

Letter No.: HIL/EC/GP- IV/4/I/2021-22/399

18th November, 2021

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 Gare Palma IV/4 Coal Mines of Hindalco Industries Limited, Village – Banjikhol, Tehsil – Tamnar, District – Raigarh, Chhattisgarh.

Respected Sir,

This has reference to the Environment Clearance Letter no. – J-11015/183/2010- IA –II. (M) dated 16.04.2015 (Transferred in favour of HIL) & Amendment in EC for production capacity i.e. Opencast: 0.56 MTPA & Under Ground: 0.44 MTPA dated 24.05.2019.

We are submitting herewith the Half Yearly EC Compliance Report along with Environmental Monitoring Report (Hard & Soft) for the period from **April 2021 to September 2021** for your kind perusal please.

The receipt of the report may kindly be acknowledged.

Yours faithfully,

For Hindalco Industries Limited,

Govind Kumar (Mine Agent)

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 STIPULATED CONDITIONS OF ENVIRONMENTAL CLEARANCE (EC) ACCORDED TO GARE PALMA IV/4 COAL MINE VIDE LETTER No.— J-11015/183/2010-IA—II.(M) DATED 16.04.2015 (TRANSFERRED IN FAVOUR OF HIL) & AMENDMENT IN EC FOR PRODUCTION CAPACITY I.E. OPENCAST: 0.56 MTPA & UNDER GROUND: 0.44 MTPA DATED 24.05.2019.

Sr. No.	Stipulated Conditions	Compliance Statement
1	Any change in scope of work will attract the	Noted
	provisions of 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
	11015/183/2010-IA.II (M) dated 12 th March,	
	2013 shall remain unchanged.	
3	The successful bidder shall be liable, if any, for	Noted
	any act of 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	Noted
	of all court directions, if any.	

ON STIPULATED CONDITIONS OF ENVIRONMENTAL CLEARANCE (EC) ACCORDED TO GARE PALMA IV/4 COAL MINE VIDE LETTER No. – J-11015/183/2010-IA–II.(M) DATED 12.03.2013

Stipulated Conditions	Compliance Statement
SPECIFIC CONDITIONS	
The Maximum production from the mines shall not exceed beyond that for which environmental clearance has been granted for i.e. 0.48 MTPA to 1.0 MTPA of which 0.4 MTPA OC and 0.6 MTPA UG in ML area of 701.512 ha)	Being Compiled. Amendment has been done in this stipulated condition by MoEF & CC dated 24.05.2019 (Letter No. J-11015/183/2010-IA–II.(M) for the production capacity i.e. Open cast - 0.56 MTPA and Under Ground – 0.44 MTPA, Total capacity – 1 MTPA instead of 0.4 MTPA OC and 0.6 MTPA UG. Amendment Copy of EC is attached as Annexure No. 1 The coal production from the mine from April 2021 to September 2021 is within the limit of 1 MTPA as prescribed in the EC.
	SPECIFIC CONDITIONS The Maximum production from the mines shall not exceed beyond that for which environmental clearance has been granted for i.e. 0.48 MTPA to 1.0 MTPA of which 0.4 MTPA OC and 0.6 MTPA UG in ML area of

		Production from (April 2021 to September 2021) Open Cast: 0.284 MT (Million Tons) Under Ground: 0.00 MT (Million Tons) A copy of Statistical return for the month of September 2021 submitted to The Coal Controller Ministry of Coal, GOI Kolkata dated 04/10/2021 is attached as Annexure No. 2
ii	The calendar plan should be uploaded on MOEF website.	As per Approved mining plan (2018) the coal production from HIL GP IV/4 is 0.56 MTPA from OC & 0.44 MTPA from the UG. The production will be within the limit of above schedule. Proposed calendar year quantities based on the current scenario. Mining calendar plan for FY 21-22: Open Cast: 0.56 MT (Million Tons) Under Ground: No proposal as of now In future if there will be any change in calendar plan the same will be intimated to MoEF & CC.
iii	The coal transportation by road is up to 270 km at Raipur by road presently with tarpaulin covered trucks and partially by rail up to Bhupdevpur. After new siding comes up which is approximately 3 km away for changing over to rail transport. The coal transportation by road should be by mechanically covered trucks. The mode of transportation shall be shifted to by rail by 2017.	This particular condition is not applicable to us, as per Vesting order by Ministry of Coal, GOI, Coal is being used in the captive power plant of HIL located at Hirakud and Lapanga District Sambalpur, Odisha and mode of transportation will be by road. We are transporting the coal by road through tarpaulin covered trucks.
iv	Karanj should be deleted from the list of native species for plantation program.	Complied. Karanj will not be planted in mining area.
V	Rs. 5/T of coal/annum till the end of life of project with the escalation factor of coal production.	Being Complied. As per condition Rs. 5 /T is being utilized under CSR activities & Sustainability. Expenditure details from

		April 2021 to September 2021 is enclosed as
vi	No external OB dump will be left after mine operation and shall be backfilled in the mine void.	Annexure No. – 3 Being Complied. The OB dumping is maintained as per the provisions of approved Mining Plan only.
vii	The proponent shall take necessary action on the issues raised during public hearing.	Being Complied. A separate budget for the CSR/Sustainability/CER is being maintained.
viii	The coal will be used in existing steel plant of proponent.	This particular condition is not applicable to us, as per Vesting order by Ministry of Coal, GOI, Coal is being used in the captive power plant of HIL located at Hirakud and Lapanga, District Sambalpur, Odisha.
ix	The Mine Planning is done in such manner that underground mining is proposed below forest land and opencast mining under Government waste land /agriculture land. Hence tree cutting from forest land is not proposed during expansion proposal. However if required plantation will be done 10 times of tree felling in the project affected area.	Being Complied. Mining is being done in such manner that underground mining is being done below forest land and opencast mining is being done under Government waste land /agriculture land. Planation in the mine lease area is being carried out @2500 plant/ha. Total 99821 nos. local plants species have been planted till date in mine lease area including OB dump area. Plantation details are enclosed as Annexure- 4
Х	Kelo river and Bendra Nallah shall not be disturbed.	Being Complied.
xi	External OB dump of 0.67 million cubic meters will be created as reported in closure plan of first year. This external dump will be re handled and backfilled in subsequent years. There will be no external dump left after the mine operation.	Being Complied. The OB dumping is maintained as per the provisions of approved Mining Plan only.
xii	Biological reclamation of all external dumps will be done progressively after leveling these dumps. This will provide stability and prevent soil erosion from dumps. The total top soil generated (1.14 m.cum B) during the development of mine will be stacked separately in a soil stack	Being Complied. The Top soil conservation and use are successive and periodic activities during mining operation. In the FY 21 – 22 (From April 21 to September 21), approx. 1,97,626 cubic meter of the top soil has been generated, approx. 1,77,863 cubic meter has been spread/used on OB Dumps (Banjikhol & Bankheta) for reclamation, slope stabilization,

	pile in between the pit and the surface dump over an area of 7.12 Ha.	green belt development & approx. 19,763 cubic meter stored for further uses in the mine area.
xiii	The report Titled "Flora and Fauna and conservation plan for endangered species of Gare-IV/8 coal block approved by The PCCF (Wildlife) of Chhatisgarh, dated 22.11.2011 states that there is no national park, tiger reserve, ecosensitive zones within 15 km radius. It was informed that this area is neither affected by elephant corridor exists. However, there are occasional presence of elephants and other wild lives.	Noted. HIL will comply with mitigative measure as suggested by competent authority if any in this regard in future also.
xiv	A Wildlife Conservation Plan for the conservation and protection of wildlife in the study area has been approved at a cost of Rs. 1.0 crore and shall be implemented by the proponent in consultation with Department of Forest and Wildlife, Govt. of Chhattisgarh. The WLCP shall be comprise of components of habitat improvement and conservation of biodiversity, provision of water holes, and augmenting water bodies, nursery and plantation of species of natural food and fodder found in the natural habitat salt licks, measures for the protection against forest fires and poaching, awareness campaign of villagers in the study area and compensation in case of man animal conflicts. The status of implementation of WL Conservation Plan including budgetary provision of various activities and status of expenditure shall be regularly, uploaded on the website of the forest and wildlife Department of Government of	Noted. Rs. 1.0 crore has been deposited to state forest department by the prior allottee against Wildlife conservation plan. Company will comply with mitigative measure as suggested by competent authority if any in this regard in future also.

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xv	Chhattisgarh and of the project proponent and the status shall be regularly reported to this Ministry and the MoEF Regional Office, as part of the compliance report. As per the approved plan of the Flora and Fauna and Conservation plan for endangered species of Gare IV/4 coal block" and recommended the PCCF (Wildlife), Rs. One crore be deposited, at one time. With the department of forest and wildlife, Govt. of Chhattisgarh for the implementation of the plan.	Rs. 1.0 crore has been deposited to state forest department by the prior allottee against Wildlife conservation plan. Company will comply with mitigative measure as suggested by competent authority if any in this regard in future also.
xvi	The project authority shall also participate in a Regional action plan of the State Government for the conservation of flora and fauna found within the study area, in addition to the above funds shall also contribute financially for implementation of RWLCP. Habitat development such as grassland/conservation measures along the migratory route/habitats of elephants found/visiting the area shall form a part of the regional action plan.	The company will participate in regional action plan of the State Government for the conservation of flora and fauna of the area, as per directives of the authority. Company will comply with mitigative measure as suggested by competent authority if any in this regard in future also.
xvii	It will be used for growing plants along the fringes of the side roads and reclamation of external dump and backfilled area. The topsoil stockpile will be low height not exceeding 6 m and will be made use for concurrent filling without keeping the top soil for a long period.	Being Complied. Topsoil is being used for green belt development along the road and the reclamation of OB Dump area. The topsoil stockpile is low in height not exceeding 6 m and this is being used and will be used for concurrent filling without keeping the top soil for a long period.
xviii	The OB dump for the South Quarry dump will be spread over 13.75 Ha. area on the south and eastern part of south quarry while the mining operation will start from north and advance towards south and west. Part of OB excavated from the mine	Being Complied. The over burden is maintained as per approved mining plan. As per the reclamation plan, the external dump will be biologically reclaimed with local species and grass to minimize fugitive emission as well as to

	from 1st year and part of 2nd year (3.91 Mm3) will be accommodation in it including top soil for afforestation. The height of dump	control surface runoff. Backfilling has already started.
	achieved during 1st and 2nd year will be 6 m to 20 m respectively.	
xix	The O.B. left in external dump will	Being Complied.
	be re handled and backfilled in the void after the extraction of coal is completed, this will make the operation of UG mining safe as no water will be logged in the quarry. The OB will be temporarily stored which primarily consist of sand stone and shale which does not contain any heavy metal. As per the reclamation plan, the entire OB will be re-handled and biologically reclaimed with local grass to minimize fugitive emission as well to control surface runoff.	The over burden management is being done as per approved mining plan. As per the reclamation plan, the dumps will be biologically reclaimed with local species and grass to minimize fugitive emission as well as to control surface runoff. Backfilling has already started. Since the takeover by HIL no external dumping is being done OB generated annually is being backfilled in de-coaled area. Aprox. 50,000 Nos of Vetiver grass plantation has been done last year on OB Dump area near Patch "C" to provide the stability and prevent top soil erosion / Reduce the surface Run- off from OB dumps.
xx	Topsoil generated in the balance life	Being Complied.
	of mine should be stacked properly with proper slope at earmarked site (s) and should not be kept active and shall be used for reclamation and development of green belt.	Presently topsoil is being stacked properly and topsoil to be generated in the balance life of mine will be stacked properly with proper slope at earmarked site (s) and will not be kept active. The stocked topsoil is being /will be used for reclamation and development of green belt.
xxi	OB generated in the balance life of mine should be stacked at earmarked one external OB dumpsite within ML area. The ultimate slope of dump shall not exceed 28° Monitoring and management of reclaimed dumpsite should continue until the vegetation becomes self- sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional offices located at Bhubaneswar on yearly basis. The area of OB dump should be reduced.	Being Complied. Since the takeover by HIL no external dumping is being done OB generated annually is being backfilled in de-coaled area. Slope stability study has been carried out by ISM Dhanbad. The ultimate slope of the dump is maintained and dumps are stabilized. Monitoring and management of reclaimed dump site is continuing and will continue until the vegetation becomes self – sustaining. Now Raipur, Integrated Regional Office is looking after EC monitoring & compliances. Full co – operation has been extended to Regional Officer by furnishing requisite data information / monitoring reports.

	The grass turfing should be done on OB dumps.	
xxii	Adequate numbers of sprinklers should be provided on both the side of road to minimize pollution.	Being Complied. Regular Water sprinkling on haul road is practiced through truck mounted water sprinklers (04 Nos) to check the fugitive dust emission. Also installed the fixed type of water sprinklers (29 nos) to control the fugitive dust emission in the mine area. Photographs of truck mounted water sprinklers & fixed type of water sprinklers at GP IV/4 Coal Mines attached as Annexure – 4A
xxiii	Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected should be utilized for	Being Complied. Catch drains are constructed to collect and drain water to sumps and ponds. Catch drains are provided with check dams to arrest slit and maintained properly.
	watering the mine area, roads, green belt development etc. The drains should be regularly desilted	The store water is used for spraying / sprinkling on haul roads and also for greenbelt development.
	and maintained properly. Garland drains (size, gradient, length,) and sump capacity should be designed 50 % safety margin over and above	Garland drains are constructed to arrest discharge and runoff with slit and sedimentation surging into areas adjoining the periphery of OB dump.
	the peak sudden rainfall and maximum discharge in the area	HIL Constructed/Provided settling ponds:
	adjoining the mine site. Sump capacity should also provide	a) At Banjikhol Mine (GP IV/4):
adequate retention period to allow proper settling of silt material.	HIL has constructed 03 nos of Settling ponds of size 50m X 30m X 3m (each) with chemical dosing arrangement and sump with adequate capacity (for sedimentation) at Banjikhol for the mine seepage water collection, settling & treatment before discharge for the agriculture purpose (Photograph is attached as Annexure – 4AA).	
		Also HIL constructed an additional settling pond of size 30m X 10m X 1.5m (01Nos) to collect whole mine seepage water generated during the mining activities from Patch "C" specially in the rainy season for proper settling of mine seepage water before discharge (Photograph is attached as Annexure – 4AAA)

		At Bankheta Mine (GP IV/4): At Bankheta, HIL constructed 02 nos of additional settling pond of size (50m X 40m X 5.0 m) for proper settling of mine seepage water generated from mining activities from Batch "B" before discharge for the agriculture purpose (Photograph is attached as Annexure – 4B)
xxiv	Dimension of retaining wall at the toe of the dumps and OB benches within the mine to check run –off and siltation should be based on rain fall data.	Being Complied. In the 1st Phase we have constructed approx. 55 mtr. long gabion/retaining wall at the toe of permanent dump slope near Patch "C" in Banjikhol, GP IV/4 Coal Mines.
		The Gabion /retaining walls had been made of GI wire net cages filled with stone boulders and anchored with angle iron as per specification. Gabions provide vertical support to the bottom of the slope and help against sliding. Those also protect the toe of the reshaped OB dump.
		We would also like to inform you that we have taken gabion/retaining wall construction activity at the toe of the OB dump as a continuous process & ensure you that it will be carried out as & when required in future also at mine site.
		Photographs of constructed gabion/Retaining wall attached as Annexure – 4C & the Gabion wall construction/implementation report has already been submitted to MoEF & CC Nagpur Office dated 01st June 2021 the same is attached as Annexure 4CC for reference please.
xxv	Water sprinkling system (mist spray type) shall be provided to check fugitive emission from conveyor system, haulage roads and transfer points.	Being Complied. Water sprinkling arrangement has been maintained at all haul roads, conveyor system, loading and unloading points to minimize the fugitive dust emission.
xxvi	Fixed sprinkler shall be installed at pit top truck loading hoppers in all the three mines, siding for dust control during coal loading. Adequate numbers of sprinklers	Being Complied. As per requirement, fixed type water sprinklers as well as truck mounted water sprinklers has been provided in the mines and other places.

	should be provided on both the	
	sides of road to minimize dust	
	pollution.	
xxvii	Drills should be wet operated only.	Being Complied.
		In coal mining wet drilling is under practice.
xxviii	An action plan for mine closure with	Complied.
	details of area, depth, voids and	
	details of abandoned mine should	
	be submitted to the Ministry.	
xxix	Controlled blasting should be	Being Complied.
	practiced with use of delay detonators. The mitigative	Controlled blasting is practiced with use of delay detonators.
	measures for control of ground vibrations and to arrest the fly of	Ground vibration generated due to the blasting is measured BY seismographs regularly.
	rocks and boulders should be	The permissible limit for the ground vibration with
	implemented.	respect to the structures is strictly followed.
		Measures are taken to minimized ground
		vibrations. Blasting is done during day time only.
XXX	Transportation shall be by covered	Being Complied.
	trucks of higher capacity (25 -tons)	Transportation is being done with tarpaulin
	and loading shall be by siding.	covered trucks.
	Mechanically covered trucks should	
	be provided for transportation of coal.	
xxxi	Area brought under afforestation	Being Complied.
	from the three mines shall be by	Planation in the mine area is being carried out
	planting native species in consultation with local	@2500 plant/ha. Total 99821 nos local plants
	DFO/Agriculture Department. The	species have been planted till date including OB dump area. Plant Species i.e. Saja, Siris,
	density of the trees should be	Shisham, Yellow flametree, Kassod, Satvan, Acacia
	around 2500 plants per ha.	Mangium, Ganga Emli, Arjuna, Chirol, Gliricidia,
		Amla, Mango, guava, Kathal, Neem, Pipal, Ficus sp.,
		Peltafarm, Nilgiri, Casia Samia, Gulmohar, Acacia
		Coliformis, Jamun, Kachnar, Baheda,
		Kachnar, Mahua & Saal etc. in consultation with
		DFO.
xxxii	Extensive plantation should be done near agriculture area to avoid coal	Being Complied.
	dust pollution which may affect the	Extensive plantation near agriculture land along road side is being done and will be done in future
	productivity of crop.	to avoid coal dust pollution which may affect the
	p. 33360000 01 01 01 01 01	productivity of crop.
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xxxiii	Mine discharge water shall be treated to meet the prescribed standards before discharge into the natural water course/agriculture. The quality of water discharge shall be monitored at the outer point and proper records maintained thereof and uploaded regularly on the company website.	Being Complied. a) At Banjikhol Mine (GP IV/4): O3 nos of Settling ponds with chemical dosing arrangement and sump with adequate capacity (for sedimentation) has been provided for the mine seepage water treatment before discharge for the agriculture purpose. The treated water quality analysis report from April 2021 to September 2021 is enclosed as Annexure No5
		Photographs of Treatment Facility (enclosed above)
		Also HIL constructed an additional settling pond of size 30m X 10m X 1.5m (01Nos) to collect whole mine seepage water generated during the mining activities from Patch "C" specially in the rainy season for proper settling of mine seepage water before discharge (Photograph enclosed above)
		At Bankheta Mine (GP IV/4): At Bankheta, HIL constructed 02 nos of additional settling pond of size (50m X 40m X 5.0 m) for proper settling of mine seepage water generated from mining activities from Batch "B" before discharge for the agriculture purpose (Photograph enclosed above) The treated water quality analysis reports are being periodically furnished to CECB & uploaded regularly on the company website.
xxxiv	No ground water shall be used for mining activities; additional water required if any shall be met from mine water or by recycling /reuse of water from existing activities and from rainwater harvesting measures. The project authority shall meet water requirement of nearby village (s) in case the village wells go dry to dewatering of mine.	Being Complied. For the mining activity only mine seepage water is being used after chemical dosing in settling ponds. To meet the water requirement of nearby villages company is providing treated water through pipeline/ drains and other mode for domestic (Non Drinking) and irrigation purpose.
xxxv	Regular monitoring of groundwater level and quality of the study area shall be carried out by establishing a network of existing wells and	Being Complied. Regular monitoring of groundwater level and quality of the area is being carried out by establishing a network of existing

xxxvi	construction of new peizometers. The monitoring for quality shall be done four times a year in premonsoon (May), Monsoon (August) Post- monsoon (November), and winter (January) seasons and for quality including Arsenic and Fluoride during the month of May. Data thus collected should be submitted to the Ministry of Environment & Forests and to the Central Pollution Control Board /SPCB quarterly within one month of monitoring. Rain water harvesting shall be undertaken in case monitoring of water table indicates a declining trend. 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 should be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures should be taken to avoid	wells/Piezometers. The Ground water level (from April 2021 to September 2021) and quality Monitoring report of Pre -Monsoon (May 21) and Monsoon (August 21) is attached as Annexure No6. Non-working mine pit has been developed as rain water harvesting structure in the mines. Quarterly monitoring report of Ground Water Level (from April 2021 to June 2021) and (from July 2021 to September 2021) & GW Quality Monitoring for the month of Pre -Monsoon (May 21) and Monsoon (August 21) has been submitted to MoEF & CC, CPCB and CECB on quarterly within one month of monitoring basis. Attached as Annexure No. – 7. Being Complied. In Gare Palma IV/4 coal mine: the method of underground coal mining is Board & 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 team. During the observation no any subsidence movement has been observed. In future, if any subsidence movement, occurred then appropriate effective
	appropriate effective corrective	been observed. In future, if any subsidence
xxxvii	Sufficient coal pillars shall be left unextracted around the airshaft (within the subsidence influence area) to protect from any damage from subsidence, if any.	Being Complied. Sufficient coal pillars have been will be left unextracted around the airshaft (within the subsidence influence area) to protect from any damage from subsidence.
xxxviii	High root density tree species shall be selected and planted over areas likely to be affected by subsidence.	Being Complied. High root density tree species will be selected and planted over areas likely to be affected by subsidence as required.

xxxix	Depression due to subsidence resulting in water accumulating within the low lying areas shall be filled up or drained out by cutting drains.	Being Complied. As of now depression due to subsidence is not observed. In future if such depression gets observed resulting in water accumulating , the same will be filled up or drained out by cutting drains, if any
xl	Solid barriers shall be left below the village, roads falling within the blocks to avoid any damage to the roads.	Being Complied. Solid barriers is left below the village, roads falling within the blocks to avoid any damage to the roads as per statute.
xli	No depillaring operation shall be carried out below the roads and habitation area found within the lease.	Being Complied. No depillaring operation will be carried out below the roads and habitation area found within the lease.
xlii	The proponent shall ensure to undertake and provide the costs incurred for taking up remedial measures in case of soil.	Being Complied. Cost incurred for taking remedial measures in case of soil will be borne by the company.
xliii	Extensive plantation should be done near agriculture area to avoid coal dust pollution which may affect the productivity of crop.	Being Complied. Extensive planation along road side has been done near the agriculture area to avoid coal dust pollution which may affect the productivity of crop. The same will be continue in other areas also.
xliv	ETP shall be provided for workshop, CHP, if any. Effluent shall be treated to confirm to prescribe standards in case discharge in to any water course outside the lease. The quality of water discharged shall be monitored at the outer point and proper records maintained thereof and uploaded regularly on the company website.	Being Complied. Water treatment facility has been provided in mines for the seepage water treatment. The quality of treated water is being monitored. The water quality analysis report is already enclosed. Also HIL constructed/provided the Effluent Treatment Plant of capacity 50 m3/Hr. at Bankheta GP IV/4 to treat the waste water generated from Dumper/HEMM washing bay and treated water is being reused again in dumper/HEMM washing, Dust suppression & Greenbelt development. The treated water quality analysis reports are being periodically furnished to CECB & uploaded regularly on the company website.
xlv	A detailed plan for CSR with specific budgetary allocation (capital and	Being Complied.

	revenue) for various skill development and alternate livelihood programmes and schemes shall be implemented and the impacts activities under CSR monitored based on in a scientific methodology. An amount of Rs. 5 per tonne of coal produced with escalation factor shall be utilized for the CSR activities for the adjoining villages for the balance life of project apart from one time capital expenditure. The details of CSR undertaken along with budgetary provisions for the village wise various activities and expenditure thereon shall be uploaded on the company website every year. CSR Audit should be carried conducted annually.	Rs. 5/- per ton of coal produce is being utilized for CSR activities under the guidance of District Collector, Raigarh. CSR Expenditure detail is already enclosed.
xlvi	A special corpus fund either at company level or in CIL/MOC be provided for the reclamation of abandoned and degraded areas.	Being Complied. Escrow account has been opened for the reclamation of abandoned and degraded areas in the mine lease till date (March 2021) Rs 764.01 lakhs has been deposited.
xlvii	For monitoring land use pattern and for post mining land use, a time series of land use, maps, based on satellite imagery (on a scale of 1: 5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in the three years (for any one particular season which is consistent in the time series). And the report submitted to MOEF and its regional office at Bhopal. The post mining land use shall be that out of the total 701.512 ha area, 57.73 ha area will be under plantation. 319.65 Ha area for public use, 324.132 ha area shall be undisturbed.	Complied. Report on Assessment of Land Use / Land Cover using High Resolution Satellite Imagery for the GP Mine IV/4 Coal Mine was carried out by IndiGEO Consultants, Bangalore in the month of December 2019 and the report was submitted to MoEF & CC Nagpur, Regional office dated 27 May 2020.

xlviii	A Final Mine closure plan along with a plan for habitat restoration and with details of corpus Fund shall be submitted to the Ministry of Environment & forest five years before mine closure for approval. The species selected for habitat restoration for post mining and shall include a specific plan for development of agro forestry using a mix native species found in the study area.	Being Complied. A Final Mine closure plan along with a plan for habitat restoration and with details of corpus Fund will be submitted to the Ministry of Environment & forest five years before mine closure for approval. The mix species will be selected for habitat restoration as per the conditions set out herewith.
xlix	A special corpus fund either at company level or in CIL/MOC be provided for reclamation of abandoned and degraded area.	Escrow account has been opened for the
I.	The possibility of sand stone, wherever is present in the OB as per lithology report, be explored and be provided to locals free of cost.	Being Complied. As per availability the sand stone is being provided to the locals free of cost.
li	After extraction of coal is completed, the OB left will be completely rehandled and backfilled the voids. This will be achieved by rehandling of OB Dumps in the area. Contamination of ground water and surface water and occupational and other dieses due to the mining operation.	Being Complied. After extraction of coal is completed, the OB dump created by Hindalco if any will be re-handled and backfilled into the voids as per mine closer plan to the extent possible.
lii	Corporate Environment Responsibility: a) The company shall have a well laid down Environment Policy approved by the Board of Directors. b) The Environment Policy shall prescribe for standard operating process/ procedures to bring into focus any infringements/deviation/violation	

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	of the environmental of forest	Mines Head & Head office (Compliance
	norms/conditions.	Committee).
	c) The hierarchical system or	
	administrative Order of the	
	company to deal with	
	environmental issues and for	
	ensuring compliance with the	
	environmental clearance	
	conditions shall be furnished.	
	To have proper checks and balances,	
	the company shall have a well laid	
	down system of reporting of no-	
	compliances/ violations of	
	environmental norms to the Board	
	of Directors of the company and /or	
	shareholders at large.	
Gene	ral Conditions	
i	No change in mining technology and	Noted
	scope of working should be made	
	without prior approval of the	
	ministry of Environment & Forest.	
ii	No change in the calendar plan for	Noted
	quantum of mineral coal and waste	
	should be made.	
iii	Four ambient air quality monitoring	Being Complied.
	stations shall be established in the	Four ambient air quality monitoring stations have
	core zone as well as in the buffer	been established and regular monitoring is being
	zone for PM10, PM2.5, SO2, and	carried out.
	NOx monitoring. Location of the	Reports are being periodically furnished to CECB.
	stations shall be decided based on	Copy of AAQ Monitoring Report from the period
	meteorological data topographical	April 2021 to September 2021 is enclosed as
	features and environmentally and	Annexure –8
	ecologically sensitive targets in	
	consultation with the state pollution	
	Control Board. Monitoring heavy	
	metals such as Hg, As Ni, Cd, Cr, etc.	
	carried out at least once in six	
	months.	
iv	Data on Ambient air quality (PM10,	Being Complied.
	PM 2.5, SO2, NOX) monitoring	All AAQM stations are decided based on the on the
	location of the stations shall be	meteorological data, topographical features and
	decided based on the	environmentally and ecologically sensitive targets
	meteorological data, topographical	

	<u></u>	
V	features and environmentally and ecologically sensitive targets in consultation with the state Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr etc. carried out at least once in six months. Adequate measures shall be taken for control of noise levels below 85	in consultation with the state Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr etc. carried out once in six months. Heavy metals Monitoring report for the month of September 2021 is attached as Annexure No. 9 Being Complied. Ear muffs/plugs has been provided to the all
	dBA in the work environment. Workers engaged in blasting and drilling operation of HEMM, etc should be provided with ear plugs/muffs.	workers engaged in blasting and drilling operations. The Noise monitoring report period April 2021 to September 2021 is enclosed as Annexure-10
vi	Industrial wastewater (workshop and wastewater from the mine) should be properly collected treated so as to conform to the standards under prescribed GSR 422 (E) dated 19 th May 1993 and 31 st December 1993 or as amended from time to time before discharge. Oil and grease trap should be installed before discharge of workshop effluents.	Being Complied. HIL constructed/provided the Effluent Treatment Plant of capacity 50 m3/Hr. at Bankheta GP IV/4 to treat the waste water generated from Dumper/HEMM washing bay and treated water is being reused again in dumper/HEMM washing, Dust suppression & Greenbelt development. Photograph of Effluent Treatment Plat is attached as Annexure – 10A. The treated water quality analysis reports are being periodically furnished to CECB. Copy of Analysis Report for the month of September 2021 is enclosed as Annexure – 10B
vii	Vehicular emission should be kept under control and regularly monitored. Vehicles used for transporting the mineral should be covered with tarpaulins and optimally loaded.	Being Complied. Regular monitoring of vehicular emission is being done and it is under control. The PUC certificate has been ensured for all the vehicles engaged in mining activities. The vehicle used for transporting the minerals are covered and optimally loaded.
viii	Monitoring of Environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment	Being Complied. Environmental monitoring is being carried out through CECB & MoEF & CC approved & NABL accredited Laboratory i.e. Ultimate Envirolytical Solutions Raipur.

ix	in consultation with the state pollution control board and data got analyzed through a laboratory recognized under EPA Rules,1986. Personnel working in dusty area shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health	Approval letter of Monitoring Agency from CECB Raipur, MoEF & CC & NABL accredited Laboratory certificate is attached as <u>Annexure No 11</u> Being Complied. Personnel working in dusty areas are provided with protective respiratory devices and they have also been provided with adequate training and information on safety and health aspect.
х	aspect. Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed and records maintained thereof.	Being Complied. Occupational health surveillance is undertaken as per DGMS guidelines.
xi	A separate environment management cell with suitable qualified personnel shall be set up under the control of a senior Executive, who will report directly to the head of the company.	Being Complied. A separate Environmental Management Department is functioning at Coal Mine under the direct control of a senior executive.
xii	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this ministry and it's Regional Office at Bhubaneswar.	Being Complied. The funds earmarked for environmental protection measures has been budgeted separately and not been diverted for other purposes. Environmental Expenditure details from April 2021 to September 2021 is Enclosed as Annexure – 12 Now Raipur Regional Office is looking after EC monitoring & compliances full co – operation has been extended to Regional Officer by furnishing requisite data information / monitoring reports
xiii	The project authority shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available	Complied.

	with the State pollution control Board and may also be seen at the website of the ministry of environment & forest at https://envfro.nic.in.	
xiv	A copy of environmental clearance letter shall be marked to concern panchayat / Zila Parishad, Municipal Corporation or Urban local body and local NGO,if any., from whom any suggestion /representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on company's website.	Complied. The EC documents are uploaded on the company's website The status of the environmental parameters is displayed at the main gate.
xv	A copy of environmental clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the regional office, District Industry Sector and Collector's office/Tehsildar's office for 30 days.	Complied by Prior Allottee.
xvi	The Clearance letter shall be uploaded on the company's website. The compliance status of the stipulated environmental clearance conditions shall be uploaded by the project authorities on their website and uploaded at least once every six months so as to bring the same in public domain. The monitoring data of environmental quality parameter (Air, Water, noise and soil) and critical pollutant such as PM10, PM2.5, SO2, and NO2 (Ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mine office	Complied. Upload the EC Clearance letter & Half yearly compliance report on the company's website i.e. http://wwwhindalco.com/sustainability/regulatory-compliances and also displayed the monitoring data of environmental quality parameter (Air, Water, noise and soil) and critical pollutant such as PM10, PM2.5, SO2, and NO2 at the entrance of the mine gate.

	and in corporate office and on	
	company's website	
xvii	The project proponent shall submit	Complied.
X • 11	six monthly compliance reports on	Complied.
	status of compliance of the	The last Half Yearly Compliance report for the
	stipulated environmental clearance	period from October 2020 to March 2021 was
	conditions (Both in hard copy and in	submitted to MoEF & CC Regional office dated
	e- mail) to the respective Regional	21.05.2021.
	Office of the Ministry, Respective	21.05.2021.
	Zonal officer's of CPCB and the	
	SPCB. Compliance of the EC	
	conditions be monitored by the	
	MoEF and other concerned	
	agencies.	
xviii	The Regional Office of this ministry	Complied.
*****	located at Bhubaneswar shall	complica.
	monitor compliance of the	Now Raipur, Integrated Regional Office is looking
	stipulated conditions. The Project	after EC monitoring & compliances full co –
	authorities shall extend full	operation has been extended to Regional Officer
	cooperation to the office (s) of the	by furnishing requisite data information /
	Regional Office by furnishing the	monitoring reports
	requisite data / information/	, and the second
	monitoring reports.	
xix	The Environmental Statement for	Complied.
	each financial year ending 31 March	·
	in Form –V is mandated to be	Submitted the Environmental Statement Report (In
	submitted by the project proponent	Form - V) for the FY 2020 -21 to the concerned
	for the concerned State Pollution	State Pollution Control Board as prescribed under
	Control Board as prescribed under	the Environment (Protection) Rules, 1986, dated
	the Environment (Protection) Rules,	15.09.2021 and also uploaded in the company's
	1986, as amended subsequently	website also E-mailed the EC Compliance report to
	shall be uploaded on the company's	Regional Office, Nagpur.
	web site along with the status of	
	compliance of EC conditions and	
	shall be sent to the respective	
	Regional Officers of the MoEF & CC	
	by E- mail	
5	The Ministry or other competent	Noted.
	authority may stipulated any further	
	condition for environmental	
	Protection.	
6	Failure to comply with any of the	Noted.
	conditions mentioned above may	

	result in withdrawal of this	
	clearance and attract the provisions	
	•	
	of the Environmental (Protection)	
	Act, 1986	
7	The above condition will be	Noted.
	enforced inter - alia, under the	
	provisions of the Water (Prevention	
	& Control of Pollution) Act, 1974,	
	The Air (Prevention & Control of	
	Pollution) Act, 1981, The	
	Environmental Protection Act 1986,	
	and the Public Liability Insurance	
	Act, 1991 along with their	
	amendments and Rules, The	
	proponent shall insure to undertake	
	and provide for the costs incurred	
	for taking up remedial measures in	
	case of soil contamination,	
	contamination of ground water and	
	surface water, and occupational and	
	other diseases due to the mining	
	operations.	
8	The Environmental Clearance is	Noted.
	subjected to the outcome of the	1.5.5.
	case filed by Chhattisgarh	
	Environmental Conservation Board,	
	in the court of Chief Judicial	
	Magistrate, Raigarh, which is	
	pending.	
	pending.	

J-11015/183/2010-IA-II(M) Government of India Ministry of Environment, Forest and Climate Change IA Division

Indira Paryavaran Bhawan, Jorbagh Road, N Delhi-3 Dated: 24th May, 2019

To,

The Assistant Vice-President (Corporate-Affairs)
M/s Hindalco Industries Limited,
Aditya Birla Centre, 3rd Floor,
B wing, S.K. Ahire Marg,Worli,

Mumbai - 400030 (Maharashtra) E-mail: corporateaffairs@adityabirla.com

Sub: Gare-Palma IV/4 Coal Block of capacity 1 MTPA of M/s Hindalco Industries Limited located in District Raigarh (Chhattisgarh) - Amendment in Environmental Clearance - reg.

Sir.

This is with reference to your online proposal No.IA/CG/CMIN/7679/2010 dated 25th January, 2019 on the above-mentioned subject.

- 2. The Ministry of Environment, Forest and Climate Change has granted environmental clearance vide letter dated 12th March, 2013 in favour of M/s Jayaswal Neco Industries to Gare-Palma IV/4 Coal Block of production capacity 1 MTPA (0.6 MTPA Underground & 0.4 MTPA Opencast) in mine lease area of 701.512 ha located in District Raigarh (Chhattisgarh).
- 3. Subsequent to cancellation of coal blocks pursuant to order of Hon'ble Supreme Court in August/September, 2014 and their reallocation to successful bidders, Gare-Palma IV/4 coal block was vested with M/s Hindalco Industries Limited vide Allotment Order No.104/16/2015/NA dated 23rd March, 2015 issued by the Nominated Authority in the Ministry of Coal. The said environmental clearance was accordingly transferred to M/s Hindalco Industries Limited vide this Ministry's letter dated 16th April, 2015.
- **4.** M/s Hindalco Industries Limited has sought amendment in the said environmental clearance for change in mining operations (Underground from 0.6 to 0.44 MTPA and Opencast from 0.4 to 0.56 MTPA) with the total capacity remains at 1 MTPA in the same mine lease area of 701.512 ha. Revised Mining Plan has the approval of Ministry of Coal vide letter dated 13th December, 2018.
- 5. The EAC, in its meeting held on 21st February, 2019, has recommended the proposed amendment for change in mining operations, and thus amendment in the environmental clearance dated 12th March, 2013, read with communication dated 16th April, 2015, with all other conditions stipulated therein remaining the same. With the proposed restructuring, mining operations would be revised as under:-

Mining method	Proposed Production Capacity		
Opencast	0.56 MTPA (Increase by 0.16 MTPA)		
Underground	0.44 MTPA (Decrease by 0.16 MTPA)		



- **6.** Based on recommendations of the EAC, Ministry of Environment, Forest and Climate Change hereby accords approval for amendment in environmental clearance dated 12th March, 2013, read with communication dated 16th April, 2015, to Gare-Palma IV/4 Coal Block of M/s Hindalco Industries Limited located in District Raigarh (Chhattisgarh), to effect change in mining operations as stated in para 5 above, with the total capacity remains at 1 MTPA in the same mine lease area of 701.512 ha.
- 7. All other conditions stipulated in environmental clearance granted vide letter dated 12th March, 2013, read with communication dated 16th April, 2015, shall remain unchanged.

(S. K. Srivastava) Scientist E

Copy to:

1. The Secretary, Ministry of Coal, New Delhi

The Secretary, Department of Environment & Forests, Government of Chhattisgarh, Secretariat, Raipur

3. The Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, E-2/240 Arera Colony, Bhopal - 462016

4. The Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi

5. The Member Secretary, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32

6. The Member Secretary, Chhattisgarh State Environment Conservation Board, 1-Tilak Nagar, Shiv Mandir Chowk, Main Road, Avanti Vihar, Raipur- 492001(Chhattisgarh)

7. The District Collector, Raigarh, Government of Chhattisgarh

8. Monitoring File 9. Guard File 10. Record File



Ref. No. HIL/GP-IV-4/CCO/2021-22/139

Dated: 04.10.2021

To,
The Coal Controller,
Office of the Coal Controller,
Ministry of Coal,
Government of India,
1, Council House Street,
Kolkata-700001.

Sub: Statistical Return for the month of September-2021 of Gare Palma IV/4 Coal Mine.

Sir,

Enclosed please find the Statistical Return for the month of September-2021 of Gare Palma-IV/4 Coal Mine.

This is for your kind information please.

Thanking you,

Yours sincerely,

Deepak Pracad Lenka Mine Manager

Gare Palma-IV/4 Coa

Banjikhol, Raigarh (CG

Encl.: as above.

Copy to: OSD, CCO, Bilaspur.

Statistical return for the month of September -2021.

- 1 Name of the Coal Company :- Gare Palma IV/4 Coal Mine, M/s Hindalco Industries Limited.
- 2 Contact Name with Designation & Telephone No. :- Deepak Prasad Lenka (Mines Manager), Mob.No.9111006023
- 3 Coal Consuming sector :- Captive Power Plant

	TE LEE	Clean Coal and Mic	Production (In T	housand Tonnes)		
Coal Type		D. Jan Month			Progressive (F.Y. 2021-22)		
	During Month			Opencast	Underground	Total	
	Opencast	Underground	Total	Openious			
			•			204 269	
Coking			52.944	284.368	0.000	284.368	
Non Coking	52.944	0.000		284.368	0.000	284.368	
Total Raw Coal	52.944	0.000	52.944	204.500			
			-	-	-		
Clean Coal		+				•	
Middlings	-	•	•	-	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 10-	
Rejects		-	•	1			

Coal Type	h of Raw Coal, Clean Coal and Middling etc. Despatch (In Thousand Tonnes)		IVIOGE OF S	Mode of Despatch (In Thousa	
Coal Type	During Month Progressive (F.Y. 2021-22)		1 1	Road	Others
	During Mona.	-/		•	
Coking	•	204 00037	-	54.80924	- 12" •
Non Coking	54.80924	281.08837		54.80924	-
Total Raw Coal	54.80924	281.08837			
Clean Coal	•	•	<u> </u>		•
Middlings		•	+	-	
Rejects	-	•			

^{*} Domestic Consumption - Nil

Table 3: Pit Head Closing Stock of 30.09.2021

Coal Type	Pit Head Closing Stock (In Thousand Tonnes)			
Coarrype	During Month			
Coking	•			
	30.170496			
Non Coking	30.170496			
Total Raw Coal	30.110-100			
Clean Coal	•			
Middlings				
Rejects	•			

Signature:

Designation: Owner/ Agent/ Manager

Date :- 04.10.2021



CSR & Sustainability Expenditure Details From <u>April 2021 to September 2021</u> Hindalco Industries Ltd. Gare Palma IV/4

Sr. No.	Focused Area/ Project Activities	Summary Cost (In Lakhs)	
1	Education	0.553	
2	Health	5.427	
3	Sustainable Livelihood under CSR	1.813	
4	Infra - Structure	4.216	
5	Social	14.046	
6	Other (if any)	0.000	
7	Under Sustainable Development	2.232	
Total		28.287	

Hindalco Industries Limited Green Belt Development Status

Year wise plantation detail of Gare Palma IV/4 Coal Mine								
Year	Location	No. of Tree Planted (Approx.)	Survival Rate (%)	Number of Plant Survived	Area Covered in Plantation (hectare)	Sapling Details		
Upto 2015	Coal mine	53000	85.00	45050	18.0	Saja,Siris, Shisham,Yellow flametree, Kassod , Satvan, Acacia Mangium, Ganga Emli, Arjuna, Chirol, Gliricidia, Amla,Mango, guava, Kathal,Neem, Pipal, Ficus sp., Peltafarm, Nilgiri, Casia Samia, Gulmohar, Acacia Coliformis,Jamun,Kachnar, Baheda, Kachnar,Mahua & Saal		
2016	lease	6500	90.00	5850	2.3			
2017	area/OB	10000	87.00	8700	3.5			
2018	Dump.	5000	87.00	4350	1.7			
2019	·	6600	90.00	5940	2.4			
2020		10200	93.83	9570	3.9			
2021		8521	95.00	8094	3.2			
Total		99821	87.71	87554	35.0	EIG.		
Note : Gap filling of plants is a continous process								

Green Belt Development Photographs















Annexure – 4A

Photographs of Truck mounted water sprinklers & Fixed type of water sprinklers at GP IV/4 Coal Mines

Truck mounted water sprinkler





Fixed type of water sprinklers





Annexure – 4AA

Annexure – 4AA





SETTLING POND NO – 1

SETTLING POND NO – 2



SETTLING POND NO – 3

Annexure – 4AAA



An additional settling pond of size 30m X 10m X 1.5m (01Nos) to collect whole mine seepage water generated during the mining activities specially for the rainy season for proper settling of mine seepage water before discharge it out site

Annexure – 4B

ANNEXURE – 4B



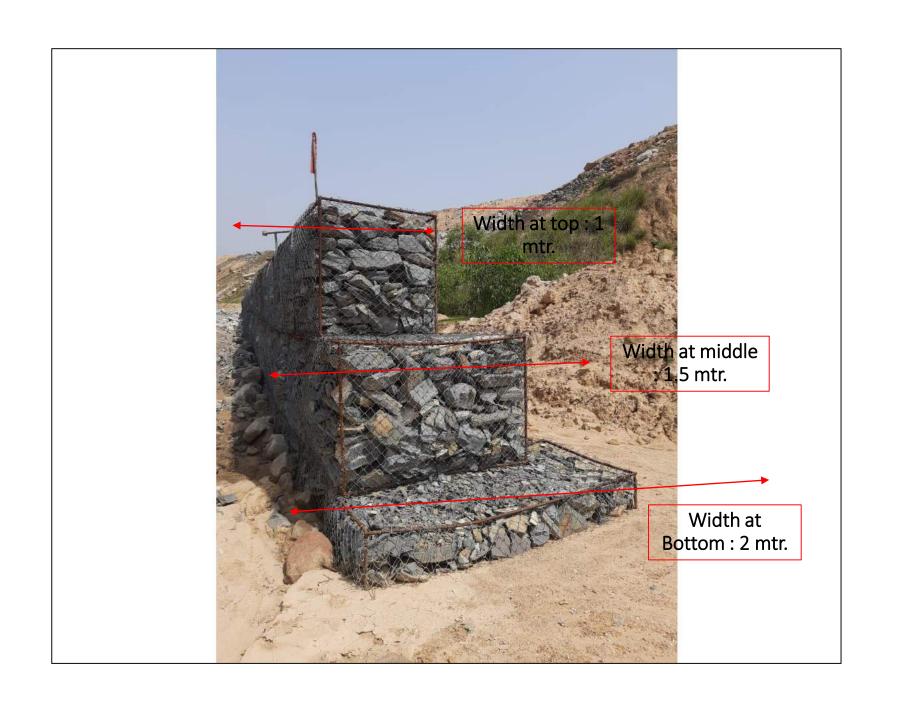


02 nos of additional settling pond of size (50m X 40m X 5.0 m) for proper settling of mine seepage water generated from mining activities from Batch "B" before discharge for the agriculture purpose

ANNEXURE – 4C



Gabion/Retaining wall at the toe of permanent dump slope for arresting the silt near Patch "C" in Banjikhol, GP IV/4 Coal Mines.









Annexure – 4CC



Ref No: HIL/ GP-IV4/EC- C-2/2021-22/33

1st June 2021

The DDGF (Central), Regional Office,

Ministry of Environment Forests & Climate Change (MoEF & CC) Regional Office, (West Central Zone) Ground Floor, East Wing New Secretary Building, Civil Line, Nagpur – 440001

Kind Attention: Dr. P.R Sakare (Scientist –D/ Joint Director)

Sub.: - Environmental Clearance Compliance of Specific condition no. (xxiv) of Gare Palma IV/4 Coal Mine of M/s Hindalco Industries Limited, Village – Banjikhol, Tehsil – Tamnar, District – Raigarh, Chhattisgarh- Compliance of reg.

Ref.:

- Letter No. F.No.3-18/2013(ENV)/5931 dated 28th November 2019.
- Mine visit of Dr. P.R Sakhare (Scientist –D/ Joint Director) for the monitoring of compliance of condition stipulated in the environment clearance dated 7th November 2019.

Respected Sir,

Please find the compliance status as on date regarding EC Specific Condition No. xxiv:

Sr. No.	EC Specific Condition No. xxiv	Compliance status during the site visit	Compliance status till date
1	To check run-off and siltation from OB/benches retaining wall is being constructed at the toe of permanent dump slope.	Partially Complied.	Complied. In the Ist Phase we have constructed approx. 55 m long gabion/retaining wall at the toe of permanent dump slope near Patch "C" in Banjikhol, GP IV/4 Coal Mines. The Gabion /retaining walls had been made of GI wire net cages filled with stone boulders and anchored with angle iron as per specification. Gabion walls provide vertical support to the bottom of the slope and help against sliding. They also protect the toe of the reshaped OB dump.



We would also like to inform you that we have taken gabion/retaining wall construction activity at the toe of the OB dump as a continuous process & ensure you that it will be carried out as & when required in future also at mine site.
Photographs of constructed gabion/Retaining wall attached as Annexure No 1

We request you to kindly update as Complied instead of Partially Complied and issue/grant a compliance Certificate for the future reference please.

Thanking you,

Yours faithfully,

For Hindalco Industries Limited

Dipesh Bhatia

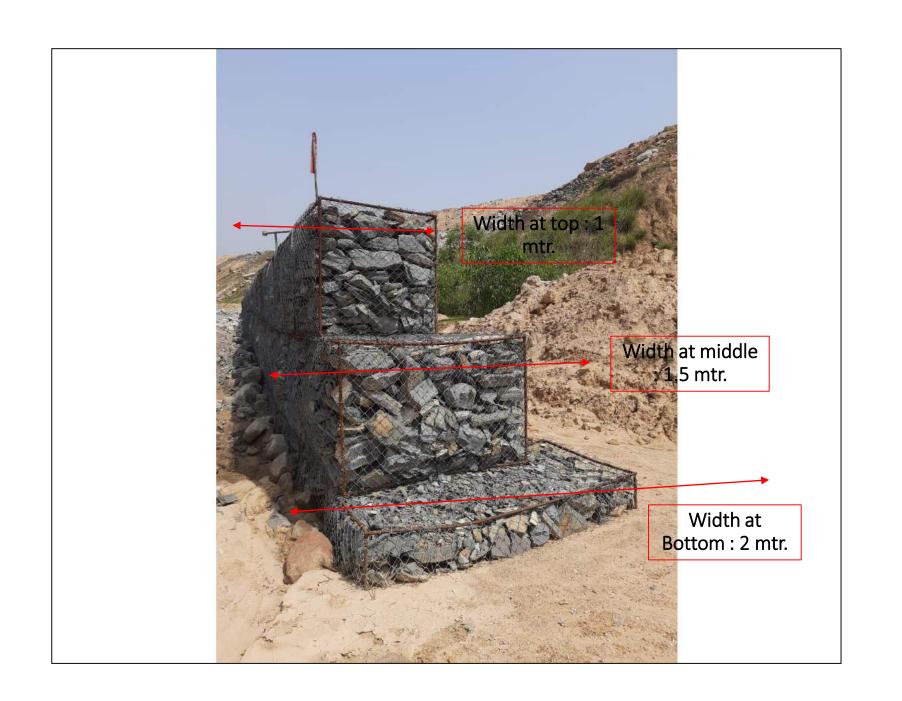
(Vice President –Mines)

Enclosed: Annexure -1

ANNEXURE - 1



Gabion/Retaining wall at the toe of permanent dump slope for arresting the silt near Patch "C" in Banjikhol, GP IV/4 Coal Mines.









Annexure - 5



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

Name & Address Of The Custo TO, HINDALCO INDUS GARE PALMA – IV VILLAGE – BANKH	TRIES LIMITED,		REPORT NO LAB REF NO DATE OF SAMPLING DATE OF RECEIPT DATE OF REPORT	UES/TR/21-22/0037 UES/21-22/W/033 26/04/2021 27/04/2021 03/05/2021		
DISTT RAIGARH	(C.G.) 496107		DATE OF ANALYSIS	START: 28/04/2	END: 03/05/2021	
		SAMPLE DI	ETAILS			
SAMPLE TYPE	WASTE WATER		ORDER / REFERENCE:			//2021/0035, UG-2020
CUSTMER SAMPLE ID	ETP INLET BANJIKHOL		SAMPLE CONDITION AT RECE	EIPT 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	LAB	DRATO	DRY CHEMIST
SAMPLING PROCEDURE	IS:3025(PART I):1987 RA 2003; AF	PHA 22ND ED.	QUANTITY RECEIVED	5 LT	2	

TEST REPORT								
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT			
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1			
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable			
3	Temperature	*c	APHA 22 nd Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.8			
4	pн	-	APHA 22 ⁵⁶ Ed.2012,4500-E'-B,4-92	5.5 to 9.0	7.54			
5	Total Residual Chlorine	mg/L	APHA 22 ^{ad} Ed.2012,4500-C1-G, 4 -	1.0	N.D.			
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	32.0			
7	Dissolved Phosphate (as P)	mg/L	AFHA 22 nd Ed.2012,4500-P-C, 4-153	5.0	N.D.			
8	Fluoride (as F)	mg/L	APHA 22nd Ed.2012,4500-F-B&D,4-84	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 En)	mg/L	APHA 22md Ed.2012,3111-B, 3-18	5.0	0.16			
11	Copper (as Cu)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	3.0	N.D.			
12	Cadmium (as Cd)	mg/L	APHA 22nd Ed.2012,3500-Cd, 3-105	2.0	N.D.			
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-B, 3-23	0.01	N.D.			
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.			
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.			
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.			
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B,5-17	250	244.0			
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	24.2			
19	Oil & Grease	mg/L	IS 3025(Fart 39):1991,RA 2003,	10.0	N.D.			
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.			

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

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

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

.....End of the test report-



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

Name & Address Of The C	ustomer		REPORT NO	UES/TR/21-22/0409			
то,			LAB REF NO	UES/21-	1-22/W/0509		
HINDALCO INDU	JSTRIES LIMITED,		DATE OF SAMPLING	29/05/2	021		
GARE PALMA -	IV/4, COAL MINE,		DATE OF RECEIPT	30/05/2	30/05/2021		
	KHETA, POST MILUPAR	Δ.	DATE OF REPORT	03/06/2	021		
	RH (C.G.) 496107	DATE OF ANALYSIS	START: 31,	END: 03/06/2021			
		SAMPI	LE DETAILS				
SAMPLE TYPE	WASTE WATER		ORDER /REFERENCE;		N/PO/SRV/2021/0035, DTD. 21-AUG-2020		
CUSTMER SAMPLE ID	ETP INLET BANJIKHOL		SAMPLE CONDITION AT REC	EIPT	CK		
3 L X 1 NO. PVC CAN SEALED 1 L X 1 NO. PVC CAN SEALED 1 L X 1 NO. GLASS BOTTLE		SAMPLE COLLECTED BY		LABORATORY CHEMIST			
SAMPLING PROCEDURE IS:3025(PART I):1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39			QUANTITY RECEIVED		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 22ndEd. 2012,2120-B,2-6	See 6 of Annexure-I	<1			
2	Odour	-	APHA 22 TGEd. 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	25.4			
4	pн	-	APHA 22" Ed.2012,4500-H*-B,4-92	5.5 to 9.0	7.36			
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-C1-G, 4 -	1,0	N.D.			
6	Total Suspended Solids	mg/L	APHA 22nd Ed.2012,2540- D, 2-66	100	44.0			
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	0.13			
9	Lead (as Pb)	mg/L	APHA 22" 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	124.0			
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	16.2			
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003,	10.0	N.D.			
20	Phenolic Compounds (as C _c H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.			

REMARKS: mg/lit.:milligram per liter, N.D.: Not Detected. 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) and have the same test of the sa

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03/06 **AUTHORIZED SIGNATORY**

.....End of the test report-



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Name & Address Of The C	ustomer	REPORT NO	UES/TR/2	TR/21-22/0876			
TO,			LAB REF NO	UES/21-2	2/W/09	88	
HINDALCO INDU	JSTRIES LIMITED,		DATE OF SAMPLING	27/06/202	21		
GARE PALMA -	IV/4, COAL MINE.		DATE OF RECEIPT	28/06/202	2021		
	KHETA, POST MILUPAR	A	DATE OF REPORT	03/07/2021			
	RH (C.G.) 496107	~,	DATE OF ANALYSIS	START: 29/0	END: 02/07/2021		
		SAMPI	LE DETAILS				
SAMPLE TYPE	MASTE WATER	- SAME	ORDER /REFERENCE:			V/2021/0035, -AUG-2020	
CUSTMER SAMPLE ID	ETP INLET BANJIEROL	ONT DESCRIPTION OF THE PARTY.	SAMPLE CONDITION AT RECEIPT		CK		
PACKING OF SAMPLE 3 L X 1 MO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE 1 L X 1 NO. GLASS BOTTLE		SAMPLE COLLECTED BY		LABORATORY CHEMIST			
SAMPLING PROCEDURE	IS:3025(PART I):1987 RA 2003; ED. 2012, 1060-B, 1-39	QUARTITY RECEIVED		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 ^{pd} 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	25.2			
4	рH	-	APHA 22th Ed.2012,4500-H-B,4-92	5.5 to 9.0	7.43			
5	Total Residual Chlorine	mg/L	APHA 22 ^{ml} Ed.2012,4500-C1-G, 4 -	1.0	N.D.			
6	Total Suspended Solids	mg/L	APHA 22 ⁿ¹ Ed.2012,2540- D, 2-66	100	46.0			
7	Dissolved Phosphate (as P)	mg/L	APHA 22 ^{nt} Ed.2012,4500-P-C, 4-153	5.0	N.D.			
8	Fluoride (as F)	mg/L	APHA 22nd Ed.2012,4500-F-B&D,4-84 & 87	2.0	0.12			
9	Lead (as Pb)	mg/L	APHA 22 ^{nf} 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 ¹⁰ Ed.2012,3111-B, 3-18	3.0	N.D.			
12	Cadmium (as Cd)	mg/L	APHA 22nd Ed.2012,3500-Cd, 3-105	2.0	N.D.			
13	Mercury (as Hg)	mg/L	APHA 22 ^{hd} 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" 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 ^{nt} Ed.2012, 5520-B,5-17	250	128.0			
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	14.8			
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.			

is & conditions
The report for publication, arbitration or as legal dispute is forbidden.
The sport for publication, arbitration or as legal dispute is forbidden.
Total sample will be retained for 15-lays after issue of test report printing of the relation of the state of the s

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For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY

.....End of the test report-



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

Name & Address Of The C	ustamer		REPORT NO	UES/TR/	21-22/1416		
TO,			LAB REF NO	UES/21-22/W/200B			
HINDALCO INDU	JSTRIES LIMITED,		DATE OF SAMPLING	27/07/2	021	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	IV/4, COAL MINE,		DATE OF RECEIPT	28/07/2021			
	KHETA, POST MILUPAR	Λ	DATE OF REPORT	02/08/2	02/08/2021		
	RH (C.G.) 496107	м,	DATE OF ANALYSIS	START: 27/07/2021 END: 31/07/			
		SAMPI	LE DETAILS				
SAMPLE TYPE	WASTE WATER		ORDER /REFERENCE:		N/PO/SRV/2021/0035, DID. 21-AUG-2020		
CUSTOMER ENDFIRE ID	USINER SAMPLE ID ETF INTET BANJIKHOL		EMPLE CONDITION AT RECEIPT		ON		
PACICING OF SAMPLE 3 L X 1 NO. PVC CAN GSALED 1 L X 1 NO. GLASS DOTFLE		SANCTE COLLECTED BY		LABORATORY CHEMIST			
HAMPLING PROCEDURZ 18:3025 (PART 1):1987 RA 2003; APRA 2200 ED. 2012, 1060-B, 1-89		QUANTITY RECEIVED		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 22mded. 2012,2120-8,2-6	See 6 of Annexure-I	<1			
2	Odour	-	APHA 22"Ed. 2012,2120-8,2-6	See 6 of Annexure-I	Agreeable			
3	Temperature	·c	APHA 22 ^{ma} Rd.2D12,2130-8,2-13	Shall not exceed 5°C above the receiving water temperature	24.8			
4	рн	-	APHA 22mg Ed. 2012, 4500-H'-B, 4-92	5.5 to 9.0	7,28			
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-C1-G, 4 - 69	1.0	N.D.			
6	Total Suspended Solids	mg/L	APHA 22 ^{ns} Ed.2012,2540- D, 2-65	100	52.4			
7	Dissolved Phosphate (as P)	mg/L	APHA 22 ^{ad} Ed.2012,4500-P-C, 4-153	5.0	N.D.			
8	Fluoride (as F)	mg/L	APHA 22 nd Ed. 2012, 4500-F-B4D, 4-84 5 87	2.0	0.14			
9	Lead (as Pb)	mg/L	APHA 22md Ed. 2012, 3111-B, 3-18	0.1	N.D.			
10	Zinc (as Zn)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	5.0	0.16			
11	Copper (as Cu)	mg/L	APHA 22 nd Ed. 2012, 3111-8, 3-18	3.0	N.D.			
12	Cadmium (as Cd)	mg/L	APHA 22nd Ed. 2012, 3500-Cd, 3-105	2.0	N.D.			
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed. 2012, 3112-B, 3-23	0.01	N.D.			
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.			
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-0, 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	114.0			
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	12.6			
19	Oil & Grease	mg/L	IS 3025(Part 39):1991,RA 2003,	10.0	N.D.			
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.			

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Test sample will be retained for 45days after Issus of test report unless otherwise agreed with customer.
This is for information as the party has acked for above testic) only.

AUTHORIZED SIGNATORY

.End of the test report



CUSTMER SAMPLE ID

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 I Email: ultimatenviro@gmail.com

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REPORT NO TO, LAB REF NO DATE OF SAMPLING 27/08/2021 HINDALCO INDUSTRIES LIMITED, DATE OF RECEIPT 29/08/2021 GARE PALMA - IV/4, COAL MINE, DATE OF REPORT 03/09/2021 VILLAGE - BANKHETA, POST MILUPARA, DATE OF ANALYSIS START: 29/08/2021 FND-02/09/2021 DISTT. - RAIGARH (C.G.) 496107 SAMPLE TYPE WASTE WATER

(C.G.) 496107		DATE OF AMADISTS	SIAR1.29/08/2021	END: 02/03/2021
Selwente Unas III	SAMPI	E DETAILS		
WASTE WATER		ORDER /REFERENCE:	N/PO/SRV DTD. 24-	/2122/0045, /ULY-2021
ETP INLET BANJIKHOL	W	SAMPLE CONDITION AT REC	EIPT OK	
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	LABORAT	ORY CHEMIST
IS:3025(PART I):1987 RA 2003; ED. 2012, 1060-B, 1-39	APHA 22ND	QUANTITY RECEIVED	5 LTR	

UES/TR/21-22/2108

UES/21-22/W/03443

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°dEd. 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	pн	-	APHA 22nd Ed.2012,4500-H+-B,4-92	5.5 to 9.0	7.42			
5	Total Residual Chlorine	mg/L	APHA 22 rd Ed.2012,4500-C1-G, 4 -	1.0	N.D.			
6	Total Suspended Solids	mg/L	APHA 22nd Ed.2012,2540- D, 2-66	100	52.0			
7	Dissolved Phosphate (as P)	mg/L	APHA 22nd 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)	mq/L	APHA 22nd Ed.2012,3111-B, 3-18	0.1	N.D.			
10	Zinc (as Zn)	mg/L	APHA 22nd Ed.2012,3111-B, 3-18	5.0	0.08			
11	Copper (as Cu)	mg/L	APHA 22nd Ed.2012,3111-B, 3-18	3.0	N.D.			
12	Cadmium (as Cd)	mg/L	APHA 22nd Ed.2012, 3500-Cd, 3-105	2.0	N.D.			
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-B, 3-23	0.01	N.D.			
14	Arsenic (as As)	mg/L	APHA 22nd Ed.2012,3114-C, 3-38	0.2	N.D.			
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.			
16	Total Chromium (as Cr)	mg/L	APHA 22nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.			
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B,5-17	250	144.0			
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	18.2			
19	Oil & Grease	mg/L	IS 3025 (Part 39):1991, RA 2003,	10.0	N.D.			
20	Phenolic Compounds (as C _c H ₀ OH)	mg/L	IS 3025(Part 43):1992,RA 2003	1.0	N.D.			

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

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

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

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

03/09/2 PREPARED BY

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For ULTIMATE ENVIROLYTICAL SOLUTIONS 03/09/2021

AUTHORIZED SIGNATORY

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



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

REPORT NO UES/TR/21-22/2260 TO, LAB REF NO UES/21-22/W/4361 HINDALCO INDUSTRIES LIMITED, DATE OF SAMPLING 24/09/2021 GARE PALMA - IV/4, COAL MINE, DATE OF RECEIPT 25/09/2021 DATE OF REPORT 02/10/2021 VILLAGE - BANKHETA, POST MILUPARA, DATE OF ANALYSIS START: 24/09/2021 END: 30/09/2021 DISTT. - RAIGARH (C.G.) 496107 SAMPLE DETAILS SAMPLE TYPE WASTE WATER N/PO/SRV/2122/0045 ORDER /REFERENCE: DTD.:24-JULY-2021 CK ETF INLET BANJIKHOL

3 L X 1 NO. PVC CAN
1 L X 1 NO. PVC CAN
1 L X 1 NO. FVC CAN
1 L X 1 NO. GLASS BOTTLE
15:3025[FART 1]:1987 RA 2003; APHA 22ND
ED. 2012, 1060-B, 1-39 CUSTMER SAMPLE ID SAMPLE CONDITION AT RECEIPT PACKING OF SAMPLE SAMPLE COLLECTED BY SAMPLING PROCEDURE CUANTITY RECEIVED 5 LTR

TEST REPORT								
SR. PARAMETER		ETER UNIT METHOD OF T		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 22ndEd. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable			
3	Temperature	*c	APHA 22mdEd.2012,2130-B,2-13 Shall not exceed 5°C above the receiving water temperature		25.4			
4	pH	-	APHA 22 nd Ed.2012,4500-H*-B,4-92	5.5 to 9.0	7.48			
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-C1-G, 4 -	1.0	N.D.			
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	68.0			
7	Dissolved Phosphate (as P)	mg/L	APHA 22nd 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	0.18			
9	Lead (as Pb)	mg/L	APHA 22nd Ed.2012,3111-B, 3-18	0.1	N.D.			
10	Zinc (as Zn)	mg/L	APHA 22nd Ed.2012,3111-B, 3-18	5.0	0.12			
11	Copper (as Cu)	mg/L	APHA 22nd Ed.2012,3111-B, 3-18	3.0	N.D.			
12	Cadmium (as Cd)	mg/L	APHA 22nd Ed.2012,3500-Cd, 3-105	2.0	N.D.			
13	Mercury (as Hg)	mg/L	APHA 22nd Ed.2012,3112-B, 3-23	0.01	N.D.			
14	Arsenic (as As)	mg/L	APHA 22nd Ed.2012,3114-C, 3-38	0.2	N.D.			
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.			
16	Total Chromium (as Cr)	mg/L	APHA 22nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.			
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22nd Ed.2012, 5520-B,5-17	250	128.0			
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025(Part 44):1993,RA 2003	30	14.2			
19	Oil & Grease	mq/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.			

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 02/10 PREPARED BY AUTHORIZED SIGNATORY

..... End of the test report-



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Name & Address Of The C	Lustomer	RE	PORT NO	UES/TR/21-22/0038 UES/21-22/W/034		
TO,	USTRIES LIMITED,	LA	B REF NO			
	IV/4, COAL MINE,	DA	TE OF SAMPLING	26/04/2021		
VILLAGE - BAN		DA	TE OF RECEIPT	27/04/2021 03/05/2021		
POST -MILUPAR		DA	TE OF REPORT			
DISTT RAIGAI	DA	TE OF ANALYSIS	START: 28/04/202	21	END: 03/05/2021	
		SAMPLE	DETAILS		4 (3)	
SAMPLE TYPE	WASTE WATER		ORDER /REFERENCE:		N/PO/SRV/2021/0035, DTD, 21-AUG-2020	
CUSTMER SAMPLE ID	ETP OUTLET BANJIKHOL	***************************************	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 B	BY CHEMIST		list
SAMPLING PROCEDURE	I IS-2025/DAPT II-1097 PA 2003- APHA 22ND ED 2012		QUANTITY RECEIVED		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 d. 2012,2120-B,2-6	See 6 of Annexure-I	<1				
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable				
3	Temperature	*c	APHA 22 nd Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.4				
4	рн		APHA 22 nd Ed.2012,4500-H ⁺ -B,4-92	5.5 to 9.0	7.38				
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-C1-G,4-69	1.0	N.D.				
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	20.0				
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	N.D.				
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	N.D.				
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 22td Ed.2012,3114-C, 3-38	0.05	N.D.				
16	Total Chromium (as Cr)	mg/L	APHA 22nd 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	24.0				
18	Biochemical Cxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993, RA 2003	30	4.1				
19	Oil & Grease	mg/L	IS 3025 (Part 39):1991, RA 2003	10.0	N.D.				
20	Phenolic Compounds (as CeHsOH)	mg/L	IS 3025 (Part 43):1992, RA 2003	1.0	N.D.				

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

Terms & conditions

FOR ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY



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

Name & Address of The Cur TO, HINDALCO INDU- GARE PALMA – IV VILLAGE – BANK POST -MILUPARA DISTT RAIGARI	STRIES LIMITED, 1/4, COAL MINE, HETA, A,	DA DA	PORT NO B REF NO TE OF SAMPLING TE OF RECEIPT TE OF REPORT TE OF ANALYSIS	UES/TR/21-22/0410 UES/21-22/W/0510 29/05/2021 30/05/2021 03/06/2021 START:31/05/2021 END:03/06/202		
		SAMPLE	DETAILS		and the characteristic control of th	MANAGE AND ADDRESS OF THE PARTY
SAMPLE TYPE	WASTE WATER	n Carry about an al Assertion	ORDER /REFERENCE:			D/SRV/2021/0035,
CUSTMER SAMPLE ID	ETP OUTLET BANJIXHOL		SAMPLE CONDITIO	SAMPLE CONDITION AT RECEIPT		
PACKING OF SAMPLE	3 L X I NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	SEALED	SAMPLE COLLECTE	D BY	CHEMIST	
SAMPLING PROCEDURE IS:3025 (PART I):1987 RA 2003; A 22ND ED. 2012, 1060-B, 1-39			QUANTITY RECEIVED		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" Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1		
2	Odour		APHA 22 ⁿ³ Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable		
3	Temperature	,c	APHA 22 nd Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.6		
4	pH	-	APHA 22nd 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-Cl-G,4-69	1.0	N.D.		
6	Total Suspended Solids	mg/L	APHA 22" Ed.2012,2540- D, 2-66	100	24.0		
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	N.D.		
9	Lead (as Pb)	mg/L	APHA 22nd 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	N.D.		
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 ^{ms} 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 ^{th2} 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 22th 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	16.0		
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993, RA 2003	30	2.4		
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	TS 3025 (Part 43):1992, RA 2003	1.0	N.D.		

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

Terms & conditions

The report for publication, arbitration or as legal dispinal.

Test sample will be retained for 15 days after issue of test up.

This is for information as the party has asked for above justice. The report for publication, arbitration or as legal dispute is forbidden.

FOR ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY PREPARED BY

End of the test report-



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

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Name & Address Of The Gustomer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA,			PORT NO B REF NO TE OF SAMPLING TE OF RECEIPT TE OF REPORT	UES/TR/21-22/0877 UES/21-22/W/0989 27/06/2021 28/06/2021 03/07/2021			
DISTT RAIGARI			DETAILS	START: 29/06/2021		END: 02/07/2021	
SAMPLE TYPE		SPUTE LIE	T	_	N/PC	0/SRV/2021/0035,	
	WASTE WATER		ORDER /REFERENCE:			21-AUG-2020	
CUSTMER SAMPLE ID	ETP OUTLET BANJIKHOL	SAMPLE CONDITION		N 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 COLLECTE	D BY	CHEMIST		
SAMPLING PROCEDURE IS:3025 (PART I):1987 RA 2003; 22ND ED. 2012, 1060-B, 1-39			QUANTITY RECEIV	Y RECEIVED		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 ^{hd} Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable			
3	Temperature	,c	APHA 22 ^{td} Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.4			
4	PH	-	APHA 22" Ed. 2012, 4500-H'-B, 4-92	5.5 to 9.0	7.36			
5 Total Residual mg/L A		APHA 22 ^{lod} Ed.2012,4500-C1-G,4-69	1.0	N.D.				
6	Total Suspended Solids	mg/L	APHA 22nd Ed.2012,2540- D, 2-66	100	28.0			
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	N.D.			
9	Lead (as Pb)	mg/L	APHA 22nd 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	N.D.			
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 ^{8d} 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 22nd 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	12.0			
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993, RA 2003	30	1.8			
19	Oil & Grease	mg/L	IS 3025 (Part 39):1991, RA 2003	10.0	N.D.			
20	Phenolic Compounds (as C _c H _S OH)	mg/L	IS 3025 (Part 43):1992, RA 2003	1.0	N.D.			

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

Terms & conditions

> The report for publication, erbitmion or as legal displate is forbidden.

> Test sample will be retained for 15 days after issue of test report unto

> This is for information as the party has asked for above tester of the conditions.

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For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY

End of the test report-



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Nume & Address Of The Cus	tomer	REI	PORT NO	UES/TR/21-22/1417		
то,		LA	B REF NO	UES/21-22/W/2009		09
HINDALCO INDUS		DA	TE OF SAMPLING	27/07/2021		
GARE PALMA - IV		DA	TE OF RECEIPT	28/07/2021 02/08/2021		
VILLAGE - BANK	5-2 con-17/2/e11H (01201)	DA	TE OF REPORT			C-Hambon William Strike III - Likk
POST -MILUPARA, DISTT RAIGARH (C.G.) 496107			TE OF ANALYSIS	START: 27/07/2021 EN		END: 31/07/2021
DIOTTI TOTAL		SAMPLE	DETAILS			
SAMPLE TYPE	WASTE WATER		ORDER /REFERENCE;			0/SRV/2021/0035, . 21-AUG-2020
CUSTMER SAMPLE ID	ETF OUTLET HANJIEHOL		SAMPLE CONDITIO	N AT RECEIPT	CK	
PACKING OF SAMPLE	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	SEALED	SAMPLE COLLECTE	SAMPLE COLLECTED BY		MIST
SAMPLING PROCEDURE	TS: 3025 (PART I): 1987 RA 2003; APHA		COUNTILL SECRIAND		5 1	TB

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	-	APMA 22ndEd. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable			
3	Temperature	*c	дряА 22 ^{m0} Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	24.6			
4	pH	-	APHA 22md Ed.2012,4500-H-B,4-92	5.5 to 9.0	7.24			
5	Total Residual Chlorine	mg/L	RPHA 22 nd Ed.2012,4500-C1-G,4-59	1.0	N.D.			
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	22.0			
7	Disselved Phosphate	mg/L	APHA 22 nd Ed.2012,4500-F-C,4-153	5.0	N.D.			
8	Fluoride (as F)	mg/L	APHA 22 nd Ed.2012,4500-F-8 &D, 4- 84 & 87	2.0	N.D.			
9	Lead (as Pb)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	N,D,			
10	Zinc (as Zn)	mq/L	AFHA 22 nd Ed.2012,3111-B, 3-18	5.0	N.D.			
11	Copper (as Cu)	mg/L	APHA 22nd Ed.2012,3111-B, 3-18	3.0	N.D.			
12	Cadmium (as Cd)	mg/L	APHA 22 Md 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	APHR 22" 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	20.0			
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993, RA 2003	30 .	2,2			
19	Oil & Grease	mg/L	IS 3025 (Part 39):1991, RA 2003	10.0	N.D.			
20	Phenolic Compounds (as CaHaOH)	mg/L	IS 3025 (Part 43):1992, RA 2003	1.0	N.D.			

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

HTMS & COVILITIONS
The report for publication, arbitration or as legal disputs is forbidden. The report for publication, arbitration or as legal disputs is forbiddent and public FOR ULTIMATE ENVIROLYTICAL SOLUTIONS

End of the test report--

AUTHORIZED SIGNATORY



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Name & Address Of The Customer	
TO,	
HINDALCO INDUSTRIES LIMITED,	
GARE PALMA - IV/4, COAL MINE,	
VILLAGE - BANKHETA,	
POST -MILUPARA,	
DISTT RAIGARH (C.G.) 496107	

	REPORT NO	UES/TR/21-22/02109				
	LAB REF NO	UES/21-22/W/03444				
	DATE OF SAMPLING	27/08/2021				
	DATE OF RECEIPT	29/08/2021				
	DATE OF REPORT	03/09/2021				
-	DATE OF ANALYSIS	START:29/08/2021	END: 02/09/2021			

SAMPLE DETAILS								
SAMPLE TYPE	WASTE WATER		ORDER /REFERENCE:	M/PO/SRV/2122/0045, DTD. 24-JULY-2021				
CUSTMER SAMPLE ID	ETP OUTLET BANJIKHOL		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; 22ND ED. 2012, 1060-B, 1-39	АРНА	QUANTITY RECEIVED	5 LTR				

	TEST REPORT								
SR. NO.	DADAMETED		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 22mded.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	24.8				
4	pH	-	APHA 22nd Ed.2012,4500-H*-B,4-92	5.5 to 9.0	7.11				
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-C1-G,4-69	1.0	N.D.				
6	Total Suspended Solids	mg/L	APHA 22nd Ed.2012,2540- D, 2-66	100	22.0				
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°d Ed.2012,4500-F-B 6D, 4-84 6 87	2.0	N.D.				
9	Lead (as Pb)	mg/L	APHA 22nd Ed.2012,3111-B, 3-18	0.1	N.D.				
10	Zinc (as Zn)	mg/L	APHA 22 rd Ed.2012,3111-B, 3-18	5.0	N.D.				
11	Copper (as Cu)	mg/L	APHA 22nd Ed.2012,3111-B, 3-18	3.0	N.D.				
12	Cadmium (as Cd)	mg/L	APHA 22 nd Ed.2012,3500-Cd, 3-105	2.0	N.D.				
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-B, 3-23	0.01	N.D.				
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.				
15	Selenium (as Se)	mg/L	APHA 22md Ed.2012,3114-C, 3-38	0.05	N.D.				
16	Total Chromium (as Cr)	mg/L	APHA 22md 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	14.0				
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993, RA 2003	30	2.8				
19	Oil & Grease	mg/L	IS 3025 (Part 39):1991, RA 2003	10.0	N.D.				
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025 (Part 43):1992, RA 2003	1.0	N.D.				

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

Terms & conditions

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

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

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

 RECEITION

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For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

-End of the test report-



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

REPORT NO UES/TR/21-22/2261 TO, UES/21-22/W/4362 LAB REF NO HINDALCO INDUSTRIES LIMITED, 24/09/2021 DATE OF SAMPLING GARE PALMA - IV/4, COAL MINE, 25/09/2021 DATE OF RECEIPT VILLAGE - BANKHETA, DATE OF REPORT 02/10/2021 POST -MILUPARA, DISTT. - RAIGARH (C.G.) 496107 DATE OF ANALYSIS START: 24/09/2021 END: 30/09/2021

		SAMPLE	DETAILS	
SAMPLE TYPE	WASTE WATER		ORDER /REFERENCE:	N/PO/SRV/2122/0045, DTD.:24-JULY-2021
CUSTMER SAMPLE ID	ETP OUTLET BANJIKHOL		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(FART I):1987 RA 2003; 22ND ED. 2012, 1060-B, 1-39	APHA	QUANTITY RECEIVED	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 22ndEd. 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 22ndEd.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	24.2				
4	PH	-	APHA 22nd Ed.2012,4500-H+-B,4-92	5.5 to 9.0	7.41				
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-C1-G,4-69	1.0	N.D.				
6	Total Suspended Solids	mg/L	APHA 22nd Ed.2012,2540- D, 2-66	100	20.0				
7	Dissolved Phosphate (as P)	mg/L	APHA 22nd 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	N.D.				
9	Lead (as Pb)	mg/L	APHA 22nd Ed.2012,3111-B, 3-18	0.1	N.D.				
10	Zinc (as Zn)	mg/L	APHA 22nd Ed.2012,3111-B, 3-18	5.0	N.D.				
11	Copper (as Cu)	mg/L	APHA 22nd Ed.2012,3111-B, 3-18	3.0	N.D.				
12	Cadmium (as Cd)	mg/L	APHA 22nd Ed.2012,3500-Cd, 3-105	2.0	N.D.				
13	Mercury (as Hg)	mg/L	APHA 22nd Ed.2012,3112-B, 3-23	0.01	N.D.				
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.				
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.				
16	Total Chromium (as Cr)	mg/L	APHA 22nd 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	24.0				
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993, RA 2003	30	2.6				
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.				

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

Terms & conditions

The report for publication, arbitration or as legat dispute is torbidden.

Test sample will be relatined 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.

adf For ULTIMATE ENVIROLYTICAL SOLUTIONS 02/10/2 10 2021 AUTHORIZED SIGNATORY PREPARED BY



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Namo & Address Of The Customer TO.			PORT NO	UES/TR/21-22/0039			
	STRIES LIMITED.	LA	B REF NO	UES/21-22/W/035			
GARE PALMA - IN		DA	TE OF SAMPLING	26/04/20	021		
VILLAGE - BANK	[] 이 (B. 10 H)	DA	TE OF RECEIPT	27/04/20	021		
POST MILUPARA		DA	DATE OF REPORT		03/05/2021		
DISTT RAIGARI	DAS	DATE OF ANALYSIS		04/2021	END: 03/05/2021		
		SAMPLE	DETAILS				
SAMPLE TYPE	EFFLUENT WATER	A SOR COME TO LONG	ORDER /REFERENCE:		N/PO/SR	V/2021/0035, AUG-2020	
CUSTMER SAMPLE ID	SUMP WATER PATCH "B"	***************************************	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		CHEMIST		
SAMPLING PROCEDURE IS:3025(PART I):1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39			QUANTITY RECEIVED		5 LTR		

	TEST REPORT								
SR. NO.	PARAMETER			THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT				
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-8,2-6	See 6 of Annexure-I	<1				
2	Odour	-	APHA 22hdEd. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable				
3	Temperature	*c	APHA 22 nd Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.8				
4	рH	-	APHA 22 nd Ed.2012,4500-H*-B, 4- 92	5.5 to 9.0	7.14				
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	56.0				
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	N.D.				
9	Lead (as Pb)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	N.D.				
10	Zinc (as Zn)	mg/L	APHA 22nd Ed.2012,3111-B, 3-18	5.0	N.D.				
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 ⁵⁴ Ed.2012,3112-B, 3-23	0.01	N.D.				
14	Arsenic (as As)	mg/L	APHA 22 rd 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 22nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.				
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22md Ed.2012, 5520-B, 5-17	250	164.0				
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993, RA 2003	30	14.6				
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/I	IS 3025 (Part 43):1992,RA 2003	1.0	N.D.				

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

Terms & conditions

Terms & conditions

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

Test sample will be retained fort\$ days after issue of test report unless otherwise agreed with customer.

This is for information as the party has asked for above testing city.

For ULT

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

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



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

Name & Address Of The TO,	Customer	1	PORT NO	UES/TR/21-22/0411		
HINDALCO INDU	STRIES LIMITED,	LAI	B REF NO	UES/21-2	2/W/05	11
GARE PALMA - I	V/4. COAL MINE.	DA	TE OF SAMPLING	29/05/20	21	
VILLAGE - BANK		DA:	TE OF RECEIPT	30/05/2021		
POST MILUPARA		DA:	TE OF REPORT	03/06/2021 START: 31/05/2021		
DISTT RAIGAR	H (C.G.) 496107	DAS	EE OF ANALYSIS			END: 03/06/2021
		SAMPL	E DETAILS			***************************************
SAMPLE TYPE	EFFLUENT WATER		ORDER /REFERENCE:			RV/2021/0035, 1-AUG-2020
CUSTMER SAMPLE ID SUMP WATER PATCH "B"			SAMPLE CONDITION AS	receipt	OK	
PACKING OF SAMPLE	3 L X 1 NO. PVC CAN 2 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	SEALED	SAMPLE COLLECTED BY	7	СНЕМІЗТ	
SAMPLING PROCEDURE		HA 22ND ED.	QUANTITY RECEIVED		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 ⁿⁱ Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1			
2	Odour	-	APHA 22"Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable			
3	Temperature	,c	арна 22 ^{mi} Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.5			
4	PH	-	APHA 22 nd Ed.2012,4500-H ⁻ -B, 4- 92	5.5 to 9.0	7.67			
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	40.0			
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	N.D.			
9	Lead (as Pb)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	N.D.			
10	Zinc (as Zn)	mg/L	APHA 22nd Ed.2012,3111-B, 3-18	5.0	N.D.			
11	Copper (as Cu)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	3.0	N.D.			
12	Cadmium (as Cd)	mg/L	APHA 22nd Ed.2012,3500-Cd, 3-105	2.0	N.D.			
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-B, 3-23	0.01	N.D.			
14	Arsenic (as As)	mg/L	APHA 22 ^{ml} 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	88.0			
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993, RA 2003	30	12.5			
19	Oil & Grease	mg/L	IS 3025 (Part 39):1991,RA 2003,	10.0	N.D.			
20	Phenolic Compounds (as C _c H _z OH)	mg/L	IS 3025 (Part 43):1992,RA 2003	1.0	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 tests (1000).

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Name & Address Of The TO.	Gustomer	REP	PORT NO	UES/TR/21-22/0878 UES/21-22/W/0990 27/06/2021 28/06/2021		
	STRIES LIMITED.	LAB	REF NO			
GARE PALMA - I		DAT	T OF SAMPLING			
VILLAGE - BANK	것이 없는데 아픈데 시간 이번 이번 것이 없는데 하는데 이 얼마나면?	DAT	E OF RECEIPT			
POST MILUPARA	Contraction of the contraction o	DAT	E OF REPORT	03/07/2021 START: 29/06/2021 END: 0		
DISTT RAIGAR	H (C.G.) 496107	DAT	E OF ANALYSIS			END: 02/07/2021
		SAMPLI	E DETAILS		Laboration of the Control of the Con	
SAMPLE TYPE	EFFLUENT WATER		ORDER /REFERENCE:			RV/2021/0035, 1-AUG-2020
COSTMER SAMPLE ID	SUMP WATER PATCH "B"		SAMPLE CONDITION AT RECEIPT		αx	
ACKING OF SAMPLE 3 L X 1 NO. PVC CAN STALED 1 L X 1 NO. PVC CAN STALED		SAMPLE COLLECTED BY		CHEMIST		
SAMPLING PROCEDURE 15:3025(PART I):1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39			QUARTITY RECRIVED		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	Soo 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	DH	-	APHA 22 ^{m1} Ed.2012,4500-H ^r -B, 4- 92	5.5 to 9.0	7.56			
5	Total Residual Chlorine	mg/L	APHA 22 ^{ml} Ed.2012,4500-C1-G, 4 - 69	1.0	N.D.			
6	Total Suspended Solids	mg/L	APHA 22 ^{ns} Ed.2012,2540- D, 2-66	100	42.0			
7	Dissolved Phosphate (as	mg/L	APHA 22 nd Ed.2012,4500-P-C, 4- 153	5.0	N.D.			
8	Fluoride (as F)	mg/L	APHA 22 ^{nl} Ed.2012,4500-F-B &D, 4-84 & 87	2.0	N.D.			
9	Lead (as Pb)	mg/L	APHA 22 ⁿ³ Ed.2012,3111-B, 3-18	0.1	N.D.			
10	Zinc (as Zn)	mg/L	APHA 22 ⁿⁱ Ed.2012,3111-B, 3-18	5.0	N.D.			
11	Copper (as Cu)	mg/L	APHA 22 ^{ml} 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° 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 ^{cl} Ed.2012,3114-C, 3-38	0.05	N.D.			
16	Total Chromium (as Cr)	mg/L	APHA 22nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.			
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 ^{nt} Ed.2012, 5520-B, 5-17	250	84.0			
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_fH_SOH)	mg/L	IS 3025 (Part 43):1992,RA 2003	1.0	N.D.			

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

Terrins & conditions

The report for publication, arbitration or as legal dispute is forbitled by Toets sample will be retained fort 5 days after issue of test report.

This is for information as the party has asked for above realls.

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End of the test report-----



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Name & Address Of the Customer TO, HINDALGO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST MILUPARA, DISTT RAIGARH (C.G.) 496107			PORT NO REF NO REF OF SAMPLING REF OF RECEIPT REF OF REPORT REF OF ANALYSIS	UES/TR/21-22/1418 UES/21-22/W/2010 27/07/2021 28/07/2021 02/08/2021 START:27/07/2021 END:31/07/202:		10
DISTT KAIGAK	H (C.G.) 496107		E DETAILS	× E		
SAMULE TIPE	EFFLUENT NATER	yy;	CRIMER /RESTRICTS:			RV/2021/0035, 1-ADG-2020
CUSTMER SAMPLE ID	NOTICE SANGLE ID SING MATER PATCH "B"		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 BOPPLE	SEALED	SAMPLE COLLECTED B	x	CHEMIST	
#AMPLING PROCHIDINE 18:3025 (PART 1,:1987 EA 2003; ADMA 22MD ED. 2012, 1060-B, 1-39			QUARTITY RECEIVED		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 2204Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable			
3	Temperature	°C	АРНА 22 ^{md} Ed.2012,2130-6,2-13	Shall not exceed 5°C above the receiving water temperature	25.8			
4	Eq	-	АРНА 22 nd Ed.2012,4500-H ² -В, 4- 92	5.5 to 9.0	7.42			
5	Total Residual Chlorina	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	44.0			
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 ^{td} Ed.2012,4500-F-B &D, 4-84 & 87	2.0	N,D,			
9	Lead (as Pb)	mq/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	N.D.			
11	Copper (as Cu)	mg/L	APHA 22 Ed. 2012, 3111-B, 3-18	3.0	N.D.			
12	Cadmium (as Cd)	mg/L	APHA 22 ^{Md} Ed.2012,3500-Cd, 3-105	2.0	N.D.			
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-8, 3-23	0.01	N,D,			
14	Arsenic (as As)	mg/L	APHA 22 st 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 22nd 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	96.0			
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993, RA 2003	30 '	12.2			
19	Oil & Grease	mg/L	IS 3025 (Part 39):1991,RA 2003,	10.0	N.D.			
20	Phenolic Compounds (as C.H.OH)	mg/L	IS 3025 (Part 43):1992,RA 2003	1.0	N.D.			

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

ng/file: managem per any ferror terms & conditions

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

> Test semple will be retained for 15 days after issue of test report unless.

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

End of the test report

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TO, HINDALCO INDU GARE PALMA - I' VILLAGE - BANK POST MILUPARA DISTT RAIGAR	STRIES LIMITED, V/4, COAL MINE, CHETA,	DATE DATE	PORT NO B REF NO FE OF SAMPLING FE OF RECEIPT FE OF REPORT FE OF ANALYSIS		21 21	
		SAMPL	E DETAILS		SKI TE	
SAMPLE TYPE	EFFLUENT WATER		ORDER /REFERENCE:			V/2122/0045, -JULY-2021
CUSTMER SAMPLE ID	SUMP WATER PATCH "B"		SAMPLE CONDITION AS	RECEIPT	CIK	
PACKING OF SAMPLE	3 L X I NO. PVC CAN 1 L X I NO. PVC CAN 1 L X I NO. GLASS BOTTLE	SEALED	SAMPLE COLLECTED BY	r	CHEMIST	
SAMPLING PROCEDURE	IS:3025(PART I):1987 RA 2003; A	PHA 22MD ED.	QUANTITY RECEIVED		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		Hazen	APHA 22ndEd. 2012,2120-B,2-6	See 6 of Annexure-I	<1			
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable			
3	Temperature	·c	APHA 22 nd Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	24.6			
4	рH	-	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 22nd 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	N.D.			
9	Lead (as Pb)	mg/L	APHA 22nd 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	N.D.			
11	Copper (as Cu)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	3.0	N.D.			
12	Cadmium (as Cd)	mg/L	APHA 22nd Ed.2012,3500-Cd, 3-105	2.0	N.D.			
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-B, 3-23	0.01	N.D.			
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.			
15	Selenium (as Se)	mg/L	APHA 22nd 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	64.0			
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993, RA 2003	30	6.8			
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.			

Terms & conditions

Test sample will be retained for 13 days after issue of test report unless otherwise agreed with custo. This is for information as the party has asked for above test(s) only.

203/09/2 PREPARED BY

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

-- End of the test report--



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REPORT NO UES/TR/21-22/2262 TO, UES/21-22/W/4363 LAB REF NO HINDALCO INDUSTRIES LIMITED, DATE OF SAMPLING 24/09/2021 GARE PALMA - IV/4, COAL MINE, 25/09/2021 DATE OF RECEIPT VILLAGE - BANKHETA, DATE OF REPORT 02/10/2021 POST MILUPARA, DATE OF ANALYSIS START: 24/09/2021 END: 30/09/2021 DISTT. - RAIGARH (C.G.) 496107 SAMPLE DETAILS N/PO/SRV/2122/0045, DTD.:24-JULY-2021 SAMPLE TYPE EFFLUENT WATER ORDER /REFERENCE: CUSTMER SAMPLE ID SUMP WATER PATCH "B" SAMPLE CONDITION AT RECEIPT CK 9 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. CLASS BOTTLE
SEALED
1 L X 1 NO. CLASS BOTTLE
15:3032 (PART 1):1987 NA 2003; APHA 22ND ED.
2012, 1060-B, 1-39 PACKING OF SAMPLE SAMPLE COLLECTED BY CHEMIST 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°dEd. 2012,2120-B,2-6	See 6 of Annexure-I	<1				
2	Odour	-	APHA 22ndEd. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable				
3	Temperature	·c	APHA 22 nd Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	24.2				
4	рн	-	APHA 22nd Ed.2012,4500-H*-B, 4- 92	5.5 to 9.0	7.11				
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-C1-G, 4 - 69	1.0	N.D.				
6	Total Suspended Solids	mg/L	APHA 22nd Ed.2012,2540- D, 2-66	100	40.0				
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	N.D.				
9	Lead (as Pb)	mg/L	APHA 22nd Ed.2012,3111-B, 3-18	0.1	N.D.				
10	Zinc (as Zn)	mg/L	APHA 22nd Ed.2012,3111-B, 3-18	5.0	N.D.				
11	Copper (as Cu)	mg/L	APHA 22nd Ed.2012,3111-B, 3-18	3.0	N.D.				
12	Cadmium (as Cd)	mg/L	APHA 22nd Ed.2012,3500-Cd, 3-105	2.0	N.D.				
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-B, 3-23	0.01	N.D.				
14	Arsenic (as As)	mg/L	APHA 22nd Ed.2012,3114-C, 3-38	0.2	N.D.				
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.				
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.				
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B, 5-17	250	84.0				
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993, RA 2003	30	12.2				
19	Oil & Grease	mg/L	IS 3025 (Part 39):1991,RA 2003,	10.0	N.D.				
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025 (Part 43):1992,RA 2003	1.0	N.D.				

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

Terms & conditions
> The report for publication
> Test sample will be retained.

blication, arbitration or as legal dispute is forbidden.
be retained for 15 days after issue of test report unless otherwise agreed with cust attor as the party has asked for above test(s) only.

Thuely 02/10/21. For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY PREPARED BY End of the test report-



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PACKING OF SAMPLE	1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE IS:3025(PART I):1987 RA 2003: API	SEALED	SAMPLE COLLECTED B	Υ	CHEMIS	57	
	3LX 1NO. PVC CAN		Sam LL CONDITION P	I REVEIT I	- J.		
CUSTMER SAMPLE ID	SUMP WATER PATCH "C"	***************************************	SAMPLE CONDITION A	AT RECEIPT	ОК	***************************************	
SAMPLE TYPE	EFFLUENT WATER	CONTRACTOR OF THE STREET	: ORDER /REFERENCE:		1.0000000000000000000000000000000000000	/SRV/2021/0035, 21-AUG-2020	
		SAMPLE	DETAILS				
DISTT RAIGAR	H (C.G.) 496107	DA	DATE OF ANALYSIS		4/2021	END: 03/05/2021	
POST MILUPARA	,	DA	TE OF REPORT	27/04/2021 03/05/2021			
VILLAGE - BANK	HETA,	DA	TE OF RECEIPT				
GARE PALMA - I	V/4, COAL MINE,	DA	TE OF SAMPLING	26/04/2021			
. Tili i Tilli karala an sesara menana sa remaka	STRIES LIMITED,	LA	B REF NO	UES/21-2	2/W/03	6	
Name & Address Of The TO.	Gustomer'	RE	PORT NO	UES/TR/21-22/0040			

	TEST REPORT								
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VIJ PART-A INLAND SURFACE WATER	RESULT				
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1				
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable				
3	Temperature	·c	APHA 22 nd Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.6				
4	рH	-	APHA 22 nd Ed.2012,4500-H*-B, 4- 92	5.5 to 9.0	7.26				
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 ^{ad} Ed.2012,2540- D, 2-66	100	26.0				
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	N.D.				
9	Lead (as Pb)	mg/L	APHA 22nd Ed.2012,3111-B, 3-18	0.1	N.D.				
10	Zinc (as Zn)	mg/L	APHA 22nd Ed.2012,3111-B, 3-18	5.0	N.D.				
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 22nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.				
17	Chemical Oxygen Demand (CCD)	mg/L	APHA 22 nd Ed.2012, 5520-B, 5-17	250	58.0				
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993, RA 2003	30	6.8				
19	Oil & Grease	mg/L	IS 3025 (Part 39):1991,RA 2003,	10.0	N.D.				
20	Phenolic Compounds (as C ₅ H ₅ OH)	mg/L	IS 3025 (Part 43):1992,RA 2003	1.0	N.D.				

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

Terms & conditions

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

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

For ULT

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

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Name & Address of The Gustomer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST MILUPARA, DISTT RAIGARH (C.G.) 496107		DAS	PORT NO B REF NO TE OF SAMPLING TE OF RECEIPT TE OF REPORT	UES/TR/2 UES/21-2 29/05/20 30/05/20 03/06/20	12	
DISTT RAIGAR	H (C.G.) 496107	-	E DETAILS	START: 31/0.	5/2021	END: 03/06/2021
SAMPLE TYPE	EFFLUENT WATER		ORDER /REFERENCE:			/SRV/2021/0035, 21-AUG-2020
CUSTMER SAMPLE ID	SUMP WATER PATCH "C"		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 I	gr	снимая	ST
SAMPLING PROCEDURE	QUANTITY RECEIVED		5 LTR			

TEST REPORT								
SR. NO.		UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT			
1	Colour	Hazen	APHA 22 rd 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	7.29			
5	Total Residual Chlorine	mg/L	APHA 22 ⁿ³ Ed.2012,4500-C1-G, 4 - 69	1.0	N.D.			
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540 D, 2-66	100	28.0			
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 rd Ed.2012,4500-F-B 6D, 4-84 6 87	. 2.0	N.D.			
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	N.D.			
11	Copper (as Cu)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	3.0	N.D.			
12	Cadmium (as Cd)	mg/L	APHA 22 nd Ed.2012,3500-Cd, 3-105	2.0	N.D.			
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-B, 3-23	0.01	N.D.			
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.			
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.			
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.			
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B, 5-17	250	56.0			
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993, RA 2003	30	2.9			
19	Oil & Grease	mg/L	IS 3025 (Part 39):1991,RA 2003,	10.0	N.D.			
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025 (Part 43):1992,RA 2003	1.0	N.D.			

REMARKS: mg/lit.: milligram per liter, N.D.-Not Detected. 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 testis only y r, For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY PREPARED BY End of the test report-



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

Name & Address Of The Gustomer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST MILUPARA,		LAE DAI DAI	ORT NO REF NO TO OF SAMPLING TO OF RECEIPT TO OF REPORT	EIPT 28/06/2021 ORT 03/07/2021		91	
DISTT RAIGAR	H (C.G.) 496107		E OF ANALYSIS	START: 29/0	6/2021	END: 02/07/2021	
		SAMPLI	E DETAILS		11/22/		
SAMPLE TYPE	EFFLUENT MATER		ORDER /REFERENCE:		N/PO/SRV/2021/0035, DTD. 21-AUG-2020		
CUSTMER SAMPLE ID	SUMP WATER PAICH "C"	100	SAMPLE CONDITION I	AT RECEIPT	OK	The state of the s	
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	ar.	снимих	T.	
SAMPLING PROCEDURE	QUANTITY RECEIVED		5 LIR				

SR. No.	PARAMETER			THE ENVIRONMENT (PROTECTION) RULES, 1886 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT	
1	Colour	Hazen	APHA 22"'Ed. 2012,2120-B,2-6	See 6 of Annexuze-I	<1	
2	Odour	-	APHA 22"Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable	
3	Temperature	*c	APHA 22 ⁿ¹ Ed.2012,2130-B,2-13	Shall not exceed 5'C above the receiving water temperature	25.6	
4	PH		APHA 22 th Ed.2012,4500-H'-B, 4- 92	5.5 to 9.0	7.35	
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-C1-G, 4 - 69	1.0	N.D.	
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	30.0	
7	Dissolved Phosphate (as P)	mg/L	APHA 22 ^{ml} Ed.2012,4500-P-C, 4- 153	5.0	N.D.	
8	Fluorida (as F)	mg/L	APHA 22 ^{td} Ed.2012,4500-F-B &D, 4-84 & 87	2.0	N.D.	
9	Lead (as Pb)	mg/L	APHA 22 ^{td} Ed.2012,3111-B, 3-18	0.1	N.D.	
10	Zinc (as Zn)	mg/L	APHA 22 ^{ed} Ed.2012,3111-B, 3-18	5.0	N.D.	
11	Copper (as Cu)	mg/L	APHA 22 ^{td} 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 ^{ed} Ed.2012,3112-B, 3-23	0.01	N.D.	
14	Arsenic (as As)	mg/L	APHA 22 rd Ed.2012,3114-C, 3-38	0.2	N.D.	
15	Selenium (as Se)	mg/L	APHA 22 rd Ed.2012,3114-C, 3-38	0.05	N.D.	
16	Total Chromium (as Cr)	mg/L	APHA 22 Ed. 2012, 3500-Cr-B, 3-69	2.0	N.D.	
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B, 5-17	250	56.0	
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993, RA 2003	30	2.2	
19	Oil & Grease	mg/L	IS 3025 (Part 39):1991, RA 2003,	10.0	N.D.	
20	Phenolic Compounds (as C.H.OH)	mg/L	IS 3025 (Part 43):1992,RA 2003	1.0	N.D.	

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Test sample will be retained for 15days after issue of test upon the publication.

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AUTHORIZED SIGNATORY

End of the test report-



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Name & Address Of the Customer TO, TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE,			ORT NO		TES/TR/21-22/1419 UES/21-22/W/2011		
			E OF SAMPLING	27/07/203	21		
VILLAGE - BANK	CHANGE AND	DAY	E OF RECEIPT	28/07/2021			
POST MILUPARA		DAG	E OF REPORT	02/08/2021			
DISTT RAIGARH (C.G.) 496107		DATE OF ANALYSIS		START: 27/07/2021 ENL		END:31/07/2021	
		SAMPL	E DETAILS				
SUMPLE TYPE	HEFEURWY WATER		ORDER /HSFSHENCE/			ERV/2021/0035, 21-ADG-2020	
CUSTNER SAMPLE ID	SUMP WALER PANCH "G"		SAMPLE CONDITION .	AT RECEIPT	OR		
PACKING OF SAMPLE	3 L X 1 NO. PVC CAM 1 L X 1 NO. PVC CAW 1 L X 1 NO. GLASS BOTTLE	553,160	SAMPLE COLLECTED	PL	C583471	r	
EANGLING ERCCEPURE	15:8025(PART I):1987 RA 2003; 2 2012, 2060-B, 1-39	APHA 22ND FID	GOVNATAL POSTRIARS		5 LTE		

SR. NO.	PARAMETER			THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT	
1	Colour	Hazen	APHA 22"Ed. 2012,2120-B,2-6	See 6 of Annexure-I	<1	
2	Odour	-	APHA 22 md Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable	
3	Temperature	·c	APHA 22 nd Sd.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.2	
4	ря	-	APHA 22 nd Ed.2012,4500-H*-B, 4- 92	5.5 to 9.0	7.44	
5	Total Residual Chlorina	mg/L	APHA 22 ⁸⁴ Ed.2012,4500-C1-G, 4 - 69	1.0	n.d.	
6	Total Suspended Solids	mg/L	APHA 22" Ed.2012,2540- D, 2-66	100	32.0	
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 & B7	2.0	N.D.	
9	Lead (as Fb)	mq/L	APHA 22nd 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	N.D.	
11	Copper (as Cu)	mg/L	APHA 22 ^{ad} Ed.2012,3111-B, 3-18	13.0	N.D.	
12	Cadmium (as Cd)	mq/L	APHA 22"d 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	AFHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.	
15	Selenium (as Se)	mg/L	APHA 22 ⁵⁶ Ed.2012,3114-C, 3-38	0.05	N.D.	
16	Total Chromium (as Cr)	mg/L	APHA 22" 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	64.0	
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993, RA 2003	30	2.8	
19	Oil & Grease	mg/L	IS 3025 (Part 39):1991,RA 2003,	10.0	N.D.	
20	Phenolic Compounds (as C.H.OH)	mg/L	IS 3025 (Part 43):1992,8A 2003	1.0	N.D.	

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Name & Address Of The TO, HINDALCO INDU GARE PALMA – I' VILLAGE – BANK POST MILUPARA DISTT RAIGAR	STRIES LIMITED, V/4, COAL MINE, CHETA,	DATE DATE DATE DATE DATE DATE DATE DATE	PORT NO RE OF SAMPLING TO OF RECEIPT TO OF REPORT TO OF ANALYSIS	UES/TR/21- UES/21-22/ 27/08/2021 29/08/2021 03/09/2021 START:29/0	W/3446	END:02/09/2021
SAMPLE TYPE	EFFLUENT WATER	SAMPL	ORDER /REFERENCE:			RV/2122/0045,
CUSTNER SAMPLE ID	SUMP WATER PATCH "C"		SAMPLE CONDITION	AT RECEIPT	DID. 2	4-JULY-2021
PACKING OF SAMPLE	3 L X 2 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	SEALED	SAMPLE COLLECTED I	97	снями	T
SAMPLING PROCEDURE	IS:3025(PART I):1987 RA 2003; 2012, 1060-B, 1-39	APHA 22ND ED.	QUANTITY RECEIVED		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 22ndEd. 2012,2120-B,2-6	See 6 of Annexure-I	<1				
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable				
3	Temperature	·c	APHA 22 nd Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.4				
4	PH	-	APHA 22 nd Ed.2012,4500-H*-B, 4- 92	5.5 to 9.0	7.24				
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 22nd Ed.2012,2540- D, 2-66	100	26.0				
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 rd Ed.2012,4500-F-B &D, 4-84 & 87	2.0	N.D.				
9	Lead (as Pb)	mg/L	APHA 22nd 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	N.D.				
11	Copper (as Cu)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-18	3.0	N.D.				
1.2	Cadmium (as Cd)	mg/L	APHA 22nd Ed. 2012, 3500-Cd, 3-105	2.0	N.D.				
13	Mercury (as Hg)	mg/L	APHA 22nd Ed.2012,3112-B, 3-23	0.01	N.D.				
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.				
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.				
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.				
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B, 5-17	250	54.0				
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993, RA 2003	30	2.6				
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.				

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

Terms & conditions

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

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-End of the test report--



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	ISTRIES LIMITED, V/4, COAL MINE, (HETA,	DAS DAS	PORT NO B REF NO TE OF SAMPLING TE OF RECEIPT TE OF REPORT	UES/TR/21-22/2263 UES/21-22/W/4364 24/09/2021 25/09/2021 02/10/2021		
DISTT RAIGAR	H (C.G.) 496107	DAT	TE OF ANALYSIS	START: 24/09/2021		END:30/09/2021
		SAMPL	E DETAILS			
SAMPLE TYPE	EFFLUENT WATER		ORDER /REFERENCE:		N/PO/SRV/2122/0045, DTD.:24-JULY-2021	
CUSTMER SAMPLE ID	SUMP WATER PATCH "C"		SAMPLE CONDITION A	AT RECEIPT	OK	
PACKING OF SAMPLE	3 L X I NO. PVC CAN 1 L X I NO. PVC CAN 1 L X I NO. GLASS BOTTLE	SEALED	ALED SAMPLE COLLECTED BY		CHEMIST	
SAMPLING PROCEDURE IS:3025(PART I):1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39			D. QUANTITY RECEIVED		5 LTR	

THE ENVIRONMENT											
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	RESULT <1						
1		Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I							
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable						
3	Temperature	*c	APHA 22 nd Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.4						
4	рн		APHA 22 nd Ed.2012,4500-H ⁺ -B, 4- 92	5.5 to 9.0	7.22						
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	36.0						
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	-F-B &D, 2.0							
9	Lead (as Pb)	mg/L	APHA 22nd 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	N.D.						
11	Copper (as Cu)	mg/L	APHA 22nd Ed.2012,3111-B, 3-18	3.0	N.D.						
12	Cadmium (as Cd)	mg/L	APHA 22nd Ed.2012,3500-Cd, 3-105	2.0	N.D.						
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-B, 3-23	0.01	N.D.						
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.						
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.						
16	Total Chromium (as Cr)	mg/L	APHA 22nd Ed.2012,3500-Cr-B,3-69	2.0	N.D.						
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B, 5-17	250	44.0						
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993, RA 2003	30	2.8						
19	Oil & Grease	mg/L	IS 3025 (Part 39):1991,RA 2003,	10.0	N.D.						
20	Phenolic Compounds (as C.H.OH)	mg/L	IS 3025 (Part 43):1992,RA 2003	1.0	N.D.						

Terms & conditions

The report for publicati

Test sample will be retained.

on, arbitration or as legal dispute is forbidden. uned for 15days after issue of test report unless otherwise agreed with customer, is the party has asked for above test(s) only:

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AUTHORIZED SIGNATORY

-End of the test report-



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Hame & Address Of The C	ustomer		REPORT NO	UES/TH	1/21-22/1422		
то,			LAB REF NO	UES/21-22/W/2014-2015			
HINDALCO INDUS GARE PALMA - IV	12 (27) (25) (27) (27) (27) (27) (27) (27)		DATE OF SAMPLING 27/07/2021				
	HETA, POST MILUPARA,		DATE OF RECEIPT	28/07,	28/07/2021 02/08/2021		
DISTT RAIGARI			DATE OF REPORT	02/08,			
	201		DATE OF ANALYSIS	START:27/07/2021 END:31/07		END:31/07/2021	
esmic enterior		SAM	PLE DETAILS				
SAMPLE TYPE	WASTE WATER		ORDER /REFFERENCE:		N/PO/ERV/2021/0035, DTD. 21-AUG-2020		
CUSTMER SAMPLE ID	ETP INLET & OUTLET, BANKHE	TA	SAMPLE CONDITION AT	RECEIPT	OK .		
FACEING 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 15:3025 (PART 1):1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39			QUANTITY RECEIVED	QUANTITY RECEIVED 5 LTR			

Report No. 1422

TEST REPORT										
SR. NO.		UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 (SCHEOULE-VI) PART-A INLAND SURFACE WATER	BHANKETA ETP INLET	BANKHETA ETP OUTLET				
1	Colour	Hazen	APHR 22 ^{ME} Ed. 2012,2120-B,2-6	Sec 6 of Annexure-I	2.2	<1				
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 5 of Annexure-I	Agreeable	Agreeable				
3	Temperature	°c	арна 22 [∞] Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	26.4	24,2				
4	pE	-	APRA 22 nd Ed.2012,4500-H'- 5.5 to 9.0 B,4-92		7.28	7.46				
5	Total Residual Chlorine	mg/L	APHR 22 nd Ed.2012,4500-Cl- G,4-69	500-C1- 1.0		N.D.				
6	Total Suspended Solids	mg/L	APHA 22 ^M Ed.2012,2540- D, 2- 66	100	120,0	22.0				
7	Dissolved Phosphate (as P)	mg/L	APHA 22 nd Ed.2012,4500-P-C,4- 153	2,4500-P-C,4- 5-0		0,1				
8	Fluoride (as F)	mgr/L	APHA 22 nd Ed.2012,4500-F-B &D,4-84 & 87	2,0	0.11	0.18				
9	Lead (as Pb)	mg/L	APHA 22 nd Ed.2012,3111-B, 3- 18	0.1	N.D.	N.D.				
10	Zinc (as En)	mg/L	APHR 22 nd Ed.2012,3111-B, 3- 18	5.0	0.18	0,08				
11	Copper (as Cu)	mg/L	APHA 22 nd Ed.2012,3111-B, 3- 18	3.0	N.D.	N.D.				
12	Cadmium (as Cd)	mg/L	APHA 22 nd Ed.2012,3500-Cd, 3- 105	2.0	N.D.	N.D.				
13	Mercury (as Hg)	mg/L	APHA 22 nd Ed.2012,3112-B, 3- 23	0.01	N.D.	N.D.				
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3- 38	-C, 3- 0.2		N.D.				
15	Selenium (as Se)	mg/L	APHA 22 ^{hg} Ed.2012,3114-C, 3- 38	0.05	N.D.	N.D.				
16	Total Chronium (as	mg/L	АРНА 22 nd Bd.2012,3500-Cr- B,3-69	2.0	N.D.	N.D.				
and he	1.5300		Personal Print	1		4				



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Report No. 1422

	TEST REPORT									
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1886 (SCHEDULE-VI) PART-A INLAND SURFACE WATER	BHANKETA ETP INLET	BANKHETA ETP OUTLET				
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B, 5- 17	250	64.0	18.0				
18	Biochemical Caygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993, RA 2003	30	10.2	2.0				
19	Oil & Grease	mg/L	IS 3025 (Part 39):1991,RA 2003	10	N.D.	N.D.				
20	Phenolic Compounds (as C ₆ H ₂ OH)	mg/L	IS 3025 (Part 43):1992, RA 2003	1.0	N.D.	N.D.				

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

Terms & conditions

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

> Test sample will be resemed for \$5 days after issue of test report uples superpite agreed with customer.

> This is for information as the party has eaked for above testile) only.

PREFARED BY 2021

AUTHORIZED SIGNATORY



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

Name & Address Of The Cu TO, HINDALCO INDUS' GARE PALMA – IV/ VILLAGE – BANKH DISTT RAIGARH	TRIES LIMITED, 4, COAL MINE, ETA, POST MILUPARA,		REPORT NO LAB REF NO DATE OF SAMPLING DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS	UES/21- 27/08/2 29/08/2 03/09/2	2021	END: 02/09/2021
		SAMP	LE DETAILS			
SAMPLE TYPE	WASTE WATER		ORDER /REFERENCE:		N/PO/SRV/2122/0045, DTD. 24-JULY-2021	
CUSTMER SAMPLE ID	ETP INLET & OUTLET, BANKH	ETA	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 2 22ND ED. 2012, 1060-B, 1-	QUANTITY RECEIVED		5 LTR		

Report No.2114

TEST REPORT									
SR. NO.	PARAMETER		PARAMETER UNIT METHOD OF TEST		THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	BHANKETA ETP INLET	BANKHETA ETP OUTLE		
1	Colour		APHA 22ndEd. 2012,2120-B,2-6 See (d. 2012,2120-B,2-6 See 6 of Annexure-I	2.8	1.8			
2	Odour	-	APHA 22nded. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable	Agreeable			
3	Temperature	oC	арна 22 nd Ed.2012,2130-B,2-13	Shall not exceed 5°C above the receiving water temperature	25.2	24.6			
4	рн	-	APHA 22 nd Ed.2012,4500-H*- B,4-92	5.5 to 9.0	7.42	7.24			
5	Total Residual Chlorine	mg/L	APHA 22md Ed. 2012, 4500-C1- G, 4-69	1.0	N.D.	N.D.			
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2- 66	100	134.0	24.0			
7	Dissolved Phosphate (as P)	mg/L	APHA 22 nd Ed.2012,4500-P-C,4- 153	5.0	0.45	0.2			
8	Fluoride (as F)	mg/L	APHA 22nd Ed.2012,4500-F-B 6D,4-84 & 87	2.0	0.4	0.2			
9	Lead (as Pb)	mg/L	APHA 22 nd Ed.2012,3111-B, 3- 18	0.1	N.D.	N.D.			
10	Zinc (as Zn)	mg/L	APHA 22 nd Ed.2012,3111-B, 3-	5.0	0.18	0.11			
11	Copper (as Cu)	mg/L	АРНА 22 nd Ed.2012,3111-В, 3- 18	3.0	N.D.	N.D.			
12	Cadmium (as Cd)	mg/L	АРНА 22 nd Ed.2012,3500-Cd, 3- 105	2.0	N.D.	N.D.			
13	Mercury (as Hg)	mg/L	АРНА 22 nd Ed.2012,3112-В, 3- 23	0.01	N.D.	N.D.			
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2 N.D.		N.D.			
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.	N.D.			
16	Total Chromium (as Cr)	mg/L	APHA 22nd Ed.2012,3500-cr- B,3-69	2.0	N.D.	N.D.			



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Report No.2114

	TEST REPORT									
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	BHANKETA ETP INLET	BANKHETA ETP OUTLET				
17	7 Chemical Oxygen Demand (COD)		APHA 22 nd Ed.2012, 5520-B, 5- 17	250	64.0	24.0				
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993, RA 2003	30	8.4	2,2				
19	Oil & Grease	mg/L	IS 3025 (Part 39):1991,RA 2003	10	N.D.	N.D.				
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025 (Part 43):1992, RA 2003	1.0	N.D.	N.D.				

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

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

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

This is for information as the party has asked for above testis) only.

For ULTIMATE ENVIROLYFICAL SOLUTIONS 03/09 03 09 2021 AUTHORIZED SIGNATORY PREPARED BY End of the test report



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

Name & Address Of The C TO, HINDALCO INDUS GARE PALMA – IV VILLAGE – BANKI DISTT RAIGARH	STRIES LIMITED, 1/4, COAL MINE, HETA, POST MILUPARA,		REPORT NO LAB REF NO DATE OF SAMPLING DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS	LAB REF NO UES/21-22/W/4367 DATE OF SAMPLING 24/09/2021 DATE OF RECEIPT 25/09/2021 DATE OF REPORT 02/10/2021			
Mer The State of t		SAM	PLE DETAILS	assiin e	Helen III		
SAMPLE TYPE	WASTE WATER		ORDER /REFERENCE:		N/PO/SRV/2122/0045, DTD.:24-JULY-2021		
CUSTMER SAMPLE ID	ETP INLET & OUTLET, BANKH	ETA	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	TED BY CHEMIST			
SAMPLING PROCEDURE	SAMPLING PROCEDURE IS:3025(PART I):1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39			QUANTITY RECEIVED		5 LTR	

Report No. 2266

TEST REPORT									
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	BHANKETA ETP INLET	BANKHETA ETP OUTLE			
1	Colour	Colour Hazen APHA 22ndEd. 2012,2120-B,2-6		See 6 of Annexure-I	2.6	<1			
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable	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	26.2			
4	рн	-	АРНА 22 nd Ed.2012,4500-H ⁺ - В,4-92	5.5 to 9.0	7.26	7.34			
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-C1- G,4-69	1.0	N.D.	N.D.			
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	124.0	26.0			
7	Dissolved Phosphate (as P)	mg/L	APHA 22 nd Ed.2012,4500-P-C,4-153	22 nd Ed.2012,4500-P-C,4-		0.1			
8	Fluoride (as F)	mg/L	АРНА 22 nd Ed.2012,4500-F-B &D,4-84 & 87	2.0	0.16	0.08			
9	Lead (as Pb)	mg/L	АРНА 22 nd Ed.2012,3111-В, 3- 18	0.1	N.D.	N.D.			
10	Zinc (as Zn)	mg/L	АРНА 22 nd Ed.2012,3111-B, 3- 18	5.0	0.14	0.06			
11	Copper (as Cu)	mg/L	APHA 22 nd Ed.2012,3111-B, 3- 18	3.0	N.D.	N.D.			
12	Cadmium (as Cd)	mg/L	APHA 22 nd Ed.2012,3500-Cd, 3- 105	2.0	N.D.	N.D.			
13	Mercury (as Hg)	mg/L	АРНА 22 nd Ed.2012,3112-В, 3- 23	0.01	N.D.	N.D.			
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2 N.D		N.D.			
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.	N.D.			
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr- B,3-69			N.D.			



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Report No. 2266

TEST REPORT									
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	BHANKETA ETP INLET	BANKHETA ETP OUTLET			
17	7 Chemical Oxygen Demand (COD)		APHA 22 nd Ed.2012, 5520-B, 5- 17	250	74.0	20.0			
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993, RA 2003	30	12.6	2.4			
19	Oil & Grease	mg/L	IS 3025 (Part 39):1991,RA 2003	10	N.D.	N.D.			
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025 (Part 43):1992, RA 2003	1.0	N.D.	N.D.			

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

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 effective agreed with customer. This is for information as the party has asked for above test(s) on the control of the customer.

PREPARED BY

For ULTIMATE ENVIROLYTICAL SOLUTIONS

2021

AUTHORIZED SIGNATORY

Annexure – 5A

Treatment Facility at GP IV/4 Coal Mines

Annexure -5A





SETTLING POND NO – 1

SETTLING POND NO – 2





SETTLING POND NO – 3

Drinking Water Section (RO Plant 2 KL/Hour)

Annexure – 6

Ground Water Level Monitoring Report in and around the Coal Mine Area (From April 2021 to June 2021)

			In Meters			
Sr. No.	Location	Types of Structure	Ground Water level (BGL) April. 2021	Ground Water level (BGL) May. 2021	Ground Water level (BGL) June. 2021	
1	Bankheta (Near HIL Office)	Borewell/AWLR	11.87	12.00	10.06	
2	Banjikhol (Near Office)	Borewell/ AWLR	23.91	24.18	24.26	
3	Milupara (Near Office)	Borewell/ AWLR	13.07	13.27	12.39	
4	HIL Staff Quarter	Borewell/ AWLR	8.08	8.50	7.20	
5	Milupara Village (PHC-HIL)	Dugwell	7.14	7.20	3.20	
6	Sakta Village (Near Primary School)	Dugwell	4.82	4.98	2.10	
7	Sidarpara Village (Near Primary School)	Dugwell	11.80	12.40	5.66	
8	Beljor Village	Dugwell	8.60	8.80	5.85	

Ground Water Level Monitoring Report in and around the Coal Mine Area (From July 2021 to Sep 2021)

Sr. No.	Location	Types of Structure		In Meters	
		Ground Water level (BGL) July 2021		Ground Water level (BGL) August 2021	Ground Water level (BGL) Sep 2021
1	Bankheta (Near HIL Office)	Borewell/ AWLR	8.37	7.42	5.45
2	Banjikhol (Near Office)	Borewell/ AWLR	24.30	24.50	24.70
3	Milupara (Near Office)	Borewell/ AWLR	7.90	9.48	8.58
4	HIL Staff Quarter	Borewell/ AWLR	4.40	4.30	4.85
5	Milupara Village (PHC-HIL)	Dugwell	1.19	0.95	0.84
6	Sakta Village (Near Primary School)	Dugwell	1.71	2.14	1.84
7	Sidarpara Village (Near Primary School)	Dugwell	3.28	5.10	4.95
8	Beljor Village	Dugwell	5.18	4.72	4.24



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Name & Address Of The Customer	REPORT NO	UES/TR/21-22/0	425
то,	LAB REF NO	UES/21-22/W/05	25
HINDALCO INDUSTRIES LIMITED,	DATE OF SAMPLING	29/05/2021	
GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA,	DATE OF RECEIPT	30/05/2021	
POST -MILUPARA,	DATE OF REPORT	03/06/2021	
DISTT RAIGARH (C.G.) 496107.	DATE OF ANALYSIS	START: 31/05/2021	END: 03/06/2021

SAMPLE TYPE	GROUNDWATER	ORDER /REFERENCE:	N/PO/SRV/2021/0035, DTD. 21-AUG-2020
CUSTMER SAMPLE ID	BANKHETA MINE (PIEZOMETER) AWLR	SAMPLE CONDITION AT RECEIPT	OR
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

SAMPLE DETAILS

Report No.0425

	TEST REPORT								
SR.				AS PER IS					
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT			
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1			
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable			
3	Taste		IS 3025(part-8)	Agreeable	Agreeable	Agreeable			
4	рН	-	APHA 22 nd Ed.2012,4500-H ⁺ -B, 4-92	6.5-8.5	NoRelaxatio n	6.74			
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	0.98			
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	134.0			
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-CI-G, 4 - 69	0.2	1	N.D.			
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2- 64	*	-	84.1			
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	82.0			
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2- 66	-	-	2.1			
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	26.0			
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2-44,45	200	600	38.0			
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	-	-	16.0			
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	-	-	22.0			
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	75	200	6.4			
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500–Mg-B, 3-84	30	100	5.3			
17	Chloride (as CI)	mg/Lit	APHA 22 nd Ed.2012,4500-CI-B, 4-72	250	1000	10.9			
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500–SO ₄ -E, 4-190	200	400	9.6			
19,	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ -B, 4-122	45	NoRelaxatio n	0.48			
20	Phosphate (as P)	mg/Lit	APHA 22nd Ed.2012,4500-P-C, 4-153	-	-	N.D.			
21	Sodium (as Na)	mg/Lit	APHA 22nd Ed.2012,3500–Na-B, 3-97	-	-	12.6			
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-	7.	-	1.25			

Format No.: UES/FORM/09



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

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Report No.0425

SR. AS PER IS 10500:2012										
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESUL				
			87							
23	Boron (as B)	mg/Lit	APHA 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	NoRelaxatio n	N.D.				
25	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.10				
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	0.3	N.D.				
27	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.01	NoRelaxatio	N.D.				
28	Nickel (as Ni)	mg/Lit	APHA 22 nd Ed.2012,3500-Ni, 3-	0.02	n No	N.D.				
29	Zinc (as Zn)	mg/Lit	108 APHA 22 nd Ed.2012,3111-B, 3-18	5	Relaxation					
30	Copper (as Cu)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.05	15 1.5	N.D.				
			APHA 22 nd Ed.2012,35111-B, 3-18		NoRelaxatio	N.D.				
31	Cadmium (as Cd)	mg/Lit	105	0.003	n	N.D.				
32	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3-23	0.001	NoRelaxatio n	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	NoRelaxatio n	N.D.				
35	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B, 3-69	0.05	NoRelaxatio n	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	NoRelaxatio n	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	2003							
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				
esti	cides			0.11, 2001	Julipiu					
1	p,p DDT	µg/L	US EPA 508-1995		1	N.D.				
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.				
3	p,pDDE	µg/L	US EPA 508-1995		1	N.D.				
4	p,p DDD	µg/L	US EPA 508-1995		1	N.D.				
5	O,p DDD	µg/L	US EPA 508-1995		1	N.D.				
6.	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995		2	N.D.				
7	Alpha-HCH	µg/L	US EPA 508-1995	0.	01	N.D.				
8	Beta-HCH	µg/L	US EPA 508-1995	0.	04	N.D.				
9	Delta HCH	µg/L	US EPA 508-1995	0.	04	N.D.				



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

Report No.0425

			TEST REPORT	•		
SR.	District State of the State of	DISTER !		AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.
12	Endosulfansulphate	µg/L	US EPA 508-1995	0	.4	N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994		1	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		-	
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	190	
25	Malaoxon	µg/L	US EPA 8141A-1994		-	
26	Aldrin	µg/L	US EPA 508- 1995	0.0	0.03	
27	Dieldrin	µg/L	US EPA 508-1995	0.0	03	N.D.

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

03 06 202

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 about the only.

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

---End of the test report-



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

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/21-22/0	0426
LAB REF NO	UES/21-22/W/05	526
DATE OF SAMPLING	29/05/2021	
DATE OF RECEIPT	30/05/2021	
DATE OF REPORT	03/06/2021	
DATE OF ANALYSIS	START: 31/05/2021	END: 03/06/2021

		SAME	PLE DETAILS		
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:	N/PO/SRV/2021/0035, DTD. 21-AUG-2020	
CUSTMER SAMPLE ID	BANJIKHOL MINE (PIEZOMET	er) 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 APHA 22ND ED. 2012, 106		QUANTITY RECEIVED	5 LTR	

Report No. 0426

SR.		4	No. of the last of	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	NoRelaxation	6.81
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	3.6
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	148.0
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-CI-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2- 64	-	-	95.8
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	94.0
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2- 66	-	-	1.8
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	36.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2-44,45	200	600	66.0
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	-	-	32.0
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	75	200	13.6
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500–Mg-B, 3-84	30	100	7.77
17	Chloride (as CI)	mg/Lit	APHA 22 nd Ed.2012,4500-CI-B, 4-72	250	1000	13.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ -E, 4-190	200	400	18.6
19'	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ - B,4-122	45	NoRelaxation	3.1
20	Phosphate (as P)	mg/Lit	APHA 22nd Ed.2012,4500-P-C, 4-153	-	-	N.D.
21	Sodium (as Na)	mg/Lit	APHA 22nd Ed.2012,3500-Na-B, 3-97	-	-	12.6

Format No.: UES/FORM/09



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

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Report No. 0426

			TEST REPORT			
SR.		11111		AS PER IS		
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87	-	-	0.54
23	Boron (as B)	mg/Lit	APHA 22 nd Ed.2012,4500-B-B, 4-25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 22 nd Ed.2012,3111-B,3-18	0.3	NoRelaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	N.D.
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.01	NoRelaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 22 nd Ed.2012,3500-Ni, 3- 108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	5	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 22 nd Ed.2012,3500-Cd, 3- 105	0.003	NoRelaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3-23	0.001	NoRelaxation	N.D.
33	Arsenic (as As)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3-38	0.01	0.05	N.D.
34	Selenium (as Se)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3-38	0.01	NoRelaxation	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B, 3-69	0.05	NoRelaxation	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 22 nd Ed.2012,5540-C, 5-53	0.2	1.0	N.D.
37	Phenolic Compound (as C ₆ H ₅ OH)	mg/Lit	APHA 22 nd Ed.2012,5540-B & C, 5-47	0.001	0.002	N.D.
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	μg/Lit	APHA 22 nd Ed.2012,6440-6-93	0.0001	NoRelaxation	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39): 1991, RA 2003	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003,	-	-	N.D.
licro	piological Analysis					
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		etectable in any I sample	Absent
2	Faecal Coliform	MPN/ 100ml	IS:1622:1981: RA:2019		etectable in any I sample	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019		etectable in any sample	Absent
estic	ides				A	
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		.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	C).4	N.D.



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Report No. 0426

SR	SR. PARAMETER			AS PER IS	10500:2012	
		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	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	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		-	
26	Aldrin	µg/L	US EPA 508- 1995	0.0	03	N.D.
27	Dieldrin	µg/L	US EPA 508-1995	0.0	03	N.D.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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

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

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

PREPARED BY 06 202

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

202

End of the test report-



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Name & Address Of The Customer
TO,
HINDALCO INDUSTRIES LIMITED,
GARE PALMA – IV/5, MILUPARA
U/G COAL MINE,VILLAGE – MILUPARA,
BLOCK-TAMNAR,
DISTT. - RAIGARH (C.G.) 496107

REPORT NO UES/TR/21-22*/0462

LAB REF NO UES/21-22/W/0562

DATE OF SAMPLING 29/05/2021

DATE OF RECEIPT 30/05/2021

DATE OF REPORT 03/06/2021

DATE OF ANALYSIS START:31/05/2021 END:03/06/2021

	SAMPL	E DETAILS	
SAMPLE TYPE	GROUND WATER	ORDER /REFERENCE:	M/PO/SRV/2021/0044, DTD. 21-AUG-2020
CUSTMER SAMPLE ID	NEAR MILUPARA MINES OFFICE PIEZOMETER -AWLR	SAMPLE CONDITION AT RECEIPT	OR
PACKING OF SAMPLE	3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	SAMPLE COLLECTED BY	CHEMIST
SAMPLING PROCEDURE	IS:3025(PART I):1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39	QUANTITY RECEIVED	5 LTR

REPORT NO. -0462

SR.				AS PER IS	10500:2012		
NO. PARAMETER		UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT	
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1	
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable	
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable	
4.	pH	-	APHA 22 nd Ed.2012,4500-H ⁺ -B, 4-92	6.5-8.5	NoRelaxation	6.58	
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	2.8	
6	Electrical Conductivity	μS/cm	IS 3025(part-14):1984, RA 2013	-	-	176.0	
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-CI-G,4 - 69	0.2	1	N.D.	
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2- 64	<u>u</u>	-	110.1	
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	108.0	
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2- 66	-	-	2.1	
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	26.0	
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2-44,45	200	600	50.0	
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	-	-	38.0	
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	-	-	12.0	
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500–Ca-B, 3-67	75	200	15.2	
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	30	100	2.9	
17	Chloride (as CI)	mg/Lit	APHA 22 nd Ed.2012,4500-CI-B, 4-72	250	1000	9.9	
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ - E,4-190	200	400	13.1	
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ -B, 4-122	45	NoRelaxation	2.0	
'20	Phosphate (as P)	mg/Lit	APHA 22nd Ed.2012,4500-P-C, 4-153	-	-	N.D.	



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REPORT NO. -0462

			TEST REPORT			
				AS PER IS	3 10500:2012	
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
20	Sodium (as Na)	mg/Lit	APHA 22ndEd.2012,3500-Na-B, 3-97	-	-	5.6
21	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87	-	-	0.69
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	NoRelaxation	N.D.
24	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.12
25	Manganese (as	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	NoRelaxation	N.D.
27	Nickel (as Ni)	mg/Lit	APHA 22 nd Ed.2012,3500-Ni, 3-	0.02	No	N.D.
28	Zinc (as Zn)	mg/Lit	108 APHA 22 nd Ed.2012,3111-B, 3-18	5	Relaxation 15	N.D.
29	Copper (as Cu)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.05	1.5	N.D.
30	Cadmium (as Cd)	mg/Lit	APHA 22 nd Ed.2012,3500-Cd,3- 105	0.003	NoRelaxation	N.D.
31	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3-23	0.001	NoRelaxation	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	NoRelaxation	N.D.
34	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B, 3-69	0.05	NoRelaxation	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	NoRelaxation	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	obiological Analysis		D. D			
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		detectable in any	Absent
2	Faecal coliform	MPN/ 100ml	IS:1622:1981: RA:2019	Shall not be o	detectable in any	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be o	detectable in any	Absent
esti	cides		1	20011		
1	p,p DDT	µg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	µg/L	US EPA 508-1995		1	N.D.
4	p,p DDD	µg/L	US EPA 508-1995		1	N.D.
5	O,p DDD	µg/L	US EPA 508-1995		1	N.D.
6	Gamma-HCH (Lindane)	μg/L	US EPA 508-1995		2	N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	(0.01	N.D.



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REPORT NO. -0462

			TEST REPOR	T		
SR.		IIIVAL -		AS PER IS	10500:2012	Tall Line Color
NO.	DADAMETED		METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
8	Beta-HCH	µg/L	US EPA 508-1995	0	.04	N.D.
9	Delta HCH	µg/L	US EPA 508-1995	0	.04	N.D.
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	(0.4	N.D.
11	Beta-Endosulfan	µg/L	US EPA 508-1995	(0.4	N.D.
12	Endosulfansulphat e	µg/L	US EPA 508-1995	(0.4	N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994		1	N.D.
14	Ethion	µg/L	US EPA 8141A-1994		3	N.D.
15	Chloropyrifos	µg/L	US EPA 8141A-1994	30		N.D.
16	Phorate	µg/L	US EPA 8141A-1994		2	N.D.
17	Phoratesulphoxide	µg/L	US EPA . 8141A-1994	3	-	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	.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.

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 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

AUTHORIZED SIGNATORY

End of the test report-

PREPARED BY



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3		THE RESERVE AND ADDRESS OF THE PARTY OF THE	NAME AND ADDRESS OF TAXABLE PARTY OF TAXABLE PARTY.
Name & Address Of The Customer	REPORT NO	UES/TR/21-22/0	1461
то,	LAB REF NO	UES/21-22/W/05	661
HINDALCO INDUSTRIES LIMITED,	DATE OF SAMPLING	29/05/2021	
GARE PALMA – IV/5, MILUPARA	DATE OF RECEIPT	30/05/2021	
U/G COAL MINE, VILLAGE - MILUPARA,	DATE OF REPORT	03/06/2021	
BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107	DATE OF ANALYSIS	START: 31/05/2021	END: 03/06/2021

		SAMP.	LE DETAILS	
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:	M/PO/SRV/2021/0044, DTD. 21-AUG-2020
CUSTMER SAMPLE ID	STAFF QUARTER-BANJIKHOL 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 : APHA 22ND ED. 2012, 1060	The second secon	QUANTITY RECEIVED	5 LTR

REPORT NO. 0461

		-49	TEST REPORT			
SR.			ACCEPTABLE DRINKING WATER			
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	6.67
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	14.2
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	194.0
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-CI-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2- 64	-	-	126.0
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	118.0
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2- 66	-	2	8.0
11	Alkalinity Total (as CaCO₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	30.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2-44,45	200	600	74.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500–Ca-B, 3-67	-	-	48.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500–Mg-B, 3-84	2	-	26.0
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500–Ca-B, 3-67	75	200	19.2
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500–Mg-B, 3-84	30	100	6.3
17	Chloride (as CI)	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-B, 4-72	250	1000	25.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ - E,4-190	200	400	20.1
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ - B,4-122	45	NoRelaxati on	0.84
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	-	-	6.4



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REPORT NO. 0461

		-	TEST REPORT			
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	ACCEPTABL DRINKING WATER Acceptable Limit	E LIMIT FOR R (IS 10500:2012) Permissible limit	RESUL
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-	-	-	1.3
23	Boron (as B)	mg/Lit	87 APHA 22 nd Ed.2012,4500-B-B, 4-	0.5	1.0	N.D.
		37/	25		NoRelaxati	
24	Iron (as Fe)	mg/Lit	APHA 22 nd Ed.2012,3111-B,3-18	0.3	on	N.D.
25	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.11
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.01	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- 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.
licrob	iological Analysis					
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019	Shall not be any 100 r	detectable in nl sample	Absent
2	Faecal coliform	MPN/ 100ml	IS:1622:1981: RA:2019	Shall not be any 100 r		Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be any 100n		Absent
estic	des					
1	p,p DDT	µg/L	US EPA 508-1995	1	L	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	L	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	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.



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REPORT NO. 0461

SR.		THE SUBJECT OF STREET		ACCEPTABLE DRINKING WATER		
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	30)	N.D.
16	Phorate	µg/L	US EPA 8141A-1994	2		N.D.
17	Phoratesulphoxide	μg/L	US EPA 8141A-1994	-	-	
18	Phoratesulphone	μg/L	US EPA 8141A-1994	-		N.D.
19	2,4-D	μg/L	US EPA 515.1-1995	30)	N.D.
20	Alachior	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	13	N.D.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

PREPARED BY

- > 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

-End of the test report-



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

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/21-22/0463

LAB REF NO UES/21-22/W/0563

DATE OF SAMPLING 29/05/2021

DATE OF RECEIPT 30/05/2021

DATE OF REPORT 03/06/2021

DATE OF ANALYSIS START:31/05/2021 END:03/06/2021

		SAMPL	E DETAILS	
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:	M/PO/SRV/2021/0044, DTD. 21-AUG-2020
CUSTMER SAMPLE ID	MILUPARA VILLAGE NEAR PA	HC-	SAMPLE CONDITION AT RECEIPT	OR
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 APHA 22ND ED. 2012,1060		QUANTITY RECEIVED	5 LTR

REPORT NO. - 0463

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 22 nd Ed.2012,4500-H ⁺ -B, 4-92	6.5-8.5	NoRelaxatio n	6.78
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	64.0
6	Electrical Conductivity	μS/cm	IS 3025(part-14):1984, RA 2013	-	-	274.0
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-CI-G, 4 – 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2- 64		-	188.2
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	168.0
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2- 66	-	-	20.2
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	32.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2-44,45	200	600	80.0
13	Calcium Hardness (as CaCO3)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca- B,3-67	-	-	44.0
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	17.6
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	30	100	8.74
17	Chloride (as CI)	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-B, 4-72	250	1000	12.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ - E, 4-190	200	400	21.6
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ - B,4-122	45	NoRelaxatio n	3.2
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	-	-	4.9
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87	-	-	1.2



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REPORT NO. - 0463

			TEST REPORT		10500:2012	
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESUL
23	Boron (as B)	mg/Lit	APHA 22 nd Ed.2012,4500-B-B, 4-25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 22 nd Ed.2012,3111-B,3- 18	0.3	NoRelaxatio n	N.D.
25	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.08
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	0.1	0.3	0.20
27	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	0.01	NoRelaxatio n	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	NoRelaxatio	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3- 23	0.001	NoRelaxatio	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	NoRelaxatio	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B,	0.05	NoRelaxatio	N.D.
36	Anionic Detergent	mg/Lit	3-69 APHA 22 nd Ed.2012,5540-C, 5-	0.2	1.0	N.D.
37	(as MBAS) Phenolic Compound		53 APHA 22 nd Ed.2012,5540-B & C,	NOVS A II		
	(as C ₆ H ₅ OH) Poly-nuclear Aromatic	mg/Lit	5-47	0.001	0.002 NoRelaxatio	N.D.
38	Hydrocarbon (PAH)	μg/Lit	APHA 22 nd Ed.2012,6440-6-93	0.0001	n	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		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
Pesti	cides	ALLEGE TO THE STATE OF THE STAT		1001111	Serie .	
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.

N.D.



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

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TEST REPORT

REPORT NO. - 0463

PARAMETER

Alpha-Endosulfan

Beta-Endosulfan

Monocrotophos

Chloropyrifos

Phoratesulphoxide

Phoratesulphone

Methyl parathion

Methyl paraxone

Ethion

Phorate

2,4-D

Alachlor

Atrazine

Malathion

Malaoxon

Aldrin

Endosulfansulphate

UNIT

µg/L

SR.

NO.

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

	AS PER IS							
METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT					
US EPA 508-1995	0.4		N.D.					
US EPA 508-1995	0.4		N.D.					
US EPA 508-1995	0.4		N.D.					
US EPA 8141A-1994	1		N.D.					
US EPA 8141A-1994	3		N.D.					
US EPA 8141A-1994	30		N.D.					
US EPA 8141A-1994		2	N.D.					

30

20

2

0.3

-

190

0.03

0.03

Dieldrin µg/L US EPA 508-1995

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.

US EPA 8141A-1994

US EPA 8141A-1994

US EPA 515.1-1995

US EPA 8141A-1994

US EPA 8141A-1994

US EPA 8141A-1994

US EPA 8141A-1994

US EPA 508- 1995

US EPA 508- 1995

US EPA 532-2000

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

FOR ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

-End of the test report-



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

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/21-22/0	1427
LAB REF NO	UES/21-22/W/05	527
DATE OF SAMPLING	29/05/2021	
DATE OF RECEIPT	30/05/2021	
DATE OF REPORT	03/06/2021	
DATE OF ANALYSIS	START: 31/05/2021	END: 03/06/2021

SAMPLE DETAILS

SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:	N/PO/SRV/2021/0035, DTD. 21-AUG-2020
CUSTMER SAMPLE ID	SAKTA VILLAGE, (DUGWE	(LL)	SAMPLE CONDITION AT RECEIPT	OR
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 22ND ED. 2012, 1060-B, 1-39		QUANTITY RECEIVED	5 LTR	

Report No.0427

TEST REPORT						
SR.	PARAMETER	UNIT		AS PER IS		
NO.			METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	2.3
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	NoRelaxatio n	7.31
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	3.0
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	239.0
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-CI-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2- 64	-	-	148.1
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	144.0
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2- 66	-	-	4.1
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	70.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2-44,45	200	600	98.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	-	-	42.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	-	-	56.0
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	75	200	16.8
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	30	100	13.6
17	Chloride (as CI)	mg/Lit	APHA 22 nd Ed.2012,4500-CI-B, 4-72	250	1000	22.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ -E, 4-190	200	400	19.6
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ -B, 4-122	45	NoRelaxatio n	0.30
20	Phosphate (as P)	mg/Lit	APHA 22nd Ed.2012,4500-P- C,4-153	-	-	N.D.
21	Sodium (as Na)	mg/Lit	APHA 22nd Ed.2012,3500-Na- B,3-97	-	-	11.4
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87	-	-	0.81



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

Report No.0427

			TEST REPORT			
SR.	SR 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	NoRelaxatio n	N.D.
25	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.14
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	0.1	0.3	0.09
27	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-	0.01	NoRelaxatio	N.D.
28	Nickel (as Ni)	mg/Lit	18 APHA 22 nd Ed.2012,3500-Ni, 3-	-	n No	
			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	NoRelaxatio n	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3- 23	0.001	NoRelaxatio n	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	NoRelaxatio	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B,	0.05	n NoRelaxatio	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	3-69 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	NoRelaxatio n	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		Relaxation -	N.D.
licro	biological Analysis		2003			
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		etectable in any	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	100 ml sample Shall not be detectable in any 100ml sample		Absent
	cides	1001111		100ml	sample	
1	p,p DDT	µg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995	1		N.D.
3	p,pDDE	µg/L	US EPA 508-1995	1		N.D.
4	p,p DDD	µg/L	US EPA 508-1995	1		N.D.
5	O,p DDD	µg/L	US EPA 508-1995	1		N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995	2	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.



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

Report No.0427

SR.	PARAMETER		METHOD OF TEST	AS PER IS		
NO.		UNIT		Acceptable Limit	Permissible limit	RESULT
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0.	4	N.D.
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0.	4	N.D.
12	Endosulfansulphate	µg/L	US EPA 508-1995	0.	4	N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994	1		N.D.
14	Ethion	µg/L	US EPA 8141A-1994	3	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		N.D.
20	Alachlor	µg/L	US EPA 508- 1995	20		N.D.
21	Atrazine	µg/L	US EPA 532-2000	2		N.D.
22	Methyl parathion	µg/L	US EPA 8141A-1994	0.3		N.D.
23	Methyl paraxone	µg/L	US EPA 8141A-1994	-		N.D.
24	Malathion	µg/L	US EPA 8141A-1994	190		N.D.
25	Malaoxon	µg/L	US EPA 8141A-1994	-		N.D.
26	Aldrin	µg/L	US EPA 508- 1995	0.03		N.D.
27	Dieldrin	µg/L	US EPA 508-1995	0.0	03	N.D.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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

This is for information as the party has asked for about

FORULTIMATE ENVIRORYTICAL SOLUTIONS



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

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/21-22/0	0464		
LAB REF NO	UES/21-22/W/0564			
DATE OF SAMPLING	29/05/2021			
DATE OF RECEIPT	30/05/2021			
DATE OF REPORT	03/06/2021			
DATE OF ANALYSIS	START: 31/05/2021	END: 03/06/2021		

		SAMPL	E DETAILS	
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:	M/PO/SRV/2021/0044, DTD. 21-AUG-2020
CUSTMER SAMPLE ID	SIDARPARA VILLAGE (DUGWI	ELL)	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 APHA 22ND ED. 2012,1060-		QUANTITY RECEIVED	5 LTR

TEST DEDART

REPORT NO. - 0464

SR.				AS PER IS	0500:2012	E THE
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	7.56
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	0.29
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	296.0
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2- 64	-	-	186.1
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	184.0
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2- 66	-	-	2.1
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	52.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2-44,45	200	600	80.0
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	-	-	26.0
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca- B,3-67	75	200	21.6
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	30	100	6.31
17	Chloride (as CI)	mg/Lit	APHA 22 nd Ed.2012,4500-CI-B, 4-72	250	1000	12.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ -E, 4-190	200	400	13.8
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ - B,4-122	45	NoRelaxati on	3.3
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	-	-	8.4
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-	-	-	0.2



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

S REPORT NO. - 0464

			TEST REPORT			
SR.				AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
			87			
23	Boron (as B)	mg/Lit	APHA 22 nd Ed.2012,4500-B-B, 4- 25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 22 nd Ed.2012,3111-B,3-18	0.3	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	0.14
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	0.3	0.10
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	APHÁ 22 nd Ed.2012,3111-B, 3-18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 22 nd Ed.2012,3500-Cd, 3- 105	0.003	NoRelaxati on	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3-23	0.001	NoRelaxati on	N.D.
33	Arsenic (as As)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3-38	0.01	0.05	N.D.
34	Selenium (as Se)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3-38	0.01	NoRelaxati on	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B, 3-69	0.05	NoRelaxati 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	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003		Relaxation -	N.D.
Micro	biological Analysis		2003			
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019	Shall not be any 100 r	detectable in nl sample	Absent
2	Faecal coliform	MPN/ 100ml	IS:1622:1981: RA:2019	Shall not be any 100 r		Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be	detectable in	Absent
Pesti	cides			2.17 20011		HALL SO
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	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.



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- 0464 REPORT NO.

			TEST REPORT	•		
SR.	LEADING THE PERSON			AS PER IS 1	0500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0.	4	N.D.
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0.	4	N.D.
12	Endosulfansulphate	µg/L	US EPA 508-1995	0.	4	N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994	1		N.D.
14	Ethion	µg/L	US EPA 8141A-1994	3	3	
15	Chloropyrifos	µg/L	US EPA 8141A-1994	30		N.D.
16	Phorate	µg/L	US EPA 8141A-1994	2		N.D.
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994	-		N.D.
18	Phoratesulphone	µg/L	US EPA 8141A-1994	-	-	
19	2,4-D	µg/L	US EPA 515.1-1995	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	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.

mg/lit.: milligram per liter, N.D. -

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

The report for publication, arbitration of 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

06/2021



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

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/21-22/0428		
LAB REF NO	UES/21-22/W/05	528	
DATE OF SAMPLING	29/05/2021		
DATE OF RECEIPT	30/05/2021		
DATE OF REPORT	03/06/2021		
DATE OF ANALYSIS	START: 31/05/2021	END: 03/06/2021	

SAMPLE DETAILS

SAMPLE TYPE	MPLE TYPE GROUND WATER		ORDER /REFERENCE:	N/PO/SRV/2021/0035, DTD. 21-AUG-2020	
CUSTMER SAMPLE ID BELJOR VILLAGE (DUGWELL)		ELL)	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 2003; APHA 22ND ED. 1060-B, 1-39		QUANTITY RECEIVED	5 LTR	V

Report No.0428

,			TEST REPORT	TEL UL		
SR.		1493	A CONTRACTOR OF SERVICE	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	NoRelaxatio n	7.31
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	0.62
6	Electrical Conductivity	μS/cm	IS 3025(part-14):1984, RA 2013	i — i	-	588.0
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2- 64	-	-	365.3
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	360.0
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2- 66	*	-	5.3
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	160.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2-44,45	200	600	194.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500–Ca-B, 3-67	-	-	114.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500–Mg-B, 3-84	-	-	80.0
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	75	200	45.6
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	30	100	19.4
17	Chloride (as CI)	mg/Lit	APHA 22 nd Ed.2012,4500-CI-B, 4-72	250	1000	62.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ -E, 4-190	200	400	21.3
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ -B, 4-122	45	NoRelaxatio n	0.64
20	Phosphate (as P)	mg/Lit	APHA 22nd Ed.2012,4500-P- C,4-153	-	-	N.D.

Format No.: UES/FORM/09



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

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

Report No.0428

			TEST REPORT			
SR.		PAMETED UNIT METHOD OF THE	AS PER IS	10500:2012		
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
21	Sodium (as Na)	mg/Lit	APHA 22nd Ed.2012,3500-Na- B,3-97	-	-	4.2
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87	-	-	1.10
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	NoRelaxatio n	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	0.15
27	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-	0.01	NoRelaxatio	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 22 nd Ed.2012,3500-Ni, 3-	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	NoRelaxatio n	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3- 23	0.001	NoRelaxatio n	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	NoRelaxatio	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B, 3-69	0.05	NoRelaxatio n	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	NoRelaxatio n	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	-	- METAVACTOII	N.D.
licro	biological Analysis		2003			
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 ml sample	Absent
esti	cides	2001111		dily 100	ini sample	
1	p,p DDT	μg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	µg/L	US EPA 508-1995		1	N.D.
4	p,p DDD	µg/L	US EPA 508-1995		1	N.D.
5	O,p DDD	µg/L	US EPA 508-1995		1	N.D.
6	Gamma-HCH (Lindane)	μg/L	US EPA 508-1995		2	N.D.



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

Report No.0428

SR.				AS PER IS	10500:2012	RESULT
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	
7	Alpha-HCH	µg/L	US EPA 508-1995	0.	01	N.D.
8	Beta-HCH	µg/L	US EPA 508-1995	0.	04	N.D.
9	Delta HCH	µg/L	US EPA 508-1995	0.	04	N.D.
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.
12	Endosulfansulphate	µg/L	US EPA 508-1995	0	.4	N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994	1		N.D.
14	Ethion	µg/L	US EPA 8141A-1994	3		N.D.
15	Chloropyrifos	µg/L	US EPA 8141A-1994	30		N.D.
716	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		-	
26	Aldrin	µg/L	US EPA 508- 1995	0.0	0.03	
27	Dieldrin	µg/L	US EPA 508-1995	0.0	03	N.D.

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

- > Thereportfor 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

03/06/2021

For ULTIMATE ENVIROLYTICAL SOLUTIONS

03/06/2021 **AUTHORIZED SIGNATORY**

-End of the test report---



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

Name & Address Of 1	The Customer	REPORT NO	UES/TR/21-22/2126			
TO,		LAB REF NO	UES/21-22/W/3470			
HINDALCO INDUSTR	THE SECRETARY CONTRACTOR OF SECRETARY SECRETAR	DATE OF SAMPLING	27/08/2021			
GARE PALMA – IV/4, VILLAGE – BANKHET	NAT A CONTRACT OF STREET OF ST	DATE OF RECEIPT	29/08/2021			
POST -MILUPARA.	n ,	DATE OF REPORT	03/09/2021			
DISTT RAIGARH (C.	G.) 496107.	DATE OF ANALYSIS	START:29/08/2021 END:02/09/2021			
		SAMPLE DETAILS	W 170 (75W 107 00 (004 F 15W 104 W 1			
SAMPLE TYPE	GROUND WATER	ORDER /REFERENCE:	N/PO/SRV/2122/0045, DTD. 24-JULY-2021			
CUSTMER SAMPLE ID	BANKHETA MINE (PIEZOMETER) AWLR	SAMPLE CONDITION AT RECEIPT	OK			
PACKING OF SAMPLE	3 L X 1 NO. FVC CAN 1 L X 1 NO. FVC CAN SEALED 1 L X 1 NO. GLASS BOTTLE	SAMPLE COLLECTED BY	CHEMIST			
IS:3025(PART I):1987 RA SAMPLING PROCEDURE 2003; APHA 22ND ED. 2012, 1060-B, 1-39		QUANTITY RECEIVED	5 LTR			

Report No.2126

TEST REPORT									
SR.				AS PER IS	AS PER IS 10500:2012				
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT			
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1 .			
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable			
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable			
4	pH	-	APHA 22 nd Ed.2012,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	7.98			
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	1.16			
6	Electrical Conductivity	μS/cm	IS 3025(part-14):1984, RA 2013	-	-	164.0			
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-G, 4 - 69	0.2	1	N.D.			
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2- 64	-		101.4			
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	99.3			
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2- 66		-	2.1			
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	32.0			
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2- 44,45	200	600	46.0			
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500–Ca-B, 3-67	-	-	18.0			
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	-	-	28.0			
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500–Ca-B, 3-67	75	200	7.2			
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	30	100	6.8			
17	Chloride (as Cl)	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-B, 4-72	250	. 1000	16.9			
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ -E, 4-190	200	400	10.4			
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500−NO ₃ -B, 4-122	45	No Relaxation	0.28			
20	Phosphate (as P)	mg/Lit	APHA 22nd Ed.2012,4500-P-C, 4-153	-	-	N.D.			



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			TEST REPORT			
		1		AS PER IS	10500:2012	
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
21	Sodium (as Na)	mg/Lit	APHA 22nd Ed.2012,3500-Na-B, 3-97	-	- [18.4
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3- 87	-	-	1.14
23	Boron (as B)	mg/Lit	APHA 22 nd Ed.2012,4500-B-B, 4- 25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 22 nd Ed.2012,3111-B,3-18	0.3	No Relaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.08
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.01	No Relaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 22 nd Ed.2012,3500-Ni, 3- 108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	5	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 22 nd Ed.2012,3500-Cd, 3- 105	0.003	No Relaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3-23	0.001	No Relaxation	N.D.
33	Arsenic (as As)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3-38	0.01	0.05	N.D.
34	Selenium (as Se)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3-38	0.01	No Relaxation	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B, 3-69	0.05	No Relaxation	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 22 nd Ed.2012,5540-C, 5-53	0.2	1.0	N.D.
37	Phenolic Compound (as C ₆ H ₅ OH)	mg/Lit	APHA 22 nd Ed.2012,5540-B & C, 5-47	0.001	0.002	N.D.
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	μg/Lit	APHA 22 nd Ed.2012,6440-6-93	0.0001	No Relaxation	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39): 1991, RA 2003	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003	-	-	N.D.
Micro	obiological Analysis		, 2005			
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 ml sample	Absent
Pesti	icides					
1	p,p DDT	µg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	μg/L	US EPA 508-1995		1	N.D.
4	p,p DDD	μg/L	US EPA 508-1995		1	N.D.
5	O,p DDD	μg/L	US EPA 508-1995		1	N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995		2	N.D.



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Report No. 2126

			TEST REPORT			
000000				AS PER IS	10500:2012	
SR. NO.	PARAMETER	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	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	
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	Alachior	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	190		N.D.
25	Malaoxon	μg/L	US EPA 8141A-1994			
26	Aldrin	µg/L	US EPA 508- 1995	0.	0.03	
27	Dieldrin	µg/L	US EPA 508-1995	0.	0.03	

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

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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

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

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

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For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

End of the test report-



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Nama & Address Of The Cut	tiomer	REP	ORT NO	UES,	UES/TR/21-22/2127 UES/21-22/W/3471			
то,		LAB	REF NO	UES.				
GARE PALMA - IV	STRIES LIMITED,	DAT	E OF SAMPLING	27/	08/2021			
VILLAGE - BANK	하면요 하는 100 전 1 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	DAT	E OF RECEIPT	29/	29/08/2021			
POST -MILUPARA		DAT	DATE OF REPORT		03/09/2021			
DISTT RAIGARH (C.G.) 496107.			DATE OF ANALYSIS		START:29/08/2021 END:02/09/2021			
		SAME	LE DETAILS					
SAMPLE TYPE	GROUND WATER		ORDER /REFEREN	Œ:	22/0045, Y-2021			
CUSTMER SAMPLE ID	BANJIKHOL MINE (PIEZOMET	OL MINE (PIEZOMETER) AWLR		ON AT	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		SAMPLE COLLECT	ED BY				
SAMPLING PROCEDURE 15:3025(PART I):1987 RA 2003 APHA 22ND ED. 2012, 1060-B,1			QUANTITY RECEIVED		5 LTR			

Report No.2127

			TEST REPORT			
SR.				AS PER IS	10500:2012	RESULT
NO.	PARAMETER UNI	UNIT	METHOD OF TEST	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	1-	ΑΡΗΛ 22 nd Ed.2012,4500-H+-B, 4-92	6.5-8.5	NoRelaxation	6.86
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	2.8
6	Electrical Conductivity	μS/cm	IS 3025(part-14):1984, RA 2013	-	-	168.0
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-CI-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2- 64	- 1	-	103.2
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	101.8
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2- 66	-	-	1.4
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	42.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2- 44,45	200	. 600	72.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67		-	36.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	_	-	36.0
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	75	200	14.4
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	30	100	8.7
17	Chloride (as Cl)	mg/Lit	APHA 22 nd Ed.2012,4500-CI-B, 4-72	250	1000	16.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ -E, 4-190	200	400	12.4
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ - B,4-122	45	NoRelaxation	2.2
20	Phosphate (as P)	mg/Lit	APHA 22nd Ed.2012,4500-P-C, 4-153	-		N.D.



Alpha-HCH

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

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			TEST REPORT			
High				AS PER IS	10500:2012	
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
21	Sodium (as Na)	mg/Lit	APHA 22nd Ed.2012,3500-Na-B, 3-97	-	-	8.6
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87	-	-	0.28
23	Boron (as B)	mg/Lit	APHA 22 nd Ed.2012,4500-B-B, 4-25	0.5	1.0	N.D.
24	Iron (as Fe)	mg/Lit	APHA 22 nd Ed.2012,3111-B,3-18	0.3	NoRelaxation	N.D.
25	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	N.D.
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.01	NoRelaxation	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 22 nd Ed.2012,3500-Ni, 3- 108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	5	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 22 nd Ed.2012,3500-Cd, 3- 105	0.003	NoRelaxation	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3-23	0.001	NoRelaxation	N.D.
33	Arsenic (as As)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3-38	0.01	0.05	N.D.
34	Selenium (as Se)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3-38	0.01	NoRelaxation	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 22 ^{nc} Ed.2012,3500-Cr-B, 3-69	0.05	NoRelaxation	N.D.
36	Anionic Detergent (as MBAS)	mg/Lit	APHA 22 nd Ed.2012,5540-C, 5-53	0.2	1.0	N.D.
37	Phenolic Compound (as C ₆ H ₅ OH)	mg/Lit	APHA 22 nd Ed.2012,5540-B & C, 5-47	0.001	0.002	N.D.
38	Poly-nuclear Aromatic Hydrocarbon (PAH)	µg/Lit	APHA 22 nd Ed.2012,6440-6-93	0.0001	NoRelaxation	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA 2003	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003,	-	-	N.D.
4icro	biological Analysis	L	1 2003,			
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	100 m	detectable in any nl sample	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019		detectable in any nl sample	Absent
Pesti	cides					Mark Sold In other Public
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.
				A comment of the comm	The second secon	

0.01

N.D.

μg/L US EPA 508-1995



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Report No. 2127

			TEST REPORT			
	i e			AS PER IS	10500:2012	
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
8	Beta-HCH	µg/L	US EPA 508-1995	0.	04	N.D.
9	Delta HCH	µg/L	US EPA 508-1995	0.	.04	N.D.
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0	.4	N.D.
12	Endosulfansulphate	µg/L	US EPA 508-1995	0	.4	N.D.
13	Monocrotophos	μg/L	US EPA 8141A-1994		1	N.D.
14	Ethion	µg/L	US EPA 8141A-1994	3		N.D.
15	Chloropyrifos	µg/L	US EPA 8141A-1994	30		N.D.
16	Phorate	µg/L	US EPA 8141A-1994	2		N.D.
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994		-	N.D.
18	Phoratesulphone	µg/L	US EPA 8141A-1994		-	N.D.
19	2,4-D	µg/L	US EPA 515.1-1995		30	N.D.
20	Alachlor	µg/L	US EPA 508- 1995	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-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.

WEAR AND TO SEE THE SE

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AUTHORIZED SIGNATORY

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Name & Address Of The Gu	stamer	REPO	RT NO	UES/TR/21-2		
то,		LAB	REF NO	UES/21-22/W/3542		42
HINDALCO INDUSTR		DATE	OF SAMPLING	27/08/2021		
GARE PALMA – IV/5,		DATE	OF RECEIPT	29/08/2021		(0)1000
U/G COAL MINE, VILL	AGE – MILUPARA,	DATE	OF REPORT	03/09/2021		
BLOCK-TAMNAR, DISTT RAIGARH (C	G.) 496107	DATE	OF ANALYSIS	START: 29/08/2021 END: 02/09/2021		END: 02/09/2021
		SAMPL	E DETAILS			
SAMPLE TYPE	SAMPLE TYPE GROUND WATER		ORDER /REFERENCE:		1	PO/SRV/2122/0049, D. 24-JULY-2021
CUSTMER SAMPLE ID	NEAR MILUPARA MINES O PIEZOMETER -AWLR	OFFICE	SAMPLE CONDITION AT OK RECEIPT			
1 L X 1 NO. GLASS BOTTLE		SEALED	SAMPLE COLLE	ECTED BY	сни	EMIST
SAMPLING PROCEDURE IS:3025(PART I):1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1			QUANTITY RECEIVED		5 1	LTR

REPORT NO. -2161

			TEST REPORT			
	PARAMETER			AS PER IS	10500:2012	
SR. NO.		UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour	=	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
4	рН		APHA 22 nd Ed.2012,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	6.62
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	2.2
6	Electrical Conductivity	μS/cm	IS 3025(part-14):1984, RA 2013	-	-	182.0
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-G,4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2- 64	- /	-	117.1
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	110.3
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2- 66	- 1	•	6.8
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	22.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2- 44,45	200	600	54.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	-	-	36.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	-	-	18.0
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	75	200	14.4
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	30	100	4.3
17	Chloride (as Cl)	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-B, 4-72	250	1000	18.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ - E,4-190	200	400	12.6
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ -B, 4-122	45	NoRelaxation	1.8



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REPORT	

			TEST REPORT			
SR.				AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	N.D. 6.8 0.89 N.D. N.D. N.D. N.D. N.D. N.D. N.D. N.D
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	-	-	6.8
21	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3- 87	-	-	0.89
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	NoRelaxation	N.D.
24	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.08
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	NoRelaxation	N.D.
27	Nickel (as Ni)	mg/Lit	APHA 22 nd Ed.2012,3500-Ni, 3- 108	0.02	No Relaxation	N.D.
28	Zinc (as Zn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	5	15	N.D.
29	Copper (as Cu)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.05	1.5	N.D.
30	Cadmium (as Cd)	mg/Lit	APHA 22 nd Ed.2012,3500-Cd,3- 105	0.003	NoRelaxation	N.D.
31	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3-23	0.001	NoRelaxation	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	NoRelaxation	N.D.
34	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B, 3-69	0.05	NoRelaxation	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	NoRelaxation	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	obiological Analysis					
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		detectable in any	Absent
2	Faecal coliform	MPN/ 100ml	IS:1622:1981: RA:2019	Shall not be	detectable in any	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be	detectable in any	Absent
Pesti	cides		0			
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.



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REPORT NO. -2161

			TEST REPOR	T			
				AS PER IS	10500:2012	HEN	
SR. NO.	PARAMETER	PARAMETER UNIT	PARAMETER UNIT METHOD OF TEST	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
5	O,p DDD	µg/L	US EPA 508-1995		1	N.D.	
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995		2	N.D.	
7	Alpha-HCH	μg/L	US EPA 508-1995	0	0.01	N.D.	
8	Beta-HCH	µg/L	US EPA 508-1995	0	0.04	N.D.	
9	Delta HCH	µg/L	US EPA 508-1995	0	0.04	N.D.	
10	Alpha-Endosulfan	μg/L	US EPA 508-1995		0.4	N.D.	
11	Beta-Endosulfan	μg/L	US EPA 508-1995		0.4	N.D.	
12	Endosulfansulphat e	μg/L	US EPA 508-1995		0.4		
13	Monocrotophos	µg/L	US EPA 8141A-1994	1		N.D.	
14	Ethion	μg/L	US EPA 8141A-1994	3		N.D.	
15	Chloropyrifos	µg/L	US EPA 8141A-1994		30	N.D.	
16	Phorate	µg/L	US EPA 8141A-1994		2	N.D.	
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994		-	N.D.	
18	Phoratesulphone	µg/L	US EPA 8141A-1994		-	N.D.	
19	2,4-D	μg/L	US EPA 515.1-1995		30	N.D.	
20	Alachlor	µg/L	US EPA 508- 1995		20	N.D.	
21	Atrazine	µg/L	US EPA 532-2000		2	N.D.	
22	Methyl parathion	µg/L	US EPA 8141A-1994		0.3	N.D.	
23	Methyl paraxone	µg/L	US EPA 8141A-1994		-	N.D.	
24	Malathion	µg/L	US EPA 8141A-1994		190	N.D.	
25	Malaoxon	µg/L	US EPA 8141A-1994		-		
26	Aldrin	μg/L	US EPA 508- 1995	(0.03	N.D.	
27	Dieldrin	µg/L	US EPA 508-1995	(0.03		

Dieldrin µg/L US EPA 508-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

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AUTHORIZED SIGNATORY

202

-End of the test report--



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Name & Address Of The Gu	stomer		ORT NO UES/TR/21 REF NO UES/21-22			and the state of t		
HINDALCO INDUSTR	IES LIMITED,		OF SAMPLING	27/08/2021				
GARE PALMA - IV/5,		DATE	OF RECEIPT	29/08/2021				
U/G COAL MINE, VILL	AGE – MILUPARA,	DATE	OF REPORT	03/09/2021	03/09/2021			
BLOCK-TAMNAR, DISTT RAIGARH (C	G.) 496107	DATE	OF ANALYSIS	START: 29/08/	END: 02/09/2021			
		SAMP	LE DETAILS					
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:		M/PO/SRV/2122/0049, DTD. 24-JULY-2021			
CUSTMER SAMPLE ID	STAFF QUARTER-BANJIKHOL PIEZOMETER (AWLR)		SAMPLE CONDITION AT RECEIPT OK					
PACKING OF SAMPLE 3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE			SAMPLE COLLECTED BY		CHEMIST			
SAMPLING PROCEDURE IS:3025(PART I):1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-35			QUANTITY RECEIVED		5 LTR			

REPORT NO. 2160

			TEST REPORT			
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	ACCEPTABL DRINKING WATER Acceptable Limit	E LIMIT FOR R (IS 10500:2012) Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour	-	IS 3025:(part-5)	Agreeable	Agreeable	Agreeabl
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	6.98
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	1.26
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	224.0
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-CI-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2- 64		*	148.3
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	135.7
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2- 66	-	-	12.6
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	36.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2- 44,45	200	600	78.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500–Ca-B, 3-67	-	-	42.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	-	-	36.0
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500–Ca-B, 3-67	75	200	16.8
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500–Mg-B, 3-84	30	100	8.74
17	Chloride (as CI)	mg/Lit	APHA 22 nd Ed.2012,4500-CI-B, 4-72	250	1000	36.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ - E,4-190	200	400	22.4
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ - B,4-122	45	NoRelaxati on	0.68
20	Phosphate (as P)	mg/Lit	APHA 22nd Ed.2012,4500-P-C, 4-153	-	-	N.D.



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			TEST REPORT			
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	CHORDS OWNERS THE RESIDENCE OF THE	E LIMIT FOR R (IS 10500:2012) Permissible limit	RESULT
21	Sodium (as Na)	mg/Lit	APHA 22ndEd.2012,3500-Na-B, 3-97	-	-	6.2
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87	-	-	1.8
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	0.14
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	0.3	N.D.
27	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.01	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- 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.
Microl	piological Analysis					
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		detectable in nl sample	Absent
Pestic	ides	-	111111111111111111111111111111111111111		***************************************	
1	p,p DDT	μg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	μg/L	US EPA 508-1995		1	N.D.
4	p,p DDD	μg/L	US EPA 508-1995		1	N.D.
5	O,p DDD	μg/L	US EPA 508-1995		1	N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995		2	N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	0.	01	N.D.



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REPORT NO. 2160

			TEST REPORT			
SR.				ACCEPTABLE DRINKING WATER		RESULT
NO.	PARAMETER	PARAMETER UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	
8	Beta-HCH	μg/L	US EPA 508-1995	0.0	4	N.D.
9	Delta HCH	µg/L	US EPA 508-1995	0.0	4	N.D.
10	Alpha-Endosulfan	μg/L	US EPA 508-1995	0.4	4	N.D.
11	Beta-Endosulfan	μg/L	US EPA 508-1995	0.4	1	N.D.
12	Endosulfansulphate	µg/L	US EPA 508-1995	0.4	1	N.D.
13	Monocrotophos	μg/L	US EPA 8141A-1994	1		N.D.
14	Ethion	µg/L	US EPA 8141A-1994	3		N.D.
15	Chloropyrifos	μg/L	US EPA 8141A-1994	30		N.D.
16	Phorate	μg/L	US EPA 8141A-1994	2		N.D.
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994	-		N.D.
18	Phoratesulphone	μg/L	US EPA 8141A-1994	-		N.D.
19	2,4-D	µg/L	US EPA 515.1-1995	30)	N.D.
20	Alachlor	µg/L	US EPA 508- 1995	20)	N.D.
21	Atrazine	µg/L	US EPA 532-2000	2		N.D.
22	Methyl parathion	µg/L	US EPA 8141A-1994	0.3	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

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End of the test report-



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Name & Address Of The	Gustomer	REPO	ORT NO	UES/TR/	21-22/2	162		
TO,		LAB	REF NO	UES/21-22/W/3544				
HINDALCO INDUSTR	IES LIMITED,	DATE	E OF SAMPLING	LING 27/08/20		021		
GARE PALMA - IV/5,	MILUPARA	DATE	E OF RECEIPT	29/08/2	021			
U/G COAL MINE, VILL	AGE – MILUPARA,	DATE	E OF REPORT	03/09/2	03/09/2021			
BLOCK-TAMNAR, DISTT RAIGARH (C.	DATE	E OF ANALYSIS	START:29/08/2021		END:02/09/2021			
		SAMPI	E DETAILS	E VERSION	That I	5 G SIER		
SAMPLE TYPE	GROUND WATER		ORDER /REFERE	INCE:		/SRV/2122/0049, 24-JULY-2021		
CUSTMER SAMPLE ID	MILUPARA VILLAGE NEAR P HIL(DUGWELL)	HC-	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 COLLEC	CTED BY	СНЕМІ	ST		
SAMPLING PROCEDURE IS:3025 (PART 1):1987 RA 2003; APHA 22ND ED. 2012,1060-B,1-39			QUANTITY RECEIVED		5 LTR			

			TEST REPORT			
		1		AS PER IS	10500:2012	
SR. NO.	PARAMETER	UNIT METHOD OF TEST	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
4	рН	-	APHA 22 nd Ed.2012,4500-H+-B, 4-92	6.5-8.5	No Relaxation	6.96
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	2.6
6	Electrical Conductivity	μS/cm	IS 3025(part-14):1984, RA 2013	- 1	-	268.0
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-CI-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2- 64		-	178.2
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	162.4
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2- 66	-	-	16.2
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	38.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2- 44,45	200	600	86.0
13	Calcium Hardness (as 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	-	-	34.0
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca- B,3-67	75	200	20.8
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	30	100	8.2
17	Chloride (as Cl)	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-B, 4-72	250	1000	16.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ - E, 4-190	200	400	26.8
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ - B,4-122	45	NoRelaxatio n	4.6
20	Phosphate (as P)	mg/Lit	APHA 22ndEd.2012,4500-P-C, 4-153	-	-	N.D.



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			TEST REPORT			
SR.				AS PER IS	10500:2012	Marine seems
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
21	Sodium (as Na)	mg/Lit	APHA 22nd Ed.2012,3500-Na- B, 3-97	-	-	6.8
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87	-	-	1.4
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	NoRelaxatio n	N.D.
25	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.04
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	0.1	0.3	0.18
27	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	0.01	NoRelaxatio n	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	NoRelaxatio n	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3- 23	0.001	NoRelaxatio n	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	NoRelaxatio n	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B, 3-69	0.05	NoRelaxatio n	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 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	μg/Lit	APHA 22 nd Ed.2012,6440-6-93	0.0001	NoRelaxatio	N.D.
39	Hydrocarbon (PAH) 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.
	obiological Analysis	3/ =	2003		L	
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		etectable in any sample	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be de	etectable in any sample	Absent
Pesti	cides	2001111	L	1001111	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.



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REPORT NO. - 2162

			TEST REPORT	Т		
				AS PER IS	10500:2012	
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
5	O,p DDD	µg/L	US EPA 508-1995	1	L	N.D.
6	Gamma-HCH (Lindane)	μg/L	US EPA 508-1995	1 3	2	N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	0.0	01	N.D.
8	Beta-HCH	μg/L	US EPA 508-1995	0.0	04	N.D.
9	Delta HCH	μg/L	US EPA 508-1995	0.0	04	N.D.
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0.	.4	N.D.
11	Beta-Endosulfan	μg/L	US EPA 508-1995	0.	.4	N.D.
12	Endosulfansulphate	µg/L	US EPA 508-1995	0.	.4	N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994	1	L	N.D.
14	Ethion	μg/L	US EPA 8141A-1994		3	N.D.
15	Chloropyrifos	µg/L	US EPA 8141A-1994	3	0	N.D.
16	Phorate	μg/L	US EPA 8141A-1994		2	N.D.
17	Phoratesulphoxide	µg/L	US EPA 8141A-1994		•	N.D.
18	Phoratesulphone	µg/L	US EPA 8141A-1994			N.D.
19	2,4-D	µg/L	US 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	0.0	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

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

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

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End of the test report-



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Name & Address Of The Cus	tomer		REPORT NO	UES/TR/21-22/2128		
TO,		- 1	LAB REF NO	UES/21-22/W/03472		
HINDALCO INDUST	RIES LIMITED,		DATE OF SAMPLING	27/08/2021		
GARE PALMA - IV/4	, COAL MINE, VILLAG	E-	DATE OF RECEIPT	29/08/2021		
BANKHETA, POST	() 75 시간 () 경기 경기 경기 경기 경기 전 () 전 (DATE OF REPORT	03/09/2021 START:29/08/2021 END:02/09/2021		
DISTT RAIGARH	시기가 하시기의 기계가 있었다면 하네요		DATE OF ANALYSIS			
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:	N/PO/SRV/2122/0045, DTD. 24-JULY-2023		
SAMPLE TYPE	GROUND WATER			N/PO/SRV/2122/0045, DTD. 24-JULY-202		
CUSTMER SAMPLE ID	SAKTA VILLAGE, (DUGWE	VLL)	SAMPLE CONDITION AT RECEIPT	OK		
CUSTMER SAMPLE ID	SAKTA VILLAGE, (DUGWE 3 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE	SEALED		OK CHEMIST		

Report	No	2128

			TEST REPORT			
				AS PER IS	10500:2012	RESULT
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	
1	Colour	Hazen	IS:3025:(Part-4)	5	15	2.8
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	NoRelaxatio n	7.48
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	2.6
6	Electrical Conductivity	μS/cm	IS 3025(part-14):1984, RA 2013	-	-	248.2
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	- '	-	155.2
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	150.4
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2-		-	4.8
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	76.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2- 44,45	200	. 600	102.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	-	-	46.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	_	-	56.0
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500–Ca-B, 3-67	75	200	18.4
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500–Mg-B, 3-84	30	100	13.6
17	Chloride (as Cl)	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-B, 4-72	250	1000	18.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500-SO ₄ -E, 4-190	200	400	28.4
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500−NO ₃ -B, 4-122	45	NoRelaxatio n	0.64
20	Phosphate (as P)	mg/Lit	APHA 22nd Ed.2012,4500-P-	-		N.D.



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			TEST REPORT			
				AS PER IS	10500:2012	
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
			C,4-153			
21	Sodium (as Na)	mg/Lit	APHA 22nd Ed.2012,3500-Na- B,3-97	-	-	16.2
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87	-	-	0.72
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	NoRelaxatio n	N.D.
25	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.12
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	0.1	0.3	0.08
27	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	0.01	NoRelaxatio n	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- 105	0.003	NoRelaxatio n	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3- 23	0.001	NoRelaxatio n	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-	0.01	NoRelaxatio n	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B, 3-69	0.05	NoRelaxatio n	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	NoRelaxatio n	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	obiological Analysis	wile				
1	Total Coliforms	MPN/ 100 ML	IS:1622:1981: RA:2019		etectable in any I sample	Absent
2	Faecal coliform	MPN/ 100ml	IS:1622:1981: RA:2019		etectable in any	Absent
3	E. Coli	MPN/ 100ml	IS:1622:1981:RA:2019	Shall not be d	etectable in any	Absent
Pest	icides					
1	p,p DDT	μg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	µg/L	US EPA 508-1995		1	N.D.



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Report No.2128

			TEST REPORT			
				AS PER IS 1	0500:2012	RESULT
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	
4	p,p DDD	µg/L	US EPA 508-1995	1		N.D.
5	O,p DDD	µg/L	US EPA 508-1995	1		N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995	2		N.D.
7	Alpha-HCH	µg/L	US EPA 508-1995	0.0	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	1	N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994	1		N.D.
14	Ethion	µg/L	US EPA 8141A-1994	3		N.D.
15	Chloropyrifos	µg/L	US EPA 8141A-1994	30)	N.D.
16	Phorate	μg/L	US EPA 8141A-1994	2		N.D.
17	Phoratesulphoxide	μg/L	US EPA 8141A-1994	-		N.D.
18	Phoratesulphone	µg/L	US EPA 8141A-1994	-		N.D.
19	2,4-D	µg/L	US EPA 515.1-1995	30)	N.D.
20	Alachlor	µg/L	US EPA 508- 1995	20		N.D.
21	Atrazine	µg/L	US EPA 532-2000	2		N.D.
22	Methyl parathion	µg/L	US EPA 8141A-1994	0.3	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	٠ 0.0	3	N.D.
27	Dieldrin	ua/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.

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FORULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

-End of the test report

20.0

8.7

16.9

14.2

4.0

N.D.



REPORT NO. - 2163

15

16

17

18

19

20

Calcium (as Ca)

Chloride (as CI)

Sulphate (as SO₄)

Nitrate (as NO₃)

Phosphate (as P)

Magnesium (as Mg)

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

Name & Address Of The	Customer	REPO	ORT NO	UES/TR/2	1-22/2	2163
TO,		LAB	REF NO	UES/21-2	2/W/35	45
HINDALCO INDUSTR	HINDALCO INDUSTRIES LIMITED,			27/08/2021		
GARE PALMA - IV/5,	DATE	OF RECEIPT	29/08/202	21		
U/G COAL MINE, VILL	DATE	OF REPORT	03/09/2021			
BLOCK-TAMNAR, DISTT RAIGARH (C.G.) 496107		DATE	ATE OF ANALYSIS START:29/0			END:02/09/2021
		SAMPI	E DETAILS			
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:			SRV/2122/0049, 24-JULY-2021
CUSTMER SAMPLE ID	SIDARPARA VILLAGE (DUG	WELL)	SAMPLE CONDITION AT RECEIPT		OK	
PACKING OF SAMPLE 1 L X 1 NO. PVC CAN 1 L X 1 NO. PVC CAN 1 L X 1 NO. GLASS BOTTLE		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 LTF	•	

			TEST REPORT			
1000		ATTE		AS PER IS	10500:2012	
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
4	pH	-	APHA 22 nd Ed.2012,4500-H ⁺ -B, 4-92	6.5-8.5	No Relaxation	7.48
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	0.39
6	Electrical Conductivity	µS/cm	IS 3025(part-14):1984, RA 2013	-	-	328.0
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2-		-	201.1
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	198.7
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2- 66	7		2.4
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	54.0
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 CaCO3)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca- B,3-67	-	-	50.0
14	Magnesium Hardness (as CaCO3)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg- B,3-84	-		36.0
	1	1	ADMA 2200 E4 2012 2500 Ca			

APHA 22nd Ed.2012,3500-Ca-B,3-67

APHA 22nd Ed.2012,3500-Mg-B, 3-84

APHA 22nd Ed.2012,4500-Cl-B, 4-72

4-190 APHA 22nd Ed.2012,4500-NO₃-B,4-122

APHA 22ndEd.2012,4500-P-C, 4-153

APHA 22nd Ed.2012,4500-SO4-E,

75

30

250

200

45

200

100

1000

400

NoRelaxati

on

mg/Lit

mg/Lit

mg/Lit

mg/Lit

mg/Lit

mg/Lit



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			TEST REPORT			
SR.		SELIO.		AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
21	Sodium (as Na)	mg/Lit	APHA 22nd Ed.2012,3500-Na-B, 3-97	-	-	12.4
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87	-	-	0.8
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	N.D.
25	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.11
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.1	0.3	0.08
27	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.01	NoRelaxati	N.D.
28	Nickel (as Ni)	mg/Lit	APHA 22 nd Ed.2012,3500-Ni, 3- 108	0.02	No Relaxation	N.D.
29	Zinc (as Zn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	5	15	N.D.
30	Copper (as Cu)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-18	0.05	1.5	N.D.
31	Cadmium (as Cd)	mg/Lit	APHA 22 nd Ed.2012,3500-Cd, 3- 105	0.003	NoRelaxati on	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3-23	0.001	NoRelaxati on	N.D.
33	Arsenic (as As)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3-38	0.01	0.05	N.D.
34	Selenium (as Se)	mg/Lit	APHA 22 nd Ed.2012,3114-C, 3-38	0.01	NoRelaxati on	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B, 3-69	0.05	NoRelaxati 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	- 110	-	N.D.
Micro	obiological Analysis					
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	icides					
1	p,p DDT	µg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	µg/L	US EPA 508-1995		1	N.D.
4	p,p DDD	µg/L	US EPA 508-1995		1	N.D.
5	O,p DDD	µg/L	US EPA 508-1995		1	N.D.
6	Gamma-HCH (Lindane)	µg/L	US EPA 508-1995	The wall was	2	N.D.



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REPORT NO. - 2163

			TEST REPORT			
				AS PER IS 1	10500:2012	
SR. NO.	PARAMETER	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	0.0	04	N.D.
9	Delta HCH	µg/L	US EPA 508-1995	0.0	04	N.D.
10	Alpha-Endosulfan	µg/L	US EPA 508-1995	0.	4	N.D.
11	Beta-Endosulfan	µg/L	US EPA 508-1995	0.	4	N.D.
12	Endosulfansulphate	µg/L	US EPA 508-1995	0.	4	N.D.
13	Monocrotophos	µg/L	US EPA 8141A-1994	1		N.D.
14	Ethion	µg/L	US EPA 8141A-1994	3	3	N.D.
15	Chloropyrifos	µg/L	US EPA 8141A-1994	3	0	N.D.
16	Phorate	µg/L	US EPA 8141A-1994	2	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	0.0	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.

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AUTHORIZED SIGNATORY

End of the test report



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Nama & Address Of The Cus	lamer		REPORT NO	UES/TR/21-22/2129		
TO,			LAB REF NO	UES/21-22/W/34	73	
HINDALCO INDUST	IINDALCO INDUSTRIES LIMITED,			27/08/2021		
GARE PALMA – IV/4, COAL MINE,VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107.			DATE OF RECEIPT	29/08/2021		
			DATE OF REPORT	03/09/2021		
			DATE OF ANALYSIS	START:29/08/2021 END:02/09/2021		
SAMPLE TYPE	GROUND WATER		ORDER /REFERENCE:	N/PO/SRV/2122/0045, DTD. 24-JULY-20		
SAMPLE TYPE	GROUND WATER			N/PO/SRV/2122/0045, DTD. 24-JULY-2		
	USTMER SAMPLE ID BELJOR VILLAGE (DUGWELL)					
CUSTMER SAMPLE ID	BELJOR VILLAGE (DUGWI	ELL)	SAMPLE CONDITION AT RECEIPT	OK		
CUSTMER SAMPLE ID	BELJOR VILLAGE (DUGWI 3 L X I NO. PVC CAN 1 L X I NO. PVC CAN 1 L X I NO. GLASS BOTTLE	SEALED		OK CHEMIST		

Report No.2129

			TEST REPORT			
		Alle		AS PER IS	10500:2012	
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	Taste	_	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
4	рН	-	APHA 22 nd Ed.2012,4500-H+-B, 4-92	6.5-8.5	No Relaxation	7.48
5	Turbidity	NTU	APHA 22 nd Ed.2012,2130-B,2-13	1	5	0.48
6	Electrical Conductivity	μS/cm	IS 3025(part-14):1984, RA 2013	-	-	568.0
7	Residual Chlorine	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-G, 4 - 69	0.2	1	N.D.
8	Total Solid	mg/Lit	APHA 22 nd Ed.2012,2540- B, 2- 64	-	-	348.8
9	Total Dissolved Solids	mg/Lit	IS 3025(part-16):1984, RA 2006	500	2000	344.2
10	Total Suspended Solids	mg/Lit	APHA 22 nd Ed.2012,2540- D, 2- 66	-	-	4.6
11	Alkalinity Total (as CaCO ₃)	mg/Lit	IS 3025(part-23):1986, RA 2003	200	600	168.0
12	Total Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,2340-C, 2- 44,45	200	600	188.0
13	Calcium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	-	-	108.0
14	Magnesium Hardness (as CaCO ₃)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	-	-	80.0
15	Calcium (as Ca)	mg/Lit	APHA 22 nd Ed.2012,3500-Ca-B, 3-67	75	200	43.2
16	Magnesium (as Mg)	mg/Lit	APHA 22 nd Ed.2012,3500-Mg-B, 3-84	30	100	19.4
17	Chloride (as CI)	mg/Lit	APHA 22 nd Ed.2012,4500-Cl-B, 4-72	250	1000	48.9
18	Sulphate (as SO ₄)	mg/Lit	APHA 22 nd Ed.2012,4500−SO ₄ -E, 4-190	200	400	28.6
19	Nitrate (as NO ₃)	mg/Lit	APHA 22 nd Ed.2012,4500-NO ₃ -B, 4-122	45	NoRelaxatio n	1.64



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Report	No	21	29

			TEST REPORT			
SR.				AS PER IS	10500:2012	
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.
21	Sodium (as Na)	mg/Lit	APHA 22nd Ed.2012,3500-Na- B,3-97	-	- 1	6.8
22	Potassium (as K)	mg/Lit	APHA 22 nd Ed.2012,3500-K-B, 3-87	-	I - I	1.20
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	NoRelaxatio n	N.D.
25	Fluoride (as F)	mg/Lit	APHA 22 nd Ed.2012,4500-F-B &D, 4-84 & 87	1	1.5	0.08
26	Manganese (as Mn)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3- 18	0.1	0.3	0.17
27	Lead (as Pb)	mg/Lit	APHA 22 nd Ed.2012,3111-B, 3-	0.01	NoRelaxatio n	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	NoRelaxatio n	N.D.
32	Mercury (as Hg)	mg/Lit	APHA 22 nd Ed.2012,3112-B, 3- 23	0.001	NoRelaxatio n	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	NoRelaxatio n	N.D.
35	Chromium (as Cr)	mg/Lit	APHA 22 nd Ed.2012,3500-Cr-B, 3-69	0.05	NoRelaxatio n	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 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	NoRelaxatio n	N.D.
39	Mineral Oil	mg/Lit	IS 3025 (part-39) : 1991, RA	0.5	No Relaxation	N.D.
40	Oil & Grease	mg/Lit	IS 3025 (Part 39):1991, RA 2003	-		N.D.
Micro	biological Analysis		the state of the s	***************************************	· · · · · · · · · · · · · · · · · · ·	**************
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 ml sample	Absent
Pesti	cides	1001111		uii, 100	in semple	
1	p,p DDT	μg/L	US EPA 508-1995		1	N.D.
2	o.p DDT	µg/L	US EPA 508-1995		1	N.D.
3	p,pDDE	µg/L	US EPA 508-1995		1	N.D.
4	p,p DDD	μg/L US EPA 508-1995 1		1	N.D.	



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Report No. 2129

			TEST REPORT			
SR.				AS PER IS	10500:2012	
NO.	PARAMETER	UNIT	METHOD OF TEST	Acceptable Limit	Permissible limit	RESULT
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	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	1	90	N.D.
25	Malaoxon	µg/L	US EPA 8141A-1994		-	N.D.
26	Aldrin	µg/L	US EPA 508- 1995	0.	03	N.D.
27	Dieldrin	µg/L	US EPA 508-1995	0.	.03	N.D.

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

REMARKS: RESULTS ARE AS ABOVE

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

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

PREPARED BY

September 1

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For ULTIMATE ENVIROLYTICAL SOLUTIONS

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

Annexure – 7



Letter No. : HIL/EC/GP-IV/4 -Q1/2021/072

03 July, 2021

The DDGF (Central), Regional Office,

Ministry of Environment Forests & Climate Change (MoEF & CC) Regional Office, (West Central Zone) Ground Floor, East Wing New Secretary Building, Civil Line, Nagpur – 440001

Sub.: Compliance of condition no. xxxv of Environment Clearance Letter no. – No. J-11015/183/2010-IA.II (M) dated 12 March, 2013.

Ref.: Environment Clearance Letter no. - No. J-11015/183/2010-IA.II (M) dated 12 March, 2013.

Dear Sir,

With reference to above subject, we are submitting herewith the quarterly monitoring report of Ground Water Level (from April 2021 to June 2021) & GW Quality for the month of May 2021 – Pre- Monsoon period of Gare Palma IV/4 Coal Mine of Hindalco Industries Limited, Village – Bhanjikhol, Tehsil – Tamnar, District – Raigarh, Chhattisgarh.

We would like to inform you that automatic water level recorder installed at HIL Staff Quarter – Milupara is under maintenance due to some hardware related error, so we are submitting the manual ground water level monitoring result.

Thanking you,

Yours faithfully,

Dipesh Bhatia

(Vice President – GP Mines)

For 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

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



Letter No.: HIL/EC/GP-IV/4 -Q2/2021/344

11 October, 2021

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. xxxv of Environment Clearance Letter no. – No. J-11015/183/2010-IA.II (M) dated 12 March, 2013.

Ref.: Environment Clearance Letter no. – No. J-11015/183/2010-IA.II (M) dated 12 March, 2013.

Dear Sir,

With reference to above subject, we are submitting herewith the quarterly monitoring report of Ground Water Level (from July 2021 to September 2021) & GW Quality for the month of August 2021 – Monsoon period of Gare Palma IV/4 Coal Mine of Hindalco Industries Limited, Village – Banjikhol, 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



11/10/24

Annexure - 8



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6. Name & Address Of The Custon		REPORT	NO	UES/TR/21-22/0033		
TO.	ner	LAB REF NO		UES/21-22/AAQM/029		29
HINDALCO INDUST	RIES LIMITED.	DATE OF	SAMPLING	01/04/2021 to 26/04/2021		
	MA - IV/4, COAL MINE,		RECEIPT	02/04/2021	to 27	/04/2021
VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		DATE OF REPORT		03/05/2021 START: 02/04/2021 END: 01/05/20:		
						END: 01/05/2021
		SAMPLE DE	TAILS			
MONITORING FOR	AMBIENT AIR QUALITY	MONITORING	CUSTOMER RE	F. NO. & DATE		/SRV/2021/0035, 21-AUG-2020
SAMPLING LOCATION	OFFICE AREA, BANJIKH	OL				
DURATION OF SAMPLING	24 HOURS	SAMPLE	COLLECTED BY	LABORATORY CI	EMIST	•
SAMPLING PROCEDURE	AS PER METHOD REFERE	NCE .				
SAMPLE QUANTITY/PACKING	1X1 NO., FILT BOTTLE, NO ₂ : 3 NO.					

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM2.5)	CPCBGuidelines 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	SO ₂ μg/m³	NO ₂ μg/m³	CO* mg/m³	Hg ng/m³		
01.04.2021	48	22	10	18	1.0	N.D.		
05.04.2021	36	28	08	20	0.6	N.D.		
09.04.2021	44	22	12	22	0.8	N.D.		
12.04.2021	48	26	06	18	1.0	N.D.		
16.04.2021	42	20	08	26	1.2	N.D.		
19.04.2021	46	22	12	22	1.0	N.D.		
23.04.2021	40	28	10	18	1.1	N.D.		
26.04.2021	48	22	06	14	1.0	N.D.		

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This is for information as the party has asked for above to the property.

For ULTIMATE ENVIROLYTICAL SOLUTIONS

03/05 AUTHORIZED SIGNATORY

-End of the test report-



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

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Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT NO LAB REF NO DATE OF SAMPLING DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS		UES/TR/21-22/0405 UES/21-22/AAQM/0505 03/05/2021 to 28/05/2021 04/05/2021 to 29/05/2021 03/06/2021									
							START: 05/05/2021		END: 31/05/2021				
									SAMPLE D	ETAILS			
							MONITORING FOR	AMBIENT AIR QUALITY	MONITORING CUSTOMER		F. NO. & DATE	N/FO/SRV/2021/0035, DTD. 21-AUG-2020	
							SAMPLING LOCATION	OFFICE AREA, BANJIKE	OL				
				DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY		LABORATORY CHEMIST					
SAMPLING PROCEDURE	AS PER METHOD REFERENCE												
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): SO ₂ : 30MLX1 NO. PVC E RUBBER BLADDER: 1X1	BOTTLE, NO2: 31											

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})	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/m³	CO* mg/m³	Hg ng/m ³				
01.05.2021	42	20	08	24	1.1	N.D.				
05.05.2021	32	18	12	26	1.0	N.D.				
10.05.2021	46	22	10	20	1.2	N.D.				
14.05.2021	38	20	14	24	0.8	N.D.				
17.05.2021	40	20	12	22	1.0	N.D.				
21.05.2021	36	22	10	20	0.8	N.D.				
24.05.2021	44	24	08	18	1.1	N.D.				
28.05.2021	34	20	10	20	1.0	N.D.				

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

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AUTHORIZED SIGNATORY



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Namo & 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 LIB REF NO		UES/TR/21-22/0872 UES/21-22/AAQM/0984		
		DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS		04/06/2021 to 29/06/2021		
				03/07/2021 START:05/06/2021 END:02/07/20		
						END: 02/07/2021
				SAMPLE D	ETAILS	
MONITORING FOR	AMBIENT AIR QUALITY N	MONITORING	CUSTOMER RE	FOMER REF. NO. & DATE		0/SRV/2021/0035, 21-AUG-2020
SAMPLING LOCATION	OFFICE AREA, BANJIKHO	OL	b			
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY		Y LABORATORY CHEMIS:		r
SAMPLING PROCEDURE	AS PER METHOD REFEREN	VCE		Accesses the second		
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): . SO ₂ : 30MLX1 NO. PVC E RUBBER BLADDER: 1X1 I	COTTLE, NO2: 30				

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	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	SO ₂ µg/m ³	NO ₂ µg/m ³	CO* mg/m³	Hg ng/m ³			
03.06.2021	40	18	10	22	1.0	N.D.			
05.06.2021	30	16	1.4	24	0.8	N.D.			
10.06.2021	44	20	1.2	18	1.1	N.D.			
14.06.2021	36	18	10	22	1.0	N.D.			
19.06.2021	38	22	08	20	0.8	N.D.			
23.06.2021	34	20	12	18	1.0	N.D.			
26.06.2021	. 42	22	10	16	1.0	N.D.			
28.06.2021	32	18	08	18	0.8	N.D.			

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Namo & Address Of The Castemer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT	REPORT NO		UES/TR/21-22/1412 UES/21-22/AAQM/1976-1983		
		LAB REF					
		DATE OF	SAMPLING	01/07/2021	to 28	/07/2021	
		DATE OF	DATE OF RECEIPT		to 29	/07/2021	
		DATE OF REPORT DATE OF ANALYSIS		02/08/2021 START:02/07/2021 END:31/07/202			
						END: 31/07/2021	
DISTT: - KAIGAILIT	(0.0.)	SAMPLE I	ETAILS				
MONITORING FOR	AMBIENT AIR QUALITY	MONITORING	CUSTOMER RE	EF. NO. & DATE		/3RV/2021/0035, 21-AUG-2020	
SAMPLING LOCATION	OFFICE AREA, BANJIKE	IOL				9.00,0.00,000	
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY		Y LABORATORY CHEMIST		g.	
SAMPLING PROCEDURE	AS PER METHOD REFERE						
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): SO ₂ : 30mLX1 NO. PVC RUBBER BLADDER: 1X1	FILTER PAPER (PM ₂₀): IXI NO., FILTER PAPER (PM _{2,2}): IXI NO. SO ₂ : 30MLXI NO. PVC BOTTLE, NO ₂ : 30MLXI NO. PVC BOTTLE STUDENCE LALDESCE, IXI NO.					

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Fart 23): 2006 & CFCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM2,5)	CPCB Guidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Fart 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	NO₂ µg/m³	CO* mg/m ³	Hg ng/m³			
01.07.2021	36	20	08	18	1.1	N.D.			
06.07.2021	32	18	06	20	0.6	N.D.			
09.07.2021	40	22	08	- 22	0.8	N.D.			
12.07.2021	32	18	10	26	0.6	N.D.			
16.07.2021	36	20	12	28	0.8	N.D.			
19.07.2021	30	22	10	20	1.2	N.D.			
26.07.2021	34	18	08	18	1.1	N.D.			
28.07.2021	30	20	06	16	0.8	N.D.			

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Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT NO		UES/TR/21-22/2104		
		LAB REF	NO	UES/21-22/AAQM/3411-3418		
		DATE OF	SAMPLING	01/08/2021	to 27	/08/2021
		DATE OF	RECEIPT	02/08/2021	to 28	7/08/2021
		DATE OF REPORT DATE OF ANALYSIS		03/09/2021 START: 02/08/2021 END: 02/09/2		
						END: 02/09/2021
		SAMPLE I	DETAILS			
MONITORING FOR	AMBIENT AIR QUALITY	MONITORING	CUSTOMER RE)/SRV/2122/0045, 24-JULY-2021
SAMPLING LOCATION	OFFICE AREA, BANJIKH	OL				
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY		LABORATORY CHEMIST		r
SAMPLING PROCEDURE	AS PER METHOD REFERE	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				

Parameter	Method Reference	NAAQM Standard	
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100	
Particulate Matter size less than 2.5 microns (PM2.5)	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			
02.08.2021	44	20	10	20	0.5	N.D.			
06.08.2021	38	22	16	26	0.3	N.D.			
09.08.2021	42	28	10	22	0.4	N.D.			
13.08.2021	36	26	12	28	0.2	N.D.			
16.08.2021	32	24	10	22	0.6	N.D.			
20.08.2021	38	20	18	24	0.8	N.D.			
23.08.2021	44	22	08	18	0.5	N.D.			
27.08.2021	38	18	10	22	0.8	N.D.			

Terms & conditions

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Name & Address Of The Customer	REPORT NO.	REPORT NO.		UES/TR/21-22/2352				
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA - IV/4, COAL MINE, VILLAGE - BANKHETA, POST - MILUPARA, DISTT RAIGARH (C.G.) 496107		LAB REF NO.		UES/21-22/AAQM/4316-4323				
		DATE OF SAM	PLING	03/09/2021 to 27/09/2021				
		DATE OF REC	DATE OF RECEIPT		04/09/2021 to 28/09/2021			
		DATE OF REPORT DATE OF ANALYSIS		02/10/2021				
				START: 04/09/2021		END: 30/09/2021		
		SAMPLE DETAI	LS			ng at think		
MONITORING FOR	AMBIENT AIR QUALI	LITY MONITORING CUS		ER REF. NO. & DATE		0/SRV/2122/0045, 0.:24-JULY-2021		
SAMPLING LOCATION	OFFICE AREA, BANJ	TKHOL						
DURATION OF SAMPLING	24 HOURS	SAMPLE COLL	SAMPLE COLLECTED BY LABORATORY CHE		EMIST			
SAMPLING PROCEDURE	AS PER METHOD REF	AS PER METHOD REFERENCE						
SAMPLE QUANTITY/PACKING		(PM ₁₀): IXI NO., FILTER PAPER (PM _{2.5}): IXI NO. 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 (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100					
Particulate Matter size less than 2.5 microns (PM _{2.5})	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-05						

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				
03.09.2021	48	20	08	24	0.4	N.D.				
06.09.2021	42	26	06	26	0.7	N.D.				
10.09.2021	46	20	10	20	0.6	N.D.				
13.09.2021	38	28	12	22	0.5	N.D.				
17.09.2021	40	22	14	24	0.8	N.D.				
20.09.2021	48	24	12	28	0.2	N.D.				
24.09.2021	46	28	08	20	0.6	N.D.				
27.09.2021	40	20	16	26	0.4	N.D.				

Terms & conditions

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For ULTIMATE ENVIROLYTICAL SOLUTIONS 02/10/2021 PREPARED BY AUTHORIZED SIGNATORY -End of the test report-



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

Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107				UES/TR/21-22/0034 UES/21-22/AAQM/030				
								DA
		DATE OF REPORT		02/04/2021 to 27/04/2021 03/05/2021			7/04/2021	
				START: 02/04/2021		END: 01/05/2021		
			SA	MPLE D	ETAILS	and the same of		
MONITORING FOR	AMBIENT AIR QUALITY MONIS	TORING	CUSTOMER REF.				PO/SRV/2021/0035, D. 21-AUG-2020	
SAMPLING LOCATION	ETP AREA, BANJIKHOL						*****************	
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED B			BY LABORATORY CH		EMIST	
SAMPLING PROCEDURE	AS PER METHOD REFERENCE				h	*********	***************************************	
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 I SO ₂ : 30MLX1 NO. PVC BOTTL RUBBER BLADDER: 1X1 NO.						***************************************	

Test Method and NAAQM Standard for Ambient Air Quality Monitoring							
Parameter	Method Reference	NAAQM Standard					
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100					
Particulate Matter size less than 2.5 microns (PM2.5)	CPCBGuidelines 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/m³	CO* mg/m³	Hg ng/m³			
01.04.2021	48	26	10	22	1.1	N.D.			
05.04.2021	52	22	12	24	1.2	N.D.			
09.04.2021	46	28	08	20	1.1	N.D.			
12.04.2021	40	24	06	26	0.6	N.D.			
16.04.2021	46	20	10	20	0.8	N.D.			
19.04.2021	44	26	12	18	1.0	N.D.			
23.04.2021	42	20	10	22	1.2	N.D.			
26.04.2021	48	22	12	24	1.0	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) (100 CV)

For ULTIMATE ENVIROLYTICAL SOLUTIONS 2021 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 1986

Tame & Address of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT NO LAB REF NO		UES/TR/21-22/0406 UES/21-22/AAQM/0506			
		DATE OF REPORT		04/05/2021 t	0 29	9/05/2021	
				03/06/2021 START: 05/05/2021 END: 31/05			
						END: 31/05/2021	
				SAMPLE	DETAILS		
MONITORING FOR	AMBIENT AIR QUALITY MONI	NITORING CUSTOMER REF.		NO. & DATE		0/SRV/2021/0035, 0. 21-AUG-2020	
SAMPLING LOCATION	ETP AREA, BANJIKHOL						
DURATION OF SAMPLING	24 HOURS	SAL	PLE COLLECTED I	BY LABORATORY CHEMIST		EMIST	
SAMPLING PROCEDURE	AS PER METHOD REFERENCE				C A SEC		
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X1 SO ₂ : 30MLX1 NO. PVC BOTT. RUBBER BLADDER: 1X1 NO.						

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM _{2.5})	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				
01.05.2021	40	26	12	26	1.1	N.D.				
05.05.2021	42	24	08	24	0.6	N.D.				
10.05.2021	38	20	10	20	0.8	N.D.				
14.05.2021	36	18	12	24	1.1	N.D.				
17.05.2021	44	22	08	18	1.0	N.D.				
21.05.2021	40	24	10	20	1.1	N.D.				
24.05.2021	42	22	12	28	1.0	N.D.				
28.05.2021	38	20	14	18	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.

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

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

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Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST - MILUPARA.		REPORT NO LAB REF NO		UES/TR/21-22/0873 UES/21-22/AAQM/0985			
		DATE OF RECEIPT DATE OF REPORT		04/06/2021 to 29/06/2021			
				03/07/2021			
		DISTT RAIGARH	(C.G.) 496107	DAT	ATE OF ANALYSIS START: 05/06/2021		END: 02/07/2021
	1	SAMPLE	DETAILS			-	
MONITORING FOR	AMBIENT AIR QUALITY MON	NITORING CUSTOMER REF.				PO/SRV/2021/0035, D. 21-AUG-2020	
SAMPLING LOCATION	ETP AREA, BANJIKHOL						
DURATION OF SAMPLING	24 HOURS	SAM	SAMPLE COLLECTED E		ATORY CE	EMIST	
SAMPLING PROCEDURE	AS PER METHOD REFERENCE	Ţ	110010	iii- one to recommend			
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1XI SO ₂ : 30MLX1 NO. PVC BOT RUBBER BLADDER: 1XI NO.	TLE, NO2:					

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})	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	РМ _{2.5} µg/m ³	SO ₂ μg/m ³	NO ₂ µg/m³	CO* mg/m³	Hg ng/m ³				
03.06.2021	38	24	10	24	1.0	N.D.				
05.06.2021	40	22	08	22	0.8	N.D.				
10.06.2021	36	18	14	18	1.0	N.D.				
14.06.2021	34	20	10	22	0.8	N.D.				
19.06.2021	42	18	12	16	1.1	N.D.				
23.06.2021	38	22	08	18	1.0	N.D.				
26.06.2021	40	20	10	26	0.8	N.D.				
28.06.2021	36	18	12	16	1.0	N.D.				

Terms & conditions

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Name & Address Of The Gustomer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT, - RAIGARH (C.G.) 496107		REPORT NO		UES/TR/21-22/1413			
		LAZ	REF NO	UES/21-22/AAQM/1984-1991			
		DAS	E OF SAMPLING	01/	07/2021 to 2	8/07/2021	
		DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS		02/	07/2021 to 2	9/07/2021	
				02/08/2021			
				STAF	RT:02/07/2021	END:31/07/2021	
		SAMPLE	DETAILS				
MONITORING FOR	AMBIENT AIR QUALITY MONI	TORING	RING CUSTOMER REF.			PO/SRV/2021/0035, D. 21-AUG-2020	
SAMPLING LOCATION	ETP AREA, BANJIKHOL			-			
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED I		BY LABORATORY C		emist	
SAMPLING PROCEDURE	AS PER METHOD REFERENCE			and the state of	••••		
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1x1 SO ₂ : SOMLX1 NO. PVC BOTT. RUBBER BLADDER: 1x1 NO.						

Parameter Parameter	Method Reference	NAAQM Standard	
Farticulate 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})	CPCB Guidelines VolI	60	
Sulphur Dloxide (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	50 ₂ μg/m ³	NO ₂ µg/m ³	CO* mg/m³	Hg ng/m³				
01.07.2021	36	22	12	20	1.1	N.D.				
06.07.2021	32	20	10	24	0.6	N.D.				
09.07.2021	30	18	0.8	20	0.8	N.D.				
12.07.2021	38	16	12	26	0.6	N.D.				
16.07.2021	32	20	10	22	0.8	N.D.				
19.07.2021	34	18	0.6	28	1.0	N.D.				
26.07.2021	38	22	0.8	22	0.8	N.D.				
28.07.2021	30	20	10	18	1.2	N.D.				

Terms & conditions

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-End of the test report-



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Name & Address Of The Custon	ner.	REF	REPORT NO		UES/TR/21-22/2105			
то,		LAB	REF NO	UES/21-22/AAQM/3419-3426				
HINDALCO INDUST		DAT	E OF SAMPLING	01/0	8/2021 to 2	7/08/2021		
GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		DAT	E OF RECEIPT	02/0	8/2021 to 2	8/08/2021		
		DAT	E OF REPORT	03/0	9/2021			
		DAT	DATE OF ANALYSIS		T:02/08/2021	END: 02/09/2021		
		SAMPLE	DETAILS		Carlot I			
MONITORING FOR	AMBIENT AIR QUALITY MOD	NITORING	CUSTOMER REF.	CUSTOMER REF. NO. & DATE		N/PO/SRV/2122/0045, DTD. 24-JULY-2021		
SAMPLING LOCATION	ETP AREA, BANJIKHOL							
DURATION OF SAMPLING	24 HOURS	SAM	SAMPLE COLLECTED		LABORATORY CH	<i>IEMIST</i>		
SAMPLING PROCEDURE	AS PER METHOD REFERENCE	5						
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM10): 1X SO2: 30MLX1 NO. PVC BOT RUBBER BLADDER: 1X1 NO	TLE, NO2:						

Test Method and NAAQM Standard for Ambient Air Quality Monitoring						
Parameter	Method Reference	NAAQM Standard				
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100				
Particulate Matter size less than 2.5 microns (PM2.5)	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			
02.08.2021	46	26	06	28	0.4	N.D.			
06.08.2021	44	28	08	24	0.6	N.D.			
09.08.2021	32	24	12	22	0.8	N.D.			
13.08.2021	38	20	10	28	0.2	N.D.			
16.08.2021	44	22	08	24	0.5	N.D.			
20.08.2021	36	22	14	20	0.6	N.D.			
23.08.2021	42	26	16	26	0.8	N.D.			
27.08.2021	40	28	10	20	0.6	N.D.			

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-End of the test report-----



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Name & Address Of The Gustemer	REPORT NO.		UES/TR/21-22/2353			
TO,	LAB REF	NO.	UES/21-22/AAQM/4324-4331			
HINDALCO INDUSTRIE		DATE OF	SAMPLING	03/0	9/2021 to	27/09/2021
GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS		04/09/2021 to 28/09/2021 02/10/2021		
					SA	MPLE DETA
MONITORING FOR	AMBIENT AIR QUALITY MONITORING		CUSTOMER REF. NO. & DATE		& DATE	N/PO/SRV/2122/0045 DTD.:24-JULY-2021
SAMPLING LOCATION	ETP AREA, BANJIKHOL			111111111111111111111111111111111111111	***************************************	
DURATION OF SAMPLING	24 HOURS	OLLECTED BY	ED BY LABORATO		RY CHEMIST	
SAMPLING PROCEDURE	AS PER METHOD REFERENCE	Œ				
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 BUBBER BLADDER: 1X1 NO.				

Test Method and NAAQM Standard for Ambient Air Quality Monitoring								
Parameter	Method Reference	NAAQM Standard						
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100						
Particulate Matter size less than 2.5 microns (PM2.5)	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-05							

TEST REPORT										
Date of Sampling	РМ ₁₀ µg /m³	PM _{2.5} μg/m ³	SO ₂ µg/m ³	NO ₂ µg/m³	CO* mg/m³	Hg ng/m³				
03.09.2021	44	20	10	20	0.5	N.D.				
06.09.2021	38	22	16	26	0.3	N.D.				
10.09.2021	42	28	10	22	0.4	N.D.				
13.09.2021	36	26	12	28	0.2	N.D.				
17.09.2021	32	24	10	22	0.6	N.D.				
20.09.2021	38	20	18	24	0.8	N.D.				
24.09.2021	44	22	08	18	0.5	N.D.				
27.09.20214	38	18	10	22	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 unles This is for information as the perty has asked for above test(s) only.

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For ULTIMATE ENVIROLYTICAL SOLUTIONS

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-- End of the test report-



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Name & Address Of The Gustomer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT NO		UES/TR/21-22/0035			
		LAB REF	NO	UES/21-22/AAQM/031			
		DATE OF	SAMPLING	01/04/2021 to	26,	/04/2021	
		DATE OF	RECEIPT	02/04/2021 to	27,	/04/2021	
		DATE OF REPORT DATE OF ANALYSIS		03/05/2021			
				START: 02/04/2021		END: 01/05/2021	
		SAMPLE DET	AILS				
MONITORING FOR	AMBIENT AIR QUALITY MONITORING		CUSTOMER REF. NO. & DAT			0/SRV/2021/0035, 0. 21-AUG-2020	
SAMPLING LOCATION	OFFICE AREA, BANKHETA	А					
DURATION OF SAMPLING	24 HOURS	SAMPLE C	OLLECTED BY	LABORATORY CHE	EMIST		
SAMPLING PROCEDURE	AS PER METHOD REFEREN	NCE					
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 (PM2.5)	CPCBGuidelines VolI	60				
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80				
Nitrogen Dioxide (NO2)	IS 5182 (Part 6): 2006 & CPCB Guidelines VolI	80				
Carbon Monoxide (CO)*	IS 5182(Part 10):1999, RA 2003	4.0				
Mercury (Hg)	EPA Method IO-5					

TEST REPORT									
Date of Sampling	РМ ₁₀ µg/m³	PM _{2.5} μg/m ³	SO₂ μg/m³	NO ₂ µg/m³	CO* mg/m³	Hg ng/m ³			
01.04.2021	52	20	12	28	1.0	N.D.			
05.04.2021	56	24	10	22	0.8	N.D.			
09.04.2021	52	26	14	24	1.2	N.D.			
12.04.2021	58	20	12	20	1.4	N.D.			
16.04.2021	62	22	16	26	1.2	N.D.			
19.04.2021	48	28	10	22	0.8	N.D.			
23.04.2021	42	30	14	20	1.0	N.D.			
26.04.2021	54	2.6	12	28	1.6	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 unles
This is for information as the party has asked for above testis).

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

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/21-22/0407			
		LAB REF N	ю	UES/21-22/AAQM/0507			
		DATE OF S	SAMPLING	03/05/2021 to	28/0	5/2021	
		DATE OF I	ECEIPT	04/05/2021 to	29/0	5/2021	
		DATE OF REPORT DATE OF ANALYSIS		03/06/2021 START: 05/05/2021 END: 31/05			
						END: 31/05/2021	
		SAMPLE DE	TAILS				
MONITORING FOR	AMBIENT AIR QUALITY MONITORING		CUSTOMER REF. NO. & DATE			/SRV/2021/0035, 21-AUG-2020	
SAMPLING LOCATION	OFFICE AREA, BANKHET	A					
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY		Y LABORATORY CHE			
SAMPLING PROCEDURE	AS PER METHOD REFERE	NCE					
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): SO ₂ : 30MLX1 NO. PVC 1 RUBBER BLADDER: 1X1	BOTTLE, NO2: 30h					

Parameter	Method Reference	NAAQM Standard	
Particulate Matter size less than 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100	
Particulate Matter size less than 2.5 microns (PM _{2.5})	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	SO ₂ µg/m³	NO ₂ µg/m ³	CO* mg/m³	Hg ng/m			
01.05.2021	46	24	10	22	0.8	N.D.			
05.05.2021	48	20	14	24	1.0	N.D.			
10.05.2021	44	24	12	26	1.2	N.D.			
14.05.2021	40	18	10	20	1.1	N.D.			
17.05.2021	42	24	08	18	1.0	N.D.			
21.05.2021	50	22	12	22	0.8	N.D.			
24.05.2021	4.4	24	14	20	1.0	N.D.			
28.05.2021	38	20	10	24	1.1	N.D.			

Terms & conditions

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



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TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT NO		UES/TR/21-22/0874		
		LAB REF	NO	UES/21-22/AAQM/0986		
		DATE OF	SAMPLING	03/06/2021 to	28/06/2021	
		DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS		04/06/2021 to	29/06/2021	
				03/07/2021		
				START: 05/06/20	21 END: 02/07/2021	
		SAMPLE DI	ETAILS			
MONITORING FOR	AMBIENT AIR QUALITY	IR QUALITY MONITORING		REF. NO. & DATE	N/PO/SRV/2021/0035, DTD. 21-AUG-2020	
SAMPLING LOCATION	OFFICE AREA, BANKHET	а				
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY		LABORATORY CHE	MIST	
SAMPLING PROCEDURE	AS PER METHOD REFERE	NCE	III. III. EST			
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM;0): SO2: 30MLX1 NO. PVC 1 RUBBER BLADDER: 1X1	BOTTLE, NO: 301				

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})	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/m³	PM _{2.5} μg/m ³	50 ₂ μg/m ³	NO ₂ µg/m³	CO* mg/m³	Hg ng/m ³			
03.06.2021	44	22	08	20	1.0	N.D.			
05.06.2021	46	18	12	22	0.8	N.D.			
10.06.2021	42	22	10	24	1.1	N.D.			
14.06.2021	38	20	08	18	1.0	N.D.			
19.06.2021	40	22	10	16	1.1	N.D.			
23.06.2021	48	24	14	20	0.8	N.D.			
26.06.2021	42	22	12	18	1.1	N.D.			
28.06.2021	36	18	08	22	1.0	N.D.			

Terms & conditions

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Teut sample will be retained for 15 days after issue of tost report units a piker.

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Hame & Address Of The Guston			REPORT NO		UES/TR/21-22/1414		
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		LAB REF I	10	UES/21-22/AAQM/1992-1999			
		DATE OF	RAMPLING	01/07/2021 to	28/	07/2021	
		DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS		02/07/2021 to	29/	07/2021	
				02/08/2021 START: 02/07/2021 END: 31/07/202			
						END: 31/07/2021	
		SAMPLE DE	TAILS				
MONITORING FOR	AMBIENT AIR QUALITY	MONITORING	CUSTOMER I	REF. NO. & DATE		0/SRV/2021/0035, 21-AUG-2020	
SAMPLING LOCATION	OFFICE AREA, BANKHET	TA .					
DURATION OF SAMPLING	24 HOURS	SAMPLE CO	DLLECTED BY	LABORATORY CHE	MIST		
SAMPLING PROCEDURE	AS PER METHOD REFERS	INCE		dimini	-		
SAMPLE QUANTITY/PACKING	FILTER PAPER (FM ₂₈): SO _S : 30MLX1 NO. PVC RUBBER BLADDER: 1X1	BOTTLE, NO: 30M					

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less then 10 microns (PM10)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM2.5)	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 IC-5	

TEST REPORT									
Date of Sampling	PM ₁₀ μg/m³	РМ _{2.5} µg/m ³	SO₂ μg/m³	NO ₂ µg/m ³	CO* mg/m ³	Hg ng/m³			
01.07.2021	42	26	10	-22	1.1	N.D.			
06.07.2021	44	28	12	20	0.8	N.D.			
09.07.2021	40	20	08	26	1.2	N.D.			
12.07.2021	36	22	10	16	1.0	N.D.			
16.07.2021	32	28	14	18	0.8	N.D.			
19.07.2021	38	20	10	22	0.6	N.D.			
26.07.2021	40	24	16	20	1.0	N.D.			
28.07.2021	38	20	10	24	1.1	N.D.			

Terms & conditions

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Name & Address Of The Custon	Vame & Address Of The Customer		REPORT NO		UES/TR/21-22/02106		
TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		LAB REF N	10	UES/21-22/AAQM/03427-3434			
		DATE OF S	BAMPLING	01/08/2021 to	27/	08/2021	
		DATE OF I	RECEIPT	02/08/2021 to	28/	08/2021	
		DATE OF REPORT		03/09/2021 START:02/08/2021 END:02/09/20			
						END: 02/09/2021	
		SAMPLE DE	TAILS				
MONITORING FOR	AMBIENT AIR QUALITY I	MONITORING	CUSTOMER F	REF. NO. & DATE		O/SRV/2122/0045, 24-JULY-2021	
SAMPLING LOCATION	OFFICE AREA, BANKHETA	1				***************************************	
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY		LABORATORY CHEMIST			
SAMPLING PROCEDURE	AS PER METHOD REFEREN	NCE					
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): SO ₂ : 30MLX1 NO. PVC E RUBBER BLADDER: 1X1 I	NOTTLE, NO2: 301					

Test Method and NAAQM Standard for Ambient Air Quality Monitoring						
Parameter	Method Reference	NAAQM Standard				
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100				
Particulate Matter size less than 2.5 microns (PM2.5)	CPCBGuidelines VolI	60				
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol1	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	РМ _{2.5} µg/m ³	SO ₂ µg/m³	NO₂ µg/m³	CO* mg/m³	Hg ng/m³			
02.08.2021	44	22	12	18	0.8	N.D.			
06.08.2021	42	18	10	22	0.9	N.D.			
09.08.2021	46	24	16	24	0.2	N.D.			
13.08.2021	38	20	10	22	0.8	N.D.			
16.08.2021	48	26	08	18	0.6	N.D.			
20.08.2021	52	22	06	22	0.7	N.D.			
23.08.2021	44	18	12	18	0.6	N.D.			
27.08.2021	38	22	10	26	0.5	N.D.			

Terms & conditions

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Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT NO.	REPORT NO.		354		
		LAB REF NO.		UES/21-22/AAQM/4332-4339			
		DATE OF SAMP	LING	03/09/2021 to :	27/09/2021		
		DATE OF RECE	TPT	04/09/2021 to 2	28/09/2021		
		DATE OF REPOR	DATE OF REPORT				
		DATE OF ANALYSIS		START: 04/09/2021	END: 30/09/2021		
	A PARTY OF	SAMPLE DETAIL	S				
MONITORING FOR	AMBIENT AIR QUAL	ITY MONITORING	CUSTOME	ER REF. NO. &	N/PO/SRV/2122/0045, DTD.:24-JULY-2021		
SAMPLING LOCATION	OFFICE AREA, BAN	KHETA					
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY		LABORATORY CHEMI	ST		
SAMPLING PROCEDURE	AS PER METHOD RE	FERENCE					
SAMPLE QUANTITY/PACKING	SO2: 30MLX1 NO. I	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 (PM2.5)	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-05					

TEST REPORT									
Date of Sampling	PM ₁₀ μg /m ³	PM _{2.5} μg/m ³	SO ₂ µg/m³	NO ₂ µg/m³	CO* mg/m³	Hg ng/m³			
03.09.2021	48	24	08	26	0.5	N.D.			
06.09.2021	56	22	12	22	0.2	N.D.			
10.09.2021	46	26	16	28	0.8	N.D.			
13.09.2021	52	22	10	24	0.2	N.D.			
17.09.2021	44	26	18	20	0.5	N.D.			
20.09.2021	38	22	12	26	0.7	N.D.			
24.09.2021	46	28	08	22	0.2	N.D.			
27.09.2021	55	24	16	20	0.6	N.D.			

Terms & conditions

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Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT	REPORT NO		UES/TR/21-22/0036		
		LAB REF NO		UES/21-22/AAQM/032			
		DATE C	F SAMPLING	01/04/2021	to 2	6/04/2021	
		DATE C	F RECEIPT	02/04/2021	to 2	7/04/2021	
		DATE OF REPORT		03/05/2021 START: 02/04/2021 END: 01/05/			
						END: 01/05/2021	
		SAMPLE D	ETAILS				
MONITORING FOR	AMBIENT AIR QUALITY M	CUSTOMER REF.	NO. & DATE		N/PO/SRV/2021/0035, DTD. 21-AUG-2020		
SAMPLING LOCATION	PIT OFFICE AREA, BANK	HETA					
DURATION OF SAMPLING	24 HOURS	SAMPLE	COLLECTED BY	LABORATORY CHEMIST			
SAMPLING PROCEDURE	AS PER METHOD REFEREN	Œ					
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₂₀): 1 SO ₂ : 30MLX1 NO. FVC B RUBBER BLADDER: 1X1 N	OTTLE, NO2:					

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})	CPCBGuidelines 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	5Ο ₂ μg/m ³	NO ₂ µg/m³	CO* mg/m³	Hg ng/m³			
01.04.2021	48	28	10	22	1.0	N.D.			
05.04.2021	46	26	16	24	1.4	N.D.			
09.04.2021	52	30	12	22	1.2	N.D.			
12.04.2021	48	24	10	26	1.0	N.D.			
16.04.2021	42	22	14	20	0.6	N.D.			
19.04.2021	52	24	10	18	0.8	N.D.			
23.04.2021	46	22	12	20	1.2	N.D.			
26.04.2021	48	28	14	24	1.0	N.D.			

Terms & conditions

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

This is for information as the party has asked for above (ast(s) out).

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Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT	REPORT NO		UES/TR/21-22/0408		
		LAB RE	F NO	UES/21-22/AAQM/0508			
		DATE C	F SAMPLING	03/05/2021	to 28	3/05/2021	
		DATE C	F RECEIPT	04/05/2021 to 29/05/2021			
		DATE OF REPORT		03/06/2021 START: 05/05/2021 END: 31/05/202			
						END: 31/05/2021	
		SAMPLE	DETAILS				
MONITORING FOR	AMBIENT AIR QUALITY MONITORING CUSTOMER			NO. & DATE		/SRV/2021/0035, 21-AUG-2020	
SAMPLING LOCATION	PIT OFFICE AREA, BANK	KHETA					
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY		LABORATORY CHEMIST		T	
SAMPLING PROCEDURE	AS PER METHOD REFEREN	NCE		**			
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					

Parameter	Method Reference	NAAQM Standard	
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100	
Particulate Matter size less than 2.5 microns (PM2.5)	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/m³	CO* mg/m³	Hg ng/m³			
01.05.2021	40	26	12	22	1.1	N.D.			
05.05.2021	38	22	14	26	1.0	N.D.			
10.05.2021	44	24	12	18	1.2	N.D.			
14.05.2021	40	20	10	22	1.0	N.D.			
17.05.2021	42	26	08	24	0.6	N.D.			
21.05.2021	38	20	10	26	1.0	N.D.			
24.05.2021	48	22	14	18	0.8	N.D.			
28.05.2021	40	20	10	20	1.0	N.D.			

Terms & conditions

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Test sample will be retained for 15 days after issue of test report problems in the party has asked for above testigned.

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Name & Address Of The Gustomar TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT	REPORT NO		UES/TR/21-22/0875		
		LAB RE	F NO	UES/21-22/AAQM/0987			
		DATE C	F SAMPLING	03/06/2021	to 2	8/06/2021	
		DATE OF REPORT DATE OF ANALYSIS		04/06/2021 to 29/06/2021			
				03/07/2021 START: 05/06/2021 END: 02/07/20.			
						END: 02/07/2021	
		SAMPLE	DETAILS				
MONITORING FOR	AMBIENT AIR QUALITY	TY MONITORING CUSTOMER REF.		NO. & DATE N/PO/SRV/2021 DTD. 21-AUG-2		/SRV/2021/0035, 21-AUG-2020	
SAMPLING LOCATION	PIT OFFICE AREA, BAN	RHETA				HILLS STATE OF A CONTRACTOR	
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY		LABORATORY CHEMIST		r	
SAMPLING PROCEDURE	AS PER METHOD REFERE	NCE		Auto constitution	-		
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): SO ₂ : 30MLX1 NO. PVC 1 RUBBER BLADDER: 1X1	BOTTLE, NO2:					

Test Method and NAAQM Standard for Ambient Air Quality Monitoring							
Parameter	Method Reference	NAAQM Standard					
Particulate Matter size less than 10 microns (PM;0)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100					
Particulate Matter size less than 2.5 microns (PM _{2.5})	CPCB Guidelines VolI	60					
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines VolI	80					
Nitrogen Dioxide (NO ₇)	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	NO₂ µg/m³	CO* mg/m³	Hg ng/m ³			
03.06.2021	38	24	10	20	1.0	N.D.			
05.06.2021	36	20	12	24	0.8	N.D.			
10.06.2021	42	22	08	20	1.1	N.D.			
14.06.2021	38	18	12	18	0.8	N.D.			
19.06.2021	40	24	10	22	1.0	N.D.			
23.06.2021	36	18	08	24	0.8	N.D.			
26.06.2021	46	20	12	16	0.6	N.D.			
28.06.2021	38	18	08	18	1.1	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 otherwing the continuous attention in the party has asked for above test(s) of the continuous attention in the party has asked for above test(s) of the continuous attention in the continuo

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Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT NO		UES/TR/21-22/1415			
		LAB RE	F NO	UES/21-22/AAQM/2000-2007			
		DATE C	F SAMPLING	01/07/2021	to 21	8/07/2021	
		DATE OF REPORT DATE OF ANALYSIS		02/07/2021 to 29/07/2021 02/08/2021			
							START: 02/07
						SAMPLE	DETAILS
MONITORING FOR	AMBIENT AIR QUALITY	AIR QUALITY MONITORING CUS		NO. & DATE		/SRV/2021/0035, 21-AUG-2020	
SAMPLING LOCATION	PIT OFFICE AREA, BAN	KHETA		LIPACUSACON WITH THE PRICASO			
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY		LABORATORY CHEMIST		z	
SAMPLING PROCEDURE	AS PER METHOD REFERE	NCE	***************************************				
SAMPLE QUANTITY/PACKING		FILTER PAPER (PM ₁₀): 1X1 NO., FILTER PAPER (FM _{2,8}): 1X1 NO. SO ₂ : SOMLXI 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 (PM2.5)	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 VolT	80					
Carbon Monoxide (CC)*	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/m			
01.07.2021	32	22	12	18	1.1	N.D.			
06.07.2021	30	18	10	26	1.0	N.D.			
09.07.2021	38	22	08	24	0.8	N.D.			
12.07.2021	32	20	16	20	0.6	N.D.			
16.07.2021	36	26	12	26	0.8	N.D.			
19.07.2021	30	22	08	20	1.0	N.D.			
26.07.2021	38	18	14	18	0.8	N.D.			
28.07.2021	32	20	10	20	1.0	N.D.			

Terms & conditions

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Test sample will be retained for 15 days after issue of test report unler.
This is for information as the party has asked for above test(e) only-

Takur 02/08/2021

Far 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 1986

Name & Address Of The Gustomer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		REPORT NO		UES/TR/21-22/2107 UES/21-22/AAQM/3435-3442		
		DATE O	F RECEIPT	02/08/2021	to 28	8/08/2021
		DATE O	F REPORT	03/09/2021		
		DATE OF ANALYSIS		START: 02/08/2021		END: 02/09/2021
				SAMPLE	DETAILS	
MONITORING FOR	AMBIENT AIR QUALITY	MONITORING	CUSTOMER REF.	NO. & DATE		/SRV/2122/0045, 24-JULY-2021
SAMPLING LOCATION	PIT OFFICE AREA, BAN	KHETA				
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY		LABORATORY CHEMIST		
SAMPLING PROCEDURE	AS PER METHOD REFERE	NCE				
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): SO ₂ : 30MLX1 NO. PVC I RUBBER BLADDER: 1X1	BOTTLE, NO2:				

Parameter	Method Reference	NAAQM Standard
Particulate Matter size less than 10 microns (PM ₁₀)	IS 5182 (Part 23): 2006 & CPCB Guidelines VolI	100
Particulate Matter size less than 2.5 microns (PM2.5)	CPCB Guidelines VolI	60
Sulphur Dioxide (SO ₂)	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol1	80
Nitrogen Dioxide (NO2)	IS 5182 (Part 6): 2004 & 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 ug/m ³	CO* mg/m³	Hg ng/m³			
02.08.2021	44	20	10	28	0.9	N.D.			
06.08.2021	33	26	18	22	0.7	N.D.			
09.08.2021	48	22	12	18	0.5	N.D.			
13.08.2021	44	28	10	26	0.8	N.D.			
16.08.2021	46	26	08	20	0.6	N.D.			
20.08.2021	36	20	14	28	1.5	N.D.			
23.08.2021	48	28	12	18	0.8	N.D.			
27.08.2021	44	22	10	22	0.9	N.D.			

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-End of the test report



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Name & Address Of The Customer TO.			NO.	UES/TR/21-22/2355			
HINDALCO INDUSTRIE	E LIMITED	LAB RE	F NO.	UES/21-22/AAQM/4340-4347			
	DATE C	F SAMPLING	03/09/2021	to 27	/09/2021		
GARE PALMA – IV/4, COAL MINE, VILLAGE –			F RECEIPT	04/09/2021 to 28/09/2021 02/10/2021			
BANKHETA, POST -MILUPARA, DISTT RAIGARH (C.G.) 496107		DATE OF REPORT DATE OF ANALYSIS					
				START: 04/09/2021		END: 30/09/2021	
	SAMP	LE DETA	AILS				
MONITORING FOR	AMBIENT AIR QUALITY MONI	TORING	CUSTOMER REF.	NO. & DATE		SRV/2122/0045, 24-JULY-2021	
SAMPLING LOCATION	PIT OFFICE AREA, BANKHET	A					
DURATION OF SAMPLING	24 HOURS	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})	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-05						

TEST REPORT										
Date of Sampling	PM ₁₀ μg /m ³	PM _{2.5} μg/m ³	SO ₂ µg/m³	NO ₂ µg/m³	CO* mg/m³	Hg ng/m ³				
03.09.2021	56	22	12	26	0.7	N.D.				
06.09.2021	48	26	10	22	0.5	N.D.				
10.09.2021	46	28	16	28	0.2	N.D.				
13.09.2021	38	22	12	20	0.8	N.D.				
17.09.2021	35	28	08	26	0.6	N.D.				
20.09.2021	42	18	06	24	0.2	N.D.				
24.09.2021	48	26	08	20	0.7	N.D.				
27.09.2021	36	20	12	28	0.4	N.D.				

Terms & conditions

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02 10 2021 AUTHORIZED SIGNATORY

-End of the test report-

Annexure – 9



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Name & Address Of The Customer REPORT NO. UES/TR/21-22/2329 TO, UES/21-22/AAQM/4476 LAB REF NO. HINDALCO INDUSTRIES LIMITED, 27/09/2021 DATE OF SAMPLING GARE PALMA - IV/4, COAL MINE, 28/09/2021 DATE OF RECEIPT **VILLAGE - BANKHETA,** 02/10/2021 DATE OF REPORT **POST - MILUPARA,** DATE OF ANALYSIS START: 28/09/2021 END: 30/09/2021 **DISTT. - RAIGARH (C.G.) 496107**

The second second		SAMPLE DETAI	LS		reminera	
MONITORING FOR	AMBIENT AIR QUALI	TY MONITORING	CUSTOMER	REF. NO.	& DATE	N/PO/SRV/2122/0045, DTD.:24-JULY-2021
SAMPLING LOCATION	ETP AREA, BANJIKH	IOL				
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY LABORATORY CHEM		ORY CHEM	UST	
SAMPLING PROCEDURE	AS PER METHOD REF	ERENCE		7.		
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₂ , SO ₂ : 30MLX1 NO. P RUBBER BLADDER: 1	VC BOTTLE, NO2: 3				

	TEST REPORT									
SR. NO.	Parameter	Unit	Result	NAAQM Standard	Method Reference					
1	Arsenic as As	ng/m³	0.3	6.0	CPCB Guidelines (AAS Method)					
2	Nickel as Ni	ng/m³	0.6	20	CPCB Guidelines (AAS Method)					
3	Lead as Pb	µg/m3	0.04	1.0	IS 5182 (Part-22)2004:RA- 2009					
4	Mercury as Hg	ng/m³	N.D.		EPA Method- IO-5					
5	Chromium as Cr	μg/m3	N.D.		EPA Method- IO-5					
6	Cadmium as Cd	μg/m3	N.D.		EPA Method- IO-5					
7	Ozone* as 03	μg/m3	8.4	180	CPCB Guidelines-1					
8	Ammonia as NH3	μg/m3	18.6	400	CPCB Guidelines-1					
9	Benzene as C6H6	μg/m3	N.D.	5.0	IS 5182 (Part-11)2006					
10	Benzo(a) Pyrene	ng/m³	N.D.	1.0	IS 5182 (Part-12)2014					

Remarks: * These result are on the basis of 1 hour's sampling, N.D. Not Detected, Note: All Result are on the Basis of 24 Hours Sampling

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End of the test report-

and of the test report



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Name & Address of The Customer

TO,

HINDALCO INDUSTRIES LIMITED,

GARE PALMA - IV/4, COAL MINE,

VILLAGE - BANKHETA,

POST - MILUPARA,

DISTT. - RAIGARH (C.G.) 496107

REPORT NO.	UES/TR/21-22/2328					
LAB REF NO.	UES/21-22/AAQM/4475					
DATE OF SAMPLING	27/09/2021					
DATE OF RECEIPT	28/09/2021					
DATE OF REPORT	02/10/2021					
DATE OF ANALYSIS	START: 28/09/2021	END:30/09/2021				

	SAM	PLE DETAIL:	S			- THE WEST
MONITORING FOR	AMBIENT AIR QUALITY MO	NITORING	CUSTOMER .	REF. NO.	& DATE	N/PO/SRV/2122/0045, DTD.:24-JULY-2021
SAMPLING LOCATION	OFFICE AREA, BANJIKHOL					
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY		LABORATORY CHEMIST		
SAMPLING PROCEDURE	AS PER METHOD REFERENC	E				
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM ₁₀): 1X SO ₂ : 30MLX1 NO. PVC BO RUBBER BLADDER: 1X1 NO	TTLE, NO2: 301				

	TEST REPORT									
SR. NO.	Parameter	arameter Unit	Result	NAAQM Standard	Method Reference					
1	Arsenic as As	ng/m³	0.3	6.0	CPCB Guidelines (AAS Method)					
2	Nickel as Ni	ng/m³	1.6	20	CPCB Guidelines (AAS Method)					
3	Lead as Pb	μg/m3	0.08	1.0	IS 5182 (Part-22)2004:RA- 2009					
4	Mercury as Hg	ng/m³	N.D.		EPA Method- IO-5					
5	Chromium as Cr	μg/m3	N.D.		EPA Method- IO-5					
6	Cadmium as Cd	μg/m3	N.D.		EPA Method- IO-5					
7	Ozone* as O3	μg/m3	4.8	180	CPCB Guidelines-1					
8	Ammonia as NH3	μg/m3	12.0	400	CPCB Guidelines-1					
9	Benzene as C6H6	μg/m3	N.D.	5.0	IS 5182 (Part-11)2006					
10	Benzo(a) Pyrene	ng/m³	N.D.	1.0	IS 5182 (Part-12)2014					

Remarks: * These result are on the basis of 1 hour's sampling, N.D. Not Detected, Note: All Result are on the Basis of 24 Hours Sampling

Terms & conditions

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End of the test report-

END: 30/09/2021



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

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Name & Address Of The Customer UES/TR/21-22/2331 REPORT NO. TO, UES/21-22/AAQM/4478 LAB REF NO. HINDALCO INDUSTRIES LIMITED, 27/09/2021 DATE OF SAMPLING GARE PALMA - IV/4, COAL MINE, 28/09/2021 DATE OF RECEIPT **VILLAGE - BANKHETA,** 02/10/2021 DATE OF REPORT **POST - MILUPARA,** DATE OF ANALYSIS START: 28/09/2021 **DISTT. - RAIGARH (C.G.) 496107**

		SAMPLE DETAI	LS			entertal """ gare 77"
MONITORING FOR	AMBIENT AIR QUAL	ITY MONITORING	CUSTOMER	REF. NO.	& DATE	N/PO/SRV/2122/0045, DTD.:24-JULY-2021
SAMPLING LOCATION	OFFICE AREA, BAN	KHETA				
DURATION OF SAMPLING	24 HOURS	SAMPLE COLLECTED BY LABORATORY CHEM		IIST		
SAMPLING PROCEDURE	AS PER METHOD RE	FERENCE			17 18	
SAMPLE QUANTITY/PACKING		10): 1X1 NO., FILT PVC BOTTLE, NO ₂ : 3 1X1 NO.				

	A COLUMN TO THE PARTY OF THE PA	1	EST REP	ORT	
SR. NO.	Parameter	Unit	Result	NAAQM Standard	Method Reference
1	Arsenic as As	ng/m³	0.1	6.0	CPCB Guidelines (AAS Method)
2	Nickel as Ni	ng/m³	2.1	20	CPCB Guidelines (AAS Method)
3	Lead as Pb	µg/m3	0.04	1.0	IS 5182 (Part-22)2004:RA- 2009
4	Mercury as Hg	ng/m³	N.D.		EPA Method- IO-5
5	Chromium as Cr	μg/m3	N.D.		EPA Method- IO-5
6	Cadmium as Cd	μg/m3	N.D.		EPA Method- IO-5
7	Ozone* as O3	μg/m3	4.6	180	CPCB Guidelines-1
8	Ammonia as NH3	μg/m3	8.8	400	CPCB Guidelines-1
9	Benzene as C6H6	μg/m3	N.D.	5.0	IS 5182 (Part-11)2006
10	Benzo(a) Pyrene	ng/m³	N.D.	1.0	IS 5182 (Part-12)2014

Remarks: * These result are on the basis of 1 hour's sampling, N.D. Not Detected, Note: All Result are on the Basis of 24 Hours Sampling

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Name & Address Of The Customer UES/TR/21-22/2332 REPORT NO. TO. UES/21-22/AAQM/4479 LAB REF NO. HINDALCO INDUSTRIES LIMITED, DATE OF SAMPLING 27/09/2021 GARE PALMA - IV/4, COAL MINE, 28/09/2021 DATE OF RECEIPT **VILLAGE - BANKHETA,** 02/10/2021 DATE OF REPORT POST - MILUPARA, START: 28/09/2021 DATE OF ANALYSIS END: 30/09/2021 **DISTT. - RAIGARH (C.G.) 496107**

		SAMPLE DETAI	LS	amente la company	and the same of
MONITORING FOR	AMBIENT AIR QUAI	SITY MONITORING	CUSTOMER	REF. NO. & DATE	N/PO/SRV/2122/0045, DTD.:24-JULY-2021
SAMPLING LOCATION	PIT OFFICE AREA,	BANKHETA			
DURATION OF SAMPLING	24 HOURS	SAMPLE COLL	ECTED BY	LABORATORY CHEM	MIST
SAMPLING PROCEDURE	AS PER METHOD RE	FERENCE			
SAMPLE QUANTITY/PACKING		M_{10}): 1X1 NO., FILT PVC BOTTLE, NO ₂ : 3 1X1 NO.			

		TEST REPORT						
SR. NO.	Parameter	Unit	Result	NAAQM Standard	Method Reference			
1	Arsenic as As	ng/m³	0.4	6.0	CPCB Guidelines (AAS Method)			
2	Nickel as Ni	ng/m³	1.4	20	CPCB Guidelines (AAS Method)			
3	Lead as Pb	µg/m3	0.08	1.0	IS 5182 (Part-22)2004:RA- 2009			
4	Mercury as Hg	ng/m³	N.D.		EPA Method- IO-5			
5	Chromium as Cr	μg/m3	N.D.		EPA Method- IO-5			
6	Cadmium as Cd	µg/m3	N.D.		EPA Method- IO-5			
7	Ozone* as O3	µg/m3	6.8	180	CPCB Guidelines-1			
8	Ammonia as NH3	µg/m3	10.8	400	CPCB Guidelines-1			
9	Benzene as C6H6	μg/m3	N.D.	5.0	IS 5182 (Part-11)2006			
10	Benzo(a) Pyrene	ng/m³	N.D.	1.0	IS 5182 (Part-12)2014			

Remarks: * These result are on the basis of 1 hour's sampling, N.D. Not Detected, Note: All Result are on the Basis of 24 Hours Sampling

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-End of the test report-

Annexure -10



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Name & Address Of The Custor TO, HINDALCO INDU: GARE PALMA — IV MINE, VILLAGE — POST - MILUPARA DISTT RAIGARI	STRIES LIMITED, 1/4, COAL BANKHETA,	REPORT NO LAB REF NO DATE OF REPORT DATE OF SAMPLING	UES/TR/21-25/0046 UES/21-22/N/042 03/05/2021 26/04/2021 to 27/04/2021
	SAI	MPLE DETAILS	
MONITORING FOR	NOISE LEVEL MONITORING		
CUSTOMER REF. NO. & DATE	N/PO/SRV/2021/0035, DTD.	21-AUG-2020	
SAMPLING LOCATION	INSIDE COAL MINE & OUTSI	DE COAL MINE (AS DESCRIE	BED BELOW)
SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLING PROCEDURE	MANUFACTURER'S INSTRUCT		

	TES	T REPO	RT		
		RES	SULT	LIMIT (INDU	STRIAL ZONE)
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
OFFICE AREA, BANJIKHOL	dB(A)	52	40		
INCLINE AREA, BANJIKHOL	dB(A)	60	42		
BUNKER AREA, BANJIKHOL	dB(A)	58	48		
DG SET AREA, BANJIKHOL	dB(A)	50	40		
WEIGHBRIGE AREA, BANJIKHOL	dB(A)	56	46	75	70
TRUCK PARKING AREA, BANJIKHOL	dB(A)	60	54		
OFFICE AREA, BANKHETA	dB(A)	52	40	,	
WEIGHBRIGE AREA, BANKHETA	dB(A)	56	44		
		RES	ULT	LIMIT (RESID	ENTIAL ZONE)
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
Outside Plant					
BANJIKHOL VILLAGE (NEAR ANGANBADI)	dB(A)	46	42	55	45
BELJOR VILLAGE (NEAR MANBODH HOUSE)	dB(A)	48	44		

REMARKS: RESULTS ARE AS ABOVE

03/05/2021 PREPARED BY

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

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Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA,		REPORT NO	UES/TR/21-22/0418
		LAB REF NO	UES/21-22/N/0518
		DATE OF REPORT	03/06/2021
POST -MILUPARA DISTT RAIGAR		DATE OF SAMPLING	29/05/2021 to 30/05/2021
		SAMPLE DETAILS	Market Committee
MONITORING FOR	NOISE LEVEL MONITORING		
CUSTOMER REF. NO. &	N/PO/SRV/2021/0035, DTD.	21-AUG-2020	
SAMPLING LOCATION	INSIDE COAL MINE & OUTSI	DE COAL MINE (AS DESCRIE	BED BELOW)
SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLING PROCEDURE	MANUFACTURER'S INSTRUCTI	CONT	

	TE	ST REP	ORT		
		RES	BULT	LIMIT (INDUS	TRIAL ZONE)
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
OFFICE AREA, BANJIKHOL	dB(A)	52	42		
INCLINE AREA, BANJIKHOL	dB(A)	48	38		70
BUNKER AREA, BANJIKHOL	dB(A)	50	40		
DG SET AREA, BANJIKHOL	dB(A)	54	44	20	
WEIGHBRIGE AREA, BANJIKHOL	dB(A)	56	46	75	70
TRUCK PARKING AREA, BANJIKHOL	dB(A)	54	42		60 60 60 80
OFFICE AREA, BANKHETA	dB(A)	52	40	•	
WEIGHBRIGE AREA, BANKHETA	dB(A)	56	38		
		RES	ULT	LIMIT (RESIDI	ENTIAL ZONE)
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
Outside Plant					
BANJIKHOL VILLAGE (NEAR ANGANBADI)	dB(A)	42	40	55	45
BELJOR VILLAGE (NEAR MANBODH HOUSE)	dB(A)	36	34		

REMARKS: RESULTS ARE AS ABOVE

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-End of the test report.....



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TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE,VILLAGE – BANKHETA,		REPORT NO	UES/TR/21-22/0885
		LAB REF NO	UES/21-22/N/0997
		DATE OF REPORT	03/07/2021
POST -MILUPARA DISTT RAIGARI		DATE OF SAMPLING	27/06/2021 to 28/06/2021
		SAMPLE DETAILS	
MONITORING FOR	NOISE LEVEL MONITORING		
CUSTOMER REF. NO. & DATE	N/PO/SRV/2021/0035, DTD	. 21-AUG-2020	
SAMPLING LOCATION	INSIDE COAL MINE & OUTS	IDE COAL MINE (AS DESCRIE	RED RELOW)
SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLING PROCEDURE	MANUFACTURER'S INSTRUCT	ION	

	TE	ST REP	ORT		
	2115	RES	ULT	LIMIT (INDUS	TRIAL ZONE)
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
OFFICE AREA, BANJIKHOL	dB(A)	50	40		
INCLINE AREA, BANJIKHOL	dB(A)	46	36	75 70	
BUNKER AREA, BANJIKHOL	dB(A)	48	38		
DG SET AREA, BANJIKHOL	dB(A)	52	42		70
WEIGHBRIGE AREA, BANJIKHOL	dB(A)	54	44	75	70
TRUCK PARKING AREA, BANJIKHOL	dB(A)	52	40		
OFFICE AREA, BANKHETA	dB(A)	50	42		
WEIGHBRIGE AREA, BANKHETA	dB(A)	54	40		
		RES	ULT	LIMIT (RESIDI	ENTIAL ZONE)
LOCATION	UNIT	DAY TIME	NIGHT	DAY TIME	NIGHT TIME
Outside Plant					
BANJIKHOL VILLAGE (NEAR ANGANBADI)	dB(A)	40	38	55	45
BELJOR VILLAGE (NEAR MANBODH HOUSE)	dB(A)	38	36		

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 the content of the content of the customer.

FOR ULTIMATE ENVIROLYTICAL SOLUTIONS 07/2021

AUTHORIZED SIGNATORY

End of the test report.....



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

HAMP & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA,		REPORT NO	UES/TR/21-22/1426
		LAB REF NO	UES/21-22/N/2019-2028
		DATE OF REPORT	02/08/2021
POST -MILUPARA DISTT RAIGAR		DATE OF SAMPLING	27/07/2021 to 28/07/2021
		SAMPLE DETAILS	
MONITORING FOR	NOISE LEVEL MONITORING	AND THE PARTY OF T	
CUSTOMER REF. NO. & DATE	N/PO/SRV/2021/0035, DTD.	21-AUG-2020	
SAMPLING LOCATION	INSIDE COAL MINE & OUTSI	DE COAL MINE (AS DESCRIE	BED BELOW)
SAMPLE COLLECTED BY	LABORATORY CHEMIST		
SAMPLING PROCEDURE	MANUFACTURER'S INSTRUCTI	מא	

	TE	ST REP	ORT		
		RE	ULT	LIMIT (INDUSTRIAL ZONE	
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
OFFICE AREA, BANJIKHOL	dB(A)	52	42		
INCLINE AREA, BANJIRHOL	dB(A)	48	38		
BUNKER AREA, BANJIKHOL	dB(A)	44	40		
DG SET AREA, BANJIKHOL	dB(A)	50	46		1
WEIGHBRIGE AREA, BANJIKHOL	dB(A)	56	44	75	70
TRUCK PARKING AREA, BANJIKHOL	dB(A)	50	38		
OFFICE AREA, BANKHETA	dB(A)	48	40		
WEIGHBRIGE AREA, BANKHETA	dB(A)	52	38	9	
		RES	ULT	LIMIT (RESIDI	ENTIAL ZONE)
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
Outside Plant		VIETNACINE CACINO STREET	W-100		
BANJIKHOL VILLAGE (NEAR ANGANBADI)	dB(A)	46	40	55	45
BELJOR VILLAGE (NEAR MANBODH HOUSE)	dB(A)	40	38	(4)	

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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

For ULTIMATE ENVIRORYTICAL SOLUTIONS AUTHORIZED SIGNATORY



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

Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST - MILUPARA, DISTT RAIGARH (C.G.) 496107		REFORT NO UES/TR/21-22/2118 LAB REF NO UES/21-22/N/3453-340 DATE OF REPORT 03/09/2021 DATE OF SAMPLING 27/08/2021 to 28/08/					
		SAMPLE DETAILS					
MONITORING FOR	NOISE LEVEL MONITORING						
CUSTOMER REF. NO. & DATE	N/PO/SRV/2122/0045, DTD.	N/PO/SRV/2122/0045, DTD. 24-JULY-2021					
SAMPLING LOCATION	INSIDE COAL MINE & OUTSI	DE COAL MINE (AS DESCRIE	BED BELOW)				
SAMPLE COLLECTED BY	LABORATORY CHEMIST						
SAMPLING PROCEDURE	MANUFACTURER'S INSTRUCTI	ON					

	TE	ST REP	ORT			
		RESULT		LIMIT (INDUSTRIAL ZONE)		
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME	
OFFICE AREA, BANJIKHOL	dB(A)	50	42	Victoria de la companya della companya della companya de la companya de la companya della compan	70	
INCLINE AREA, BANJIKHOL	dB(A)	46	40			
BUNKER AREA, BANJIKHOL	dB(A)	48	38	75		
DG SET AREA, BANJIKHOL	dB(A)	52	40			
WEIGHBRIGE AREA, BANJIKHOL	dB(A)	54	44			
TRUCK PARKING AREA, BANJIKHOL	dB(A)	58	46			
OFFICE AREA, BANKHETA	dB(A)	50	44			
WEIGHBRIGE AREA, BANKHETA	dB(A)	54	40			
		RESULT		LIMIT (RESIDE	ENTIAL ZONE)	
LOCATION	UNIT	DAY	NIGHT TIME	DAY TIME	NIGHT TIME	
Outside Plant				437		
BANJIKHOL VILLAGE (NEAR ANGANBADI)	dB(A)	48	42	55	45	
BELJOR VILLAGE (NEAR MANBODH HOUSE)	dB(A)	38	36		1.5	

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.

Phaced 27
PREPARED BY

For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

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



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

Name & Address of The Custor TO, HINDALCO INDUST GARE PALMA - IV/4 VILLAGE - BANKHI POST - MILUPARA, DISTT RAIGARH	TRIES LIMITED, I, COAL MINE, ETA,	REPORT NO. LAB REF NO. DATE OF REPORT DATE OF SAMPLING	UES/TR/21-22/2256 UES/21-22/N/4348-4357 02/10/2021 23/09/2021 to 24/09/2021			
		SAMPLE DETAILS				
MONITORING FOR	NOISE LEVEL MONITORING					
CUSTOMER REF. NO. & DATE	N/FO/SRV/2122/0045, DTD.:24-JULY-2021					
SAMPLING LOCATION	INSIDE COAL MINE & OUTSIDE COAL MINE (AS DESCRIBED BELOW)					
SAMPLE COLLECTED BY	LABORATORY CHEMIST					
SAMPLING PROCEDURE	MANUFACTURER'S INSTRUCTION					

TEST REPORT						
		RESULT		LIMIT (INDUSTRIAL ZONE)		
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME	
OFFICE AREA, BANJIKHOL	dB(A)	54	48	1		
INCLINE AREA, BANJIKHOL	dB(A)	48	42	VERN I	70	
BUNKER AREA, BANJIKHOL	dB(A)	46	34			
DG SET AREA, BANJIKHOL	dB(A)	50	46	75		
WEIGHBRIGE AREA, BANJIKHOL	dB(A)	58	42			
TRUCK PARKING AREA, BANJIKHOL	dB(A)	52	48			
OFFICE AREA, BANKHETA	dB(A)	62	40	A 7		
WEIGHBRIGE AREA, BANKHETA	dB(A)	58	42	diam'		
		RES	ULT	LIMIT (RESI	DENTIAL ZONE)	
LOCATION	UNIT	DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME	
Outside Plant						
BANJIKHOL VILLAGE (NEAR ANGANBADI)	dB(A)	52	40	55	45	
BELJOR VILLAGE (NEAR MANBODH HOUSE)	dB(A)	48	38	33	43	

REMARKS: RESULTS ARE AS ABOVE

Terms & conditions

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For ULTIMATE ENVIROLYTICAL SOLUTIONS AUTHORIZED SIGNATORY PREPARED BY

-End of the test report---

Annexure – 10A

Annexure - 10A



ETP of capacity 50 m3/day at Bankheta
- GP IV/4 Coal Mine

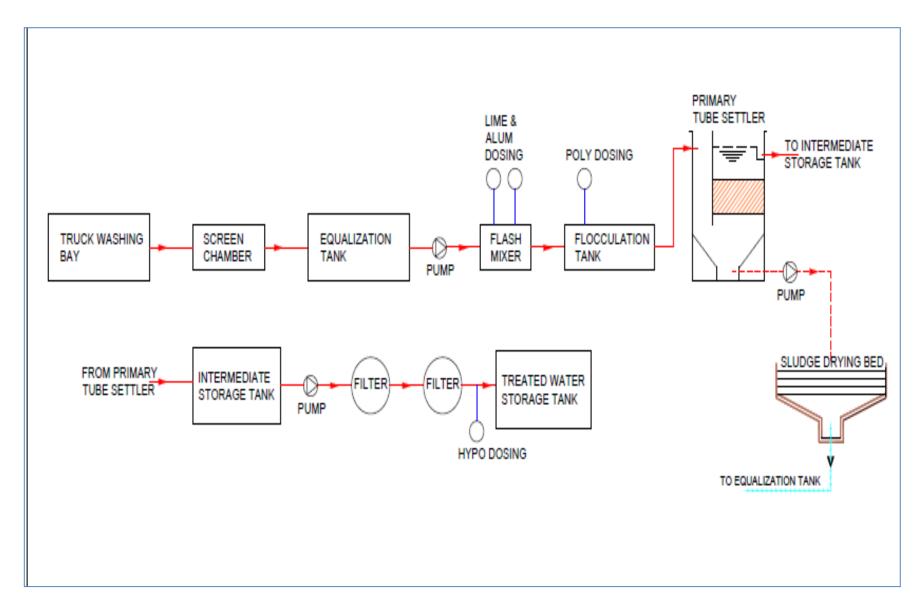


Dumper/HEMM Washing Bay at Bankheta – GP IV/4 Coal Mine

Process Flow Diagram of ETP







Annexure – 10B



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

Name & Address Of The Customer TO, HINDALCO INDUSTRIES LIMITED, GARE PALMA – IV/4, COAL MINE, VILLAGE – BANKHETA, POST MILUPARA, DISTT RAIGARH (C.G.) 496107			REPORT NO LAB REF NO DATE OF SAMPLING DATE OF RECEIPT DATE OF REPORT DATE OF ANALYSIS	UES/TR/21-22/2266 UES/21-22/W/4367 24/09/2021 25/09/2021 02/10/2021 START: 24/09/2021 END: 30/09/2021			
Miles The Company of the State		SAM	PLE DETAILS	nashina a			
SAMPLE TYPE				ORDER /REFERENCE:		N/PO/SRV/2122/0045, DTD.:24-JULY-2021	
CUSTMER SAMPLE ID	USTMER SAMPLE ID ETP INLET & OUTLET, BANKHETA		SAMPLE CONDITION AT RECEIPT		OK 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	SAMPLING PROCEDURE IS:3025(PART I):1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39		QUANTITY RECEIVED		5 LTR		

Report No. 2266

TEST REPORT							
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	BHANKETA ETP INLET	BANKHETA ETP OUTLE	
1	Colour	Hazen	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	2.6	<1	
2	Odour	-	APHA 22 nd Ed. 2012,2120-B,2-6	See 6 of Annexure-I	Agreeable	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	26.2	
4	рн	-	АРНА 22 nd Ed.2012,4500-H ⁺ - В,4-92	5.5 to 9.0	7.26	7.34	
5	Total Residual Chlorine	mg/L	APHA 22 nd Ed.2012,4500-C1- G,4-69	1.0	N.D.	N.D.	
6	Total Suspended Solids	mg/L	APHA 22 nd Ed.2012,2540- D, 2-66	100	124.0	26.0	
7	Dissolved Phosphate (as P)	mg/L	APHA 22 nd Ed.2012,4500-P-C,4-153	5.0	0.3	0.1	
8	Fluoride (as F)	mg/L	АРНА 22 nd Ed.2012,4500-F-B &D,4-84 & 87	2.0	0.16	0.08	
9	Lead (as Pb)	mg/L	АРНА 22 nd Ed.2012,3111-В, 3- 18	0.1	N.D.	N.D.	
10	Zinc (as Zn)	mg/L	АРНА 22 nd Ed.2012,3111-B, 3- 18	5.0	0.14	0.06	
11	Copper (as Cu)	mg/L	АРНА 22 nd Ed.2012,3111-B, 3- 18	3.0	N.D.	N.D.	
12	Cadmium (as Cd)	mg/L	APHA 22 nd Ed.2012,3500-Cd, 3- 105	2.0	N.D.	N.D.	
13	Mercury (as Hg)	mg/L	АРНА 22 nd Ed.2012,3112-В, 3- 23	0.01	N.D.	N.D.	
14	Arsenic (as As)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.2	N.D.	N.D.	
15	Selenium (as Se)	mg/L	APHA 22 nd Ed.2012,3114-C, 3-38	0.05	N.D.	N.D.	
16	Total Chromium (as Cr)	mg/L	APHA 22 nd Ed.2012,3500-Cr- B,3-69	2.0	N.D.	N.D.	

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



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

Report No. 2266

	TEST REPORT							
SR. NO.	PARAMETER	UNIT	METHOD OF TEST	THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER	BHANKETA ETP INLET	BANKHETA ETP OUTLET		
17	Chemical Oxygen Demand (COD)	mg/L	APHA 22 nd Ed.2012, 5520-B, 5- 17	250	74.0	20.0		
18	Biochemical Oxygen Demand (BOD)	mg/L	IS 3025 (Part 44):1993, RA 2003	30	12.6	2.4		
19	Oil & Grease	mg/L	IS 3025 (Part 39):1991,RA 2003	10	N.D.	N.D.		
20	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	IS 3025 (Part 43):1992, RA 2003	1.0	N.D.	N.D.		

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

Terms & conditions

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

PREPARED BY

For ULTIMATE ENVIROLYTICAL SOLUTIONS

2021

AUTHORIZED SIGNATORY

Annexure – 11



छत्तीसगढ़ पर्यावरण संरक्षण मंडल

पर्यावास भवन, नार्थ ब्लॉक, सेक्टर—19 नवा रायपुर अटल नगर, रायपुर (छ.ग.) 492002 ई—मेल— hocecb@gmail.com

क्रमांक **23**98/ मुख्या. / वैज्ञा. / छ.ग.प.सं.मं. / 2021 नवा रायपुर अटल नगर, दिनांक / 1/7/8 / 2021 प्रति,

श्री अनुराग श्रीवास्तव,

पार्टनर,

मेसर्स अल्टीमेट इन्वायरोलाइटिकल सॉल्यूशन्स, 272-एच.डी.डी. फेस-3, कबीर नगर, रिंग रोड नं. 2, जिला-रायपुर (छ.ग.)

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

संदर्भ :- 1. आपका आवेदन कमांक UES/2021-22/0042, दिनांक 31 / 07 / 2021. 2. मंडल मुख्यालय का पत्र कमांक 5357, दिनांक 24 / 09 / 2019.

3. भारत शासन, पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय का पत्र क्रमांक F No. Q-15018/07/2017-CPW, दिनांक 21/02/2020.

---:00:----

कृपया उपरोक्त विषयांतर्गत संदर्भित पत्रों का अवलोकन करें। लेख है कि मंडल मुख्यालय द्वारा पत्र कमांक 5357 दिनांक 24/09/2019 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 31/07/2021 तक थी। संदर्भ—3 पर उल्लेखित पत्र के अनुक्म 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 अंतर्गत् प्रदत्त मान्यता की वैधता दिनांक 25/06/2022 तक बढ़ाई जाती है। कृपया आपकी प्रयोगशाला में प्रचालकों की अद्यतन विश्लेषण दर सूची से मंडल को अवगत कराते हुए इस पत्र की पावती भेजे।

C.G. Environment Conservation Board Paryawas Bhawan, North Block, Sec-19 Atel Nagar, Distt-Rajour (C.G.) 492002

सदस्य सचिव

ख्तीसगढ़ पर्यावरण संरक्षण मंडल, नवा रायपुर अटल नगर, जिला–रायपुर (छ.ग)

पृ.क्रमांक प्रतिलिपिः— /मुख्या. / वैज्ञा. / छ.ग.प.सं.मं. / 2021 नवा रायपुर अटल नगर, दिनांक / / 2021 क्षेत्रीय अधिकारी, क्षेत्रीय कार्यालय, छत्तीसगढ़ पर्यावरण संरक्षण मंडल, रायपुर / भिलाई—दुर्ग / बिलासपुर / कोरबा / रायगढ़ / अंबिकापुर / जगदलपुर की ओर सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

सदस्य सिचव

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

F. No. Q-15018/07/2017-CPW Government of India Ministry of Environment, Forest and Climate Change (CP Division)

Agni-233, Indira Paryavaran Bhavan, Jor Bagh Road, New Delhi – 110 003. Dated, the 21st February, 2020

To

M/s Ultimate Envirolytical Solution HDD 272, Phase-3 Near J.P Chawk Kabir Nagar, Ring Road-2 Raipur-492099, Chhattisgarh

Subject: -Recognition of M/s Ultimate Envirolytical Solutions, HDD 272, Phase-3, Near J.P Chawk Kabir Nagar, Ring Road-2, Raipur 492099, Chhattisgarh as Environmental Laboratory under the Environment (Protection) Act. 1986.

Sir.

I am directed to refer to your application dated:01.09.2017 for recognition of your laboratory under Environment (Protection) Act, 1986. Based on the recommendations of the Expert Committee for Recognition of Environmental Laboratories in its 61st meeting held on 03.12.2019 and your acceptance of the revised terms and conditions at Annexure-III & IV of the Guidelines for recognition of Environmental Laboratories, this Ministry approves of recognition of M/s Ultimate Envirolytical Solutions, HDD 272, Phase-3, Near J.P Chawk Kabir Nagar, Ring Road-2, Raipur 492099, Chhattisgarh, as shall be notified in the Gazette of India. Considering the current validity of mandatory accreditations/certifications of the laboratory, this shall be valid up to 25.06.2022.

- 2. As sought in your aforementioned application M/s Ultimate Envirolytical Solutions, 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 of industrial effluent stream, Salinity, Settleable solids and Sludge volume index (SVI).
- (ii) Inorganic (General & Non-metallic): Acidity, Alkalinity, Ammonical nitrogen, Chloride, Chlorine residual, Dissolved oxygen, Fluoride, Total hardness, Total kjehldal nitrogen (TKN), Nitrite nitrogen, Nitrate nitrogen, Phosphate, Sulphate, Chlorine demand, Iodine and Silica.
- (iii) Inorganic (Trace metals): Boron, Cadmium, Calcium, Chromium Total, Chromium Hexavalent, Copper, Iron, Lead, Magnesium, Mercury, Nickel, Potassium, Sodium, Sodium absorption ratio, Zinc, Arsenic, Barium, Manganese and Tin.
- (iv) Organics (General) and Trace Organics: Bio-chemical oxygen demand (BOD), Chemical oxygen demand (COD), Oil & grease, Phenol, Pesticide ((Organo-chlorine, Organo nitrogen-phosphorous), Poly-chlorinated biphenyl (PCB's) each, Polynuclear aromatic hydrocarbon (PAH) each and Organic Carbon (in Solid).
- (v) Microbiological Tests: Total Coliform, Faecal Coliform, Faecal streptococci, E. coli, Total Plate count.
- (vi) Toxicological Tests: Bioassay method for evaluation of toxicity using fish, Bio-accumulation, bio magnification and bio-transformation studies.
- (vii) Biological Tests: Macrophytic identification, Planktonic identification count and Chlorophyll.
- (viii) Hazardous Waste: Corrosivity, Ignibility (Flash Point) and Measurement of heavy metals/pesticides in the waste /leachate.
- (ix) 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, Bicarbonate, Calcium, Calcium carbonate, Chloride, Bicarbonate, Calcium, Calcium carbonate, Chloride, Heavy metal, Magnesium, Nitrate, Potash (available), Sulphate and water holding capacity.

- (x) Ambient Air/ Fugitive Emissions: Nitrogen dioxide (NO₂), Sulphur dioxide (SO₂), Total Suspended particulate matter, Respirable suspended particulate matter (PM₁₀), Ammonia, Chlorine, Fluoride, Lead.
- (xi) Stack Gases/ Source Emission: Particulate matter, Sulphur dioxide, Velocity & flow, Carbon dioxide, Carbon monoxide, Temperature, Oxygen, Oxides of nitrogen, Acid mist, Ammonia, Fluoride (Particulate), Fluoride(Gaseous) and Hydro-chloric acid.
- (xii) Noise Level: Noise level measurement (20 to 140 dba), Ambient Noise & Source-specific Noise.
- (xiii) Meteorological: Ambient temperature, Wind direction, Wind speed, Relative Humidity and Rainfall.
- 3. Further, the following analysts have been approved for recognition as Government Analysts.
 - (i) Mr. Anurag K. Shrivastava
 - (ii) Mr. Little Kumar Prajapati
 - (iii) Mr. Pramod Kumar Choubey
- 4. The laboratory shall compulsorily participate in the Analytical Quality Control (AQC) exercise conducted by the Central Pollution Control Board (CPCB) at least once a year to ascertain the capability of the laboratory and analyses carried out and shall submit quarterly progress reports to this Ministry.
- 5. Periodic surveillance of the recognized environmental laboratory will be undertaken by this Ministry/ CPCB to assess its proper functioning, systematic operation and reliability of data generated at the laboratory.
- 6. It is also mandatory for the laboratory to have requisite accreditations of the NABL/ ISO 9001 and OHSAS and its renewal as per accreditation rules. This recognition is subject to such accreditations and renewal, as applicable. The laboratory may approach this Ministry for further extension of validity of recognition after renewal of the mandatory accreditations/ certification concerned. Such application for extension of validity may be submitted to this Ministry in due advance, preferably before 6 months.
- 7. The laboratory should compulsorily follow the accepted Terms & 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. Susan George K.) Scientist 'D'

Tel. No. 011-24695327

Email: susan.george@nic.in

Copy to:

- Member Secretary, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, New Delhi
 110032.
- 2. Member Secretary, Chhattisgarh Environment Conservation Board, Paryavas Bhawan, North Block, Sector-19, Atal Nagar, Dist-Raipur, Chattisgarh.
- Additional Principal Chief Conservator of Forests (C), Ministry of Environment, Forest and Climate Change, Regional Office (WCZ), Ground Floor, East Wing, New Secretariat Building, Civil Lines, Nagpur-440001.
- 4. Director, IT Division, MoEF&CC, New Delhi-110003: for uploading on MoEF&CC website





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

Annexure - 12

Environmental Expenditure Details for FY 2021-22 (April 2021 to September 2021)

M/s Hindalco Industries Limited, Gare Palma Mines IV/4

Particulars	Amount (Lakh)
Water Quality Management	5.94
Air Quality Management	3.34
Plantation, Green Belt Development	5.97
Others	1.89
Total	17.14