

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

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

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 Annexure –1.
>	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 Annexure No2. 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 Annexure No. – 3.
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 Annexure – 4.
x	A detailed mine decommissioning plan should be submitted to the MoEF, five years in advance for approval.	Detailed mine decommissioning plan will be submitted to the Ministry of Environment and forests, five years in advance for approval as applicable.
B. Ge	eneral Conditions	
i	No change in mining technology and scope of working should be made without prior approval of the MoEF.	Noted and being complied.
ii	No change in the calendar plan including excavation quantum of mineral coal and waste should be made.	Noted.
iii	Four ambient air quality stations should be established in the core zone as well as the buffer zone for RPM, SPM, SO2, NOx & CO Monitoring. Location of stations should be decided based on the 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 Annexure –5.
iv	Data of ambient air quality (RPM, SPM, SO2, NOx & CO) should be regularly submitted to	Four ambient air quality monitoring stations (Core Zone) & Four ambient air quality

Bhopal (Currently R	tis Regional Officer at aipur) and the State rd & Central Pollution atly Raipur).	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 already enclosed.
v Drill should be wet or	erated.	Complied.
should be controlled and the data recon spraying arrangement Wagons, loading dun	n from all the sources, regularly monitored ded properly. Water nt on haul roads, up trucks (loading and provided and properly	Fixed type water sprinkler has been provided at all along the roads, and loading points etc. to control the fugitive dust emission. Photographs of fixed type of water sprinklers at GP IV/5 Coal Mines is attached as Annexure – 6.
control of noise level environment. Worke and drilling operation	should be taken for below 80db in the work as engaged in blasting , operations of HEMM ided with ear plugs/	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 Annexure - 7 .
water from the min collected and treated the standards preso dated 19.05.1993 a amended from time	r (workshop and waste e) should be properly I so as to conform on ribed under GSR 422 nd 31.12.1993 or as so time. Oil and grease ed before discharge of to the pond.	We have constructed 05 Nos. of settling pond & 02 nos of ETP (Capacity 200 m3 / Hr Each) along with Lamella clarifier with chemical dosing arrangement for the treatment of mine seepage water, the treated water is being used for spraying / sprinkling on mines roads and also for greenbelt development inside the mine premises & remaining treated water from ETP is being distributed to the nearby villagers for irrigation & agriculture purpose (other than drinking). Copy of Analysis Report (ETP Inlet & Outlet) for the period from October 2022 to March 2023 is attached as Annexure — 8. Photographs of Treatment Facility at GP IV/5 Coal Mines is attached as Annexure — 8A. 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. Copy of Analysis Report (Inlet & Out of STP) for the period from October 2022 to March 2023 is attached as Annexure — 9.

		Photographs of Sewage Treatment Plant installed at GP IV/5 Coal Mines (Kondkel) is attached as Annexure – 9A.
ix	Acid mine water if any has to be treated and disposed off after conforming to the standards prescribed by the competent authority.	There is no acid mine water. HIL has provided ETP (Capacity 200 m3 / Hr Each) along with Lamella clarifier with chemical dosing arrangement for the treatment of mine seepage water and the analysis report of treated water quality are being periodically furnished to 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 Envirolytical 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
хi	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.	Annexure No. – 10. 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 been 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 Annexure – 11.
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 cooperation 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 w	ise planta	tion detail	of Gare P	alma 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			82.00	24600	9.84				
2015		30000	02.00	24000	3.04	Sapling Details Neem, Mahua, , Jamun, Mango, Guava, Imli,. Drumstick, Teak, Shivan / Ghamar, Sisham, Sirus, Bamboo, Peltafarm, Nilgiri, Amla, Saptaparni, Kathal, kasso d tree, Arjuna & Kachnar etc			
2016	Cool	2000	85.00	1700	0.68				
2017	Coal	5000	80.00	4000	1.60	Drumstick, Teak, Shivan			
2018	mine	5000	92.00	4600	1.84	/ Ghamar, Sisham, Sirus,			
2019	lease	5000	93.00	4650	1.86	•			
2020	area	1100	95.00	1045	0.42	•			
2021		1504	91.00	1369	0.55				
2022		2500	95.00	2375	0.95	•			
		52104	89.13	44339	17.7	Cit			



















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			
		0.1.4.0.4.1.0	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		



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

Name & Address Of 1	The Customer	REPORT NO	UES/TR/22-23/04749		
TO,		LAB REF NO	UES/22-23/W/010915 26/11/2022		
HINDALCO INDUSTRI	SERVICE - SERVICES CONTRACTOR PROPERTY	DATE OF SAMPLING			
GARE PALMA – IV/4, (VILLAGE – BANKHET	BOOK WITH THE THE WAS THE	DATE OF RECEIPT	28/11/2022		
POST -MILUPARA.	Α,	DATE OF REPORT	02/12/2022		
DISTT RAIGARH (C.	G.) 496107.	DATE OF ANALYSIS	START:28/11/2022	END:02/12/2022	
	S	AMPLE DETAILS			
SAMPLE TYPE	GROUND WATER	ORDER /REFERENCE:	P.O.13552310211, DATED:07.09.2022		
CUSTMER SAMPLE ID NEAR MAIN SECURITY GATE BANKHETA MINE (PIEZOMETER) AWLR		SAMPLE CONDITION AT RECEIPT	ОК		
PACKING OF SAMPLE 3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN SEALED 1 L X 1 NO. GLASS BOTTLE		SAMPLE COLLECTED BY	Y CHEMIST		
IS:3025(PART I):1987 RA SAMPLING PROCEDURE 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 Acceptable Limit	10500:2012 Permissible	RESULT	
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1	
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable	
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable	
4	рН	-	APHA 23 nd Ed.2012,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	6.87	
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	7	-	146.8	
7	Residual Chlorine	mg/Lit	APHA 23 nd Ed.2012,4500-CI-G, 4 - 69	0.2	1	N.D.	
8	Total Solid	mg/Lit	APHA 23 nd Ed.2012,2540- B, 2- 64		-	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 CI)	mg/Lit	APHA 23 nd Ed.2012,4500-CI-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 23nd Ed.2012,4500-P-C, 4-153	-	-	N.D.	
21	Sodium (as Na)	mg/Lit	APHA 23nd Ed.2012,3500-Na-B, 3-97	Ę	-	8.6	



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

			TEST REPORT			
SR.		AS PER IS	10500:2012			
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
22	Potassium (as K)	mg/Lit	APHA 23 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-	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.2 <mark>012,3112</mark> -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	1 T	-	N.D.
Micro	biological Analysis			3		
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		detectable in nl sample	Absent
2	Faecal Coliform	MPN/ 100ml	IS:1622:1981: RA:2019		detectable in nl sample	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be	detectable in nl sample	Absent
esti	cides	-		The second secon		
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.



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

Report No.04749

TEST REPORT									
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012 Acceptable Permissible Limit limit	RESULT				
8	Beta-HCH	μg/L	US EPA 508-1995	0.04	N.D.				
9	Delta HCH	μg/L	US EPA 508-1995	0.04	N.D.				
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0.4	N.D.				
11	Beta-Endosulfan	μg/L	US EPA 508-1995	0.4	N.D.				
12	Endosulfansulphate	μg/L	US EPA 508-1995	0.4	N.D.				
13	Monocrotophos	μg/L	US EPA 8141A-1994	1	N.D.				
14	Ethion	μg/L	US EPA 8141A-1994	3	N.D.				
15	Chloropyrifos	μg/L	US EPA 8141A-1994	30	N.D.				
16	Phorate	μg/L	US EPA 8141A-1994	2	N.D.				
17	Phoratesulphoxide	μg/L	US EPA 814 <mark>1A-1994</mark>	<u>-</u>	N.D.				
18	Phoratesulphone	μg/L	US EPA 8141 <mark>A-1994</mark>	-	N.D.				
19	2,4-D	µg/L	US EPA 515. <mark>1-1995</mark>	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.

02/12/2022

REVIEWED BY

TAMILIO Nagar to Maria (C.C.) NATION (C.C.)

End of the test report-----

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY



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

Name & Address Of The Customer

TO,

HINDALCO INDUSTRIES LIMITED,

GARE PALMA – IV/4, COAL MINE,

VILLAGE – BANKHETA,

POST -MILUPARA,

DISTT. - RAIGARH (C.G.) 496107.

REPORT NO	UES/TR/22-23/04750				
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			

	SI	MPLE DETAILS	A. 如果在中国的大学,但不是是一类人。
SAMPLE TYPE	GROUND WATER	ORDER /REFERENCE:	P.O.13552310211, DATED:07.09.2022
CUSTMER 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 SEALE.	SAMPLE COLLECTED BY	CHEMIST
SAMPLING PROCEDURE	IS:3025(PART I):1987 RA 2003; APHA 22ND ED. 2012, 1060-B,1-	QUANTITY RECEIVED	5 LTR

Report No.04750

			TEST REPORT			
	100 CH 10			AS PER IS	10500:2012	
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour		IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	Taste		IS 30 <mark>25(part-8)</mark>	Agreeable	Agreeable	Agreeable
4	рН		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	- (1)	_	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 CaCO₃)	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 CI)	mg/Lit	APHA 23 nd Ed.2012,4500–CI-B, 4-72	250	1000	19.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 23 nd Ed.2012,4500-SO₄-E, 4-190	200	400	25.8



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

			TEST REPORT			
SR.			"我们是我们的人,"	AS PER IS		
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
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 23nd Ed.2012,4500-P-C, 4-153	-		N.D.
21	Sodium (as Na)	mg/Lit	APHA 23nd Ed.2012,3500-Na-B, 3-97	-	-	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.20 <mark>12,3111-</mark> B, 3-18	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 23 nd Ed.20 <mark>12,3111-</mark> B, 3-18	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 23 nd Ed.2012,3500-Ni, 3-	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 23 nd Ed.2012,3111-B, 3-18			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-		No Relaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 23 nd Ed 2012 3112-B 3-23 0 001 No		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.
Micro	biological Analysis	L. Mariana	d			
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		etectable in any I sample	Absent
2	Faecal Coliform	MPN/ 100ml	IS:1622:1981: RA:2019	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
Pesti	cides			1001111		
1	p,p DDT	μg/L	US EPA 508-1995	and the second s	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.04750

			TEST REPORT			
SR.				AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
4	p,p DDD	µg/L	US EPA 508-1995		1	N.D.
5	O,p DDD	µg/L	US EPA 508-1995		1	N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995		2	N.D.
7	Alpha-HCH	μg/L	US EPA 508-1995	0.	01	N.D.
8	Beta-HCH	µg/L	US EPA 508-1995	0.	04	N.D.
9	Delta HCH	μg/L	US EPA 508-1995	0.	04	N.D.
10	Alpha-Endosulfan	μg/L	US EPA 508-1995	0.	.4	N.D.
11	Beta-Endosulfan	μg/L	US EPA 508-1995	0.	.4	N.D.
12	Endosulfansulphate	μg/L	US EPA 508-1995	0.4		N.D.
13	Monocrotophos	μg/L	US EPA 8141A-1994	1		N.D.
14	Ethion	μg/L	US EPA 8141A-1994	3		N.D.
15	Chloropyrifos	μg/L	US EPA 8141A-1994	3	0	N.D.
16	Phorate	μg/L	US EPA 8141A <mark>-1994</mark>		2	N.D.
17	Phoratesulphoxide	μg/L	US EPA 8141A <mark>-1994</mark>	-	-	N.D.
18	Phoratesulphone	μg/L	US EPA 814 <mark>1A-1994</mark>		-	N.D.
19	2,4-D	μg/L	US EPA 5 <mark>15.1-1995</mark>	3	0	N.D.
20	Alachlor	μg/L	US EPA <mark>508- 1995</mark>	2	0	N.D.
21	Atrazine	μg/L	US EPA 532-2000		2	N.D.
22	Methyl parathion	μg/L	US EPA 8141A-1994	0.	.3	N.D.
23	Methyl paraxone	μg/L	US EPA 8141A-1994	<u> </u>	- 7	N.D.
24	Malathion	μg/L	US EPA 8141A-1994	190		N.D.
25	Malaoxon	μg/L	US EPA 8141A-1994			
26	Aldrin	μg/L	US EPA 508- 1995	0.0	03	N.D.
27	Dieldrin	μg/L	US EPA 508-1995	0.0	03	N.D.

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.

02/12/2022

REVIEWED BY

THE TOTAL TO

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

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

-End of the test report-----



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

Name & Address Of The Customer

TO,

HINDALCO INDUSTRIES LIMITED,

GARE PALMA – IV/5, MILUPARA

U/G COAL MINE, VILLAGE – MILUPARA,

BLOCK-TAMNAR,

DISTT. - RAIGARH (C.G.) 496107

REPORT NO	UES/TR/22-23/04788				
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			

10000000000000000000000000000000000000		SAMPLI	E DETAILS	
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:	VERBAL COMMUNICATION.
CUSTMER 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.				AS PER I	Fig. 1	
	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
4	pH	_	APHA 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	-4.	-	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-		-	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 CI)	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, 50: 14001:2015 / ISO 45001	45	No Relaxation	2.9



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

			TEST REPORT			
4				AS PER I		
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
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-	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-	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.
Micro	biological Analysis	4				
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		detectable in any 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
Pesti	cides	1 200111				
1	p,p DDT	μg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	μg/L	US EPA 508-1995	İ	1	N.D.



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

REPORT NO. 04788

			TEST REPOR	RT .			
				AS PER I	AS PER IS 10500:2012		
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	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	Endosulfansulphat e	μg/L	US EPA 508-199 <mark>5</mark>	0.4		N.D.	
13	Monocrotophos	μg/L	US EPA 8141A-1994		1	N.D.	
14	Ethion	μg/L	US EPA 8141A-1 <mark>994</mark>		3	N.D.	
15	Chloropyrifos	μg/L	US EPA 8141A- <mark>1994</mark>		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 <mark>515.1-199</mark> 5		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		
25	Malaoxon	μg/L	US EPA 8141A-1994		-		
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

02/12/2022

REVIEWED BY

TAMILE TO THE TOTAL OF THE TOTA

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

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



Name & Address Of The Customer

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

UES/TR/22-23/04787

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

REPORT NO

wante a Address of The Cu	stomer	REPO.	REF NO UES/17/22-23/W/ E OF SAMPLING 27/11/2022			3/04787		
TO,		LAB				//010990		
HINDALCO INDUSTR	The state of the s	DATE						
GARE PALMA – IV/5,		DATE	OF RECEIPT	28/11/2022				
U/G COAL MINE, VILI BLOCK-TAMNAR,	LAGE – MILUPARA,	DATE	OF REPORT	02/12/2022				
DISTT RAIGARH (C	.G.) 496107	DATE	OF ANALYSIS	START: 28/11/	END: 02/12/2022			
		SAMP	LE DETAILS	1 3634				
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:		P.O.13552310212, DATED: 07.09.2			
CUSTMER SAMPLE ID	STAFF QUARTER- MILUPARA PIEZOMETER (AWLR)		SAMPLE CONDITION AT RECEIPT		ок	,		
PACKING OF SAMPLE	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	SEALED	SAMPLE COLLECTED BY		СНЕ	MIST		
SAMPLING PROCEDURE IS:3025(PART I):1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39			QUANTITY RECE	CIVED	5 L	TR		

REPORT NO. 04787

SR.	The state of the s			ACCEPTABI DRINKING WATE	White	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour		IS 3025:(part-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS 3025:(part-8)	Agreeable	Agreeable	Agreeable
4	pН		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	-11/2 -	-	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 CaCO₃)	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 CI)	mg/Lit	APHA 22 nd Ed.2012,4500-CI-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 22nd Ed.2012,4500-P-C, 14051:2015 / ISO 45001:20	_	_	N.D.



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

			TEST REPORT			
SR.					LE LIMIT FOR	4
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible	RESUL
21	Sodium (as Na)	mg/Lit	APHA 22ndEd.2012,3500-Na-B, 3-97	-	-	5.4
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-	-	-	2.9
23	Boron (as B)	mg/Lit	87 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	N.D.
25	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B	1	Relaxation 1.5	0.18
26	Manganese (as Mn)	mg/Lit	&D, 4-84 & 87 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	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 22 nd Ed.2012,3500-Ni, 3-	0.02	Relaxation No	N.D.
29	Zinc (as Zn)	mg/Lit	108 APHA 22 nd Ed.2012,3111-B, 3-18	5	Relaxation 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.
4icrob	iological Analysis				NATA (1314-144-145) (1314-145) (1	
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		detectable in ml sample	Absent
2	Faecal coliform	MPN/ 100ml	IS:1622:1981: RA:2019	Shall not be	detectable in ml sample	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be	detectable in nl sample	Absent
estici	ides			,		
1	p,p DDT	μg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	µg/L	US EPA 508-1995		1	N.D.
4	p,p DDD	µg/L	US EPA 508-1995		1	N.D.
5	O,p DDD	μg/L	US EPA 508-1995		1	N.D.
6	Gamma-HCH (Lindane)	μg/L	US EPA 508-1995		2	N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995 14001:2015 / ISO 45001:201	0.	01	N.D.



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

REPORT NO. 04787

			TEST REPORT			
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	DRINKING WATE Acceptable	ER (IS 10500:2012) Permissible	RESULT
0	Date UCU	//	US EPA 508-1995	Limit	limit .04	N.D.
8	Beta-HCH	μg/L	US EPA 508-1995		.04	N.D.
9	Delta HCH	µg/L	US EPA 508-1995).4	N.D.
10	Alpha-Endosulfan	μg/L				N.D.
11	Beta-Endosulfan	μg/L	US EPA 508-1995		0.4	
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 <mark>-1995</mark>		30	N.D.
20	Alachlor	μg/L	US EPA 508- 1 <mark>995</mark>		20	N.D.
21	Atrazine	μg/L	US EPA 532-2000		2	N.D.
22	Methyl parathion	μg/L	US EPA 8141A-1994	0	0.3	N.D.
23	Methyl paraxone	μg/L	US EPA 8141A-1994		- 14	N.D.
24	Malathion	μg/L	US EPA 8141A-1994	1	90	N.D.
25	Malaoxon	µg/L	US EPA 8141A-1994	a la	-	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

WINDLY TO THE TOTAL AND THE TO

End of the test report-----

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY



Name & Address Of The Customer

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

UES/TR/22-23/04789

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

REPORT NO

то,		LAB	REF NO	UES/22-23/W/010992			
HINDALCO INDUSTRI	ES LIMITED,	DATE	E OF SAMPLING	27/11/202	27/11/2022 28/11/2022		
GARE PALMA - IV/5, I	MILUPARA	DATE	OF RECEIPT	28/11/202			
U/G COAL MINE, VILL	.AGE – MILUPARA,	DATE	E OF REPORT	02/12/202	22		
BLOCK-TAMNAR, DISTT RAIGARH (C.	G.) 496107	DATE	DATE OF ANALYSIS START: 28/1		11/2022	END: 02/12/2022	
	AGE LEVEL TO THE PARTY OF THE P	SAMPI	E DETAILS	40		11 11 11	
SAMPLE TYPE	GROUND WATER		ORDER /REFERE	ENCE:	VERBAL COMMUNICATION.		
CUSTMER SAMPLE ID	MILUPARA VILLAGE NEAR P HIL(DUGWELL)	PHC-	SAMPLE CONDITION AT RECEIPT		ОК		
PACKING OF SAMPLE	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	SEALED	SAMPLE COLLEC	CTED BY	SY CHEMIST		
SAMPLING PROCEDURE	IS:3025(PART I):1987 RA APHA 22ND ED. 2012,1060		OHANTITY RECEIVED		5 LTR		

			TEST REPORT			
SR.	B. B. Lander		10000000000000000000000000000000000000	AS PER IS	10500:2012	Photo Sales
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeabl
3	Taste	1	IS 3025(part-8)	Agreeable	Agreeable	Agreeabl
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 CaCO3)	mg/Lit	APHA 22 nd Ed.2012,3500–Ca- B,3-67	-	-	48.0
14	Magnesium Hardness (as CaCO3)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg- B,3-84	-	-	54.0
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500–Ca- B,3-67	75	200	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 CI)	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 22ndEd.2012,4500-P-C, 4-153	-	-	N.D.
21	Sodium (as Na)	Emg/Lit.	1400 7:20 FB 7913 0 545 00 1:2	019 CEDTIEII	ED LAPODAT	DV 5.9



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

			TEST REPORT			
SR.				AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESUL
			В, 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-	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-	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 22 nd Ed.2012,3500-Cd, 3-	0.003	No Relaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3-23	0.001	No Relaxation	N.D.
33	Arsenic (as As)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3-38	0.01	0.05	N.D.
34	Selenium (as Se)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3-38	0.01	No Relaxation	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B, 3-69	0.05	No Relaxation	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 22 nd Ed.2012,5540-C, 5-	0.2	1.0	N.D.
37	Phenolic Compound (as C_6H_5OH)	mg/Lit	APHA 22 nd Ed.2012,5540-B & C, 5-47	0.001	0.002	N.D.
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	μg/Lit	APHA 22 nd Ed.2012,6440-6-93	0.0001	No Relaxation	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA	0.5	No	N.D.
40	Oil & Grease	mg/Lit	2003 IS 3025 (Part 39):1991, RA		Relaxation	N.D.
1icro	biological Analysis	197 =	2003			N.D.
		MPN/				
1	Total Coliforms	100 ML	IS:1622:1981: RA:2019		etectable in any sample	Absent
2	Faecal coliform	MPN/ 100ml	IS:1622:1981: RA:2019		etectable in any sample	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be de	etectable in any sample	Absent
esti	cides	, 1001111	I	1001111	Jampie	
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	The state of the s	1	N.D.
5	O,p. DDD		14051.2598-1985 45001:2			01001010010110110111111



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

REPORT NO. 04789

			TEST REPOR	T	
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012 Acceptable Permissible Limit limit	RESULT
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 8141 <mark>A-1994</mark>		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 53 <mark>2-2000</mark>	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	/ Landa (February)	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 foo above test(s) only.

02/12/2022

REVIEWED BY

TAMH # 1000g CS

-End of the test report-----

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

N.D.



REPORT NO. 04790

20

Phosphate (as P)

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

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

Name & Address Of The	Customer	REPC	ORT NO	UES/TR/22	2-23/04	790
TO,		LAB	REF NO	UES/22-23/W/010993 27/11/2022		
HINDALCO INDUSTRI	ES LIMITED,	DATE	OF SAMPLING			
GARE PALMA – IV/5, I	MILUPARA	DATE	OF RECEIPT	28/11/202	22	
U/G COAL MINE, VILL	AGE – MILUPARA,	DATE	OF REPORT	02/12/202	22	
BLOCK-TAMNAR, DISTT RAIGARH (C.	G.) 496107	DATE	OF ANALYSIS	START: 28/1	11/2022	END: 02/12/2022
		SAMPL	E DETAILS			
SAMPLE TYPE	GROUND WATER		ORDER /REFERE	NCE:	VERBA	L COMMUNICATION.
CUSTMER SAMPLE ID	NEAR PRIMARY SCHOOL - SAF VILLAGE (PIEZOMETER - DUG		SAMPLE CONDITION AT RECEIPT		ок	
PACKING OF SAMPLE	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	SEALED	SAMPLE COLLEC	TED BY	СНЕМІ	ST
SAMPLING PROCEDURE	IS:3025(PART I):1987 RA 2 APHA 22ND ED. 2012,1060-E		QUANTITY RECE	IVED	5 LTR	ł.

			TEST REPORT			
SR.			The state of the s	AS PER IS	10500:2012	100
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour	-	IS 3025(part <mark>-5)</mark>	Agreeable	Agreeable	Agreeable
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
4	рН	-	APHA 22 nd Ed.2012,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	7.42
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-CI-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	- 1	-	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 CaCO3)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca- B,3-67	-	-	54.0
14	Magnesium Hardness (as CaCO3)	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 CI)	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-B, 4-72	250	1000	20.9
18	Sulphate (as SO₄)	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	NoRelaxati on	4.1
			1			A STATE OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY.

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

APHA 22ndEd.2012,4500-P-C,

mg/Lit

4-153



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

REPORT NO. 04790

			TEST REPORT			
SR.				AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESUL
21	Sodium (as Na)	mg/Lit	APHA 22nd 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	NoRelaxati on	N.D.
25	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.15
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	NoRelaxati on	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.2 <mark>012,3111</mark> -B, 3-18	5 2 5	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 22 nd Ed.2 <mark>012,3111</mark> -B, 3-18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 22 nd Ed.2 <mark>012,3500</mark> -Cd, 3- 105	0.003	NoRelaxati on	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3-23	0.001	NoRelaxati on	N.D.
33	Arsenic (as As)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3-38	0.01	0.05	N.D.
34	Selenium (as Se)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3-38	0.01	NoRelaxati on	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B, 3-69	0.05	NoRelaxati on	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	NoRelaxati on	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003	_	-	N.D.
Micro	biological Analysis	-L	J			
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		detectable in nl sample	Absent
2	Faecal coliform	MPN/ 100ml	IS:1622:1981: RA:2019		detectable in nl sample	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be	detectable in nl sample	Absent
Pesti	cides					
1	p,p DDT	μg/L	US EPA 508-1995	1	L	N.D.
2	o.p DDT	μg/L	US EPA 508-1995		L	N.D.
3	p,pDDE	μg/L	US EPA 508-1995		L	N.D.
4	p,p DDD	µg/L	US EPA 508-1995		L	N.D.
5	O,p DDD	µg/L	US EPA 508-1995		L	N.D.
5 6	<u> </u>		US EPA 508-1995 14001:2015 / ISO 45001:20			



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

REPORT NO. 04790

			TEST REPORT			
SR.	PRIME SHOW	THE SECURITY OF		AS PER IS 1	0500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
7	Alpha-HCH	μg/L	US EPA 508-1995	0.0	1	N.D.
8	Beta-HCH	μg/L	US EPA 508-1995	0.0	4	N.D.
9	Delta HCH	μg/L	US EPA 508-1995	0.0	4	N.D.
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0.4	1	N.D.
11	Beta-Endosulfan	μg/L	US EPA 508-1995	0.4	1	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 8141 <mark>A-1994</mark>	2		N.D.
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994			N.D.
18	Phoratesulphone	μg/L	US EPA 8141 <mark>A-1994</mark>			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 <mark>-2000</mark>	2		N.D.
22	Methyl parathion	μg/L	US EPA 8141A-1994	0.3	3	N.D.
23	Methyl paraxone	μg/L	US EPA 8141A-1994	-		N.D.
24	Malathion	μg/L	US E <mark>PA 8141A-1</mark> 994	190)	N.D.
25	Malaoxon	μg/L	US EPA 8141A-1994		- 47	N.D.
26	Aldrin	μg/L	US EPA 508- 1995	0.0	3	N.D.
27	Dieldrin	μg/L	US EPA 508-1995	0.0	3	N.D.

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-----



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

Name & Address Of The Cut	stomer		REPORT NO	UES/TR/22-23/04751		
TO,			LAB REF NO	UES/22-23/W/010917		
HINDALCO INDUST	TRIES LIMITED,		DATE OF SAMPLING	26/11/2022		
GARE PALMA - IV	4, COAL MINE, VILLAGE	E-	DATE OF RECEIPT	28/11/2022		
BANKHETA, POST	-MILUPARA,		DATE OF REPORT	02/12/2022		
DISTT RAIGARH	(C.G.) 496107.		DATE OF ANALYSIS	START:28/11/2022	END: 02/12/2022	
SAMPLE TYPE	GROUND WATER	and the	ORDER /REFERENCE:	P.O.13552310211, DATED:07.09.2022		
SAMPLE TYPE			ORDER /REFERENCE:			
CUSTMER SAMPLE ID	NEAR PRIMARY SCHOOL - SIDARPARA VILLAGE,		SAMPLE CONDITION	OK		
CUSTMER SAMPLE ID	NEAR PRIMARY SCHOOL - SIDARPARA VILLAGE, (PIEZOMETER - DUGWELL		SAMPLE CONDITION AT RECEIPT	OK		
CUSTMER SAMPLE ID	SIDARPARA VILLAGE,			OK CHEMIST		

Report No.04751

	424	The state of		AS PER IS		
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5/14/16	15	<1.0
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	Taste		IS 3025(part-8)	Agreeable	Agreeable	Agreeable
4	рН	1	APHA 23 nd Ed.2012,4500-H*-B, 4-92	6.5-8.5	No Relaxation	7.34
5	Turbidity	NTU	APHA 23 nd 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 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	-	-	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 nd Ed.2012,2540- D, 2- 66	-	-	2.7
11	Alkalinity Total (as CaCO₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	88.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,2340–C, 2- 44,45	200	600	112.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500–Ca-B, 3-67	-	_	76.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	-	-	36.0
15	Calcium (as Ca)	mg/Lit	APHA 23 nd Ed.2012,3500–Ca-B, 3-67	75	200	30.46
16	Magnesium (as Mg)	mg/Lit	APHA 23 nd Ed.2012,3500–Mg-B, 3-84	30	100	8.75
17	Chloride (as CI)	mg/Lit	APHA 23 nd Ed.2012,4500-CI-B, 4-72	250	1000	18.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 23 nd Ed.2012,4500−SO ₄ -E, 4-190	200	400	20.7



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

Repor	t	No.	0	47	15	1
-------	---	-----	---	----	----	---

	AS PER IS 10500:2012							
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT		
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 23nd Ed.2012,4500-P-C, 4-153	-	-	N.D.		
21	Sodium (as Na)	mg/Lit	APHA 23nd Ed.2012,3500-Na-B, 3-97	1-	-	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-	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-	0.02	No Relaxation	N.D.		
29	Zinc (as Zn)	mg/Lit	APHA 23 nd Ed.2012,3111-B, 3- 18	5	15	N.D.		
30	Copper (as Cu)	mg/Lit	APHA 23 nd Ed.2012,3111-B, 3-	0.05	1.5	N.D.		
31	Cadmium (as Cd)	mg/Lit	APHA 23 nd Ed.2012,3500-Cd, 3-	0.003	No Relaxation	N.D.		
32	Mercury (as Hg)	mg/Lit	APHA 23 nd Ed.2012,3112-B, 3-	0.001	No Relaxation	N.D.		
33	Arsenic (as As)	mg/Lit	APHA 23 nd Ed.2012,3114-C, 3-	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	mg/Lit	APHA 23 nd Ed.2012,5540-B & C, 5-47	0.001	0.002	N.D.		
38	(as C ₆ H ₅ OH) Poly-nuclear Aromatic Hydrocarbon (PAH)	μg/Lit	APHA 23 nd Ed.2012,6440-6-93	0.0001	No Relaxation	N.D.		
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003	0.5	No Relaxation	N.D.		
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003	-	-	N.D.		
Micro	biological Analysis		•					
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			
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be de	tectable in any sample	Absent		
Pesti	cides	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ž	when the second				
1	p,p DDT	µg/L	US EPA 508-1995		I	N.D.		
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.		



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

Report No.04751

TEST REPORT							
SR.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 1	Hb a		
NO.				Acceptable Limit	Permissible limit	RESULT	
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	2	N.D.	
7	Alpha-HCH	μg/L	US EPA 508-1995	0.0	01	N.D.	
8	Beta-HCH	μg/L	US EPA 508-1995	0.0	04	N.D.	
9	Delta HCH	μg/L	US EPA 508-1995	0.0)4	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 8141 <mark>A-1994</mark>	3		N.D.	
15	Chloropyrifos '	μg/L	US EPA 8141 <mark>A-1994</mark>	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	0	N.D.	
20	Alachlor	μg/L	US EP <mark>A 508- 1995</mark>	20		N.D.	
21	Atrazine	µg/L	US EPA 532-2000	// 2	2	N.D.	
22	Methyl parathion	µg/L	US EPA 8141A-1994	0.	3	N.D.	
23	Methyl paraxone	μg/L	US EPA 8141A-1994		7	N.D.	
24	Malathion	μg/L	US EPA 8141A-1994	19	0	N.D.	
25	Malaoxon	μg/L	US EPA 8141A-1994	<u> </u>		N.D.	
26	Aldrin	μg/L	US EPA 508- 1995	0.0)3	N.D.	
27	Dieldrin	µg/L	US EPA 508-1995	0.0	03	N.D.	

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

Terms & conditions

REMARKS: RESULTS ARE AS ABOVE

> 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-----



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

Name & Address Of The Customer

TO,

HINDALCO INDUSTRIES LIMITED,

GARE PALMA – IV/4, COAL MINE,VILLAGE –

BANKHETA, POST -MILUPARA,

DISTT. - RAIGARH (C.G.) 496107.

REPORT NO	UES/TR/22-23/04752	
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
CUSTMER 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 SEALED 1 L X 1 NO. GLASS BOTTLE	SAMPLE COLLECTED BY	CHEMIST
SAMPLING PROCEDURE	IS:3025(PART I):1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39	QUANTITY RECEIVED	5 LTR

Report No.04752

TEST REPORT							
	PARAMETER	UNIT	METHOD OF TEST	AS PER IS			
SR. NO.				Acceptable Limit	Permissible limit	RESULT	
1	Colour	Hazen	IS:30 <mark>25:(Part</mark> -4)	5	15	<1	
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable	
3	Taste	- (1)	IS 3025(part-8)	Agreeable	Agreeable	Agreeable	
4	pH	- 1	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-CI-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-CI-B, 4-72	250	1000	21.9	



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

Report No.04752

			TEST REPORT	THE REPORT OF A		
SR.	THE STATE OF	1 (1)	CONTRACTOR OF THE SECOND	AS PER IS	10500:2012	7 1
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
18	Sulphate (as SO ₄)	mg/Lit	APHA 23 nd Ed.2012,4500-SO₄-E, 4-190	200	400	22.7
19	Nitrate (as NO₃)	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 23nd Ed.2012,4500-P-C, 4-153	APHA 23nd Ed.2012,4500-P-C,		N.D.
21	Sodium (as Na)	mg/Lit	APHA 23nd Ed.2012,3500–Na-B, 3-97	APHA 23nd Ed.2012,3500–Na-B,		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-	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	18 APHA 23 nd Ed.2012,3111-B, 3-	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	18 APHA 23 nd Ed.2012,3500-Ni, 3-	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 23 nd Ed.2012,3111-B, 3-	APHA 23 nd Ed.2012,3111-B, 3- 5 15		N.D.
30	Copper (as Cu)	mg/Lit	18 APHA 23 nd Ed.2012,3111-B, 3-	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	18 APHA 23 nd Ed.2012,3500-Cd, 3- 0.003 Relevation		No Relaxation	N.D.
32		mg/Lit	105 APHA 23 nd Ed.2012,3112-B, 3-	0.001	No	N.D.
	Mercury (as Hg)		23 APHA 23 nd Ed.2012,3114-C, 3-	0.01	Relaxation 0.05	N.D.
33	Arsenic (as As)	mg/Lit	38 APHA 23 nd Ed.2012,3114-C, 3-	0.01	No	N.D.
34	Selenium (as Se)	mg/Lit	38 APHA 23 nd Ed.2012,3500-Cr-B,		Relaxation No	
35	Chromium (as Cr)	mg/Lit	3-69 APHA 23 nd Ed.2012,5540-C, 5-	0.05	Relaxation	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	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.
	obiological Analysis			I		
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		detectable in ml sample	Absent
2	Faecal Coliform	MPN/ 100ml	IS:1622:1981: RA:2019	Shall not be	detectable in ml sample	Absent
3	E. Coli	MPN/	IS:1622:1981:RA:2019	Shall not be	detectable in ml sample	Absent
	icides	100ml		any 100	iii sairipie	
1	p,p DDT	μg/L	US EPA 508-1995		1	N.D.



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

Report No.04752

			TEST REPORT	建设是为是 不够		
SR.	40.44AAA			AS PER IS 1	10500:2012	10
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
2	o.p DDT	µg/L	US EPA 508-1995	1		N.D.
3	p,pDDE	μg/L	US EPA 508-1995		L	N.D.
4	p,p DDD	μg/L	US EPA 508-1995	1	L	N.D.
5	O,p DDD	μg/L	US EPA 508-1995	1	L	N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995	2	2	N.D.
7	Alpha-HCH	μg/L	US EPA 508-1995	0.0	01	N.D.
8	Beta-HCH	μg/L	US EPA 508-1995	0.0	04	N.D.
9	Delta HCH	μg/L	US EPA 508-1995	0.0	04	N.D.
10	Alpha-Endosulfan	μg/L	US EPA 508-1995	0.	.4	N.D.
11	Beta-Endosulfan	μg/L	US EPA 508-1995	0.	0.4	
12	Endosulfansulphate	μg/L	US EPA 508-1 <mark>995</mark>	0.4		N.D.
13	Monocrotophos	μg/L	US EPA 8141A-1994	1	Ĺ	N.D.
14	Ethion	μg/L	US EPA 8141A-1994	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	3	N.D.
15	Chloropyrifos	μg/L	US EPA 8141A-1994	3	0	N.D.
16	Phorate	μg/L	US EPA 8141A-1994	2	2	N.D.
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994	-		N.D.
18	Phoratesulphone	μg/L	US EPA 8141A-1994			N.D.
19	2,4-D	µg/L	US EPA 515.1-1995	3	0	N.D.
20	Alachlor	μg/L	US EPA 508- 1995	2	0	N.D.
21	Atrazine	μg/L	US EPA 532-2000		2	N.D.
22	Methyl parathion	μg/L	US EPA 8141A-1994	0.	.3	N.D.
23	Methyl paraxone	μg/L	US EPA 8141A-1994		7	N.D.
24	Malathion	μg/L	US EPA 8141A-1994	19	90	N.D.
25	Malaoxon	μg/L	US EPA 8141A-1994		-	N.D.
26	Aldrin	µg/L	US EPA 508- 1995	0.0	03	N.D.
27	Dieldrin	μg/L	US EPA 508-1995	0.0	03	N.D.

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-----

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	
1101		Structure	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



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

Name & Address Of	The Customer	REPORT NO	UES/TR/22-23/06895			
TO,		LAB REF NO	UES/22-23/W/014611 23/01/2023			
HINDALCO INDUSTR GARE PALMA – IV/4,		DATE OF SAMPLING				
VILLAGE - BANKHET		DATE OF RECEIPT	25/01/2023			
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			
CUSTMER SAMPLE ID	NEAR MAIN SECURITY GATE BANKHETA MINE (PIEZOMETER) AWLR	SAMPLE CONDITION AT RECEIPT	OK			
PACKING OF SAMPLE	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE SEALED	SAMPLE COLLECTED BY	CHEMIST	avenue e e e e e e e e e e e e e e e e e e		
	IS: 3025 (PART I): 1987 RA		5 LTR			

Report No.06895

SR.				AS PER IS	10500:2012	100 E.
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
4	рН	-	APHA 23 nd Ed.2012,4500-H+-B, 4-92	6.5-8.5	No Relaxation	6.72
5	Turbidity	NTU	APHA 23 nd 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 nd Ed.2012,4500-CI-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 23 nd Ed.2012,2540- B, 2- 64	-1	-	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 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	38.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,2340-C, 2-44,45	200	600	56.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Ca-B, 3-67	-	-	36.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	-	-	20.0
15	Calcium (as Ca)	mg/Lit	APHA 23 nd Ed.2012,3500–Ca-B, 3-67	75	200	14.42
16	Magnesium (as Mg)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	30	100	4.86
17	Chloride (as Cl)	mg/Lit	APHA 23 [™] Ed.2012,4500-CI-B, 4-72	250	1000	10.9
18	Sulphate (as SO₄)	mg/Lit	APHA 23 nd Ed.2012,4500-SO ₄ -E, 4-190	200	400	9.4
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 nd Ed.2012,4500-NO ₃ -B, 4-122	45	No Relaxation	0.30
20	Phosphate (as P)	mg/Lit	APHA 23nd Ed.2012,4500-P-C, 4-153	-	-	N.D.
21	Sodium (as Na)	mg/Lit	APHA 23nd Ed.2012,3500-Na-B, 3-97		-	8.2



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

	المحمد المحافظة		TEST REPORT			The state of
SR.			[1] [1] [1] [1] [1] [1] [1] [1] [1] [1]	AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
22	Potassium (as K)	mg/Lit	APHA 23 nd Ed.2012,3500-K-B, 3-87	-	-	0.40
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	PHA 23 nd Ed.2012,3111-B,3-18 0.3 No Relaxatio		N.D.
25	Fluoride (as F)	mg/Lit	APHA 23 nd Ed.2012,4500-F-B &D, 4-84 & 87	PHA 23 nd Ed.2012,4500−F-B		0.06
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	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	0.01 No Relaxation	
35	Chromium (as Cr)	mg/Lit	APHA 23 nd Ed.2012,3500-Cr-B, 3-69	2012,3500-Cr-B, 0.05		N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 23 nd Ed.2012,5540-C, 5-53	0.2	Relaxation 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.
Micro	biological Analysis		<u> </u>	***************************************	1	#100- 3-07-8-0-1-00-0
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		detectable in ml sample	Absent
2	Faecal Coliform	MPN/ 100ml	IS:1622:1981: RA:2019		detectable in ml sample	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be	detectable in nl sample	Absent
Pesti	cides	A	L	<u> </u>	iii sampie	
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.



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

Report No.06895

No. of the last			TEST REPORT		are in the	
SR.	PARAMETER			AS PER IS	West Ti	
NO.	PARAMETER	AMETER UNIT	METHOD OF TEST	Acceptable Limit	Permissible	RESULT
8	Beta-HCH	µg/L	US EPA 508-1995		limit 04	N.D.
9	Delta HCH	µg/L	US EPA 508-1995		04	N.D.
10	Alpha-Endosulfan	µg/L	US EPA 508-1995		.4	N.D.
11	Beta-Endosulfan	µg/L	US EPA 508-1995		.4	N.D.
12	Endosulfansulphate	µg/L	US EPA 508-1995	***************************************	.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	3	0	N.D.
20	Alachlor	µg/L	US EPA 508- 1995	20	0	N.D.
21	Atrazine	µg/L	US EPA 532-2000	2		N.D.
22	Methyl parathion	µg/L	US EPA 8141A-1994	0.	3	N.D.
23	Methyl paraxone	µg/L	US EPA 8141A-1994	-		N.D.
24	Malathion	µg/L	US EPA 8141A-1994	19	190	
25	Malaoxon	µg/L	US EPA 8141A-1994	-		N.D.
26	Aldrin	µg/L	US EPA 508- 1995	0.0	03	N.D.
27	Dieldrin	µg/L	US EPA 508-1995	0.0	03	N.D.

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.

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

REVIEWED BY

End of the test report-



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

Name & Address Of The Customer REPORT NO UES/TR/22-23/06896 TO. LAB REF NO UES/22-23/W/014612 HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, DATE OF SAMPLING 23/01/2023 VILLAGE - BANKHETA, DATE OF RECEIPT 25/01/2023 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 P.O. 13552310211, GROUND WATER ORDER /REFERENCE: DATED: 07.09.2022 NEAR MINE OFFICE - BANJIKHOL SAMPLE CONDITION AT CUSTMER SAMPLE ID OK MINE (PIEZOMETER) AWLR RECEIPT 3 L X 1 NO. PVC CAN PACKING OF SAMPLE 1 L X 1 NO. PVC CAN SAMPLE COLLECTED BY SEALED CHEMIST 1 L X 1 NO. GLASS BOTTLE IS:3025(PART I):1987 RA 2003; SAMPLING PROCEDURE QUANTITY RECEIVED 5 LTR APHA 22ND ED. 2012, 1060-B,1-39

Report No.06896

			TEST REPORT			
SR.				AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	Taste		IS 3025(part-8)	Agreeable	Agreeable	Agreeable
4	рН	-	APHA 23 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-CI-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 CaCO₃)	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-CI-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.				AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESUL
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 nd Ed.2012,4500-NO ₃ -B, 4-122	45	No Relaxation	1.8
20	Phosphate (as P)	mg/Lit	APHA 23nd Ed.2012,4500-P-C, 4-153	-	-	N.D.
21	Sodium (as Na)	mg/Lit	APHA 23nd Ed.2012,3500-Na-B, 3-97	APHA 23nd Ed.2012,3500-Na-B, 3-97		7.8
22	Potassium (as K)	mg/Lit	APHA 23 nd Ed.2012,3500-K-B,	APHA 23 nd Ed.2012,3500–K-B,		0.24
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 <mark>,3500-Ni</mark> , 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		
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.
1icro	biological Analysis	1-10-1-10 (Oct.)	* · · · · · · · · · · · · · · · · · · ·		k	
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		etectable in any sample	Absent
2	Faecal Coliform	MPN/ 100ml	IS:1622:1981: RA:2019		Shall not be detectable in any 100 ml sample	
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be de	etectable in any sample	Absent
estic	cides	E)	• • • • • • • • • • • • • • • • • • • •	Note that the state of the stat	areas and the second se	
1	p,p DDT	µg/L	US EPA 508-1995	0.4000000000000000000000000000000000000	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.				AS PER IS	AS PER IS 10500:2012					
NO.	PARAMETER	PARAMETER UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT				
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	1	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		04	N.D.				
9	Delta HCH	µg/L	US EPA 508-1995	0.0		N.D.				
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0.		N.D.				
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0.		N.D.				
12	Endosulfansulphate	µg/L	US EPA 508-1995	0.4		N.D.				
13	Monocrotophos	µg/L	US EPA 8141A-1994	1		N.D.				
14	Ethion	µg/L	US EPA 8141A-1994	3		N.D.				
15	Chloropyrifos	µg/L	US EPA 8141A-1994	3(0	N.D.				
16	Phorate	µg/L	US EPA 8141A-1994	2		N.D.				
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994	-		N.D.				
18	Phoratesulphone	µg/L	US EPA 8141A-1994	-		N.D.				
19	2,4-D	µg/L	US EPA 515.1-1995	30	0	N.D.				
20	Alachlor	μg/L	US EPA 508- 1995	20	0	N.D.				
21	Atrazine	μg/L	US EPA 532-2000	2		N.D.				
22	Methyl parathion	µg/L	US EPA 8141A-1994	0.	3	N.D.				
23	Methyl paraxone	μg/L	US EPA 8141A-1994	-		N.D.				
24	Malathion	μg/L	US EPA 8141A-1994	19	10	N.D.				
25	Malaoxon	µg/L	US EPA 8141A-1994	-		N.D.				
26	Aldrin	µg/L	US EPA 508- 1995	0.0)3	N.D.				
27	Dieldrin	µg/L	US EPA 508-1995	0.0)3	N.D.				

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.

REVIEWED BY

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

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

End of the test report



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

Name & Address Of The Cu TO, HINDALCO INDUSTR GARE PALMA – IV/5, U/G COAL MINE, VILI BLOCK-TAMNAR,	IES LIMITED, MILUPARA LAGE – MILUPARA,	LAB DATE DATE	RT NO UES/TR/22-23/06923 REF NO UES/22-23/W/014641 OF SAMPLING 24/01/2023 OF RECEIPT 25/01/2023 OF REPORT 29/01/2023			
DISTT RAIGARH (C	.G.) 496107		OF ANALYSIS E DETAILS	START: 25/01/2	2023	END:29/01/2023
SAMPLE TYPE	GROUND WATER	SAMPL	ORDER /REFER	RENCE:	VE	RBAL COMMUNICATION.
CUSTMER SAMPLE ID	NEAR MILUPARA MINES (PIEZOMETER -AWLR	OFFICE	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 COLLE	ECTED BY	СНІ	EMIST
SAMPLING PROCEDURE IS:3025 (PART I):1987 RA 200 APHA 22ND ED. 2012, 1060-B,			QUANTITY RECEIVED		5 LTR	

REPORT NO.06923

		1	TEST REPORT			
SR.		T.D		AS PER I	S 10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
4	рН		APHA 22 nd Ed.2012,4500-H+-B, 4-92	6.5-8.5	No Relaxation	7.09
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 22nd Ed.2012,4500-P-C, 4-153	-	-	N.D.
20	Sodium (as Na)	mg/Lit	APHA 22ndEd.2012,3500-Na-B,	-	-	7.4



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

REPORT NO.06923

	1		TEST REPORT			
SR.				AS PER I	IS 10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
			3-97	The second secon		
21	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87	-	- I	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	N.D.
24	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B	1	Relaxation 1.5	
25	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	0.3	0.16 N.D.
26	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.01	No	N.D.
27	Nickel (as Ni)	mg/Lit	APHA 22 nd Ed.2012,3500-Ni, 3-	0.02	Relaxation No	N.D.
28	Zinc (as Zn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	5	Relaxation 15	***************************************
29			<u> </u>	0.05		N.D.
30	Copper (as Cu) Cadmium (as Cd)	mg/Lit mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18 APHA 22 nd Ed.2012,3500-Cd,3-	0.003	1.5 No	N.D.
30	Cadmium (as Ca)	mg/Lit	105	0.003	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.
Micro	biological Analysis					
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019	100 (detectable in any ml sample	Absent
2	Faecal coliform	MPN/ 100ml	IS:1622:1981: RA:2019		detectable in any ml sample	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be	detectable in any nl sample	Absent
Pesti	cides			Name and the second sec	Commence Secretaria Management and the secretaria de la commence de la commence de la commence de la commence	
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.



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

REPORT NO. 06923

	TEST REPORT									
SR.	PARAMETER			AS PER	IS 10500:2012					
NO.		UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT				
7	Alpha-HCH	μg/L	US EPA 508-1995		0.01	N.D.				
8	Beta-HCH	µg/L	US EPA 508-1995		0.04	N.D.				
9	Delta HCH	µg/L	US EPA 508-1995		0.04	N.D.				
10	Alpha-Endosulfan	µg/L	US EPA 508-1995		0.4	N.D.				
11	Beta-Endosulfan	µg/L	US EPA 508-1995		0.4	N.D.				
12	Endosulfansulphat e	μg/L	US EPA 508-1995		0.4	N.D.				
13	Monocrotophos	µg/L	US EPA 8141A-1994		1					
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

For ULTIMATE ENVIROLYTICAL SOLUTIONS

--- End of the test report-

AUTHORIZED SIGNATORY

REVIEWED BY

20101/2023



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

Name & Address Of The Cu TO.	stomer	REPO.	RT NO	UES/TR/22-23	/0692	2	
HINDALCO INDUSTR	IEC I IMITED	LAB	REF NO	UES/22-23/W/014640			
GARE PALMA - IV/5,		DATE	OF SAMPLING 24/01/2023				
U/G COAL MINE, VILI		DATE	OF RECEIPT 25/01/2023				
BLOCK-TAMNAR,	LAGE - MILOPARA,	DATE	OF REPORT	29/01/2023			
DISTT RAIGARH (C	.G.) 496107	DATE	TE OF ANALYSIS START: 25/01/2			END:29/01/2023	
SARAGE LAND		SAMP	LE DETAILS				
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:		P.O. 13552310212, DATED: 07.09.2		
CUSTMER SAMPLE ID	STAFF QUARTER- MILUPARA PIEZOMETER (AWLR)		SAMPLE CONDITION AT RECEIPT		22 OK		
PACKING OF SAMPLE	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	SEALED	SAMPLE COLLEC	TED BY	СНЕ	MIST	
SAMPLING PROCEDURE	2003; 0-B, 1-39	QUANTITY RECEIVED		5 LTR			

REPORT NO.06922

		A	TEST REPORT				
SR.	PARAMETER	UNIT	METHOD OF TEST	THE RESERVE OF THE PROPERTY OF THE PARTY OF	LE LIMIT FOR R (IS 10500:2012)	RESULT	
NO.	TANAIIIE I EN			Acceptable Limit	Permissible limit		
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1	
2	Odour		IS 3025:(part-5)	Agreeable	Agreeable	Agreeable	
3	Taste	-	IS 3025:(part-8)	Agreeable	Agreeable	Agreeable	
4	рН	-	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-CI-G, 4 - 69	0.2	1	N.D.	
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2-	-	-	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-CI-B, 4-72	250	1000	12.9	
18	Sulphate (as SO₄)	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 22nd Ed.2012,4500-P-C, 4-153	-	-	N.D.	
21	Sodium (as Na)	mg/Lit	APHA 22ndEd.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	



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		LE LIMIT FOR ER (IS 10500:2012)	DESIL
NO.				Acceptable Limit	Permissible	RESUL
	# 10 m 10	-	87	Limit	limit	
23	Boron (as B)	mg/Lit	APHA 22 nd Ed.2012,4500-B-B, 4-	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	25 APHA 22 nd Ed.2012,3111-B,3-18	***************************************	No	
25	Fluoride (as F)		APHA 22 nd Ed.2012,4500-F-B	0.3	Relaxation	N.D.
26	<u> </u>	mg/Lit	&D, 4-84 & 87	1	1.5	0.15
	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	mg/Lit	APHA 22 nd Ed.2012,5540-C, 5-53	0.2	1.0	N.D.
37	(as MBAS) Phenolic Compound	mg/Lit	APHA 22 [™] Ed.2012,5540-B & C,	0.001	0.002	N.D.
	(as C ₆ H ₅ OH) Poly-nuclear Aromatic		5-47		No	N.S.
38	Hydrocarbon (PAH)	µg/Lit	APHA 22 nd Ed.2012,6440-6-93	0.0001	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.
licrob	iological Analysis					
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		detectable in ml sample	Absent
2	Faecal coliform	MPN/	IS:1622:1981: RA:2019	Shall not be	detectable in	Absent
2	E Coli	100ml MPN/	IS:1622:1981:RA:2019		ml sample detectable in	Absont
3 ostici	E. Coli	100ml	13.1022.1901.KA.2019	any 100	ml sample	Absent
estici		Y	1			
1	p,p DDT	µg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	µg/L	US EPA 508-1995		1	N.D.
4	p,p DDD	µg/L	US EPA 508-1995		1	
5	O,p DDD	µg/L	US EPA 508-1995		1	N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995		2	N.D.
7	Alpha-HCH	μg/L	US EPA 508-1995		.01	N.D.
8	Beta-HCH	μg/L	US EPA 508-1995	<u> </u>	.04	N.D.
9	Delta HCH	µg/L	US EPA 508-1995		.04	N.D.
10	Alpha-Endosulfan	µg/L	US EPA 508-1995 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.	PARAMETER	UNIT	METHOD OF TEST		LE LIMIT FOR ER (IS 10500:2012)	RESULT
NO.			The Section of the Se	Acceptable Limit	Permissible limit	
12	Endosulfansulphate	µg/L	US EPA 508-1995	C).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	3	30	N.D.
20	Alachlor	μg/L	US EPA 508- 1995	2	20	N.D.
21	Atrazine	µg/L	US EPA 532-2000		2	N.D.
22	Methyl parathion	µg/L	US EPA 8141A-1994	0	.3	N.D.
23	Methyl paraxone	μg/L	US EPA 8141A-1994		-	N.D.
24	Malathion	µg/L	US EPA 8141A-1994	190		N.D.
25	Malaoxon	μg/L	US EPA 8141A-1 <mark>994</mark>	-		N.D.
26	Aldrin	μg/L	US EPA 508- 199 <mark>5</mark>	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 for15 days after issue of test report unless otherwise agreed with customer.

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

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATION

REVIEWED BY

-End of the test report-



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

Name & Address Of The Customer 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 BLOCK-TAMNAR, 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: VERBAL COMMUNICATION MILUPARA VILLAGE NEAR PHC-CUSTMER SAMPLE ID SAMPLE CONDITION AT HIL (DUGWELL) RECEIPT 3 L X 1 NO. PVC CAN PACKING OF SAMPLE 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE SEALED SAMPLE COLLECTED BY CHEMIST IS:3025 (PART I):1987 RA 2003; SAMPLING PROCEDURE QUANTITY RECEIVED APHA 22ND ED. 2012,1060-B,1-39 5 LTR

REPORT NO.06924

			TEST REPORT			
SR.	Rose State			AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
4	рН	-	APHA 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-CI-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	- 11		7.4
11	Alkalinity Total (as CaCO₃)	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 CaCO3)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca- B,3-67	-	-	52.0
14	Magnesium Hardness (as CaCO3)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg- B,3-84		-	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 CI)	mg/Lit	APHA 22 nd Ed.2012,4500-CI-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 22ndEd.2012,4500-P-C, 4-153	-	-	N.D.
21	Sodium (as Na)	mg/Lit	APHA 22nd 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

-William			TEST REPORT			
SR.				AS PER I	S 10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESUL
23	Boron (as B)	mg/Lit	APHA 22 nd Ed.2012,4500-B-B, 4-25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 22 nd Ed.2012,3111-B,3-	0.3	No No	N.D.
25	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	Relaxation 1.5	0.12
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-	0.1	0.3	***************************************
27	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-	0.01	No No	0.16
28	Nickel (as Ni)		18 APHA 22 nd Ed.2012,3500-Ni, 3-		Relaxation No	N.D.
		mg/Lit	108 APHA 22 nd Ed.2012,3111-B, 3-	0.02	Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	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.201 <mark>2,3114-C</mark> , 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.
Micro	biological Analysis			I	<u> </u>	
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		detectable in any nl sample	Absent
2	Faecal coliform	MPN/ 100ml	IS:1622:1981: RA:2019		detectable in any nl sample	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019		detectable in any nl sample	Absent
Pesti	cides	1001111	1.2	10011		
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	1	N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995	1	2	N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995		0.01	N.D.
8	Beta-HCH	μg/L	US EPA 508-1995		0.04	N.D.
9	Delta HCH	µg/L	US EPA 508-1995		0.04	N.D.



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

REPORT NO.06924

	TEST REPORT								
SR.	PARAMETER			AS PER IS	10500:2012				
NO.		UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESUL			
10	Alpha-Endosulfan	µg/L	US EPA 508-1995).4	N.D.			
11	Beta-Endosulfan	µg/L	US EPA 508-1995		0.4	N.D.			
12	Endosulfansulphate	µg/L	US EPA 508-1995).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	1	190				
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.

AUTHORIZED SIGNATORY

For ULTIMATE ENVIROLYTICAL SOLUTIONS

REVIEWED BY

End of the test report



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

Name & Address Of The	Customer	REPO	ORT NO	UES/TR/22-	23/0692	5
TO,		LAB	REF NO	UES/22-23/	3	
HINDALCO INDUSTR		DATE	E OF SAMPLING	24/01/2023		
GARE PALMA - IV/5,		DATE	E OF RECEIPT	25/01/2023	}	
U/G COAL MINE, VILL BLOCK-TAMNAR,	AGE – MILUPARA,	DATE	E OF REPORT	29/01/2023		
DISTT RAIGARH (C.	G.) 496107	DATE	E OF ANALYSIS	START: 25/0	1/2023	END: 29/01/2023
		SAMPI	E DETAILS			
SAMPLE TYPE	GROUND WATER	COAC INTE	ORDER /REFERENCE:		VERBAL COMMUNICATION.	
CUSTMER SAMPLE ID	NEAR PRIMARY SCHOOL - S VILLAGE (PIEZOMETER - I	SAKTA DUGWELL)	SAMPLE CONDITION AT RECEIPT		ок	
PACKING OF SAMPLE	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	SEALED	SAMPLE COLLEC	TED BY	СНЕМІ	ST
SAMPLING PROCEDURE 15:3025 (PART 1):1987 RA 20 APHA 22ND ED. 2012,1060-B,			QUANTITY RECEIVED		5 LTR	

REPORT NO.06925

TEST REPORT									
SR.			The state of the s	AS PER IS	10500:2012	Major San Park			
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT			
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1			
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable			
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable			
4	рН	-	APHA 22 nd Ed.2012,4500-H+-B, 4-92	6.5-8.5	NoRelaxati on	7.32			
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-CI-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 CaCO3)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca- B,3-67	-	-	68.0			
14	Magnesium Hardness (as CaCO3)	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 CI)	mg/Lit	APHA 22 nd Ed.2012,4500-CI-B, 4-72	250	1000	17.9			
18	Sulphate (as SO₄)	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	NoRelaxati on	3.7			
20	Phosphate (as P)	mg/Lit	APHA 22ndEd.2012,4500-P-C, 4-153	-	-	N.D.			
21	Sodium (as Na)	mg/Lit	APHA 22nd Ed.2012,3500-Na-B, 3-97	-		18.2			
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87	-	-	1.36			



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

REPORT NO.06925

			TEST REPORT	S. Santill		
SR.			No. 10 April 1985 Apri	AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
23	Boron (as B)	mg/Lit	APHA 22 nd Ed.2012,4500-B-B, 4- 25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 22 nd Ed.2012,3111-B,3-18	0.3	NoRelaxati on	N.D.
25	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.13
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	NoRelaxati on	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 22 nd Ed.2012,3500-Ni, 3- 108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	5	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 22 nd Ed.2012,3500-Cd, 3-	0.003	NoRelaxati	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3-23	0.001	on NoRelaxati	N.D.
					on	
33	Arsenic (as As)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3-38	0.01	0.05 NoRelaxati	N.D.
34	Selenium (as Se)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3-38	0.01	on	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B, 3-69	0.05	NoRelaxati on	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	NoRelaxati on	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003	-	-	N.D.
Micro	biological Analysis	L	2003		<u> </u>	
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		detectable in nl sample	Absent
2	Faecal coliform	MPN/ 100ml	IS:1622:1981: RA:2019	any 100 r	detectable in nl sample	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019		detectable in nl sample	Absent
Pesti	cides	1001111	1	<u> </u>	<u> </u>	
1	p,p DDT	µg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	μg/L	US EPA 508-1995		1	N.D.
4	p,p DDD	µg/L	US EPA 508-1995		1	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.



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

REPORT NO.06925

			TEST REPORT			
SR.				AS PER IS 1	0500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
11	Beta-Endosulfan	μg/L	US EPA 508-1995	0.	4	N.D.
12	Endosulfansulphate	µg/L	US EPA 508-1995	0.	4	N.D.
13	Monocrotophos	μg/L	US EPA 8141A-1994	1		N.D.
14	Ethion	μg/L	US EPA 8141A-1994	3		N.D.
15	Chloropyrifos	μg/L	US EPA 8141A-1994	3	30	
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	-	1	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	0	N.D.
21	Atrazine	µg/L	US EPA 532-2000	2		N.D.
22	Methyl parathion	µg/L	US EPA 8141A-1994	0.	3	N.D.
23	Methyl paraxone	µg/L	US EPA 8141A-1994	-		N.D.
24	Malathion	µg/L	US EPA 8141A-1994	19	0	N.D.
25	Malaoxon	µg/L	US EPA 8141A-1994	-		N.D.
26	Aldrin	µg/L	US EPA 508- 1995	0.0)3	N.D.
27	Dieldrin	µg/L	US EPA 508-1995	0.0)3	N.D.

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

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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

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

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

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

REVIEWED BY

29/01/2023

End of the test report-



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

Name & Address Of The Cu TO.	stomer		REPORT NO	UES/TR/22-23/06897		
			LAB REF NO	UES/22-23/W/014613		
HINDALCO INDUSTRIES LIMITED,			DATE OF SAMPLING	23/01/2023	***************************************	
	4, COAL MINE,VILLAC	3E -	DATE OF RECEIPT	25/01/2023		
BANKHETA, POST			DATE OF REPORT	29/01/2023	***************************************	
DISTT RAIGARH (C.G.) 496107.			DATE OF ANALYSIS	START: 25/01/2023	END: 29/01/2023	
	7 700		SAMPLE DETAILS			
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:	P.O.13552310211, DATED:07.09.2022		
CUSTMER SAMPLE ID	NEAR PRIMARY SCHOOL SIDARPARA VILLAGE, (PIEZOMETER - DUGWEL		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		
IS:3025(PART I):1987 RA 2003; APHA 23RD ED. 2012, 1060-B, 1-39		QUANTITY RECEIVED	5 LTR			

Report No.06897

SR.				AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1.0
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
4	рН	-	APHA 23 nd Ed.2012,4500-H+-B, 4-92	6.5-8.5	No Relaxation	7.27
5	Turbidity	NTU	APHA 23 nd 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 nd Ed.2012,4500-CI-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 23 nd Ed.2012,2540- B, 2- 64	-	-	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 nd Ed.2012,2540- D, 2- 66	-	-	2.2
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	90.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,2340-C, 2-44,45	200	600	110.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Ca-B, 3-67	-	-	74.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	-	-	36.0
15	Calcium (as Ca)	mg/Lit	APHA 23 nd Ed.2012,3500-Ca-B, 3-67	75	200	29.65
16	Magnesium (as Mg)	mg/Lit	APHA 23 nd Ed.2012,3500-Mg-B, 3-84	30	100	8.74
17	Chloride (as CI)	mg/Lit	APHA 23 nd Ed.2012,4500-CI-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	16.6
19	Nitrate (as NO ₃)	mg/Lit	APHA 23 nd Ed.2012,4500−NO₃-B, 4-122	45	No Relaxation	0.62



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

Report No.06897

			TEST REPORT			2.1
SR.	PARAMETER			AS PER IS	10500:2012	
NO.		UNIT	METHOD OF TEST	Acceptable Limit	Permissible	RESUL
20	Phosphate (as P)	mg/Lit	APHA 23nd Ed.2012,4500-P-C, 4-153	-	limit -	N.D.
21	Sodium (as Na)	mg/Lit	APHA 23nd 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	N.D.
25	Fluoride (as F)	mg/Lit	APHA 23 nd Ed.2012,4500-F-B	1	Relaxation 1.5	0.11
26	Manganese (as Mn)	mg/Lit	&D, 4-84 & 87 APHA 23 nd Ed.2012,3111-B, 3-	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	18 APHA 23 nd Ed.2012,3111-B, 3-	0.01	No	
			18 APHA 23 nd Ed.2012,3500-Ni, 3-		Relaxation No	N.D.
28	Nickel (as Ni)	mg/Lit	108 APHA 23 nd Ed.2012,3111-B, 3-	0.02	Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	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	μg/Lit	APHA 23 nd Ed.2012,6440-6-93	0.0001	No	N.D.
39	Hydrocarbon (PAH) Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA	0.5	Relaxation No	N.D.
40	Oil & Grease	mg/Lit	2003 IS 3025 (Part 39):1991, RA		Relaxation	
	biological Analysis	mg/Lit	2003			N.D.
	Diological Allalysis	MPN/		Y	- Out the state of	
1	Total Coliforms	100 ML	IS:1622:1981: RA:2019	Shall not be de 100 ml	tectable in any sample	Absent
2	Faecal coliform	MPN/ 100ml	IS:1622:1981: RA:2019		tectable in any sample	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be de	tectable in any sample	Absent
esti	cides	100111		1001111	Sample	
1	p,p DDT	µg/L	US EPA 508-1995	1	L	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		<u> </u>	N.D.
3	p,pDDE	µg/L	US EPA 508-1995		L 1	N.D.



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

Report No.06897

	and the state of t		TEST REPORT			
SR.				AS PER IS 1	0500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
4	p,p DDD	µg/L	US EPA 508-1995	1		N.D.
5	O,p DDD	µg/L	US EPA 508-1995	1		N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995	2		N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	0.0)1	N.D.
8	Beta-HCH	µg/L	US EPA 508-1995	0.0)4	N.D.
9	Delta HCH	μg/L	US EPA 508-1995	0.0)4	N.D.
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0.	4	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	19	0	N.D.
25	Malaoxon	µg/L	US EPA 8141A-1994	-		N.D.
26	Aldrin	µg/L	US EPA 508- 1995	0.0	3	N.D.
27	Dieldrin	µg/L	US EPA 508-1995	0.0		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 for15 days after issue of test report unless otherwise agreed with customer.

End of the test report-

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

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

REVIEWED BY



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

Name & Address Of The Customer REPORT NO UES/TR/22-23/06898 TO. LAB REF NO UES/22-23/W/014614 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 P.O. 13552310211, ORDER /REFERENCE: NEAR PRIMARY SCHOOL - BELJOR DATED: 07.09.2022 CUSTMER SAMPLE ID SAMPLE CONDITION AT RECEIPT VILLAGE (PIEZOMETER - DUGWELL) 3 L X 1 NO. PVC CAN
1 L X 1 NO. PVC CAN
1 L X 1 NO. GLASS BOTTLE PACKING OF SAMPLE SAMPLE COLLECTED BY CHEMIST SAMPLING PROCEDURE IS:3025 (PART I):1987 RA 2003; QUANTITY RECEIVED APHA 22ND ED. 2012, 1060-B, 1-39 5 LTR

Report No.06898

SR.				AS PER IS	10500:2012	4.2.6.6	
NO.	PARAMETER	PARAMETER UNIT	METHOD OF TEST	Acceptable Permissible Limit limit		RESULT	
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1	
2	Odour		IS 3025(part-5)	Agreeable	Agreeable	Agreeable	
3	Taste		IS 3025(part-8)	Agreeable	Agreeable	Agreeable	
4	рН	-	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-CI-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	- 4	-	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 CI)	mg/Lit	APHA 23 nd Ed.2012,4500-CI-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/L <mark>i</mark> t	APHA 23nd Ed.2012,4500-P-C, 4-153	-	-	N.D.	
21	Sodium (as Na)	mg/Lit	APHA 23nd Ed.2012,3500-Na-B,	r=	-	7.1	



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

Report No.06898

			TEST REPORT		4	
SR.	PARAMETER			AS PER IS	10500:2012	
NO.	FARAIL LER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESUL
			3-97		mut	
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	N.D.
25	Fluoride (as F)	mg/Lit	APHA 23 nd Ed.2012,4500-F-B	1	Relaxation 1.5	
26	Manganese (as Mn)	mg/Lit	&D, 4-84 & 87 APHA 23 nd Ed.2012,3111-B, 3-			0.11
27			18 APHA 23 nd Ed.2012,3111-B, 3-	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	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.
1icro	biological Analysis	kan maan maan ma <mark>n</mark> maan	d	Net 1.40 - 1.00 - 1.00 - 1.00 - 1.00 - 1.00 - 1.00 - 1.00 - 1.00 - 1.00 - 1.00 - 1.00 - 1.00 - 1.00 - 1.00 - 1	L.,	
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		detectable in nl sample	Absent
2	Faecal Coliform	MPN/ 100ml	IS:1622:1981: RA:2019	Shall not be	detectable in nl sample	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be	detectable in ml sample	Absent
estic	cides		A	9.1.1		***************************************
1	p,p DDT	μg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995	************************	1	N.D.
3	p,pDDE	µg/L	US EPA 508-1995		1	N.D.
4	p,p DDD	µg/L	US EPA 508-1995		1	N.D.
5	O,p DDD	μg/L	US EPA 508-1995		1	N.D.



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

Report No.06898

TEST REPORT									
SR.	PARAMETER			AS PER IS	10500:2012				
NO.		PARAMETER UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT			
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995		2	N.D.			
7	Alpha-HCH	µg/L	US EPA 508-1995	0.	01	N.D.			
8	Beta-HCH	µg/L	US EPA 508-1995	0.	04	N.D.			
9	Delta HCH	µg/L	US EPA 508-1995	0.	04	N.D.			
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.			
11	Beta-Endosulfan	μg/L	US EPA 508-1995	0	.4	N.D.			
12	Endosulfansulphate	µg/L	US EPA 508-1995	0	.4	N.D.			
13	Monocrotophos	µg/L	US EPA 8141A-1994		1	N.D.			
14	Ethion	μg/L	US EPA 8141A-1994	3		N.D.			
15	Chloropyrifos	µg/L	US EPA 8141A-1994	3	30				
16	Phorate	µg/L	US EPA 8141A-1994		2	N.D.			
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994	•	-	N.D.			
18	Phoratesulphone	µg/L	US EPA 8141A-1994			N.D.			
19	2,4-D	μg/L	US EPA 515.1-1995	3	0	N.D.			
20	Alachlor	µg/L	US EPA 508- 1995	2	0	N.D.			
21	Atrazine	μg/L	US EPA 532-2000		2	N.D.			
22	Methyl parathion	µg/L	US EPA 8141A-1994	0	.3	N.D.			
23	Methyl paraxone	µg/L	US EPA 8141A-1994		-	N.D.			
24	Malathion	µg/L	US EPA 8141A-1994	19	90	N.D.			
25	Malaoxon	µg/L	US EPA 8141A-1994		-	N.D.			
26	Aldrin	µg/L	US EPA 508- 1995	0.	03	N.D.			
27	Dieldrin	μg/L	US EPA 508-1995	0.	03	N.D.			

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

Terms & conditions

REMARKS: RESULTS ARE AS ABOVE

> 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.

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATOR

REVIEWED BY

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,

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



Letter No.: HIL/EC/GP-IV/5 -Q4/2022-23/ _8

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

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

Annexure-5



Recognized by Ministry of Environment Forest and Climate Change under EP act 1986

Name & Address Of The Custo	omer	REPORT NO	UES/TR/22-23/039	12	
•	TRIES LIMITED, GARE	LAB REF NO	UES/22-23/AAQM/09578-09586		
		DATE OF SAMPLING	03/10/2022 to 29	/10/2022	
PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR,		DATE OF RECEIPT	04/10/2022 to 31,	/10/2022	
		DATE OF REPORT	02/11/2022		
DISTT RAIGARH	(C.G.) 496107	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,DAT	TED:07.09.2022	
SAMPLING LOCATION	MAIN OFFICE AREA, MILUPAN	RA			
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLING PROCEDURE	AS PER METHOD REFERENCE				
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM10): 1X1 SO2: 30MLX1 NO. PVC BOTTI RUBBER BLADDER: 1X1 NO.	NO., FILTER PAPER (PM2 E, NO2: 30MLX1 NO. PVC	2.5): 1X1 NO. C BOTTLE		

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM_{10})	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0
Mercury (Hg)	EPA Method IO-5	7.0

TEST REPORT									
Date of Sampling	PM ₁₀ μg/m³	PM _{2.5} μg/m ³	SO₂ µg/m³	NO ₂ µg/m³	CO* mg/m³	Hg ng/m³			
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	0.7	27	0.5				
14.10.2022	46	26	12	26	0.3	N.D.			
17.10.2022	49	22	11	25	0.9	N.D.			
21.10.2022	51	25	09	21	ļ	N.D.			
26.10.2022	56	29	14		0.7	N.D.			
29.10.2022	52			29	0.4	N.D.			
emarks: * Duration		27	12	22	0.6	N.D.			

Terms & conditions

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

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

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

Holle. 02/11/22 REVIEWED BY

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

End of the test report.....



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

Name & Address Of The Custo TO, HINDALCO INDUST PALMA – IV/5, MILU MINE, VILLAGE – M BLOCK-TAMNAR, DISTT RAIGARH	TRIES LIMITED, GARE UPARA U/G COAL IILUPARA,	REPORT NO LAB REF NO DATE OF SAMPLING DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS	UES/TR/22-23/04768 UES/22-23/AAQM/010 04/11/2022 to 28/1 05/11/2022 to 29/1 02/12/2022 START: 05/11/2022	0934-010941 11/2022	
		SAMPLE DETAILS		a Military and the second	
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED: 07.09.2022		
SAMPLING LOCATION	MAIN OFFICE AREA, MILUPAF	ZA.			
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST	2	
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 VolI	100		
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60		
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80		
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80		
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0		
Mercury (Hg)	EPA Method IO-5			

TEST REPORT						
Date of Sampling	РМ ₁₀ µg/m ³	PM _{2.5} μg/m ³	SO ₂ µg/m ³	NO ₂ μg/m ³	CO* mg/m³	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.

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.....



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	IPT 03/12/2022 to 27/12/2022		
		LAB REF NO			
		DATE OF SAMPLING			
		DATE OF RECEIPT			
		DATE OF REPORT			
		DATE OF ANALYSIS	START: 03/12/2022	END: 31/12/2022	
		SAMPLE DETAILS		《图》 第二章	
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 SO2: 30MLX1 NO. PVC BOTTI RUBBER BLADDER: 1X1 NO.				

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

TEST REPORT						
Date of Sampling	PM ₁₀ μg/m ³	PM _{2.5} μg/m ³	SO ₂ μg/m³	NO ₂ μg/m ³	CO* mg/m³	Hg ng/m³
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.

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 REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

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



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

Name & Address Of The Custo	mer	REPORT NO	UES/TR/22-23/06822		
•	TDIEC LIMITED CARE	LAB REF NO	UES/22-23/AAQM/01	14378-014385	
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL		DATE OF SAMPITAC		/01/2023	
MINE, VILLAGE - M		DATE OF RECEIPT	03/01/2023 to 28/	/01/2023	
BLOCK-TAMNAR,	ILUFAKA,	DATE OF REPORT	31/01/2023		
DISTT RAIGARH	(C.G.) 496107	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, DA1	TED:07.09.2022	
SAMPLING LOCATION	MAIN OFFICE AREA, MILUPAL	RA	.4		
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLING PROCEDURE	AS PER METHOD REFERENCE		1		
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM10): 1X1 SO2: 30MLX1 NO. PVC BOTT; RUBBER BLADDER: 1X1 NO.	NO., FILTER PAPER (PM2 LE, NO2: 30MLX1 NO. PVC	2.5): 1X1 NO. C BOTTLE		

Test Method and NA	AAQM Standard for Ambient Air Quality Monito	ring
Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM_{10})	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4 - 0
Mercury (Hg)	EPA Method IO-5	

TEST REPORT						
Date of Sampling	PM ₁₀ μg/m ³	PM _{2.5} μg/m ³	SO₂ µg/m³	NO ₂ μg/m ³	CO* mg/m³	Hg ng/m³
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.

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 oth

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

Relle 31/01/23 **REVIEWED BY**

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

-End of the test report.....

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



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

Name & Address Of The Custon	mer	REPORT NO	UES/TR/22-23/0813	3
TO,		LAB REF NO	UES/22-23/AAQM/01	6264-016271
	TRIES LIMITED, GARE	DATE OF SAMPLING	03/02/2023 to 27/	02/2023
PALMA – IV/5, MILI		DATE OF RECEIPT	04/02/2023 to 28/	02/2023
MINE, VILLAGE – N	IILUPARA,	DATE OF REPORT	03/03/2023	
BLOCK-TAMNAR, DISTT RAIGARH	(C.G.) 496107	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, DA	TED:07.09.2022
SAMPLING LOCATION	MAIN OFFICE AREA, MILUPAI	RA		
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST	
SAMPLING PROCEDURE	AS PER METHOD REFERENCE			
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM10): 1X1 SO2: 30MLX1 NO. PVC BOTTI RUBBER BLADDER: 1X1 NO.	•	-	

Test Method and NA	AQM Standard for Ambient Air Quality Monito	ring
Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM_{10})	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60
Sulphur Dioxide (${ m SO}_2$)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0
Mercury (Hg)	EPA Method IO-5	

TEST REPORT						
Date of Sampling	PM ₁₀ μg/m³	PM _{2.5} μg/m ³	SO₂ µg/m³	NO₂ μg/m³	CO* mg/m³	Hg ng/m³
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.

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 otherwith the state of t

Pohouhas 03/03/2023 **REVIEWED BY**

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

End of the test report.....



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

Name & Address Of The Custo	mer	REPORT NO	UES/TR/22-23/09160	
то,		LAB REF NO	UES/22-23/AAQM/01	
	TRIES LIMITED, GARE	DATE OF SAMPLING	03/03/2023 to 27/0	03/2023
PALMA - IV/5, MILI		DATE OF RECEIPT	04/03/2023 to 28/0	03/2023
MINE, VILLAGE – N BLOCK-TAMNAR,	MILUPAKA,	DATE OF REPORT	30/03/2023	
DISTT RAIGARH	(C.G.) 496107	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, DAT	TED: 07.09.2022
SAMPLING LOCATION	MAIN OFFICE AREA, MILUPAN	RA.		
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST	
SAMPLING PROCEDURE	AS PER METHOD REFERENCE			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM10): 1X1 SO2: 30MLX1 NO. PVC BOTTI RUBBER BLADDER: 1X1 NO.	The state of the s		

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

		TES	T REPOR			
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*	Hg ng/m³
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.

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

Peroular 30/03/2023

Nagar Rabite S

For ULTIMATE ENVIROLYTICAL SOLUTIONS

30/03/23

AUTHORIZED SIGNATORY

REVIEWED BY

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



Recognized by Ministry of Environment Forest and Climate Change under EP act 1986

Name & Address Of The Custos TO.	ner	REPORT NO	UES/TR/22-23/039	913
,	RIES LIMITED, GARE	LAB REF NO	UES/22-23/AAQM/0	09587-09594
PALMA - IV/5, MILL		DATE OF SAMPLING .	03/10/2022 to 29	9/10/2022
MINE, VILLAGE - M		DATE OF RECEIPT	04/10/2022 to 31	L/10/2022
BLOCK-TAMNAR,	LOFAIM,	DATE OF REPORT	02/11/2022	
DISTT RAIGARH	(C.G.) 496107	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, MILL	JPARA		
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEM	IST
SAMPLING PROCEDURE	AS PER METHOD REFERENCE	***************************************		
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTT RUBBER BLADDER: 1X1 NO.	NO., FILTER PAPER (PM ₂ . LE, NO ₂ : 30MLX1 NO. PVC	5): 1X1 NO. BOTTLE	

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

РМ _{2.5} µg/m³ 22 26 21	SO ₂ μg/m ³ 18 11	NO ₂ µg/m³ 27 21	CO* mg/m³ 0.6 0.7	Hg ng/m³ N.D. N.D.
22	18 11	27 21	0.6 0.7	N.D.
		<u> </u>	0.7	
21	0.9			IV.D.
		29	0.4	N.D.
26	12	24	0.5	N.D.
29	15	<u> </u>		N.D.
21		<u> </u>		
25	<u> </u>			N.D.
				N.D.
	21 25 24	21 14 25 13 24 11	21 14 27 25 13 22 24 11 26	21 14 27 0.8 25 13 22 0.5

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.

02/11/22

REVIEWED BY

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

-End of the test report.....

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



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

Name & Address Of The Customer UES/TR/22-23/04769 REPORT NO TO, UES/22-23/AAQM/010942-010949 LAB REF NO **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 CUSTOMER REF. NO. & AMBIENT AIR QUALITY MONITORING FOR P.O. 13552310212, DATED: 07.09.2022 MONITORING DATE SAMPLING LOCATION HIL STAFF QUARTER, MILUPARA DURATION OF SAMPLING 24 HOURS SAMPLE COLLECTED BY LABORATORY CHEMIST SAMPLING PROCEDURE AS PER METHOD REFERENCE FILTER PAPER (PM10): 1X1 NO., FILTER PAPER (PM25): 1X1 NO. SAMPLE SO₂: 30MLX1 NO. PVC BOTTLE, NO₂: 30MLX1 NO. PVC BOTTLE QUANTITY/PACKING RUBBER BLADDER: 1X1 NO.

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

TEST REPORT						
Date of Sampling	PM ₁₀ μg/m ³	PM _{2.5} μg/m ³	SO₂ µg/m³	NO ₂ µg/m³	CO* mg/m³	Hg ng/m³
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.

Terms & conditions

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

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

02/12/2022 REVIEWED BY THE RADIT MAGAIL R

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

AN ISO: 9001:2015 / ISO: 14001:2015 / ISO: 14001:2015 / ISO: 45001:2018 CERTIFIED L'ABORATORY



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/22-23/06128			
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, MILL	UPARA	
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST
SAMPLING PROCEDURE	AS PER METHOD REFERENCE	2	
SAMPLE QUANTITY/PACKING	The state of the s	1 NO., FILTER PAPER ($PM_{2.5}$) TILE, NO $_2$: 30MLX1 NO. PVC I	

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

TEST REPORT						
Date of Sampling	PM ₁₀ μg/m ³	PM _{2.5} μg/m ³	SO₂ μg/m³	NO ₂ μg/m ³	CO* mg/m³	Hg ng/m³
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	4 4	24	15	20	0.4	N.D.
26.12.2022	47	22	10	24	0.5	N.D.

Terms & conditions

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

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

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

31/12/22 REVIEWED BY For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

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



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

Name & Address Of The Custon	mer	REPORT NO	UES/TR/22-23/068	323	
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 02/01/2023 to 27/01/2023		
		DATE OF SAMPLING			
		DATE OF RECEIPT 03/01/2023 to 28/01/2		3/01/2023	
		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, MILUE	PARA			
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLING PROCEDURE	AS PER METHOD REFERENCE				
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTT RUBBER BLADDER: 1X1 NO.	NO., FILTER PAPER (PM ₂ . LE, NO ₂ : 30MLX1 NO. PVC	5): 1X1 NO. BOTTLE		

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

TEST REPORT						
Date of Sampling	PM ₁₀ μg/m ³	PM _{2.5} μg/m ³	SO₂ μg/m³	NO ₂ μg/m ³	CO* mg/m³	Hg ng/m³
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.

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

Bell 31/01/23

REVIEWED BY

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

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



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

Name & Address Of The 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/22-23/081	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	SAMPLING PROCEDURE AS PER METHOD REFERENCE					
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM_{10}) : 1X1 NO., FILTER PAPER $(PM_{2.5})$: 1X1 NO. SO ₂ : 30mLX1 NO. PVC BOTTLE, NO ₂ : 30mLX1 NO. PVC BOTTLE RUBBER BLADDER: 1X1 NO.					

Test Method and NAAQM Standard for Ambient Air Quality Monitoring

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM_{10})	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns $(PM_{2.5})$	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60
Sulphur Dioxide (SO_2)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO_2)	IS 5182 (Part 6): 2006 &CPCB Guidelines VolI	80
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0
Mercury (Hg)	EPA Method IO-5	

TEST REPORT							
Date of Sampling	PM ₁₀ μg/m ³	PM _{2.5} μg/m ³	SO₂ µg/m³	NO₂ µg/m³	CO* mg/m³	Hg ng/m³	
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.	

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.

WAGAR RING



TO THE CONTROL OF THE PARTY OF

AUTHORIZED SIGNATORY

For ULTIMATE ENVIROLYTICAL SOLUTIONS

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



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

Name & Address Of The Customer

TO,

HINDALCO INDUSTRIES LIMITED, GARE
PALMA – IV/5, MILUPARA U/G COAL
MINE,VILLAGE – MILUPARA,
BLOCK-TAMNAR,
DISTT. - RAIGARH (C.G.) 496107

REPORT NO	UES/TR/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, MILUP	ARA	
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST
SAMPLING PROCEDURE	AS PER METHOD REFERENCE		
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTTI RUBBER BLADDER: 1X1 NO.		

Test Method and NAAQM Standard for Ambient Air Quality Monitoring

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

TEST REPORT						
Date of Sampling	PM ₁₀ μg/m³	PM _{2.5} μg/m ³	SO₂ μg/m³	NO ₂ μg/m ³	CO* mg/m³	Hg ng/m³
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.

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

Bhouhas 30/03/2023

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

30/03/23

AUTHORIZED SIGNATORY

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



Recognized by Ministry of Environment Forest and Climate Change under EP act 1986

Name & Address Of The Custon	mer	REPORT NO	UES/TR/22-23/03914		
	TRIES LIMITED CADE	LAB REF NO		9595-9602	
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF SAMPLING	03/10/2022 to 29		
		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.	P.O.13552310212, DA	TED: 07.09.2022	
SAMPLING LOCATION	HIL COLONY,KONDKEL				
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLING PROCEDURE	AS PER METHOD REFERENCE	1			
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTTI RUBBER BLADDER: 1X1 NO.	NO., FILTER PAPER (PM LE, NO ₂ : 30MLX1 NO. PV	M _{2.5}): 1X1 NO. VC BOTTLE		

Parameter	Method Reference	NAAQM
Particulate Matter size less than 10 microns (PM_{10})	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	Standard
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80
Carbon Monoxide (CO)* Mercury (Hg)	IS 5182(Part 10):1999, RA 2003	4.0
increary (119)	EPA Method IO-5	

TEST REPORT							
Date of Sampling	PM ₁₀ μg/m³	PM _{2.5} μg/m ³	SO ₂ μg/m³	NO ₂ μg/m ³	CO* mg/m³	Hg	
03.10.2022	44	21	15	22	0.4	ng/m³	
07.10.2022	55	2.4	18	2.6		N.D.	
10.10.2022	48	29	14		0.7	N.D.	
14.10.2022	57	26		28	0.4	N.D.	
17.10.2022		è	11	24	0.5	N.D.	
	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		
29.10.2022	43	25				N.D.	
marks: * Duratio			16	24	0.7	N.D.	

Terms & conditions

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

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

Rell 02/11/22

REVIEWED BY

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

-End of the test report.....



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

Name & Address Of The Customer REPORT NO UES/TR/22-23/04770 TO. LAB REF NO UES/22-23/AAQM/010950-010957 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**, **DISTT. - RAIGARH (C.G.) 496107** DATE OF ANALYSIS START: 05/11/2022 END: 02/12/2022 SAMPLE DETAILS AMBIENT AIR QUALITY CUSTOMER REF. NO. MONITORING FOR P.O. 13552310212, DATED: 07.09.2022 MONITORING & DATE SAMPLING LOCATION HIL COLONY, KONDKEL SAMPLE COLLECTED DURATION OF SAMPLING 24 HOURS LABORATORY CHEMIST SAMPLING PROCEDURE AS PER METHOD REFERENCE FILTER PAPER (PM₁₀): 1X1 NO., FILTER PAPER (PM_{2.5}): 1X1 NO. SAMPLE SO2: 30MLX1 NO. PVC BOTTLE, NO2: 30MLX1 NO. PVC BOTTLE QUANTITY/PACKING RUBBER BLADDER: 1X1 NO.

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

TEST REPORT						
Date of Sampling	PM ₁₀ μg/m³	PM _{2.5} μg/m ³	SO ₂ μg/m ³	NO ₂ μg/m ³	CO* mg/m³	Hg ng/m³
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.

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

THE TOWN & LINCOLD &

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

REVIEWED BY

02/12/2022

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



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

Name & Address Of The Custon	ner	REPORT NO	UES/TR/22-23/061	29	
TO,		LAB REF NO	UES/22-23/AAQM/0	13038-013045	
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL		DATE OF SAMPLING	02/12/2022 to 26	/12/2022	
		DATE OF RECEIPT	03/12/2022 to 27	/12/2022	
MINE, VILLAGE - M	ILUPARA,	DATE OF REPORT	31/12/2022		
BLOCK-TAMNAR, DISTT RAIGARH	(C.G.) 496107	DATE OF ANALYSIS	START: 03/12/2022	END: 31/12/2022	
		SAMPLE DETAILS	1		
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212,DA	TED: 07.09.2022	
SAMPLING LOCATION	HIL COLONY, KONDKEL				
DURATION OF SAMPLING	24 HOURS	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 VolI	100			
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60			
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80			
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80			
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0			
Mercury (Hg)	EPA Method IO-5				

TEST REPORT						
Date of Sampling	PM ₁₀ μg/m³	PM _{2.5} μg/m ³	SO₂ µg/m³	NO ₂ μg/m ³	CO* mg/m³	Hg ng/m³
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	4 4	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.

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.

Belle 31/12/22

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

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



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

Name & Address Of The Custon	ner	REPORT NO	UES/TR/22-23/068	24	
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, DA	TED:07.09.2022	
SAMPLING LOCATION	HIL COLONY, KONDKEL				
DURATION OF SAMPLING 24 HOURS		SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLING PROCEDURE	AS PER METHOD REFERENCE	*			
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTT RUBBER BLADDER: 1X1 NO.				

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

TEST REPORT						
Date of Sampling	PM ₁₀ μg/m ³	PM _{2.5} μg/m ³	SO₂ μg/m³	NO ₂ μg/m ³	CO* mg/m³	Hg ng/m³
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.

Terms & conditions

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

Redu 31/01/23 **REVIEWED BY**

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

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



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

Name & Address Of The Customer UES/TR/22-23/08135 REPORT NO TO, LAB REF NO UES/22-23/AAQM/016280-16287 HINDALCO INDUSTRIES LIMITED, GARE 03/02/2023 to 27/02/2023 DATE OF SAMPLING PALMA – IV/5, MILUPARA U/G COAL DATE OF RECEIPT 04/02/2023 to 28/02/2023 MINE, VILLAGE - MILUPARA, 03/03/2023 DATE OF REPORT **BLOCK-TAMNAR,** START: 04/02/2023 DATE OF ANALYSIS END: 02/03/2023 **DISTT. - RAIGARH (C.G.) 496107** SAMPLE DETAILS AMBIENT AIR QUALITY CUSTOMER REF. NO. MONITORING FOR P.O.13552310212, DATED: 07.09.2022 MONITORING & DATE SAMPLING LOCATION HIL COLONY, KONDKEL SAMPLE COLLECTED DURATION OF SAMPLING 24 HOURS LABORATORY CHEMIST SAMPLING PROCEDURE AS PER METHOD REFERENCE FILTER PAPER (PM $_{10}$): 1X1 NO., FILTER PAPER (PM $_{2.5}$): 1X1 NO. SO2: 30MLX1 NO. PVC BOTTLE, NO2: 30MLX1 NO. PVC BOTTLE QUANTITY/PACKING RUBBER BLADDER: 1X1 NO.

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

TEST REPORT						
Date of Sampling	PM ₁₀ μg/m ³	PM _{2.5} μg/m ³	SO₂ µg/m³	NO₂ µg/m³	CO* mg/m³	Hg ng/m³
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.

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

Pohouha2 03/03/2023

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

End of the test report......



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

Name & Address Of The 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/22-23/091	62
LAB REF NO	UES/22-23/AAQM/0:	17566-017573
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

DIOTTI KAICAKII	(6.6.) 430107		, , , , , , , , , , , , , , , , , , , ,
	医热性性 基础性 医黑线性	SAMPLE DETAILS	是也不是他的主义,我们也是一个人的一个人的,也是一个人的人的一个人的人的。 第一章
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED: 07.09.2022
SAMPLING LOCATION	HIL COLONY,KONDKEL		
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST
SAMPLING PROCEDURE	AS PER METHOD REFERENCE	-	
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOT: RUBBER BLADDER: 1X1 NO.		

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

TEST REPORT						
Date of Sampling	PM ₁₀ μg/m ³	PM _{2.5} μg/m ³	SO ₂ μg/m ³	NO ₂ μg/m ³	CO* mg/m³	Hg ng/m³
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.

Terms & conditions

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

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

Pahouhan 30/03/2023

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

30/03/23

AUTHORIZED SIGNATORY

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



Recognized by Ministry of Environment Forest and Climate Change under EP act 1986

Name & Address Of The Custon	mer	REPORT NO	UES/TR/22-23/03915 UES/22-23/AAQM/09603-09610		
•	TRIES LIMITED, GARE	LAB REF NO			
PALMA - IV/5. MILLI	IPARA II/G COAL	DATE OF SAMPLING	03/10/2022 to 29		
PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF RECEIPT	04/10/2022 to 31		
		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	***************************************	i ————————————————————————————————————		
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTT: RUBBER BLADDER: 1X1 NO.	NO., FILTER PAPER (PM2 LE, NO2: 30MLX1 NO. PVC	5): 1X1 NO. BOTTLE		

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

TEST REPORT						
Date of Sampling	PM ₁₀ μg/m³	PM _{2.5} μg/m ³	SO ₂ µg/m³	NO ₂ μg/m ³	CO* mg/m³	Hg
03.10.2022	. 55	25	11	26	0.7	ng/m³
07.10.2022	59	2.5	10	23	ļ	N.D.
10.10.2022	54	27	16		0.5	N.D.
14.10.2022	58	29		23	0.7	N.D.
17.10.2022	61		18	24	0.5	N.D.
21.10.2022		33	15	22	0.4	N.D.
	60	26	18	26	0.5	N.D.
26.10.2022	64	32	19	2.9	0.9	
29.10.2022	59	27	17			N.D.
emarks: * Duratio		<u> </u>	1 /	28	0.7	N.D.

Terms & conditions

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

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

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

Helle-02/11/22

REVIEWED BY

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

-End of the test report.....



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

Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR,		REPORT NO LAB REF NO DATE OF SAMPLING DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS	UES/TR/22-23/047 UES/22-23/AAQM/0 04/11/2022 to 28 05/11/2022 to 29 02/12/2022 START: 05/11/2022	10958-010965 /11/2022	
DISTT RAIGARH (•	SAMPLE DETAILS	SIART: 03/11/2022	END: 02/12/2022	
	A Martin	OTHER DESIGNATION			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	P 0 13552310212 DATED:07 00 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			

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

TEST REPORT						
Date of Sampling	PM ₁₀ µg/m ³	PM _{2.5} µg/m ³	SO ₂ μg/m ³	NO ₂ μg/m ³	CO* mg/m³	Hg ng/m³
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.

Terms & conditions

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

 Test sample will be retained for 15 days after issue of test report unless other.

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

Sell-02/12/2022 **REVIEWED BY**



For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

AN ISO: 9001:2015-7150: 14001:2019/15019300/9018-CERTIFIED-LABORATORY



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

V			UES/TR/22-23/06130			
то,			UES/22-23/AAQM/0	13046-013053		
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF SAMPLING	02/12/2022 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 CUSTOMER REF. NO. & P.O.13552310212, DATED: 07.09.2022			TED: 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 VolI	100		
Particulate Matter size less than 2.5 microns (PM _{2.5})	IS 5182 (Part 24): 2019 CPCB Guidelines VolI	60		
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80		
Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80		
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0		
Mercury (Hg)	EPA Method IO-5			

TEST REPORT						
Date of Sampling	PM ₁₀ μg/m ³	PM _{2.5} μg/m ³	SO ₂ μg/m ³	NO ₂ μg/m ³	CO* mg/m³	Hg ng/m³
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.

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.

Folle. 31/12/22

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

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

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



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

Name & Address Of The Custon	mer	REPORT NO	UES/TR/22-23/06825 UES/22-23/AAQM/014402-014409		
•	TRIES LIMITED, GARE	LAB REF NO			
PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF SAMPLING	02/01/2023 to 27		
		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. &	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 SO ₂ : 30MLX1 NO. PVC BOTTI RUBBER BLADDER: 1X1 NO.	NO., FILTER PAPER (PM ₂ LE, NO ₂ : 30MLX1 NO. PVC	5): 1X1 NO. BOTTLE		

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

TEST REPORT						
Date of Sampling	PM ₁₀ μg/m ³	PM _{2.5} μg/m ³	SO ₂ μg/m³	NO ₂ μg/m ³	CO*	Hg
02.01.2023	50	24	16	27	mg/m³	ng/m ³
06.01.2023	48	25	14	24	0.7	N.D.
09.01.2023	49	23	15		0.6	N.D.
13.01.2023	46	27		23	0.9	N.D.
16.01.2023		<u> </u>	17	25	0.5	N.D.
	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	
27.01.2023	49	28	15	21	0.4	N.D.

Terms & conditions

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

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

Relle 31/01/23 REVIEWED BY

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

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

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



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

Name & Address Of The Custom	ner .	REPORT NO	UES/TR/22-23/081	36	
TO,	DIEG ! !!!!TED GADE	LAB REF NO	UES/22-23/AAQM/0	16288-016295	
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE,VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE OF SAMPLING	03/02/2023 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	
	٤	SAMPLE DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY MONITORING	CUSTOMER REF. NO. & DATE	P.O.13552310212,DA	TED:07.09.2022	
SAMPLING LOCATION	ETP AREA, KONDKEL				
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY	LABORATORY CHEMIST	7	
SAMPLING PROCEDURE	IPLING PROCEDURE AS PER METHOD REFERENCE				
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM_{10}) : 1X1 NO., FILTER PAPER $(PM_{2.5})$: 1X1 NO. SO_2 : 30MLX1 NO. PVC BOTTLE, NO ₂ : 30MLX1 NO. PVC BOTTLE RUBBER BLADDER: 1X1 NO.				

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

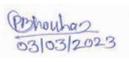
Ţ,	TEST REPORT						
Date of Sampling	PM ₁₀ μg/m³	PM _{2.5} μg/m ³	SO₂ µg/m³	NO ₂ μg/m³	CO* mg/m³	Hg ng/m³	
03.02.2023	48	24	16	27	0.5	N.D.	
06.02.2023	46	25	13	23	0.4	N.D.	
10.02.2023	50	23	15	25	0.7	N.D.	
13.02.2023	47	27	17	24	0.5	N.D.	
17.02.2023	45	28	18	22	0.6	N.D.	
20.02.2023	46	27	14	26	0.8	N.D.	
24.02.2023	51	29	15	28	0.9	N.D.	
27.02.2023	50	30	16	23	0.4	N.D.	
Remarks: * Duratio	n of sampling f	or CO - 1 Hour	, N.D Not D	etected			

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 unles

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



REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

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



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

Name & Address Of The 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/22-23/091	.63			
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	i	<u> </u>
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTT RUBBER BLADDER: 1X1 NO.		

Test Method and NAAQM Standard for Ambient Air Quality Monitoring

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

TEST REPORT						
Date of Sampling	PM ₁₀ μg/m ³	PM _{2.5} μg/m ³	SO ₂ μg/m ³	NO ₂ μg/m ³	CO* mg/m³	Hg ng/m³
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.

s. • Duration of Sampling for CO - 1 Hour, N.D. - Not Detec

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

Pohouhan 30/03/2023

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

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



Recognized by Ministry of Environment Forest and Climate Change under EP act 1986

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/22-23/03916

LAB REF NO.

UES/22-23/N/09611-09620

DATE OF REPORT

02/11/2022

17/10/2022 to 18/10/2022

SAMPLE DETAILS

	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

	1	EST RE	PORT	Temporal Control of Control Co	
	RESULT		LIMIT (INDUSTRIAL ZONE)		
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
OFFICE AREA, MILUPARA	dB(A)	54	41		AND THE PROPERTY OF THE PROPER
MILUPARA AREA NEAR INCLINE	dB(A)	62	52		70
BUNKER AREA, MILUPARA	dB(A)	69	49		
DG SET AREA, KONDKEL	dB(A)	57	42	75	
MILUPARA MINES WEIGHBRIDGE	dB(A)	60	50	,3	
OFFICE AREA, KONDKEL	dB(A)	56	46		
BUNKER AREA, KONDKEL	dB(A)	62	52		
LOCATION		RESULT		LIMIT (RESI	DENTIAL ZONE)
	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
Outside Plant					
SIDARPARA VILLAGE (GOVT. SCHOOL)	dB(A)	52	41		
HIL COLONY, KONDKEL	dB(A)	49	39	55	45
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.

02/11/22

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

-End of the test report-

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



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

Name & Address of The Customer TO,	REPORT NO.	UES/TR/22-23/04772
HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE,	LAB REF NO.	UES/22-23/N/010966-010975
VILLAGE - MILUPARA,	DATE OF REPORT	02/12/2022
BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107	DATE OF SAMPLING	26/11/2022 to 27/11/2022
SAN	MPLE DETAILS	

	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

	T.	EST REI	PORT		
	RESULT		LIMIT (INDUSTRIAL ZONE)		
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
OFFICE AREA, MILUPARA	dB(A)	56	46		
MILUPARA AREA NEAR INCLINE	dB(A)	63	54	75	70
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	L	
		RESULT		LIMIT (RESIDENTIAL ZONE)	
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
Outside Plant					
SIDARPARA VILLAGE (GOVT. SCHOOL)	dB(A)	53	44		<u> </u>
HIL COLONY, KONDKEL	dB(A)	51	42	55 45	
HIL STAFF QUARTER, MILUPARA	dB(A)	54	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.

02/12/2022

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

AN ISO: 9001:2015-1150: 1400 F.20 95 1/15 045001:2018 CERTIFIED LABORATORY



QUANTITY/ PACKING

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

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

Name & Address of The 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/22-23/06131
		LAB REF NO.	UES/22-23/N/013054-013063
		DATE OF REPORT	03/01/2023
		DATE OF SAMPLING	29/12/2022 to 30/12/2022
	SZ	MPLE DETAILS	
MONITORING FOR	NOISE LEVEL MONITORING		
CUSTOMER REF. NO. & DATE	P.O.13552310212, DATED: 07.09	9.2022	
SAMPLING LOCATION	INSIDE COAL MINE & OUTSIDE	COAL MINE (AS DESCRIE	BED BELOW)
SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLE OHANTITY/ PACKING	NOT APPLICABLE		

TEST REPORT							
	RESULT		LIMIT (INDUSTRIAL ZONE)				
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME		
OFFICE AREA, MILUPARA	dB(A)	58	45				
MILUPARA AREA NEAR INCLINE	dB(A)	64	52		70		
BUNKER AREA, MILUPARA	dB(A)	66	57	75			
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				
		RESULT		LIMIT (RESI	DENTIAL ZONE)		
LOCATION	UNIT	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		45		
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 shouly.

Bell 03/01/23

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

--End of the test report-



SAMPLE

QUANTITY/ PACKING

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/22-23/06826		
		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		
	SI	AMPLE 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				

	П	EST REF	PORT	er out that e stou	
		RES	BULT	LIMIT (IND	USTRIAL ZONE)
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
OFFICE AREA, MILUPARA	dB(A)	57	46		
MILUPARA AREA NEAR INCLINE	dB(A)	63	51		70
BUNKER AREA, MILUPARA	dB(A)	65	55	75	
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		
		RESULT		LIMIT (RESIDENTIAL ZO	
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
Outside Plant					
SIDARPARA VILLAGE (GOVT. SCHOOL)	dB(A)	50	41	FF	4.5
HIL COLONY, KONDKEL	dB(A)	48	39	55	45
HIL STAFF QUARTER, MILUPARA	dB(A)	51	40	***************************************	

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

- > The report for publication, arbitration or as legal dispute is forbidden.
- > Test sample will be retained for 15days after is sue 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

NOT APPLICABLE

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

--End of the test report---



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

Name & Address of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE, VILLAGE – MILUPARA, BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		REPORT NO.	UES/TR/22-23/08137	
		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	
	SA	MPLE 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 BE			ED BELOW)	
SAMPLE COLLECTED BY	LABORATORY CHEMIST			
SAMPLE OUANTITY/ PACKING	NOT APPLICABLE			

TEST REPORT							
		RES	SULT	LIMIT (IND	USTRIAL ZONE)		
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME		
OFFICE AREA, MILUPARA	dB(A)	59	46				
MILUPARA AREA NEAR INCLINE	dB(A)	65	53	75	70		
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				
		RESULT		LIMIT (RESIDENTIAL ZONE)			
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME		
Outside Plant							
SIDARPARA VILLAGE (GOVT. SCHOOL)	dB(A)	53	44		45		
HIL COLONY, KONDKEL	dB(A)	51	41	55 45			
HIL STAFF QUARTER, MILUPARA	dB(A)	54	42				

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.

Bhouhan 03/03/2023

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

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



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

Name & Address of The 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/22-23/09168
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						
		RES	SULT	LIMIT (INDUSTRIAL ZONE)		
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME	
OFFICE AREA, MILUPARA	dB(A)	60	48			
MILUPARA AREA NEAR INCLINE	dB(A)	66	54	75	70	
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			
		RESULT LIMIT (RESIDENTIA		DENTIAL ZONE)		
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME	
Outside Plant						
SIDARPARA VILLAGE (GOVT. SCHOOL)	dB(A)	51	42	FF	45	
HIL COLONY, KONDKEL	dB(A)	50	40	55	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.

Perouhan 28/03/2023



For ULTIMATE ENVIROLYTICAL SOLUTIONS

28/03/23

AUTHORIZED SIGNATORY

REVIEWED BY

Annexure-8



Recognized by Ministry of Environment Forest and Climate Change under EP act 1986

to Name & Audress Of The Customer	Report No	UES/TR/22-23/03917			
To, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/5, MILUPARA U/G COAL MINE, VILLAGE – MILUPARA, BLOCK-TAMNAR,	Lab Ref No	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			
DISTT RAIGARH (C.G.) 496107	Date Of Analysis	START:19/10/2022	END: 28/10/2022		
	SAMPLE DETAILS	SIDESIA SECURIO AGOING DIBESTA A CANADA BULLACA			
		P.O.13552	2310212,		

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	0k				
Packing Of Sample	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected by	Laboratory Chemist				
Sampling Procedure	IS:3025(PART-I):1987 RA APHA 22 ND ED. 2021, 1060		Quantity Received	Approx. 5Ltr.				

	AND THE REAL PROPERTY OF THE P	PARTICIPATION OF THE PARTICIPA		THE ENVIRONMENT (PROTECTION)	
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1
2	Odour	11-12-12	APHA 22 nd Ed. 2012, 2120-B, 2-6	See 6 of Annexure-I	Agreeable
3	Temperature	°C	АРНА 22 nd Ed.2012,2 <mark>130-В,2-13</mark>	Shall not exceed 5°C above the receiving water temperature	25.8
4	рн	-	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.

02/11/22 REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

End of the test report-



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

to Name & Address Of The Customer Report No UES/TR/22-23/04773 Lab Ref No UES/22-23/W/010976 HINDALCO INDUSTRIES LIMITED, GARE Date Of Sampling 27/11/2022 PALMA - IV/5, MILUPARA U/G COAL MINE, 28/11/2022 Date Of Receipt VILLAGE - MILUPARA, 02/12/2022 Date Of Report BLOCK-TAMNAR, Date Of Analysis DISTT. - RAIGARH (C.G.) 496107 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 Sea.	ed Sample Collected by	Laboratory Chemist					
Sampling Procedure	IS:3025(PART-I):1987 RA 2003, APHA 22 ND ED. 2021, 1060-B, 1		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, <mark>2120-B,</mark> 2-6	See 6 of Annexure-I	<1			
2	Odour	-	APHA 22 nd Ed. 2012, <mark>2120-B,</mark> 2-6	See 6 of Annexure-I	Agreeable			
3	Temperature	°C	АРНА 22 nd Ed.2012, <mark>2130-В,2-</mark> 13	Shall not exceed 5°C above the receiving water temperature	25.5			
4	рн		APHA 22 nd Ed.2012 <mark>,4500-H⁺-B,4-9</mark> 2	5.5 to 9.0	7.16			
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.201 <mark>2,4500-C1-G, 4 - 69</mark>	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, 4-15 <mark>3</mark>	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	АРНА 22 nd Ed.2012,3500-Cd, <mark>3-105</mark>	2.0	N.D.			
13	Mercury (as Hg)	mg/L	АРНА 22 nd Ed.2012,3112-B, 3-23	0.01	N.D.			
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.			
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.			
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.			
17	Chemical Oxygen Demand (COD)	mg/L	АРНА 22 nd Ed.2012, 5520-В,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	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.

Terms & conditions

REMARKS: RESULTS ARE AS ABOVE

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

This is for information as the party has asked for above tests

Fell-02/12/2022 REVIEWED BY

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

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



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

to Name & Address Of The C To, HINDALCO INDUS PALMA – IV/5, MI VILLAGE – MILUI	Report No Lab Ref No Date Of Sampling Date Of Receipt Date Of Report	UES/TR/22-23/06132 UES/22-23/W/013064 29/12/2022 30/12/2022 03/01/2023					
BLOCK-TAMNAR DISTT RAIGAR	,	SAMPI	Date Of Analysis	START:30/	END: 03/01/2023		
Sample Type Customer Sample ID	WASTE WATER ETP INLET, KONDKEL	Customer Ref. No. & Date Sample Condition at Receipt		P.O.13552310212, DATED: 07.09. 2022 Ok			
Packing Of Sample	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		
IS:3025(PART-I):1987 RA 2003; APHA 22 ND ED. 2021, 1060-B, 1-39			Quantity Received App		Approx. 5	oprox. 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	рн	·	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

The report for publication, arbitration or as legal dispute is compared to the relation of the result of the resul ed with customer

Roll 03/01/23

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

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



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

to Name & Address Of The	Customer		Report No UES/TR/22-23/06827				
To,	STRIES LIMITED, GAF	DE .	Lab Ref No UES/22-23 Date Of Sampling 24/01/202		3/W/014420 23		
	LUPARA U/G COAL M						
VILLAGE - MILUI		INE,	Date Of Receipt	25/01/202			
BLOCK-TAMNAR	•		Date Of Report 29/01/202		?3		
DISTT RAIGAR	•		Date Of Analysis START:25/01/2023 END:29			END:29/01/2023	
		SAMP	LE DETAILS	4 4 4 1			
Sample Type	Sample Type WASTE WATER			Customer Ref. No. & Date		2310212, DATED: 07.09.	
Customer Sample ID	ETP INLET, KONDKEL	Sample Condition at Receipt		Ok			
Packing Of Sample 3 L X 1 NO. PVC CAN 1 L X 1 NO. 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	3 Temperature °C		АРНА 22 nd Ed.2012,21 <mark>30-В,2-1</mark> 3	Shall not exceed 5°C above the receiving water temperature	24.6		
4	рн	-	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	АРНА 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

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

Kill. 29/01/23

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

-End of the test report-



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

to Name & Address Of The	Customer		Report No	UES/TR/22	PR/22-23/08138		
To,	O-DIEG		Lab Ref No	UES/22-23/W/016306			
	STRIES LIMITED, GA		Date Of Sampling	26/02/202	5/02/2023		
	LUPARA U/G COAL I	WINE,	Date Of Receipt 27/02/2023 Date Of Report 03/03/2023		3		
VILLAGE – MILUF BLOCK-TAMNAR	*						
DISTT RAIGAR			Date Of Analysis	START: 27/02/2023 END: 03/03/2			
		SAMPI	LE 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		
IS:3025(PART-I):1987 RA 2003; APHA 22 ND ED. 2021, 1060-B, 1-39			Quantity Received		Approx. 5Ltr.		

TEST REPORT							
SR. NO.	PARAMETER	UNIT METHOD OF TEST		THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT		
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1		
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable		
3	Temperature	°c	АРНА 22 nd Ed.2012,2130-В,2-13	Shall not exceed 5°C above the receiving water temperature	25.3		
4	рн	-	APHA 22 nd Ed.2012,4500-H+-B,4-92	5.5 to 9.0	7.21		
5	Total Residual		APHA 22 nd Ed.2012,4500-C1-G, 4 - 69	1.0	N.D.		
6	Total Suspended mg/		APHA 22 nd Ed.2012,2540- D, 2-66	100	82.5		
7	7 Dissolved Phosphate (as P)		APHA 22 nd Ed.20 <mark>12,4500-P-C, 4-153</mark>	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	АРНА 22 nd Ed.2012, 5520-В,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

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.

O3103/2023

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

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



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

to Name & Address Of The Customer Report No UES/TR/22-23/09169 To, UES/22-23/W/017593 Lab Ref No **HINDALCO INDUSTRIES LIMITED, GARE** 22/03/2023 Date Of Sampling PALMA - IV/5, MILUPARA U/G COAL MINE, 23/03/2023 Date Of Receipt VILLAGE - MILUPARA, 28/03/2023 Date Of Report **BLOCK-TAMNAR**, Date Of Analysis START: 23/03/2023 END: 27/03/2023 **DISTT. - RAIGARH (C.G.) 496107**

。加州、科州市和 农村中国		SAMPI	LE DETAILS	1
Sample Type WASTE WATER		Customer Ref. No. & Date	P.O.13552310212, DATED: 07.09. 2022	
Customer Sample ID	istomer 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 АРНА 22 [™] ED. 2021, 1060		Quantity Received	Approx. 5Ltr.

THE ENVIRONMENT (PROTECTION)									
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT				
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1				
2	Odour	4.5	APHA 22 nd Ed. 2012, <mark>2120-B,2</mark> -6	See 6 of Annexure-I	Agreeable				
3	Temperature	°C	АРНА 22 nd Ed.2012,2 <mark>130-В,2-</mark> 13	Shall not exceed 5°C above the receiving water temperature	25.1				
4	рн	-	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-C1-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	АРНА 22 nd Ed.2012,3111-В, 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	АРНА 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.				
17	Chemical Oxygen Demand (COD)	mg/L	АРНА 22 nd Ed.2012, 5520-B,5-17	250	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.

Terms & conditions

REMARKS: RESULTS ARE AS ABOVE

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

28/03/2023

For ULTIMATE ENVIROLYTICAL SOLUTIONS

28/03/23

AUTHORIZED SIGNATORY

REVIEWED BY

-End of the test report-----



Recognized by Ministry of Environment Forest and Climate Change under EP act 1986

to Name & Address Of The Customer	Report No	UES/TR/22-23/03918			
To, HINDALCO INDUSTRIES LIMITED, GARE	Lab Ref No	UES/22-23/W/09622			
	Date Of Sampling	18/10/2022			
PALMA - IV/5, MILUPARA U/G COAL MINE,	Date Of Receipt	19/10/2022 02/11/2022			
VILLAGE - MILUPARA,	Date Of Report				
BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107	Date Of Analysis	START: 19/10/2022	END:28/10/2022		
SAMPI	LE DETAILS	A CONTRACT OF THE CONTRACT OF	HOUST CROSS CALCULATION AND AND CALCULATE A CONTROL OF THE CONTROL		

		SAMPI	LE 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	рН	_	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	АРНА 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

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.

02/11/22 REVIEWED BY

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

End of the test report



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

to Name & Address Of The Customer Report No UES/TR/22-23/04774 To, Lab Ref No UES/22-23/W/010977 **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 **DISTT. - RAIGARH (C.G.) 496107** END: 02/12/2022

	大 江	SAMP	LE DETAILS	
Sample Type			Customer Ref. No. & Date	P.O.13552310212, DATED:07.09.2022
Customer Sample ID			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, <mark>2120-B,2</mark> -6	See 6 of Annexure-I	<1				
2	Odour	-	APHA 22 nd Ed. 2012, <mark>2120-B,</mark> 2-6	See 6 of Annexure-I	Agreeable				
3	Temperature	°C	АРНА 22 nd Ed.2012,2 <mark>130-В,2-</mark> 13	Shall not exceed 5°C above the receiving water temperature	25.4				
4	рH	-	APHA 22 nd Ed.2012, <mark>4500-H⁺-B,4-9</mark> 2	5.5 to 9.0	7.48				
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.201 <mark>2,4500-Cl-G, 4</mark> - 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	АРНА 22 nd <mark>Ed.2012,4500-Р-С, 4-153</mark>	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	АРНА 22 nd Ed.2012,3111-В, 3-18	5.0	0.07				
11	Copper (as Cu)	mg/L	АРНА 22 nd Ed.2012,3111-В, 3-18	3.0	N.D.				
12	Cadmium (as Cd)	mg/L	АРНА 22 nd Ed.2012,3500-Cd, 3-105		N.D.				
13	Mercury (as Hg)	mg/L	АРНА 22 nd Ed.2012,3112-В, 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

- > 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) on (S) LYTIO







For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

AN ISO: 9001:2015-1-150:-1400-1200 65 this cost 5000 12018-CERTIFIED LABORATORY



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

to Name & Address Of The	Customer		Report No UES/TR/22-23/06133				
To,	OFFICE LIMITED OF		Lab Ref No UES/22-23/W/013065			5	
	STRIES LIMITED, GAF		Date Of Sampling	29/12/20	22		
•	LUPARA U/G COAL M	INE,	Date Of Receipt	30/12/20	30/12/2022		
VILLAGE - MILUI BLOCK-TAMNAR			Date Of Report	03/01/20	03/01/2023		
DISTT RAIGAR			Date Of Analysis	START:30/12/2022 END:03/01/20			
		SAMP	LE DETAILS				
Sample Type	WASTE WATER	Z SE SANGE	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. 5		5Ltr.		

	TEST REPORT								
SR. NO.	PARAMETER	PARAMETER UNIT METHOD OF TEST		THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT				
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1				
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable				
3	Temperature	°C	арна 22 nd Ed.2012,21 <mark>30-В,2-1</mark> 3	Shall not exceed 5°C above the receiving water temperature	25.3				
4	рн	-	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-Cl-G, 4 - 69	1.0	N.D.				
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	30.2				
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.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

- Prms & conditions

 The report for publication, arbitration or as legal dispute is followers. Note that the conditions of the report unless otherwise agreed with customer. This is for information as the party has asked for above test(s) only

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

03/01/23 REVIEWED BY

Rolle

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



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

to Name & Address Of The	Customer		Report No	UES/TR/22	2-23/06828		
To,	STRIES LIMITED, GAR	E	Lab Ref No	UES/22-23	/W/014421		
	LUPARA U/G COAL MI		Date Of Sampling	24/01/202	3		
VILLAGE - MILUI		NE,	Date Of Receipt	Date Of Receipt 25/01/2023 Date Of Report 29/01/2023 Date Of Analysis START:25/01/2023 END:29/01/2023			
BLOCK-TAMNAR	•		Date Of Report				
DISTT RAIGAR	The same of the sa		Date Of Analysis				
		SAMP	LE DETAILS		11111		
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	d Sample Collected By Laboratory		cy Chemist		
Sampling Procedure IS:3025(PART-I):1987 RA 2003; APHA 22 ND ED. 2021, 1060-B, 1-39		Quantity Received		Approx. 5Ltr.			

	TEST REPORT							
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT			
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1			
2	Odour		APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable			
3	Temperature	°C	АРНА 22 nd Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.0			
4	рн	-	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-Cl-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

Terms & conditions

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

Skoth-29/01/23 REVIEWED BY

RULYTIC

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

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



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

to Name & Address Of The (Customer		Report No UES/TR/22-23/08139				
To,			Lab Ref No	UES/22-23	ES/22-23/W/016307		
	STRIES LIMITED, GA		Date Of Sampling	26/02/202	3		
	LUPARA U/G COAL N	MINE,	Date Of Receipt	27/02/202	3		
VILLAGE - MILUF	•		Date Of Report	03/03/2023 START:27/02/2023 <i>END:03/03/202</i>			
BLOCK-TAMNAR, DISTT RAIGARI			Date Of Analysis				
		SAMPI	LE 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		
IS:3025(PART-I):1987 RA 2003; APHA 22ND ED. 2021, 1060-B, 1-39		Quantity Received		Approx. 5Ltr.			

	TEST REPORT								
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT				
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1				
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable				
3	Temperature	°C	АРНА 22 nd Ed.2012,2130-В,2-13	Shall not exceed 5°C above the receiving water temperature	25.4				
4 '	рн	-	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-Cl-G, 4 - 69	1.0	N.D.				
6	Total Suspended Solids	mg/L	АРНА 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	АРНА 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.				
17	Chemical Oxygen Demand (COD)	mg/L	АРНА 22 nd Ed.2012, 5520-В,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.

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.

(pohouhas) 03/03/2023

REVIEWED BY



-End of the test report-

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY



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

to Name & Address Of The Customer UES/TR/22-23/09170 Report No To, Lab Ref No UES/22-23/W/017594 **HINDALCO INDUSTRIES LIMITED, GARE** 22/03/2023 Date Of Sampling PALMA - IV/5, MILUPARA U/G COAL MINE, Date Of Receipt 23/03/2023 VILLAGE - MILUPARA, 28/03/2023 Date Of Report **BLOCK-TAMNAR,** START: 23/03/2023 END: 27/03/2023 Date Of Analysis **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	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 APHA 22 ND ED. 2021, 1060		Quantity Received	Approx. 5Ltr.							

	TEST REPORT									
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT					
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1					
2	Odour		APHA 22 nd Ed. 2012,2 <mark>120-B,2-6</mark>	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	рн	- 0.2	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-Cl-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	АРНА 22 nd Ed.2012, 5520-В,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.					

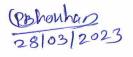
Note: mg/lit.: milligram per liter, N.D. - Not Detected.

REMARKS: RESULTS ARE AS ABOVE

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.





For ULTIMATE ENVIROLYTICAL SOLUTIONS

28/03/23

AUTHORIZED SIGNATORY

REVIEWED BY

AUTHORIZED SIGNATOR

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 I Email: ultimatenviro@gmail.com

Recognized by Ministry of Environment Forest and Climate Change under EP act 1986

to Name & Address Of The t	Customer		Report No	UES/TR/2	2-23/0391	9
To,	DALCO INDUSTRIES LIMITED, GARE			UES/22-2	3/W/09623	
				18/10/20	22	
	LUPARA U/G COAL MI	Date Of Receipt	19/10/20	22		
VILLAGE - MILUI	•	Date Of Report	02/11/20	22		
BLOCK-TAMNAR DISTT RAIGAR		Date Of Analysis	START:19/10/2022 END:28/10/20			
1 (1975) - 1975 (1975)		SAMPI	LE DETAILS	No. of the second secon		STORY TO THE COST OF THE PROPERTY OF THE COST OF THE C
Sample Type	WASTE WATER		Customer Ref. No. & Date		P.O.13552 DATED:07.	ALCONOMIC DESCRIPTION OF THE PROPERTY OF THE P
Customer Sample ID	STP INLET, PORTACABIN		Sample Condition 2	At Receipt	Ok	
Packing Of Sample 3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE Sealed		Sample Collected E	Зу	Laborator	cy 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	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	J-12	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	рн	<u> </u>	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.

Rebe 02/11/22 REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

End of the test report-



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

UES/TR/22-23/04775 Report No To. UES/22-23/W/010978 Lab Ref No HINDALCO INDUSTRIES LIMITED, GARE 27/11/2022 Date Of Sampling PALMA - IV/5, MILUPARA U/G COAL MINE, 28/11/2022 Date Of Receipt VILLAGE - MILUPARA, 02/12/2022 Date Of Report **BLOCK-TAMNAR**, END: 02/12/2022 START: 28/11/2022 Date Of Analysis **DISTT. - RAIGARH (C.G.) 496107**

		SAMP	LE 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 APHA 22 ND ED. 2021, 1060		Quantity Received	Approx. 5Ltr.

	TEST REPORT									
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT					
1	Colour	Hazen	АРНА 22 nd Ed. 2012 <mark>,2120-В,</mark> 2-6	See 6 of Annexure-I	<1					
2	Odour	-	APHA 22 nd Ed. 2012 <mark>,2120-B,</mark> 2-6	See 6 of Annexure-I	Agreeable					
3	Temperature	°C	АРНА 22 nd Ed.2012, <mark>2130-В,2</mark> -13	Shall not exceed 5°C above the receiving water temperature	25.6					
4	рН	-	APHA 22 nd Ed.2012 <mark>,4500-H⁺-B,4-9</mark> 2	5.5 to 9.0	7.24					
5	Total Residual Chlorine	mg/L	АРНА 22 nd Ed.20 <mark>12,4500-Cl-</mark> 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.					

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

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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

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

Rell 02/12/2022 REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

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



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

to Name & Address Of The (Customer		Report No UES/TR/22-23/06134			4
To,	of the control of the		Lab Ref No	UES/22-2	3/W/01306	6
	STRIES LIMITED, GAR		Date Of Sampling	29/12/20	22	
	LUPARA U/G COAL MI	NE,	Date Of Receipt	30/12/20	22	
VILLAGE - MILUF			Date Of Report	03/01/20	23	
BLOCK-TAMNAR DISTT RAIGARI			Date Of Analysis	START:30/12/2022 END:03/01/20		
		SAMP	LE DETAILS			
Sample Type	WASTE WATER		Customer Ref. No.	& Date	P.O.13552 DATED:07.	5-4-5-45-50-50-60-50-50-50-50-50-50-50-50-50-50-50-50-50
Customer Sample ID	STP INLET, PORTACABIN		Sample Condition 2	At Receipt	Ok	
Packing Of Sample	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected 1	Ву	Laborator	y Chemist
Sampling Procedure IS:3025(PART-I):1987 RA 2003; APHA 22 ND ED. 2021, 1060-B, 1-39		Quantity Received		Approx. 5	Ltr.	

	TEST REPORT									
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT					
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1					
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable					
3	Temperature	°c	APHA 22 nd Ed.2012, <mark>2130-B,2-</mark> 13	Shall not exceed 5°C above the receiving water temperature	25.6					
4	рН	-	APHA 22 nd Ed.2012,4500-H ⁺ -B,4-92	5.5 to 9.0	7.28					
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	АРНА 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	АРНА 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

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

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

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

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

Stoll 03/01/23 REVIEWED BY

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

-End of the test report-



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

to Name & Address Of The	Customer		Report No	UES/TR/22	UES/TR/22-23/06829		
To,	Lab Ref No	Lab Ref No	UES/22-23	/W/014422			
	STRIES LIMITED, GAR		Date Of Sampling	24/01/202	3		
=	LUPARA U/G COAL MI	INE,	Date Of Receipt	25/01/202	3		
VILLAGE - MILUI			Date Of Report	29/01/202	:3		
DISTT RAIGAR			Date Of Analysis START:25/01/2023 END:2			END:29/01/2023	
		SAMP	LE DETAILS				
Sample Type	WASTE WATER		Customer Ref. No.	& Date	P.O.13552 DATED:07.	CONTRACTOR	
Customer Sample ID	STP INLET, PORTACABIN		Sample Condition A	At Receipt	Ok		
Packing Of Sample	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected 1	Зу	Laboratoi	ry Chemist	
Sampling Procedure	IS:3025(PART-I):1987 RA APHA 22 ND ED. 2021, 1060		Quantity Received		Approx. 5	5Ltr.	

	TEST REPORT									
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT					
1	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.2012,2 <mark>130-B,2-1</mark> 3	Shall not exceed 5°C above the receiving water temperature	25.2					
4	рн	-	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	12 Market 0.2	N.D.					
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.					
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.					
17	Chemical Oxygen Demand (COD)	mg/L	АРНА 22 nd Ed.2012, 5520-В,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.					

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.

Relle 29/01/23 REVIEWED BY

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

-End of the test report---



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

to Name & Address Of The	Customer		Report No	UES/TR/22-23/08140 UES/22-23/W/016308		
To,		A. Senat	Lab Ref No			
	STRIES LIMITED, GAR		Date Of Sampling	26/02/202	3	
	LUPARA U/G COAL MI	INE,	Date Of Receipt	27/02/2023		
VILLAGE - MILUI	•		Date Of Report	03/03/202	3	
BLOCK-TAMNAR DISTT RAIGAR			Date Of Analysis	START:27/02/2023 END:03/03		
		SAMP	LE DETAILS	GHE BAR		
Sample Type	WASTE WATER		Customer Ref. No.	& Date	P.O.13552 DATED:07.	AMERICAN DESCRIPTION OF
Customer Sample ID	STP INLET, PORTACABIN		Sample Condition At Receip		Ok	
Packing Of Sample	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected 1	Ву	Laborator	y 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	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	1-0	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable				
3	Temperature	°C	АРНА 22 nd Ed.2012,2130-В,2-13	Shall not exceed 5°C above the receiving water temperature	25.5				
4	рН	<u> </u>	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-C1-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

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.

(Pohouhan

REVIEWED BY

03/03/2023

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

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



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

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, DISTT RAIGARH (C.G.) 496107	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 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 АРНА 22 ND ED. 2021, 1060		Quantity Received	Approx. 5Ltr.			

	TEST REPORT								
SR. No.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT				
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1				
2	Odour	/ - ·	APHA 22 nd Ed. 2012 <mark>,2120-B,2-6</mark>	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	рн		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.201 <mark>2,4500-C1-</mark> G, 4 - 69	1.0	N.D.				
6	Total Suspended Solids	mg/L	АРНА 22 nd Ed.2 <mark>012,2540- D, 2-66</mark>	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	АРНА 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

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

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



REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

28/03/23

AUTHORIZED SIGNATORY

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



Packing Of Sample

Sampling Procedure

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

to Name & Address Of The Customer Report No UES/TR/22-23/03920 To, Lab Ref No UES/22-23/W/09624 HINDALCO INDUSTRIES LIMITED, GARE Date Of Sampling 18/10/2022 PALMA - IV/5, MILUPARA U/G COAL MINE, 19/10/2022 Date Of Receipt VILLAGE - MILUPARA, 02/11/2022 Date Of Report **BLOCK-TAMNAR.** Date Of Analysis START: 19/10/2022 END: 28/10/2022 **DISTT. - RAIGARH (C.G.) 496107** SAMPLE DETAILS P.O.13552310212, Sample Type WASTE WATER Customer Ref. No. & Date DATED: 07.09.2022 Customer Sample ID STP OUTLET, PORTA CABIN Sample Condition At Receipt

Sample Collected By

Quantity Received

Sealed

	TEST REPORT							
SR. NO.	PARAMETER *	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	АРНА 22 nd Ed.2012,2 <mark>130-В,2-1</mark> 3	Shall not exceed 5°C above the receiving water temperature	25.2			
4	pН		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-Cl-G, 4 - 69	1.0	N.D.			
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	34.0			
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.

3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE

IS:3025 (PART-I):1987 RA 2003;

APHA 22ND ED. 2021, 1060-B, 1-39

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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

Test sample will be retained for 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.

02/11/22 **REVIEWED BY**

For ULTIMATE ENVIROLYTICAL SOLUTIONS

Laboratory Chemist

Approx. 5Ltr.

AUTHORIZED SIGNATORY

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



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

to Name & Address Of The Customer UES/TR/22-23/04776 Report No UES/22-23/W/010979 Lab Ref No HINDALCO INDUSTRIES LIMITED, GARE 27/11/2022 Date Of Sampling PALMA - IV/5, MILUPARA U/G COAL MINE, 28/11/2022 Date Of Receipt VILLAGE - MILUPARA, 02/12/2022 Date Of Report BLOCK-TAMNAR. START: 28/11/2022 END: 02/12/2022 Date Of Analysis **DISTT. - RAIGARH (C.G.) 496107**

		SAMP	LE DETAILS	The state of the s
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 APHA 22 ND ED. 2021, 1060		Quantity Received	Approx. 5Ltr.

	TEST REPORT								
SR. NO. PARAMETER		UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	SUMP WATER PIT-D				
1	Colour	Hazen	APHA 22 nd Ed. 2012 <mark>,2120-B,</mark> 2-6	See 6 of Annexure-I	<1				
2	Odour	_	APHA 22 nd Ed. 2012 <mark>,2120-B,</mark> 2-6	See 6 of Annexure-I	Agreeable				
3	Temperature	°C.	APHA 22 nd Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.4				
4	рн	<u> </u>	APHA 22 nd Ed.201 <mark>2,4500-H⁺-B,4-92</mark>	5.5 to 9.0	7.51				
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	АРНА 22 nd Ed <mark>.2012,2540- D, 2-6</mark> 6	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

Terms & conditions

- > The report for publication, arbitration or as legal dispute is forbidden.
- For the 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) ONIX TI

02/12/2022 REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

AN ISO: 9001-2015-1180:-14001-2019 4/1809-12018 CERTIFIED LABORATORY



Sampling Procedure

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 C	Customer		Report No	UES/TR/2	2-23/0613	5
To,			Lab Ref No	UES/22-2	3/W/01306	7
	STRIES LIMITED, GAI		Date Of Sampling	29/12/20	22	
	LUPARA U/G COAL M	INE,	Date Of Receipt 30/12/2022			
VILLAGE – MILUF	, =		Date Of Report	03/01/20	03/01/2023	
BLOCK-TAMNAR, DISTT RAIGARI			Date Of Analysis	START:30/	12/2022	END: 03/01/2023
		SAMP	LE DETAILS			
Sample Type	WASTE WATER		Customer Ref. No	. & Date	P.O.13552 DATED:07	
Customer Sample ID STP OUTLET, PORTA CABIN		Sample Condition At Receipt		t Ok		
Packing Of Sample	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	Sealed	Sample Collected	Ву	By Laboratory Chemist	

Quantity Received

	TEST REPORT							
SR. NO.	PARAMETER	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	АРНА 22 nd Ed.2012, <mark>2130-В,2-</mark> 13	Shall not exceed 5°C above the receiving water temperature	25.1			
4	рн	-	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	АРНА 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

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

IS:3025(PART-I):1987 RA 2003;

АРНА 22ND ED. 2021, 1060-В, 1-39

For ULTIMATE ENVIROLYTICAL SOLUTIONS

Approx. 5Ltr.

03/01/23 REVIEWED BY

Rolle

AUTHORIZED SIGNATORY

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



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

to Name & Address Of The Customer	Report No	UES/TR/22-23/06830	
To, HINDALCO INDUSTRIES LIMITED, GARE	Lab Ref No UES/22-23/W/01	UES/22-23/W/014423	
PALMA - IV/5, MILUPARA U/G COAL MINE,	Date Of Sampling	24/01/2023	
VILLAGE - MILUPARA,	Date Of Receipt	25/01/2023 29/01/2023	
BLOCK-TAMNAR,	Date Of Report		
DISTT RAIGARH (C.G.) 496107	Date Of Analysis	START: 25/01/2023	END:29/01/2023
SAM	PLE DETAILS		

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	PARAMETER UNIT N		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, <mark>2120-B,2-</mark> 6	See 6 of Annexure-I	Agreeable			
3	Temperature	,c	АРНА 22 nd Ed.2012,2 <mark>130-В,2-</mark> 13	Shall not exceed 5°C above the receiving water temperature	24.6			
4	рH	-	APHA 22 nd Ed.2012,4500-H ⁺ -B,4-92	5.5 to 9.0	7.48			
5	Total Residual Chlorine	mg/L	АРНА 22 nd Ed.2012,4500-C1-G, 4 - 69	1.0	N.D.			
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	30.3			
7	Dissolved Phosphate (as P)	mg/L	АРНА 22 nd Ed.2012,4500-Р-С, 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	АРНА 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

Terms & conditions

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

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.

Figeth_ 29/01/23 REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

-End of the test report-



Sampling Procedure

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

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

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/22-23/08141			
			Lab Ref No	UES/22-23	UES/22-23/W/016309		
			Date Of Sampling				
			Date Of Receipt				
			Date Of Report	03/03/202			
			Date Of Analysis	START:27/02/2023 END:03/03/20			
	J. B. J. B. B. B. B. Boshina	SAMP	LE DETAILS		r da E Be		
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		
	TO 2005 (DIDE T) 1007 DI	2002.					

Quantity Received

TEST REPORT						
SR. NO.	PARAMETER	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	рн	-	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-Cl-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	АРНА 22 nd Ed.2012, 5520-В,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

IS:3025(PART-I):1987 RA 2003; APHA 22ND ED. 2021, 1060-B, 1-39

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 ANVIROLYTICAL SOLUTIONS

Approx. 5Ltr.

AUTHORIZED SIGNATORY

End of the test report-



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
UE
Date Of Sampling
22
Date Of Receipt
23
Date Of Report
28

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 APHA 22 ND ED. 2021, 1060		Quantity Received	Approx. 5Ltr.	

SR.	PARAMETER			THE ENVIRONMENT (PROTECTION) RULES, 1986	SUMP WATER PIT-D
NO.		UNIT	METHOD OF TEST	[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	25.0
4	рн	To 10 - 10	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.201 <mark>2,4500-Cl-G</mark> , 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 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

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.

Pohouhan 28/03/2023

1000 NO 1000 N

For ULTIMATE ENVIROLYTICAL SOLUTIONS

28/03/23

AUTHORIZED SIGNATORY

REVIEWED BY

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





छत्तीसगढ पर्यावरण संरक्षण मंडल पर्यावास भवन, सेक्टर – 19,

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

Email add - hocecb@gmail.com

क्रमांक । ५०७ मुख्या / वैज्ञा. / छ.ग.प.सं.मं. / २०२२

नवा रायपुर, अटल नगर, दिनांक 12/5/2022

प्रति.

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.)

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

संदर्भ :-

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

---::00::----

उपरोक्त विषयांर्तगत संदर्भित पत्रों का अवलोकन करें। लेख है कि मंडल मुख्यालय द्वारा पत्र कमांक 3398 दिनांक 17/08/2021 के माध्यम से आपके निजी प्रयोगशाला को जल (प्रदूषण निवारण तथा नियंत्रण) अधिनियम, 1974 की धारा 17 (2) एवं वायु (प्रदूषण निवारण तथा नियंत्रण) अधिनियम, 1981 की धारा 17 (2) के अंतर्गत मान्यता प्रदान की गई थी, जिसकी वैधता दिनांक 25 / 06 / 2022 तक है। संदर्भ — 3 पर उल्लेखित सर्टिफिकेट नं. TC-6065 दिनांक 27/10/2021 के 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 अघतन विश्लेषण दर्र 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.)

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

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



केन्द्रीय प्रदूषण नियंत्रण बोर्ड CENTRAL POLLUTION CONTROL BOARD

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

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

Dated: 28th September, 2022

Provisional Certificate

To,

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

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

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

- 2. As sought in the aforementioned application M/s Ultimate Envirolytical Solutions, HDD272, Phase-III, Kabir Nagar, Raipur -492099, Chhattisgarh, may undertake the following tests:
 - i. Physical Tests- Conductivity, Colour, pH, Fixed & Volatile Solids, Total Solids, Total Dissolved Solids, Total Suspended Solids, Turbidity, Temperature, Velocity & Discharge measurement, Flocculation test (Jar test), Odour, Salinity, Settleable Solids and Sludge Volume Index (SVI).

ii. Inorganic (General and Non-Metallic): Acidity, Alkalinity, Ammonical Nitrogen, Chloride, Chlorine residual, Dissolved Oxygen, Fluoride, Total Hardness, Total Kjeldahl Nitrogen (TKN), Nitrite Nitrogen, Nitrate Nitrogen, Phosphate, Sulphate, Bromide, Chlorine Demand, Iodine, Sulphite, Silica, Cyanide and Sulphide.

iii. Inorganic (Trace Metals): Boron, Cadmium, Calcium, Chromium Total, Chromium Hexavalent, Copper, Iron, Lead, Magnesium, Mercury, Nickel, Potassium, Sodium, Sodium Absorption Ratio (SAR), Zinc, Arsenic, Aluminium, Barium, Manganese, Selenium and

Vanadium.

iv. Organics (General) and Trace Organics: Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Oil and Grease, Phenolic Compounds, Pesticides (each) (Organochlorine and Organo nitrogen-phosphorus), Total Organic Carbon, Poly-Chlorinated Biphenyl (PCB's) each, Polynuclear Aromatic Hydrocarbon (PAH) each, and Organic Carbon (in solid).

v. Microbiological Test: Total Coliform, Faecal Coliform, E. coli, Faecal Streptococci and

Total Plate Count.

vi. Toxicological Tests: Bioassay method for evaluation of toxicity using fish and

Measurement of toxicity using Daphnia or Other Organism.

vii. Characterization of Hazardous waste: Preparation of Leachate (TCLP extract/water extract), Corrosivity, Ignibility (Flash point), Reactivity and Measurement of heavy metals/ pesticides in the waste and leachate.

Contd.

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032

Parivesh Bhawan, East Arjun Nagar, Delhi-110032 दूरभाष/Tel : 43102030, 22305792, वेबसाईट/Website : www.cpcb.nic.in viii. Soil/Sludge/Sediment and Solid Waste: Boron, Cation Exchange Capacity (CEC), Electrical Conductivity, Nitrogen (available), Organic Carbon/matter (Chemical method), pH, Phosphorous (available), Phosphate (ortho), Phosphate (total), Potassium, SAR in Soil Extract, Sodium, Soil Moisture, TKN, Calorific Value, Ammonia, Bicarbonate, Calcium, Calcium Carbonate, Chloride, Colour, Exchangeable Sodium Percentage (ESP), Heavy metal, Magnesium, Nitrate, PAH, Pesticide and Sulphate.

ix. Ambient Air/ Fugitive Emissions: Nitrogen Dioxide (NO₂), Sulphur Dioxide (SO₂), Total Suspended Particulate Matter, Respirable Suspended Particulate Matter (PM₁₀), Ammonia, Carbon Monoxide, Chlorine, Fluoride, Lead, Ozone, and PM_{2.5}.

x. Stack Gases/ Source Emission: Particulate Matter, Sulphur Dioxide, Velocity & Flow, Carbon Dioxide, Carbon Monoxide, Temperature, Oxygen, Oxides of Nitrogen, Acid mist, Ammonia, Fluoride (Gaseous), Chlorine and Hydrogen Sulphide.

xi. Noise Level: Noise Level Measurement (20-140 dBa) and Ambient Noise and Source Specific Noise.

xii. Meteorological: Ambient Temperature, Wind Direction, Wind Speed, Relative Humidity, and Rainfall.

- 3. Further, the following analysts have been approved as Government Analysts.
 - i. Sh. Anurag K. Shrivastava
 - ii. Smt. Snehal Akulwar
 - iii. Sh. Pramod Choubey
- 2. The laboratory shall compulsorily participate in the Analytical Quality Exercise conducted by the Central Pollution Control Board (CPCB) to ascertain the capability of the laboratory and analysis carried out and shall submit quarterly progress report to CPCB.
- 3. The surprise inspection/periodic surveillance of the recognized environment laboratory will be undertaken by CPCB to assess its proper functioning systematic operation and reliability of data generated at the laboratory.
- 4. It is also mandatory for the laboratory to have requisite accreditations of the ISO: 17025 (NABL) and ISO:45001 (OH&SMS) and its renewal as per accreditation rules. This recognition is subject to such accreditations and renewals as applicable. The laboratory is required to apply online for further renewal of recognition through CPCB web portal after renewal of the mandatory accreditations / certifications concerned.
- 5. The laboratory should compulsorily follow the accepted terms and conditions. In case of serious non-compliance of any of the terms and conditions, the laboratory may be black listed for a minimum period of two years and civil/criminal proceedings, as applicable, may be initiated for performing functions on behalf of the Government in an unauthorized manner.

Yours faithfully,

(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