	60	26	18	26	0.5	N.D.
26.10.2022	64	32	19	29	0.9	N.D.
29.10.2022	59	27	17	28	0.7	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.

[Signature]
02/11/22

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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/22-23/04771
TO,		LAB REF NO	UES/22-23/AAQM/010958-010965
HINDALCO INDUSTRIES LIMITED, GARE		DATE OF SAMPLING	04/11/2022 to 28/11/2022
PALMA - IV/5, MILUPARA U/G COAL		DATE OF RECEIPT	05/11/2022 to 29/11/2022
MINE,VILLAGE - MILUPARA,		DATE OF REPORT	02/12/2022
BLOCK-TAMNAR,		DATE OF ANALYSIS	START: 05/11/2022 END: 02/12/2022
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	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
04.11.2022	47	26	13	26	0.8	N.D.
07.11.2022	48	25	11	24	0.7	N.D.
11.11.2022	50	28	17	25	0.6	N.D.
14.11.2022	49	29	19	28	0.5	N.D.
18.11.2022	50	30	16	25	0.6	N.D.
21.11.2022	51	27	18	27	0.7	N.D.
25.11.2022	53	33	19	28	0.9	N.D.
28.11.2022	52	28	16	29	0.8	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.

Bella
02/12/2022
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Name & Address Of The Customer		REPORT NO	UES/TR/22-23/06130
TO,		LAB REF NO	UES/22-23/AAQM/013046-013053
HINDALCO INDUSTRIES LIMITED, GARE		DATE OF SAMPLING	02/12/2022 to 26/12/2022
PALMA - IV/5, MILUPARA U/G COAL		DATE OF RECEIPT	03/12/2022 to 27/12/2022
MINE,VILLAGE - MILUPARA,		DATE OF REPORT	31/12/2022
BLOCK-TAMNAR,		DATE OF ANALYSIS	START: 03/12/2022 END: 31/12/2022
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	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
02.12.2022	49	25	15	28	0.6	N.D.
05.12.2022	47	26	12	22	0.5	N.D.
09.12.2022	51	24	16	24	0.8	N.D.
12.12.2022	48	28	18	26	0.4	N.D.
16.12.2022	46	29	19	23	0.7	N.D.
19.12.2022	47	26	13	25	0.9	N.D.
23.12.2022	50	30	14	27	0.6	N.D.
26.12.2022	51	29	17	22	0.5	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.

 31/12/22 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/22-23/06825
TO,		LAB REF NO	UES/22-23/AAQM/014402-014409
HINDALCO INDUSTRIES LIMITED, GARE		DATE OF SAMPLING	02/01/2023 to 27/01/2023
PALMA - IV/5, MILUPARA U/G COAL		DATE OF RECEIPT	03/01/2023 to 28/01/2023
MINE,VILLAGE - MILUPARA,		DATE OF REPORT	31/01/2023
BLOCK-TAMNAR,		DATE OF ANALYSIS	START:03/01/2023 END:31/01/2023
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	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
02.01.2023	50	24	16	27	0.7	N.D.
06.01.2023	48	25	14	24	0.6	N.D.
09.01.2023	49	23	15	23	0.9	N.D.
13.01.2023	46	27	17	25	0.5	N.D.
16.01.2023	47	28	18	22	0.6	N.D.
20.01.2023	50	27	12	26	0.8	N.D.
23.01.2023	48	29	13	24	0.4	N.D.
27.01.2023	49	28	15	21	0.6	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.

 31/01/23 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/22-23/08136
TO,		LAB REF NO	UES/22-23/AAQM/016288-016295
HINDALCO INDUSTRIES LIMITED, GARE		DATE OF SAMPLING	03/02/2023 to 27/02/2023
PALMA - IV/5, MILUPARA U/G COAL		DATE OF RECEIPT	04/02/2023 to 28/02/2023
MINE,VILLAGE - MILUPARA,		DATE OF REPORT	03/03/2023
BLOCK-TAMNAR,		DATE OF ANALYSIS	START:04/02/2023 END:02/03/2023
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	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
03.02.2023	48	24	16	27	0.5	N.D.
06.02.2023	46	25	13	23	0.4	N.D.
10.02.2023	50	23	15	25	0.7	N.D.
13.02.2023	47	27	17	24	0.5	N.D.
17.02.2023	45	28	18	22	0.6	N.D.
20.02.2023	46	27	14	26	0.8	N.D.
24.02.2023	51	29	15	28	0.9	N.D.
27.02.2023	50	30	16	23	0.4	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.

P. Phouhas
03/03/2023

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For ULTIMATE ENVIROLYTICAL SOLUTIONS

Panda

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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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/22-23/09163	
	LAB REF NO	UES/22-23/AAQM/017574-017581	
	DATE OF SAMPLING	03/03/2023 to 27/03/2023	
	DATE OF RECEIPT	04/03/2023 to 28/03/2023	
	DATE OF REPORT	30/03/2023	
	DATE OF ANALYSIS	START: 04/03/2023	END: 30/03/2023

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
03.03.2023	49	25	17	26	0.6	N.D.
06.03.2023	47	26	14	24	0.5	N.D.
10.03.2023	48	24	16	23	0.4	N.D.
13.03.2023	46	28	18	25	0.6	N.D.
17.03.2023	47	27	17	23	0.8	N.D.
20.03.2023	49	26	15	22	0.7	N.D.
24.03.2023	50	28	14	26	0.8	N.D.
27.03.2023	51	29	15	28	0.5	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.

(Signature)
30/03/2023

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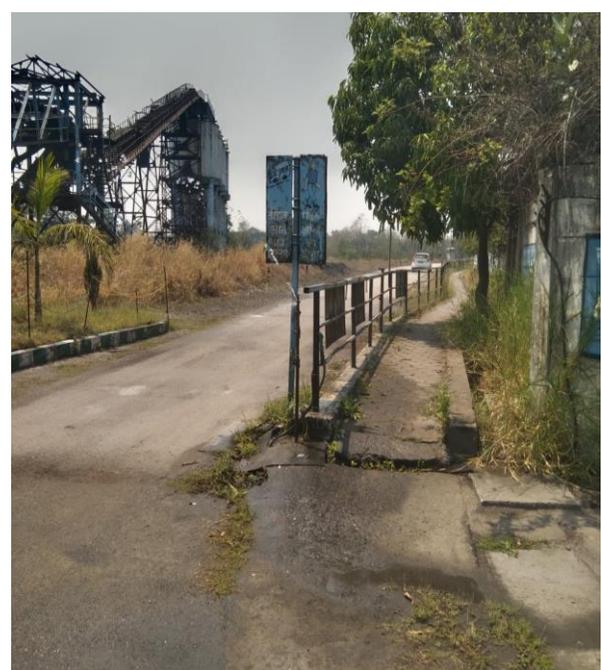
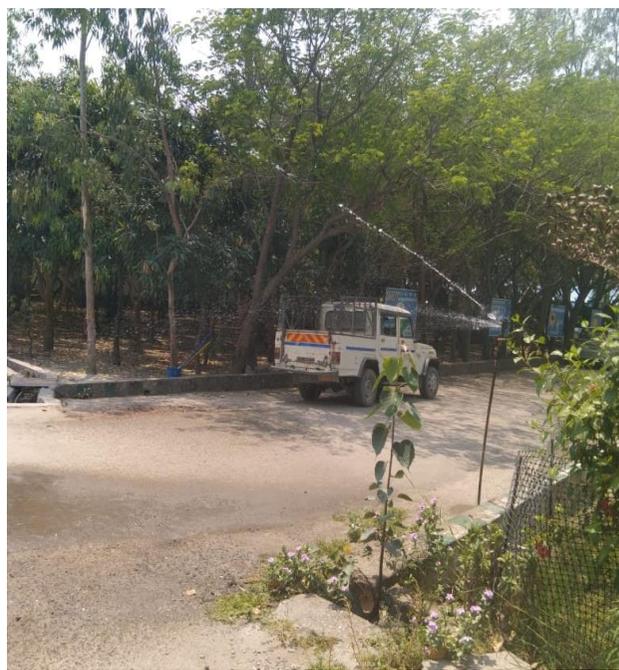
(Signature)
30/03/23

AUTHORIZED SIGNATORY

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

Annexure-6

Photographs of Fixed type of water sprinklers installed at Gare Palma IV/5 Coal Mine



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

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Name & Address of The Customer		REPORT NO.	UES/TR/22-23/03916
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/22-23/N/09611-09620
		DATE OF REPORT	02/11/2022
		DATE OF SAMPLING	17/10/2022 to 18/10/2022
		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)	54	41	75	70
MILUPARA AREA NEAR INCLINE	dB(A)	62	52		
BUNKER AREA, MILUPARA	dB(A)	69	49		
DG SET AREA, KONDKEL	dB(A)	57	42		
MILUPARA MINES WEIGHBRIDGE	dB(A)	60	50		
OFFICE AREA, KONDKEL	dB(A)	56	46		
BUNKER AREA, KONDKEL	dB(A)	62	52		
LOCATION	UNIT	RESULT		LIMIT (RESIDENTIAL ZONE)	
		DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
Outside Plant					
SIDARPARA VILLAGE (GOVT. SCHOOL)	dB(A)	52	41	55	45
HIL COLONY, KONDKEL	dB(A)	49	39		
HIL STAFF QUARTER, MILUPARA	dB(A)	53	43		

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.

Bele
02/11/22

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For ULTIMATE ENVIROLYTICAL SOLUTIONS

Pand
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 : ultimatenviron@gmail.com

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<i>Name & Address of The Customer</i>		<i>REPORT NO.</i>	UES/TR/22-23/04772
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/22-23/N/010966-010975
		<i>DATE OF REPORT</i>	02/12/2022
		<i>DATE OF SAMPLING</i>	26/11/2022 to 27/11/2022
SAMPLE DETAILS			
<i>MONITORING FOR</i>	NOISE LEVEL MONITORING		
<i>CUSTOMER REF. NO. & DATE</i>	P.O.13552310212, DATED: 07.09.2022		
<i>SAMPLING LOCATION</i>	INSIDE COAL MINE & OUTSIDE COAL MINE (AS DESCRIBED BELOW)		
<i>SAMPLE COLLECTED BY</i>	LABORATORY CHEMIST		
<i>SAMPLE QUANTITY/ PACKING</i>	NOT APPLICABLE		

TEST REPORT					
LOCATION	UNIT	RESULT		LIMIT (INDUSTRIAL ZONE)	
		DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
OFFICE AREA, MILUPARA	dB(A)	56	46	75	70
MILUPARA AREA NEAR INCLINE	dB(A)	63	54		
BUNKER AREA, MILUPARA	dB(A)	69	59		
DG SET AREA, KONDKEL	dB(A)	58	49		
MILUPARA MINES WEIGHBRIDGE	dB(A)	64	55		
OFFICE AREA, KONDKEL	dB(A)	57	48		
BUNKER AREA, KONDKEL	dB(A)	65	56		
LOCATION	UNIT	RESULT		LIMIT (RESIDENTIAL ZONE)	
		DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
Outside Plant				55	45
SIDARPARA VILLAGE (GOVT. SCHOOL)	dB(A)	53	44		
HIL COLONY, KONDKEL	dB(A)	51	42		
HIL STAFF QUARTER, MILUPARA	dB(A)	54	43		

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.

 02/12/2022 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY
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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/22-23/06131
TO,		LAB REF NO.	UES/22-23/N/013054-013063
HINDALCO INDUSTRIES LIMITED, GARE		DATE OF REPORT	03/01/2023
PALMA - IV/5, MILUPARA U/G COAL MINE,		DATE OF SAMPLING	29/12/2022 to 30/12/2022
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		

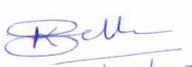
TEST REPORT

LOCATION	UNIT	RESULT		LIMIT (INDUSTRIAL ZONE)	
		DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
OFFICE AREA, MILUPARA	dB(A)	58	45	75	70
MILUPARA AREA NEAR INCLINE	dB(A)	64	52		
BUNKER AREA, MILUPARA	dB(A)	66	57		
DG SET AREA, KONDKEL	dB(A)	56	48		
MILUPARA MINES WEIGHBRIDGE	dB(A)	65	53		
OFFICE AREA, KONDKEL	dB(A)	58	49		
BUNKER AREA, KONDKEL	dB(A)	63	54		
LOCATION	UNIT	RESULT		LIMIT (RESIDENTIAL ZONE)	
		DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
Outside Plant					
SIDARPARA VILLAGE (GOVT. SCHOOL)	dB(A)	52	43	55	45
HIL COLONY, KONDKEL	dB(A)	49	40		
HIL STAFF QUARTER, MILUPARA	dB(A)	53	41		

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.

 03/01/23 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/22-23/06826
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/22-23/N/014410-014419
		DATE OF REPORT	31/01/2023
		DATE OF SAMPLING	23/12/2022 to 25/12/2022
		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)	57	46	75	70
MILUPARA AREA NEAR INCLINE	dB(A)	63	51		
BUNKER AREA, MILUPARA	dB(A)	65	55		
DG SET AREA, KONDKEL	dB(A)	55	44		
MILUPARA MINES WEIGHBRIDGE	dB(A)	66	54		
OFFICE AREA, KONDKEL	dB(A)	59	50		
BUNKER AREA, KONDKEL	dB(A)	64	55		
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	39		
HIL STAFF QUARTER, MILUPARA	dB(A)	51	40		

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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

 31/01/23 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/22-23/08137
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/22-23/N/016296-016305
		DATE OF REPORT	03/03/2023
		DATE OF SAMPLING	26/02/2023 to 27/02/2023
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)	59	46	75	70
MILUPARA AREA NEAR INCLINE	dB(A)	65	53		
BUNKER AREA, MILUPARA	dB(A)	67	59		
DG SET AREA, KONDKEL	dB(A)	58	49		
MILUPARA MINES WEIGHBRIDGE	dB(A)	66	54		
OFFICE AREA, KONDKEL	dB(A)	59	51		
BUNKER AREA, KONDKEL	dB(A)	64	55		
LOCATION	UNIT	RESULT		LIMIT (RESIDENTIAL ZONE)	
		DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
Outside Plant					
SIDARPARA VILLAGE (GOVT. SCHOOL)	dB(A)	53	44	55	45
HIL COLONY, KONDKEL	dB(A)	51	41		
HIL STAFF QUARTER, MILUPARA	dB(A)	54	42		

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.

<p><i>Chauhan</i> 03/03/2023</p> <p>REVIEWED BY</p>		<p>For ULTIMATE ENVIROLYTICAL SOLUTIONS</p> <p><i>Panda</i></p> <p>AUTHORIZED SIGNATORY</p>
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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/22-23/09168
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/22-23/N/017586-017592
		DATE OF REPORT	28/03/2023
		DATE OF SAMPLING	22/03/2023 to 23/03/2023
		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)	60	48	75	70
MILUPARA AREA NEAR INCLINE	dB(A)	66	54		
BUNKER AREA, MILUPARA	dB(A)	68	58		
DG SET AREA, KONDKEL	dB(A)	59	48		
MILUPARA MINES WEIGHBRIDGE	dB(A)	67	55		
OFFICE AREA, KONDKEL	dB(A)	58	49		
BUNKER AREA, KONDKEL	dB(A)	63	53		
LOCATION	UNIT	RESULT		LIMIT (RESIDENTIAL ZONE)	
		DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
Outside Plant				55	45
SIDARPARA VILLAGE (GOVT. SCHOOL)	dB(A)	51	42		
HIL COLONY, KONDKEL	dB(A)	50	40		
HIL STAFF QUARTER, MILUPARA	dB(A)	53	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.

Prabhakar
28/03/2023

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ER Bell
28/03/23

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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

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<i>To Name & Address Of The Customer</i>		Report No	UES/TR/22-23/03917	
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/22-23/W/09621	
		Date Of Sampling	18/10/2022	
		Date Of Receipt	19/10/2022	
		Date Of Report	02/11/2022	
		Date Of Analysis	START:19/10/2022	END:28/10/2022
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	25.8
4	pH	-	APHA 22 nd Ed.2012,4500-H ⁺ -B,4-92	5.5 to 9.0	7.12
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	78.0
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	0.11
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	116.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993,RA 2003	30	15.4
19	Oil & Grease	mg/L	IS 3025 (Part 39):1991,RA 2003	10.0	N.D.
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025 (Part 43):1992,RA 2003	1.0	N.D.

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

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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

Belh
02/11/22

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For ULTIMATE ENVIROLYTICAL SOLUTIONS

Randa

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/22-23/04773	
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/22-23/W/010976	
		Date Of Sampling	27/11/2022	
		Date Of Receipt	28/11/2022	
		Date Of Report	02/12/2022	
		Date Of Analysis	START: 28/11/2022	END: 02/12/2022
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	7.16
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	81.2
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	0.19
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	124.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993, RA 2003	30	16.3
19	Oil & Grease Phenolic	mg/L	IS 3025 (Part 39):1991, RA 2003	10.0	N.D.
20	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 tests.

Bel
02/12/2022

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Pand
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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 : ultimatenviro@gmail.com

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<i>to Name & Address Of The Customer</i>		<i>Report No</i>	UES/TR/22-23/06132
To,		<i>Lab Ref No</i>	UES/22-23/W/013064
HINDALCO INDUSTRIES LIMITED, GARE		<i>Date Of Sampling</i>	29/12/2022
PALMA - IV/5, MILUPARA U/G COAL MINE,		<i>Date Of Receipt</i>	30/12/2022
VILLAGE - MILUPARA,		<i>Date Of Report</i>	03/01/2023
BLOCK-TAMNAR,		<i>Date Of Analysis</i>	START:30/12/2022 END:03/01/2023
DISTT. - RAIGARH (C.G.) 496107			
SAMPLE DETAILS			
<i>Sample Type</i>	WASTE WATER	<i>Customer Ref. No. & Date</i>	P.O.13552310212, DATED:07.09.2022
<i>Customer Sample ID</i>	ETP INLET, KONDKEL	<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> Laboratory Chemist
<i>Sampling Procedure</i>	IS:3025 (PART-I):1987 RA 2003; APHA 22 ND ED. 2021, 1060-B, 1-39	<i>Quantity Received</i>	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	7.19
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	81.8
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	0.21
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	124.6
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993,RA 2003	30	18.4
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.

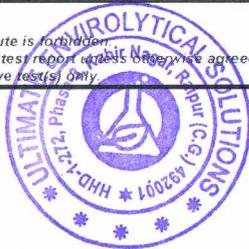
REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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

R. Bell
03/01/23

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Panda

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



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to Name & Address Of The Customer		Report No	UES/TR/22-23/06827	
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/22-23/W/014420	
		Date Of Sampling	24/01/2023	
		Date Of Receipt	25/01/2023	
		Date Of Report	29/01/2023	
		Date Of Analysis	START: 25/01/2023	END: 29/01/2023
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	24.6
4	pH	-	APHA 22 ND Ed.2012,4500-H'-B,4-92	5.5 to 9.0	7.13
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	78.4
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	0.19
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	0.10
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	120.2
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.

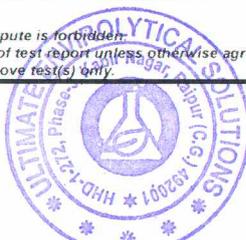
REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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R. Bell
29/01/23

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P. Anand
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-----End of the test report-----



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

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to Name & Address Of The Customer		Report No	UES/TR/22-23/08138	
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/22-23/W/016306	
		Date Of Sampling	26/02/2023	
		Date Of Receipt	27/02/2023	
		Date Of Report	03/03/2023	
		Date Of Analysis	START:27/02/2023	END:03/03/2023
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	7.21
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	82.5
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	0.20
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	128.6
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993,RA 2003	30	19.0
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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Chouhan
03/03/2023

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



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to Name & Address Of The Customer		Report No	UES/TR/22-23/09169	
To,		Lab Ref No	UES/22-23/W/017593	
HINDALCO INDUSTRIES LIMITED, GARE		Date Of Sampling	22/03/2023	
PALMA - IV/5, MILUPARA U/G COAL MINE,		Date Of Receipt	23/03/2023	
VILLAGE - MILUPARA,		Date Of Report	28/03/2023	
BLOCK-TAMNAR,		Date Of Analysis	START:23/03/2023	END:27/03/2023
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 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	25.1
4	pH	-	APHA 22 nd Ed. 2012, 4500-H ⁺ -B, 4-92	5.5 to 9.0	7.24
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	83.7
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	0.21
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	0.15
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	132.0
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.

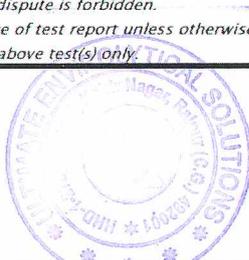
REMARKS: RESULTS ARE AS ABOVE

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P. Bhouhan
28/03/2023

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For ULTIMATE ENVIROLYTICAL SOLUTIONS

R. Balle
28/03/23

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/22-23/03918	
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/22-23/W/09622	
		Date Of Sampling	18/10/2022	
		Date Of Receipt	19/10/2022	
		Date Of Report	02/11/2022	
		Date Of Analysis	START:19/10/2022	END:28/10/2022
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 ⁺ -B,4-92	5.5 to 9.0	7.45
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	29.0
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	0.09
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	0.06
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.

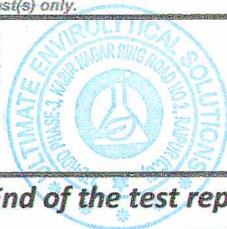
Note: mg/lit.: milligram per liter, N.D. - Not Detected.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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

Belle
02/11/22
REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

LandA
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

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/22-23/04774	
Lab Ref No	UES/22-23/W/010977	
Date Of Sampling	27/11/2022	
Date Of Receipt	28/11/2022	
Date Of Report	02/12/2022	
Date Of Analysis	START:28/11/2022	END:02/12/2022

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	7.48
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-Cl-G, 4 - 69	1.0	N.D.
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	30.8
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	0.10
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	0.07
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	9.9
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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- > This is for information as the party has asked for above test(s) only.

R. Bell
02/12/2022

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Ranga

AUTHORIZED SIGNATORY

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



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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/22-23/06133	
To,		Lab Ref No	UES/22-23/W/013065	
HINDALCO INDUSTRIES LIMITED, GARE		Date Of Sampling	29/12/2022	
PALMA - IV/5, MILUPARA U/G COAL MINE,		Date Of Receipt	30/12/2022	
VILLAGE - MILUPARA,		Date Of Report	03/01/2023	
BLOCK-TAMNAR,		Date Of Analysis	START:30/12/2022	END:03/01/2023
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 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	7.52
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	30.2
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	0.11
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	0.08
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	52.4
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.

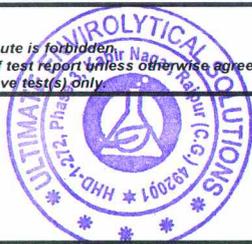
Note: mg/lit.: milligram per liter, N.D. - Not Detected.

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Rekha
03/01/23
REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Pandey
AUTHORIZED SIGNATORY

-----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/22-23/06828
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/22-23/W/014421
		Date Of Sampling	24/01/2023
		Date Of Receipt	25/01/2023
		Date Of Report	29/01/2023
		Date Of Analysis	START: 25/01/2023 END: 29/01/2023
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	25.0
4	pH	-	APHA 22 nd Ed.2012,4500-H'-B,4-92	5.5 to 9.0	7.46
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	28.6
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	0.10
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	0.06
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	50.2
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	8.4
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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 29/01/23 REVIEWED BY	 For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY
-----------------------------	--

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



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to Name & Address Of The Customer		Report No	UES/TR/22-23/08139	
To,		Lab Ref No	UES/22-23/W/016307	
HINDALCO INDUSTRIES LIMITED, GARE		Date Of Sampling	26/02/2023	
PALMA - IV/5, MILUPARA U/G COAL MINE,		Date Of Receipt	27/02/2023	
VILLAGE - MILUPARA,		Date Of Report	03/03/2023	
BLOCK-TAMNAR,		Date Of Analysis	START:27/02/2023	END:03/03/2023
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 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	7.54
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	30.9
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	0.12
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	0.09
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	9.1
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.

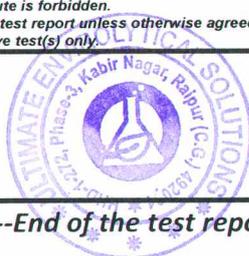
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REVIEWED BY

P. Phouhan
03/03/2023



For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

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



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<i>to Name & Address Of The Customer</i>		Report No	UES/TR/22-23/09170	
To,		Lab Ref No	UES/22-23/W/017594	
HINDALCO INDUSTRIES LIMITED, GARE		Date Of Sampling	22/03/2023	
PALMA - IV/5, MILUPARA U/G COAL MINE,		Date Of Receipt	23/03/2023	
VILLAGE - MILUPARA,		Date Of Report	28/03/2023	
BLOCK-TAMNAR,		Date Of Analysis	START: 23/03/2023	END: 27/03/2023
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 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	7.57
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	31.21
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	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.

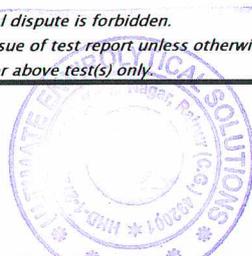
REMARKS: RESULTS ARE AS ABOVE

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(PBhouhan)
28/03/2023

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

(R Bell)
28/03/23

AUTHORIZED SIGNATORY

-----End of the test report-----
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Annexure-8A

Photographs of Treatment Facilities at Gare Palma IV/5 Coal Mine



SETTLING POND NO – 5



Effluent Treatment Plant - Kondkel – 200 Cum /Hrs X 2



Water Treatment Plant (WTP) – Kondkel – 5 X 5 Cum / Hrs



Reverse Osmosis Plant (RO Plant) – Kondkel 2 x 2 Cum/Hrs



Reverse Osmosis Plant (RO Plant) – Milupara – 5 Cum / Hrs



Iron Removal Plant (IRP Plant) – Milupara – 5 Cum / Hrs



Sewage Treatment Plant – 50 KLD

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/22-23/03919
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/22-23/W/09623
		Date Of Sampling	18/10/2022
		Date Of Receipt	19/10/2022
		Date Of Report	02/11/2022
		Date Of Analysis	START:19/10/2022 END:28/10/2022
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	25.3
4	pH	-	APHA 22 nd Ed.2012,4500-H ⁺ -B,4-92	5.5 to 9.0	7.19
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	42.0
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	0.5
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	128.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993,RA 2003	30	17.2
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

- > 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.

Belk
02/11/22
REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Pandey
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

To 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/22-23/04775	
Lab Ref No	UES/22-23/W/010978	
Date Of Sampling	27/11/2022	
Date Of Receipt	28/11/2022	
Date Of Report	02/12/2022	
Date Of Analysis	START: 28/11/2022	END: 02/12/2022

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	25.6
4	pH	-	APHA 22 ND Ed. 2012, 4500-H ⁺ -B, 4-92	5.5 to 9.0	7.24
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	45.3
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	0.52
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	0.15
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	132.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44): 1993, RA 2003	30	17.7
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 test(s) only.

R Bell
02/12/2022

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For ULTIMATE ENVIROLYTICAL SOLUTIONS

Pandya

AUTHORIZED SIGNATORY

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

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/22-23/06134	
To,		Lab Ref No	UES/22-23/W/013066	
HINDALCO INDUSTRIES LIMITED, GARE		Date Of Sampling	29/12/2022	
PALMA - IV/5, MILUPARA U/G COAL MINE,		Date Of Receipt	30/12/2022	
VILLAGE - MILUPARA,		Date Of Report	03/01/2023	
BLOCK-TAMNAR,		Date Of Analysis	START:30/12/2022	END:03/01/2023
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					
S.R. 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	7.28
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	45.8
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	0.56
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	132.8
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	18.0
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.

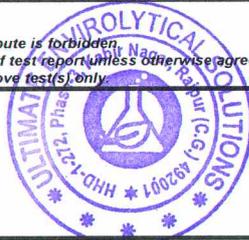
Note: mg/lit.: milligram per liter, N.D. - Not Detected.

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.

Be...
03/01/23
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For ULTIMATE ENVIROLYTICAL SOLUTIONS

Pan...
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/22-23/06829	
To,		Lab Ref No	UES/22-23/W/014422	
HINDALCO INDUSTRIES LIMITED, GARE		Date Of Sampling	24/01/2023	
PALMA - IV/5, MILUPARA U/G COAL MINE,		Date Of Receipt	25/01/2023	
VILLAGE - MILUPARA,		Date Of Report	29/01/2023	
BLOCK-TAMNAR,		Date Of Analysis	START: 25/01/2023	END: 29/01/2023
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	25.2
4	pH	-	APHA 22 nd Ed.2012,4500-H'-B,4-92	5.5 to 9.0	7.22
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	44.2
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	0.52
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	0.11
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	130.4
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993,RA 2003	30	16.4
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.

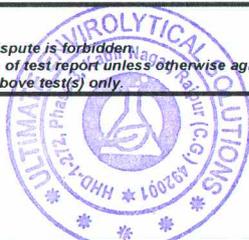
Note: mg/lit.: milligram per liter, N.D. - Not Detected.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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29/01/23
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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

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to Name & Address Of The Customer		Report No	UES/TR/22-23/08140	
To,		Lab Ref No	UES/22-23/W/016308	
HINDALCO INDUSTRIES LIMITED, GARE		Date Of Sampling	26/02/2023	
PALMA - IV/5, MILUPARA U/G COAL MINE,		Date Of Receipt	27/02/2023	
VILLAGE - MILUPARA,		Date Of Report	03/03/2023	
BLOCK-TAMNAR,		Date Of Analysis	START:27/02/2023	END:03/03/2023
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)	RESULT
				RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-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	7.31
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	46.4
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	0.59
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	0.15
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	18.6
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.

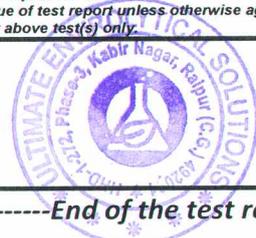
REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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

REVIEWED BY

P. Bhouhan
03/03/2023



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

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to Name & Address Of The Customer		Report No	UES/TR/22-23/09171	
To,		Lab Ref No	UES/22-23/W/017595	
HINDALCO INDUSTRIES LIMITED, GARE		Date Of Sampling	22/03/2023	
PALMA - IV/5, MILUPARA U/G COAL MINE,		Date Of Receipt	23/03/2023	
VILLAGE - MILUPARA,		Date Of Report	28/03/2023	
BLOCK-TAMNAR,		Date Of Analysis	START: 23/03/2023	END: 27/03/2023
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					
S.R. 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	7.34
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	47.3
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	0.56
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	140.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	19.2
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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- > This is for information as the party has asked for above test(s) only.

(Signature)
28/03/2023

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

(Signature)
28/03/23

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/22-23/03920	
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/22-23/W/09624	
		Date Of Sampling	18/10/2022	
		Date Of Receipt	19/10/2022	
		Date Of Report	02/11/2022	
		Date Of Analysis	START:19/10/2022	END:28/10/2022
		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	25.2
4	pH	-	APHA 22 ND Ed.2012,4500-H'-B,4-92	5.5 to 9.0	7.46
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	34.0
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	0.09
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	32.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	8.1
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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Rekh
02/11/22
REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

Ranjana
AUTHORIZED SIGNATORY

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



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to Name & Address Of The Customer		Report No	UES/TR/22-23/04776	
To,		Lab Ref No	UES/22-23/W/010979	
HINDALCO INDUSTRIES LIMITED, GARE		Date Of Sampling	27/11/2022	
PALMA - IV/5, MILUPARA U/G COAL MINE,		Date Of Receipt	28/11/2022	
VILLAGE - MILUPARA,		Date Of Report	02/12/2022	
BLOCK-TAMNAR,		Date Of Analysis	START:28/11/2022	END:02/12/2022
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	7.51
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	32.7
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	0.21
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	0.08
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	36.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993,RA 2003	30	8.4
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).

RBell
02/12/2022

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For ULTIMATE ENVIROLYTICAL SOLUTIONS

Pandey
AUTHORIZED SIGNATORY

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to Name & Address Of The Customer		Report No	UES/TR/22-23/06135	
To,		Lab Ref No	UES/22-23/W/013067	
HINDALCO INDUSTRIES LIMITED, GARE		Date Of Sampling	29/12/2022	
PALMA - IV/5, MILUPARA U/G COAL MINE,		Date Of Receipt	30/12/2022	
VILLAGE - MILUPARA,		Date Of Report	03/01/2023	
BLOCK-TAMNAR,		Date Of Analysis	START: 30/12/2022	END: 03/01/2023
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	
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	25.1
4	pH	-	APHA 22 nd Ed. 2012, 4500-H-B, 4-92	5.5 to 9.0	7.54
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	32.9
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	0.24
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	0.09
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	36.8
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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 03/01/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY
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-----End of the test report-----



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to Name & Address Of The Customer		Report No	UES/TR/22-23/06830	
To,		Lab Ref No	UES/22-23/W/014423	
HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/5, MILUPARA U/G COAL MINE, VILLAGE - MILUPARA, BLOCK-TAMNAR, DISTT. - RAIGARH (C.G.) 496107		Date Of Sampling	24/01/2023	
		Date Of Receipt	25/01/2023	
		Date Of Report	29/01/2023	
		Date Of Analysis	START: 25/01/2023	END: 29/01/2023
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	24.6
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	30.3
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	0.21
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	0.08
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	34.6
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993,RA 2003	30	8.0
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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 29/01/23 REVIEWED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY
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-----End of the test report-----



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to Name & Address Of The Customer		Report No	UES/TR/22-23/08141	
To,		Lab Ref No	UES/22-23/W/016309	
HINDALCO INDUSTRIES LIMITED, GARE		Date Of Sampling	26/02/2023	
PALMA - IV/5, MILUPARA U/G COAL MINE,		Date Of Receipt	27/02/2023	
VILLAGE - MILUPARA,		Date Of Report	03/03/2023	
BLOCK-TAMNAR,		Date Of Analysis	START:27/02/2023	END:03/03/2023
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	25.2
4	pH	-	APHA 22 ND Ed.2012,4500-H'-B,4-92	5.5 to 9.0	7.49
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	31.5
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	0.22
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	0.12
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	40.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	9.3
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003,	10.0	N.D.
20	Phenolic Compounds(as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.

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

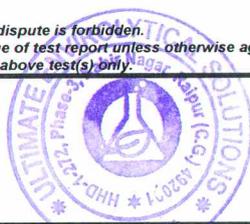
REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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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

(Bhouhan)
03/03/2023



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

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/22-23/09172	
	Lab Ref No	UES/22-23/W/017596	
	Date Of Sampling	22/03/2023	
	Date Of Receipt	23/03/2023	
	Date Of Report	28/03/2023	
	Date Of Analysis	START: 23/03/2023	END: 27/03/2023

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

S.R. 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	25.0
4	pH	-	APHA 22 ND Ed. 2012, 4500-H ⁺ -B, 4-92	5.5 to 9.0	7.43
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	30.8
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	0.21
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	36.0
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 4): 1993, RA 2003	30	8.4
19	Oil & Grease	mg/L	IS 3025 (Part 39): 1991, RA 2003,	10.0	N.D.
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025 (Part 43): 1992, RA 2003	1.0	N.D.

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

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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

PBhatnagar
28/03/2023

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

R. Bell
28/03/23

AUTHORIZED SIGNATORY

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

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

Annexure-9A

Sewage Treatment Plant



Sewage Treatment Plant – 50 KLD

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.

---:OO:---

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.)



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 Envirollytical Solutions,
HDD272, Phase-III, Kabir Nagar,
Raipur -492099, Chhattisgarh.

Subject: Recognition of M/s Ultimate Envirollytical 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 Envirollytical 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 Envirollytical 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) (Organo-chlorine 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-11

Environmental Expenditure Details for FY 2022-23
(From April 2022 to March 2023)

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

Particulars	Amount (Lakh)
Water Quality Management	1.95
Air Quality Management	12.64
Plantation, Green Belt Development	4.00
Others	19.48
Total	38.06