



Letter No.: HIL/EC/GP- IV/4/II/2021 -22/ L20

20<sup>th</sup> May, 2022

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

**Subject: Half Yearly EC Compliance Report for 1 MTPA Gare Palma IV/4 Coal Mines of Hindalco Industries Limited, Village – Banjikhoh, 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 **October 2021 to March 2022** for your kind perusal please.

The receipt of the report may kindly be acknowledged.

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

  
**Govind Kumar**  
**(Mine Agent GP IV/4 CM)**  
Encl.: As Above.

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

**Hindalco Industries Limited**

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## 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 provisions of Environment Protection Act (EPA), 1986 and Environment Impact Assessment Notification, 2006 in conjunction with the subsequent amendments/circulars. | Noted                |
| 2       | All conditions stipulated in the EC letter No.J-11015/183/2010-IA.II (M) dated 12 <sup>th</sup> March, 2013 shall remain unchanged.   | Noted                |
| 3       | The successful bidder shall be liable, if any, for any act of violation of the EPA 1986/EIA Notification 2006/subsequent amendments and circulars which it has inherited during the transfer.                   | Noted                |
| 4       | Successful bidder shall be liable for compliance of all court directions, if any.   | Noted                |

**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**

| Sr. No.                       | Stipulated Conditions   | Compliance Statement  |
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| <b>A. SPECIFIC CONDITIONS</b> |   |   |
| i                             | 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) | <p style="text-align: center;"><b>Being Complied.</b></p> <p>Amendment has been done in this stipulated condition by MoEF &amp; 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.</p> <p>Amendment Copy of EC is attached as <b><u>Annexure - No. 1</u></b></p> |

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|     |   | <p>The coal production from the mine from <b>October 2021 to March 2022</b> is within the limit of 1 MTPA as prescribed in the EC.</p> <p>Production from (October 2021 to March 2022)<br/> <b>Open Cast: 0.275 MT (Million Tons)</b><br/> <b>Under Ground: 0.00 MT (Million Tons)</b></p> <p>Total Coal Production from OC &amp; UG (2021 - 2022): 0.559 MT (Million Tons)</p> <p><b>Open Cast: 0.559 MT (Million Tons)</b><br/> <b>Under Ground: 0.00 MT (Million Tons)</b></p> <p>A copy of Statistical return for the month of March 2022 submitted to The Coal Controller Ministry of Coal, GOI Kolkata dated <b>04/04/2022</b> is attached as <b><u>Annexure No. 2</u></b></p> |
| ii  | The calendar plan should be uploaded on MOEF website.   | <p>As per Approved mining plan (2018) the coal production from HIL GP IV/4 is 0.56 MTPA from OC &amp; 0.44 MTPA from the UG.</p> <p>The production will be within the limit of above schedule. Proposed calendar year quantities based on the current scenario.</p> <p>Mining calendar plan for FY 22-23:</p> <p><b>Open Cast: 0.56 MT (Million Tons)</b><br/> <b>Under Ground: No proposal as of now</b></p> <p>In future if there will be any change in calendar plan the same will be intimated to MoEF &amp; CC.</p>   |
| 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 | <p><b>Not Applicable.</b></p> <p>This particular condition is not applicable to us, as per Vesting order issued by Ministry of Coal, GOI, (vide vesting order No. 104/16/2015/NA dated 23rd March 2015) Coal is being used in the captive power plant of HIL located at Hirakud (Distance - 160 km) and Lapanga (Distance - 130 km) District Sambalpur, Odisha and mode of transportation is</p>   |

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|      | mode of transportation shall be shifted to by rail by 2017.   | 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.  | <b>Complied.</b><br>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.  | <b>Being Complied.</b><br>As per condition Rs. 5 /T of coal /annum is being utilized under CSR activities & Sustainability. Expenditure details from <b>October 2021 to March 2022</b> is enclosed as <b>Annexure No. – 3</b>  |
| vi   | No external OB dump will be left after mine operation and shall be backfilled in the mine void.   | <b>Being Complied.</b><br>The OB dumping is being done as per the approved Mining Plan only.   |
| vii  | The proponent shall take necessary action on the issues raised during public hearing.   | <b>Being Complied.</b><br>A separate budget for the CSR & Sustainability is being maintained.  |
| viii | The coal will be used in existing steel plant of proponent.   | <b>Not Applicable.</b><br>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. | <b>Being Complied.</b><br>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. <b>Total 99821 nos.</b> local plants species have been planted till date in mine lease area including OB dump area. Plantation details are enclosed as <b>Annexure- 4</b> |
| x    | Kelo river and Bendra Nallah shall not be disturbed.  | <b>Being Complied.</b>   |
| 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.  | <b>Being Complied.</b><br>The OB dumping is maintained as per the provisions of approved Mining Plan only.   |

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| 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 pile in between the pit and the surface dump over an area of 7.12 Ha.   | <p style="text-align: center;"><b>Being Complied.</b></p> <p>The Top soil conservation and use are successive and periodic activities during mining operation. In the FY 21 – 22 approx. <b>764673 cubic meter</b> of the top soil has been generated, approx. <b>535271</b> cubic meter has been spread/used on OB Dumps (Banjikhhol &amp; Bankheta) for reclamation, slope stabilization, green belt development &amp; <b>approx. 229402</b> cubic meter stored for further uses in the mine area.</p> |
| 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, eco-sensitive 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.   | <p style="text-align: center;"><b>Noted.</b></p> <p>HIL will comply with mitigative measure as suggested by competent authority if any in this regard in future also.</p>  |
| 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 | <p style="text-align: center;"><b>Noted.</b></p> <p>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.</p>  |

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|       | 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 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.   |  |
| xv    | 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.   | <b>Being Complied.</b><br>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   | <b>Being Complied.</b><br>The over burden is maintained as per approved mining plan.   |

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|     | <p>south quarry while the mining operation will start from north and advance towards south and west. Part of OB excavated from the mine from 1st year and part of 2nd year (3.91 Mm<sup>3</sup>) will be accommodation in it including top soil for afforestation. The height of dump achieved during 1st and 2nd year will be 6 m to 20 m respectively.</p>   |  |
| xix | <p>The O.B. left in external dump will 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.</p> | <p><b>Being Complied.</b></p> <p>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 in the year 2020 on OB Dump area near Patch "C" to provide the stability and prevent top soil erosion / Reduce the surface Run- off from OB dumps.</p> |
| xx  | <p>Topsoil generated in the balance life 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.</p>   | <p><b>Being Complied.</b></p> <p>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 &amp; will be used for reclamation and development of green belt.</p>  |
| xxi | <p>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 &amp; Forests and its Regional offices located at Bhubaneswar on yearly basis. The</p>   | <p><b>Being Complied.</b></p> <p>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 within 28° and dumps are stabilized. Monitoring and management of reclaimed dump site is continuing and will continue until the vegetation becomes self – sustaining.</p>  |

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|       | area of OB dump should be reduced. The grass turfing should be done on OB dumps.   | 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.   |
| xxii  | Adequate numbers of sprinklers should be provided on both the side of road to minimize pollution.  | <p><b>Being Complied.</b></p> <p>Regular Water sprinkling on haul road is practiced through truck mounted water sprinklers (04 Nos) to prevent the fugitive dust emission. Also installed the fixed type of water sprinklers (30 nos) to control the fugitive dust emission in the mine area.</p> <p>Photographs of truck mounted water sprinklers &amp; fixed type of water sprinklers at GP IV/4 Coal Mines attached as <b>Annexure – 4A</b></p>  |
| xxiii | <p>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 watering the mine area, roads, green belt development etc. The drains should be regularly desilted and maintained properly. Garland drains (size, gradient, length,) and sump capacity should be designed 50 % safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site.</p> <p>Sump capacity should also provide adequate retention period to allow proper settling of silt material.</p> | <p><b>Being Complied.</b></p> <p>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.</p> <p>The store water is used for spraying / sprinkling on haul roads and also for greenbelt development.</p> <p>Garland drains are constructed to arrest discharge and runoff with slit and sedimentation surging into areas adjoining the periphery of OB dump.</p> <p>HIL Constructed/Provided settling ponds:</p> <p><b>a) At Banjikhhol Mine (GP IV/4):</b></p> <p>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 Banjikhhol for the mine seepage water collection, settling &amp; treatment before discharge for the agriculture purpose <b>(Photograph is attached as Annexure – 4AA).</b></p> <p>Also HIL constructed an additional settling pond of size 30m X 10m X 1.5m (01Nos) to collect</p> |



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|      |   | <p>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 <b>(Photograph is attached as <u>Annexure – 4AAA</u>)</b></p> <p><b>At Bankheta Mine (GP IV/4):</b><br/>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 <b>(Photograph is attached as <u>Annexure – 4B</u>)</b></p>  |
| 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. | <p style="text-align: center;"><b>Being Complied.</b></p> <p>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 Banjikhoh, GP IV/4 Coal Mines.</p> <p>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.</p> <p>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 &amp; ensure you that it will be carried out as &amp; when required in future also at mine site.</p> <p><b>Photographs of constructed gabion/Retaining wall attached as <u>Annexure – 4C</u></b> &amp; the Gabion wall construction/implementation report has already been submitted to MoEF &amp; CC Nagpur Office dated 01<sup>st</sup> June 2021 the same is attached as <b><u>Annexure 4CC</u></b> for reference please.</p> |
| xxv  | Water sprinkling system (mist spray type) shall be provided to check fugitive emission from conveyor  | <p style="text-align: center;"><b>Being Complied.</b></p> <p>Water sprinkling arrangement has been maintained at all haul roads, loading and</p>   |

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|        | system, haulage roads and transfer points.   | 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 should be provided on both the sides of road to minimize dust pollution. | <b>Being Complied.</b><br>As per requirement, fixed type water sprinklers as well as truck mounted water sprinklers has been provided in the mines and other places.  |
| xxvii  | Drills should be wet operated only.  | <b>Being Complied.</b><br>In coal mining wet drilling is under practice.  |
| xxviii | An action plan for mine closure with details of area, depth, voids and details of abandoned mine should be submitted to the Ministry.  | <b>Complied.</b>  |
| xxix   | Controlled blasting should be practiced with use of delay detonators. The mitigative measures for control of ground vibrations and to arrest the fly of rocks and boulders should be implemented.  | <b>Being Complied.</b><br>Controlled blasting is practiced with use of delay detonators.<br>Ground vibration generated due to the blasting is measured by seismographs regularly.<br>The permissible limit for the ground vibration with respect to the structures is strictly followed.<br>Measures are taken to minimized ground vibrations. Blasting is done during day time only.   |
| xxx    | Transportation shall be by covered trucks of higher capacity (25 –tons) and loading shall be by siding. Mechanically covered trucks should be provided for transportation of coal.   | <b>Being Complied.</b><br>Transportation is being done with tarpaulin covered trucks.   |
| xxxi   | Area brought under afforestation from the three mines shall be by planting native species in consultation with local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha.                                   | <b>Being Complied.</b><br>Planation in the mine area is being carried out @2500 plant/ha. <b>Total 99821 nos.</b> local plants species have been planted till date including OB dump area. Plant Species i.e. 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 etc. in consultation with DFO. |

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| xxxii  | Extensive plantation should be done near agriculture area to avoid coal dust pollution which may affect the productivity of crop.  | <p align="center"><b>Being Complied.</b></p> <p>Extensive plantation near agriculture land along road side is being done and will be done in future to avoid coal dust pollution which may affect the productivity of crop.</p>   |
| 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. | <p align="center"><b>Being Complied.</b></p> <p><b>a) At Banjikhhol Mine (GP IV/4):</b><br/> 03 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 <b>October 2021 to March 2022</b> is enclosed as <b><u>Annexure No.- 5</u></b></p> <p>Photographs of Treatment Facility (enclosed above)</p> <p>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 (<b>Photograph enclosed above</b>)</p> <p><b>At Bankheta Mine (GP IV/4):</b><br/> 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 (<b>Photograph enclosed above</b>)</p> <p>The treated water quality analysis reports are being periodically furnished to CECB &amp; uploaded regularly on the company website.</p> <p>Also installed 01 nos of COEQMS (Continuous Online Effluent Quality Monitoring System) at Bankheta, (At outlet of Siltation Pond No. 2) for real time monitoring of environmental quality parameters i.e. COD, BOD, TSS, PH &amp; Temperature before discharge for the agriculture purpose photograph enclosed as <b><u>Annexure – 5 A</u></b></p> |

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| 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.   | <p style="text-align: center;"><b>Being Complied.</b></p> <p>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.</p>  |
| xxxv  | Regular monitoring of groundwater level and quality of the study area shall be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for quality shall be done four times a year in pre-monsoon (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. | <p style="text-align: center;"><b>Being Complied.</b></p> <p>Regular monitoring of groundwater level and quality of the area is being carried out by establishing a network of existing wells/Piezometers. The Ground water level <b>(from October 2021 to March 2022)</b> and quality Monitoring report of <b>Post- monsoon (November 2021)</b> and <b>winter (January 2022)</b> is attached as <b><u>Annexure No.-6.</u></b></p> <p>Non-working mine pit has been developed as rain water harvesting structure in the mines.</p> <p>Quarterly monitoring report of Ground Water Level (from October 2021 to December 2021) and (from January 2022 to March 2022) &amp; GW Quality Monitoring for the month of <b>Post-monsoon (November 2021)</b> and <b>winter (January 2022)</b> has been submitted to MoEF &amp; CC, CPCB and CECB on quarterly within one month of monitoring basis. Attached as <b><u>Annexure No. – 7.</u></b></p> |
| xxxvi | 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 loss of life and material. Cracks should be effectively plugged with ballast and clayey soil/suitable material.   | <p style="text-align: center;"><b>Being Complied.</b></p> <p>In Gare Palma IV/4 coal mine: the method of underground coal mining is Board &amp; 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 corrective measures will be taken to avoid loss of life and material. Cracks will be effectively</p>   |

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|         |   | <p>plugged with ballast and clayey soil/suitable material.</p> <p>The subsidence study was already carried out for working panel by CSIR – Central Institute of Mining &amp; Fuel Research Dhanbad in March 2019 for GP IV/4 Coal mines.</p>   |
| xxxvii  | Sufficient coal pillars shall be left un-extracted around the airshaft (within the subsidence influence area) to protect from any damage from subsidence, if any. | <p><b>Being Complied.</b></p> <p>Sufficient coal pillars have been will be left un-extracted around the airshaft (within the subsidence influence area) to protect from any damage from subsidence.</p>  |
| xxxviii | High root density tree species shall be selected and planted over areas likely to be affected by subsidence.  | <p><b>Being Complied.</b></p> <p>High root density tree species will be selected and planted over areas likely to be affected by subsidence as required.</p>   |
| xxxix   | Depression due to subsidence resulting in water accumulating within the low lying areas shall be filled up or drained out by cutting drains.                      | <p><b>Being Complied.</b></p> <p>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</p>  |
| xl      | Solid barriers shall be left below the village, roads falling within the blocks to avoid any damage to the roads.   | <p><b>Being Complied.</b></p> <p>Solid barriers is left below the village, roads falling within the blocks to avoid any damage to the roads as per statute.</p>  |
| xli     | No depillaring operation shall be carried out below the roads and habitation area found within the lease.   | <p><b>Being Complied.</b></p> <p>No depillaring operation will be carried out below the roads and habitation area found within the lease.</p>  |
| xlii    | The proponent shall ensure to undertake and provide the costs incurred for taking up remedial measures in case of soil.   | <p><b>Being Complied.</b></p> <p>Cost incurred for taking remedial measures in case of soil will be borne by the company.</p>  |
| xliii   | Extensive plantation should be done near agriculture area to avoid coal dust pollution which may affect the productivity of crop.                                 | <p><b>Being Complied.</b></p> <p>Extensive planation along road side has been done near the agriculture area to avoid coal dust pollution which may affect the productivity of crop.</p> <p>The same will be continue in other areas also.</p> |
| xliv    | ETP shall be provided for workshop, CHP, if any. Effluent shall be treated to   | <p><b>Being Complied.</b></p>  |

|      |  |   |
|------|--|---|
|      | <p>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.</p>   | <p>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.</p> <p>Also HIL constructed/provided the Effluent Treatment Plant of capacity 50 m<sup>3</sup>/Day. 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 &amp; Greenbelt development.</p> <p>The treated water quality analysis reports are being periodically furnished to CECB &amp; uploaded regularly on the company website.</p> |
| xlv  | <p>A detailed plan for CSR with specific budgetary allocation (capital and 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.</p> | <p><b>Being Complied.</b></p> <p>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.</p>  |
| xlvi | <p>A special corpus fund either at company level or in CIL/MOC be provided for the reclamation of abandoned and degraded areas.</p>  | <p><b>Being Complied.</b></p> <p>Escrow account has been opened for the reclamation of abandoned and degraded areas in the mine lease till date (March 2022) <b>Rs 1044.56</b> lakhs has been deposited.</p>  |

|      |   |  |
|------|---|--|
| xlvi | <p>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.</p> | <p style="text-align: center;"><b>Complied.</b></p> <p>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 &amp; CC Nagpur, Regional office dated 27 May 2020.</p>                         |
| xlvi | <p>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 &amp; 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.</p>  | <p style="text-align: center;"><b>Being Complied.</b></p> <p>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 &amp; forest five years before mine closure for approval. The mix species will be selected for habitat restoration as per the conditions set out herewith.</p> |
| xlix | <p>A special corpus fund either at company level or in CIL/MOC be provided for reclamation of abandoned and degraded area.</p>  | <p style="text-align: center;"><b>Being Complied.</b></p> <p>Escrow account has been opened for the reclamation of abandoned and degraded areas in the mine lease.</p>   |
| i.   | <p>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.</p>  | <p style="text-align: center;"><b>Being Complied.</b></p> <p>As per availability the sand stone is being provided to the locals free of cost.</p>  |
| ii   | <p>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</p>   | <p style="text-align: center;"><b>Being Complied.</b></p> <p>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.</p>  |

|                           |   |   |
|---------------------------|---|---|
|                           | of ground water and surface water and occupational and other diseases due to the mining operation.  |   |
| lii                       | <p>Corporate Environment Responsibility:</p> <p>a)The company shall have a well laid down Environment Policy approved by the Board of Directors.</p> <p>b)The Environment Policy shall prescribe for standard operating process/ procedures to bring into focus any infringements/deviation/violation of the environmental of forest norms/conditions.</p> <p>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.</p> <p>To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/ violations of environmental norms to the Board of Directors of the company and /or shareholders at large.</p> | <p><b>Being Complied.</b></p> <p>The company has an Environmental policy duly signed by the Managing Director on Board.</p> <p>The environmental policy governs the SOPs for compliance of the stipulations within the frame work of regulatory requirements of environment / Forest Norms.</p> <p>There is compliance monitoring system is in place to take care of alert / reporting of compliance / non compliances of the regulatory requirements to the Mines Head &amp; Head office (Compliance Committee).</p> |
| <b>General Conditions</b> |   |   |
| i                         | No change in mining technology and scope of working should be made without prior approval of the ministry of Environment & Forest.  | <b>Noted</b>  |
| ii                        | No change in the calendar plan for quantum of mineral coal and waste should be made.  | <b>Noted</b>  |
| iii                       | Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM10, PM2.5, SO2, and NOx monitoring. Location of the stations shall be decided based on   | <p><b>Being Complied.</b></p> <p>Four ambient air quality monitoring stations (Core Zone) &amp; Four ambient air quality monitoring stations (Buffer Zone) have been established and regular monitoring is being carried out.</p>   |



|    |  |  |
|----|--|--|
|    | <p>meteorological data topographical features and environmentally and 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.</p>  | <p>Reports are being periodically furnished to CECB. Copy of AAQ Monitoring Report from the period <b>October 2021 to March 2022</b> is enclosed as <b><u>Annexure –8.</u></b></p> <p>Also installed 01 nos of <b>CAAQMS</b> (Continuous Ambient Air Quality Monitoring System) at Banjikhoh, (at Mine lease boundary towards the village) for real time monitoring of environmental quality parameters i.e. PM 2.5, PM 10, NO,NO2, NOX, SO2, CO photograph enclosed as <b><u>Annexure – 8 A</u></b></p>   |
| iv | <p>Data on Ambient air quality (PM10, PM 2.5, SO2, NOX) monitoring location of the stations shall be decided based on the meteorological data, topographical 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.</p> | <p><b>Being Complied.</b></p> <p>All AAQM stations are decided based on the on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the state Pollution Control Board.</p> <p>Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr etc. carried out once in six months.</p> <p>Heavy metals Monitoring report for the month of March 2022 is attached as <b><u>Annexure No. 9</u></b></p>  |
| v  | <p>Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operation of HEMM, etc should be provided with ear plugs/muffs.</p>   | <p><b>Being Complied.</b></p> <p>Ear muffs/plugs has been provided to the all workers engaged in blasting and drilling operations. The Noise monitoring report period <b>October 2021 to March 2022</b> is enclosed as <b><u>Annexure-10</u></b></p>   |
| vi | <p>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<sup>th</sup> May 1993 and 31<sup>st</sup> December 1993 or as amended from time to time before discharge. Oil and grease trap should be installed before discharge of workshop effluents.</p>                  | <p><b>Being Complied.</b></p> <p>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 &amp; Greenbelt development.</p> <p>Photograph of Effluent Treatment Plat is attached as <b><u>Annexure – 10A.</u></b></p> <p>The treated water quality analysis reports are being periodically furnished to CECB.</p> <p>Copy of Analysis Report for the month of March 2022 is enclosed as <b><u>Annexure –10B</u></b></p> |

|      |   |  |
|------|---|--|
|      |   |  |
| 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.   | <p><b>Being Complied.</b></p> <p>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.</p> <p>The vehicle used for transporting the minerals are covered and optimally loaded.</p>   |
| viii | Monitoring of Environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the state pollution control board and data got analyzed through a laboratory recognized under EPA Rules,1986. | <p><b>Being Complied.</b></p> <p>Environmental monitoring is being carried out through CECB &amp; MoEF &amp; CC approved &amp; NABL accredited Laboratory i.e. Ultimate Envirollytical Solutions Raipur.</p> <p>Approval letter of Monitoring Agency from CECB Raipur, MoEF &amp; CC &amp; NABL accredited Laboratory certificate is attached as <b><u>Annexure No. - 11</u></b></p> |
| ix   | 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 aspect.   | <p><b>Being Complied.</b></p> <p>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.</p>  |
| x    | 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.   | <p><b>Being Complied.</b></p> <p>Occupational health surveillance is undertaken as per DGMS guidelines.</p>  |
| 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.  | <p><b>Being Complied.</b></p> <p>A separate Environmental Management Department is functioning at Coal Mine under the direct control of a senior executive.</p>  |
| 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.  | <p><b>Being Complied.</b></p> <p>The funds earmarked for environmental protection measures has been budgeted separately and not been diverted for other purposes. Environmental Expenditure details from <b>October 2021 to March 2022</b> is Enclosed as <b><u>Annexure – 12</u></b></p>  |

|      |  |   |
|------|--|---|
|      |  | 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 with the State pollution control Board and may also be seen at the website of the ministry of environment & forest at <a href="https://envfro.nic.in">https://envfro.nic.in</a> . | <b>Complied.</b>  |
| 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.   | <b>Complied.</b><br>The EC documents are uploaded on the company's website<br>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.  | <b>Complied by Prior Allottee.</b>  |
| 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   | <b>Complied.</b><br>Upload the EC Clearance letter & Half yearly compliance report on the company's website i.e.  |

|       |   |   |
|-------|---|---|
|       | <p>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 and in corporate office and on company's website</p>                      | <p><a href="http://www.hindalco.com/sustainability/regulatory-compliances">http://www.hindalco.com/sustainability/regulatory-compliances</a> 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.</p>          |
| xvii  | <p>The project proponent shall submit six monthly compliance reports on status of compliance of the stipulated environmental clearance conditions (Both in hard copy and in e- mail) to the respective Regional Office of the Ministry, Respective Zonal officer's of CPCB and the SPCB. Compliance of the EC conditions be monitored by the MoEF and other concerned agencies.</p>   | <p><b>Complied.</b></p> <p>The last Half Yearly Compliance report for the period from <b>April 2021 to September 2021</b> was submitted to IRO - MoEF &amp; CC office, Raipur &amp; Delhi, CECB Raigarh &amp; Raipur, CPCB Bhopal &amp; Delhi dated 18.11.2021.</p>   |
| xviii | <p>The Regional Office of this ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office (s) of the Regional Office by furnishing the requisite data / information/ monitoring reports.</p>  | <p><b>Complied.</b></p> <p>Now Raipur, Integrated Regional Office is looking after EC monitoring &amp; compliances full co – operation has been extended to Regional Officer by furnishing requisite data information / monitoring reports</p>  |
| xix   | <p>The Environmental Statement for each financial year ending 31 March in Form –V is mandated to be submitted by the project proponent for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently shall be uploaded on the company's web site along with the status of compliance of EC conditions and shall be sent to the respective Regional Officers of the MoEF &amp; CC by E- mail</p> | <p><b>Complied.</b></p> <p>Submitted the Environmental Statement Report (In Form - V) for the FY 2020 -21 to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, dated 15.09.2021 and also uploaded in the company's website also E-mailed the EC Compliance report to IRO -MoEF &amp; CC Raipur.</p> |

|   |  |               |
|---|--|---------------|
| 5 | The Ministry or other competent authority may stipulated any further condition for environmental Protection.   | <b>Noted.</b> |
| 6 | Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract the provisions of the Environmental (Protection) Act, 1986   | <b>Noted.</b> |
| 7 | The above condition will be 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. | <b>Noted.</b> |
| 8 | The Environmental Clearance is subjected to the outcome of the case filed by Chhattisgarh Environmental Conservation Board, in the court of Chief Judicial Magistrate, Raigarh, which is pending.  | <b>Noted.</b> |

# Annexure-1

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: 24<sup>th</sup> May, 2019

To,

The Assistant Vice-President (Corporate-Affairs)  
M/s Hindalco Industries Limited,  
Aditya Birla Centre, 3<sup>rd</sup> 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 25<sup>th</sup> January, 2019 on the above-mentioned subject.


2. The Ministry of Environment, Forest and Climate Change has granted environmental clearance vide letter dated 12<sup>th</sup> 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 23<sup>rd</sup> 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 16<sup>th</sup> 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 13<sup>th</sup> December, 2018.
5. The EAC, in its meeting held on 21<sup>st</sup> February, 2019, has recommended the proposed amendment for change in mining operations, and thus amendment in the environmental clearance dated 12<sup>th</sup> March, 2013, read with communication dated 16<sup>th</sup> 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 12<sup>th</sup> March, 2013, read with communication dated 16<sup>th</sup> 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 12<sup>th</sup> March, 2013, read with communication dated 16<sup>th</sup> April, 2015, shall remain unchanged.

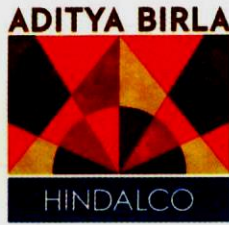
  
24/5/2019  
**(S. K. Srivastava)**  
**Scientist E**

**Copy to:**

1. The Secretary, Ministry of Coal, New Delhi
2. 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



# Annexure-2



Ref. No. HIL/GP-IV-4/CCO/2022-23/009

Dated: 04.04.2022

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 March-2022 of Gare Palma IV/4 Coal Mine.**


Sir,

Enclosed please find the Statistical Return for the month of March-2022 of Gare Palma-IV/4 Coal Mine.

This is for your kind information please.

Thanking you,

Yours sincerely,

  
Deepak Prasad Lenka  
Mine Manager  
Gare Palma-IV/4 Coal Mine  
Banjikhoh, Raigarh



Encl.: as above.

Copy to: OSD, CCO, Bilaspur.

**Hindalco Industries Limited**

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

**Statistical Return for the month of March -2022.**

- 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

**Table-1: Production of Raw Coal, Clean Coal and Middling etc.**

| Coal Type      | Production (In Thousand Tonnes) |             |        |                            |             |         |
|----------------|---------------------------------|-------------|--------|----------------------------|-------------|---------|
|                | During Month                    |             |        | Progressive (F.Y. 2021-22) |             |         |
|                | Opencast                        | Underground | Total  | Opencast                   | Underground | Total   |
| Coking         | -                               | -           | -      | -                          | -           | -       |
| Non Coking     | 15.364                          | 0.000       | 15.364 | 559.956                    | 0.000       | 559.956 |
| Total Raw Coal | 15.364                          | 0.000       | 15.364 | 559.956                    | 0.000       | 559.956 |
| Clean Coal     | -                               | -           | -      | -                          | -           | -       |
| Middlings      | -                               | -           | -      | -                          | -           | -       |
| Rejects        | -                               | -           | -      | -                          | -           | -       |

**Table 2 : Despatch of Raw Coal, Clean Coal and Middling etc.**

| Coal Type      | Despatch (In Thousand Tonnes) |                            | Mode of Despatch (In Thousand Tonnes) |          |   |
|----------------|-------------------------------|----------------------------|---------------------------------------|----------|---|
|                | During Month                  | Progressive (F.Y. 2021-22) | Road                                  | Others   |   |
| Coking         | -                             | -                          | -                                     | -        | - |
| Non Coking     | 24.70289                      | 562.59465                  | -                                     | 24.70289 | - |
| Total Raw Coal | 24.70289                      | 562.59465                  | -                                     | 24.70289 | - |
| Clean Coal     | -                             | -                          | -                                     | -        | - |
| Middlings      | -                             | -                          | -                                     | -        | - |
| Rejects        | -                             | -                          | -                                     | -        | - |

\* Domestic Consumption - Nil

**Table 3 : Pit Head Closing Stock of 31.03.2022**

| Coal Type      | Pit Head Closing Stock (In Thousand Tonnes) |  |
|----------------|---|--|
|                | During Month                                |  |
| Coking         | -   |  |
| Non Coking     | 24.252216                                   |  |
| Total Raw Coal | 24.252216                                   |  |
| Clean Coal     | -   |  |
| Middlings      | -   |  |
| Rejects        | -   |  |

Signature:

Designation: Owner/ Agent/ Manager

Date :- 04.04.2022



*Handwritten signature and date 4/4/22*

# Annexure - 3

**CSR & Sustainability Expenditure Details**  
**From October 2021 to March 2022**  
**Hindalco Industries Ltd. Gare Palma IV/4**

| <b>Sr. No.</b> | <b>Focused Area/ Project Activities</b> | <b>Summary Cost (In Lakhs)</b> |
|----------------|---|--------------------------------|
| 1              | Education                               | 2.700                          |
| 2              | Health                                  | 50.795                         |
| 3              | Sustainable Livelihood under CSR        | 1.160                          |
| 4              | Infra - Structure                       | 1.205                          |
| 5              | Social                                  | 6.805                          |
| 6              | Other ( if any)                         | 0.320                          |
| 7              | Under Sustainable Development           | 25.820                         |
|                | <b>Total</b>                            | <b>88.805</b>                  |

# Annexure-4

## 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 lease area/OB Dump. | 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 etc. |
| 2016   |                               | 6500                          | 90.00             | 5850                     | 2.3                                  |   |
| 2017   |                               | 10000                         | 87.00             | 8700                     | 3.5                                  |   |
| 2018   |                               | 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                                  |   |
| <b>Total</b>   |                               | <b>99821</b>                  | <b>87.71</b>      | <b>87554</b>             | <b>35.0</b>                          |   |

*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**



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



**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**

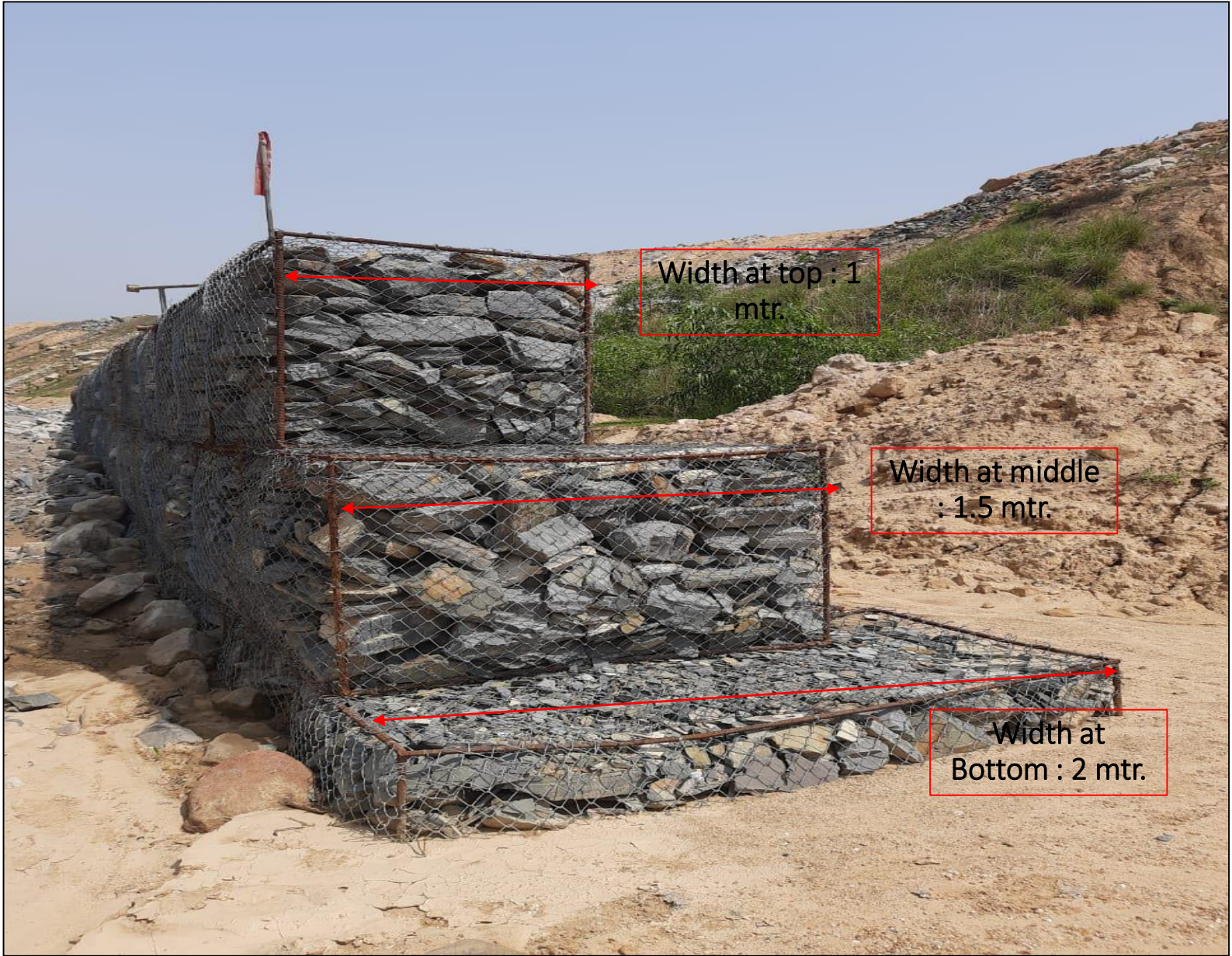




Total Height : 3 mtr.

Total Length : 55 mtr.

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



Width at top : 1  
mtr.

Width at middle  
: 1.5 mtr.

Width at  
Bottom : 2 mtr.



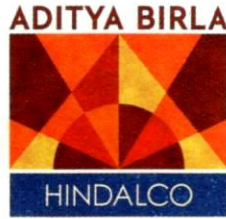
Length : 1 mtr.

Length : 1 mtr.

Length : 1 mtr.



**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 – Banjikhoh, Tehsil – Tamnar, District – Raigarh, Chhattisgarh- Compliance of reg.**

**Ref.:**

1. Letter No. – F.No.3-18/2013(ENV)/5931 dated 28<sup>th</sup> November 2019.
2. Mine visit of Dr. P.R Sakhare (Scientist –D/ Joint Director) for the monitoring of compliance of condition stipulated in the environment clearance dated 7<sup>th</sup> 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.                     | <b>Complied.</b><br>In the 1 <sup>st</sup> Phase we have constructed approx. 55 m long gabion/retaining wall at the toe of permanent dump slope near Patch "C" in Banjikhoh, GP IV/4 Coal Mines.<br><br>The Gabion /retaining walls had been made of GI wire net cages filled with stone boulders and anchored with angle iron as per specification.<br><br>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. |

*D*

**Hindalco Industries Limited**

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

|  |  |   |
|--|--|---|
|  |  | <p>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 &amp; ensure you that it will be carried out as &amp; when required in future also at mine site.</p> <p>Photographs of constructed gabion/Retaining wall attached as <b>Annexure No. - 1</b></p> |
|--|--|---|

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-5





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

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

|   |  |                             |   |
|---|--|-----------------------------|---|
| Name & Address Of The Customer  |  | REPORT NO                   | UES/TR/21-22/3501                         |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA, POST MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO                  | UES/21-22/W/6292                          |
|   |  | DATE OF SAMPLING            | 27/10/2021                                |
|   |  | DATE OF RECEIPT             | 28/10/2021                                |
|   |  | DATE OF REPORT              | 01/11/2021                                |
|   |  | DATE OF ANALYSIS            | START: 28/10/2021    END: 01/11/2021      |
| <b>SAMPLE DETAILS</b>   |  |                             |   |
| SAMPLE TYPE   | WASTE WATER  | ORDER /REFERENCE/           | M/PO/SRV/2122/0045,<br>DTD: :24-JULY-2021 |
| CUSTOMER SAMPLE ID  | STP DRIET BANJHAWAL  | SAMPLE CONDITION AT RECEIPT | OK  |
| PACKING OF SAMPLE   | 3 L X 1 NO. PFC CAN<br>1 L X 1 NO. PFC CAN<br>1 L X 1 NO. GLASS BOTTLE | GRADED                      | SAMPLE COLLECTED BY<br>LABORATORY CHEMIST |
| SAMPLING PROCEDURE  | IS:3025(PART 1):1997 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-V] PART-A INLAND SURFACE WATER | RESULT    |
|---------|--|-------|--|---|-----------|
| 1       | Colour   | Hazen | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I   | <1        |
| 2       | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I   | Agreeable |
| 3       | Temperature  | °C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13                 | Shall not exceed 5°C above the receiving water temperature                        | 24.2      |
| 4       | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>-</sup> -B, 4-92 | 5.5 to 9.0  | 7.56      |
| 5       | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-G, 4-69              | 1.0   | N.D.      |
| 6       | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540- B, 2-66                | 100   | 72.0      |
| 7       | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153              | 5.0   | N.D.      |
| 8       | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B&D, 4-84 & 87        | 2.0   | 0.11      |
| 9       | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 0.1   | N.D.      |
| 10      | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 5.0   | 0.16      |
| 11      | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 3.0   | N.D.      |
| 12      | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105               | 2.0   | N.D.      |
| 13      | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23                 | 0.01  | N.D.      |
| 14      | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.2   | N.D.      |
| 15      | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.05  | N.D.      |
| 16      | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69              | 2.0   | N.D.      |
| 17      | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 5520-B, 5-17                 | 250   | 116.0     |
| 18      | Biochemical Oxygen Demand (BOD)                          | mg/L  | IS 3025 (Part 4):1993, RA 2003                               | 30  | 18.4      |
| 19      | Oil & Grease   | mg/L  | IS 3025 (Part 39):1991, RA 2003,                             | 10.0  | N.D.      |
| 20      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) | mg/L  | IS 3025 (Part 43):1992, RA 2003                              | 1.0   | N.D.      |

REMARKS: mg/L, unless 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 same testing.

|                                    |  |   |
|------------------------------------|--|---|
| <br>01/11/21<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>01/11/21<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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



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

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|   |  |                             |  |
|---|--|-----------------------------|--|
| Name & Address of The Customer  |  | REPORT NO                   | UES/TR/21-22/04171                       |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA, POST MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO                  | UES/21-22/W/07485                        |
|   |  | DATE OF SAMPLING            | 23/11/2021                               |
|   |  | DATE OF RECEIPT             | 24/11/2021                               |
|   |  | DATE OF REPORT              | 01/12/2021                               |
|   |  | DATE OF ANALYSIS            | START: 24/11/2021    END: 27/11/2021     |
| <b>SAMPLE DETAILS</b>   |  |                             |  |
| SAMPLE TYPE   | WASTE WATER  | ORDER /REFERENCE:           | R/PO/SVV/2122/0045,<br>DSD. 24-JULY-2021 |
| CUSTOMER SAMPLE ID  | ETP INLET SAMUDRAL   | SAMPLE CONDITION AT RECEIPT | OK                                       |
| PACKING OF SAMPLE   | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | SEALED                      | SAMPLE COLLECTED BY                      |
| SAMPLING PROCEDURE  | IS:3025(PART 1):1997 RA 2003; APHA 22ND Ed. 2012, 1000-B, 1-39         |                             | LABORATORY CHEMIST                       |
|   |  | 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 <sup>nd</sup> Ed. 2012, 2120-B, 2-6           | See 6 of Annexure-I  | <1        |
| 2       | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6           | See 6 of Annexure-I  | Agreeable |
| 3       | Temperature  | 'C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13          | Shall not exceed 5'C above the receiving water temperature                         | 25.3      |
| 4       | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H'-B, 4-92       | 5.5 to 9.0   | 7.48      |
| 5       | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-G, 4-69       | 1.0  | N.D.      |
| 6       | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540- D, 2-66         | 100  | 56.0      |
| 7       | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153       | 9.0  | N.D.      |
| 8       | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B&D, 4-84 & 87 | 2.0  | 0.14      |
| 9       | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18          | 0.1  | N.D.      |
| 10      | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18          | 5.0  | 0.08      |
| 11      | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18          | 3.0  | N.D.      |
| 12      | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105        | 2.0  | N.D.      |
| 13      | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23          | 0.01   | N.D.      |
| 14      | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38          | 0.2  | N.D.      |
| 15      | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38          | 0.05   | N.D.      |
| 16      | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69       | 2.0  | N.D.      |
| 17      | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 5520-B, 5-17          | 250  | 144.0     |
| 18      | Biochemical Oxygen Demand (BOD)                          | mg/L  | IS 3025 (Part 44):1993, RA 2003                       | 30   | 21.4      |
| 19      | Oil & Grease   | mg/L  | IS 3025 (Part 39):1991, RA 2003,                      | 10.0   | N.D.      |
| 20      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) | mg/L  | IS 3025 (Part 43):1992, RA 2003                       | 1.0  | N.D.      |

REMARKS: mg/l, mg/gm per liter, N.D.: Not Detected.

Terms & conditions

- > The report for publication, circulation 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.

|   |   |   |
|---|---|---|
| <br><b>REVIEWED BY</b> |  | <b>For ULTIMATE ENVIROLYTICAL SOLUTIONS</b><br><br><b>AUTHORIZED SIGNATORY</b> |
|---|---|---|

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



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

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

|   |  |                                    |   |                    |
|---|--|------------------------------------|---|--------------------|
| <b>Name &amp; Address Of The Customer</b>   |  | <b>REPORT NO</b>                   | UES/TR/21-22/04914                      |                    |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA, POST MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | <b>LAB REF NO</b>                  | UES/21-22/W/08753                       |                    |
|   |  | <b>DATE OF SAMPLING</b>            | 22/12/2021                              |                    |
|   |  | <b>DATE OF RECEIPT</b>             | 23/12/2021                              |                    |
|   |  | <b>DATE OF REPORT</b>              | 01/01/2022                              |                    |
|   |  | <b>DATE OF ANALYSIS</b>            | START: 24/12/2021                       | END: 28/12/2021    |
|   |  | <b>SAMPLE DETAILS</b>              |   |                    |
| <b>SAMPLE TYPE</b>  | WASTE WATER  | <b>ORDER /REFERENCE:</b>           | N/PO/SN/2122/0045,<br>STD. 24-JULY-2021 |                    |
| <b>CUSTOMER SAMPLE ID</b>   | EFV IMLEY BAR/SRNO.  | <b>SAMPLE CONDITION AT RECEIPT</b> | OK                                      |                    |
| <b>PACKING OF SAMPLE</b>  | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | <b>SEALED</b>                      | <b>SAMPLE COLLECTED BY</b>              | LABORATORY CHEMIST |
| <b>SAMPLING PROCEDURE</b>   | IS:3025 (PART 1):1997 RA 2003; APHA 22ND<br>ED. 2012, 1660-B, 1-39     | <b>QUANTITY RECEIVED</b>           | 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 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-1  | <1        |
| 2       | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-1  | Agreeable |
| 3       | Temperature  | °C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13                 | Shall not exceed 5°C above the receiving water temperature                         | 25.4      |
| 4       | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>-</sup> -B, 4-92 | 5.5 to 9.0   | 7.52      |
| 5       | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-G, 4-69              | 1.0  | N.D.      |
| 6       | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540-D, 2-66                 | 100  | 58.2      |
| 7       | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153              | 5.0  | N.D.      |
| 8       | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B&D, 4-84 & 87        | 2.0  | 0.10      |
| 9       | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 0.1  | N.D.      |
| 10      | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 5.0  | 0.09      |
| 11      | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 3.0  | N.D.      |
| 12      | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105               | 2.0  | N.D.      |
| 13      | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23                 | 0.01   | N.D.      |
| 14      | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.2  | N.D.      |
| 15      | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.05   | N.D.      |
| 16      | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69              | 2.0  | N.D.      |
| 17      | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 5520-B, 5-17                 | 250  | 148.0     |
| 18      | Biochemical Oxygen Demand (BOD)                          | mg/L  | IS 3025 (Part 44):1993, RA 2003                              | 30   | 22.4      |
| 19      | Oil & Grease   | mg/L  | IS 3025 (Part 39):1991, RA 2003,                             | 10.0   | N.D.      |
| 20      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> 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, circulation or as legal document is forbidden.
- > Test sample will be retained for 15 days after issue of test report.
- > This is for information to the party has asked for advice test.

|                 |  |  |
|-----------------|--|--|
| <br>REVIEWED BY |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY |
|-----------------|--|--|

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



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

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

|   |   |                                    |  |                    |
|---|---|------------------------------------|--|--------------------|
| <b>Name &amp; Address Of The Customer</b>   |   | <b>REPORT NO</b>                   | UES/TR/21-22/05975                       |                    |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA, POST MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |   | <b>LAB REF NO</b>                  | UES/21-22/W/010293                       |                    |
|   |   | <b>DATE OF SAMPLING</b>            | 24/01/2022                               |                    |
|   |   | <b>DATE OF RECEIPT</b>             | 25/01/2022                               |                    |
|   |   | <b>DATE OF REPORT</b>              | 02/02/2022                               |                    |
|   |   | <b>DATE OF ANALYSIS</b>            | START: 25/01/2022                        | END: 29/01/2022    |
| <b>SAMPLE DETAILS</b>   |   |                                    |  |                    |
| <b>SAMPLE TYPE</b>  | WASTE WATER   | <b>CHECK /REFERENCE:</b>           | M/PO/GRV/2122/0045,<br>DTD. 24-JULY-2022 |                    |
| <b>CUSTOMER SAMPLE ID</b>   | STP IWANT MARJIRHOL   | <b>SAMPLE CONDITION AT RECEIPT</b> | OK                                       |                    |
| <b>PACKING OF SAMPLE</b>  | 3 X I NO. PVC CAN<br>1 X I NO. PVC CAN<br>1 X I NO. GLASS BOTTLE  | <b>SEALED</b>                      | <b>SAMPLE COLLECTED BY</b>               | LABORATORY CHEMIST |
| <b>SAMPLING PROCEDURE</b>   | IS:3025(PART 1):1997 RA 2003; APHA 22ND<br>ED. 2012, 1050-B, 1-39 | <b>QUANTITY RECEIVED</b>           | 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 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | <1        |
| 2       | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | Agreeable |
| 3       | Temperature  | °C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13                 | Shall not exceed 5°C above the receiving water temperature                         | 25.2      |
| 4       | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>-</sup> -B, 4-92 | 5.5 to 9.0   | 7.49      |
| 5       | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-G, 4-69              | 1.0  | N.D.      |
| 6       | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540-D, 2-66                 | 100  | 62.0      |
| 7       | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153              | 5.0  | N.D.      |
| 8       | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B&D, 4-84 & 87        | 2.0  | 0.11      |
| 9       | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 0.1  | N.D.      |
| 10      | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 5.0  | 0.08      |
| 11      | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 3.0  | N.D.      |
| 12      | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105               | 2.0  | N.D.      |
| 13      | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23                 | 0.01   | N.D.      |
| 14      | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.2  | N.D.      |
| 15      | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.05   | N.D.      |
| 16      | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69              | 2.0  | N.D.      |
| 17      | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 5520-B, 5-17                 | 250  | 152.0     |
| 18      | Biochemical Oxygen Demand (BOD)                          | mg/L  | IS 3025 (Part 44):1993, RA 2003                              | 30   | 20.6      |
| 19      | Oil & Grease   | mg/L  | IS 3025 (Part 39):1991, RA 2003,                             | 10.0   | N.D.      |
| 20      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) | mg/L  | IS 3025 (Part 43):1992, RA 2003                              | 1.0  | N.D.      |

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

**Terms & conditions:**

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|                        |  |   |
|------------------------|--|---|
| <br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br><b>AUTHORIZED SIGNATORY</b> |
|------------------------|--|---|

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



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

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|   |  |                             |                          |                    |
|---|--|-----------------------------|--------------------------|--------------------|
| Name & Address Of The Customer  |  | REPORT NO                   | UES/TN/21-22/07923       |                    |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA, POST MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO                  | UES/21-22/W/013107       |                    |
|   |  | DATE OF SAMPLING            | 24/02/2022               |                    |
|   |  | DATE OF RECEIPT             | 25/02/2022               |                    |
|   |  | DATE OF REPORT              | 01/03/2022               |                    |
|   |  | DATE OF ANALYSIS            | START: 25/02/2022        | END: 01/03/2022    |
| <b>SAMPLE DETAILS</b>   |  |                             |                          |                    |
| SAMPLE TYPE   | WASTE WATER  | ORDER /REFERENCE:           | R/PO/009/2122/0045, DTD. |                    |
| CUSTOMER SAMPLE ID  | STP INLET BANKHETA   | SAMPLE CONDITION AT RECEIPT | OK                       |                    |
| PACKING OF SAMPLE   | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | SEALED                      | SAMPLE COLLECTED BY      | LABORATORY CHEMIST |
| SAMPLING PROCEDURE  | IS:3025 (PART 1):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 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | <1        |
| 2       | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | Agreeable |
| 3       | Temperature  | °C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13                 | Shall not exceed 5°C above the receiving water temperature                         | 25.6      |
| 4       | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>-</sup> -B, 4-92 | 5.5 to 9.0   | 7.38      |
| 5       | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-G, 4-69              | 1.0  | N.D.      |
| 6       | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540-D, 2-66                 | 100  | 86.0      |
| 7       | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153              | 5.0  | N.D.      |
| 8       | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B&D, 4-84 & 87        | 2.0  | 0.14      |
| 9       | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 0.1  | N.D.      |
| 10      | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 5.0  | 0.06      |
| 11      | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 3.0  | N.D.      |
| 12      | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105               | 2.0  | N.D.      |
| 13      | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23                 | 0.01   | N.D.      |
| 14      | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.2  | N.D.      |
| 15      | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.05   | N.D.      |
| 16      | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69              | 2.0  | N.D.      |
| 17      | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 5520-B, 5-17                 | 250  | 184.0     |
| 18      | Biochemical Oxygen Demand (BOD)                          | mg/L  | IS 3025 (Part 44):1993, RA 2003                              | 30   | 22.8      |
| 19      | Oil & Grease   | mg/L  | IS 3025 (Part 39):1991, RA 2003,                             | 10.0   | N.D.      |
| 20      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) | mg/L  | IS 3025 (Part 43):1992, RA 2003                              | 1.0  | N.D.      |

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

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

|                                    |   |   |
|------------------------------------|---|---|
| <br>01/03/22<br><b>REVIEWED BY</b> | <br><b>For ULTIMATE ENVIROLYTICAL SOLUTIONS</b> | <br>01/03/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|---|---|

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



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

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|   |  |                             |   |
|---|--|-----------------------------|---|
| Name & Address Of The Customer  |  | REPORT NO                   | UES/TR/21-22/06930                        |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA, POST MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO                  | UES/21-22/W/014623                        |
|   |  | DATE OF SAMPLING            | 28/03/2022                                |
|   |  | DATE OF RECEIPT             | 29/03/2022                                |
|   |  | DATE OF REPORT              | 02/04/2022                                |
|   |  | DATE OF ANALYSIS            | START:29/03/2022    END:02/04/2022        |
| <b>SAMPLE DETAILS</b>   |  |                             |   |
| SAMPLE TYPE   | RAPID WATER  | ORDER /REFERENCE:           | N/PO/ENV/2122/0045, DTD.                  |
| CUSTOMER SAMPLE ID  | ETP INLET WATER/DMOS   | SAMPLE CONDITION AT RECEIPT | OK  |
| PACKING OF SAMPLE   | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | SEALED                      | SAMPLE COLLECTED BY<br>LABORATORY CHEMIST |
| SAMPLING PROCEDURE  | IS:3025(PART 21):1997 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-19        | 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 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | <1        |
| 2       | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | Agreeable |
| 3       | Temperature  | °C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13                 | Shall not exceed 5°C above the receiving water temperature                         | 26.4      |
| 4       | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>-</sup> -B, 4-92 | 5.5 to 9.0   | 7.48      |
| 5       | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-CL-G, 4-69              | 1.0  | N.D.      |
| 6       | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540-D, 2-66                 | 100  | 92.0      |
| 7       | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153              | 5.0  | N.D.      |
| 8       | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B&D, 4-84 & 87        | 2.0  | 0.12      |
| 9       | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 0.1  | N.D.      |
| 10      | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 5.0  | 0.08      |
| 11      | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 3.0  | N.D.      |
| 12      | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-185               | 2.0  | N.D.      |
| 13      | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23                 | 0.01   | N.D.      |
| 14      | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.2  | N.D.      |
| 15      | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.05   | N.D.      |
| 16      | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69              | 2.0  | N.D.      |
| 17      | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 5520-B, 5-17                 | 250  | 164.0     |
| 18      | Biochemical Oxygen Demand (BOD)                          | mg/L  | IS 3025(Part 44):1993, RA 2003                               | 30   | 18.4      |
| 19      | Oil & Grease   | mg/L  | IS 3025(Part 39):1991, RA 2003,                              | 10.0   | N.D.      |
| 20      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) | mg/L  | IS 3025(Part 43):1992, RA 2003                               | 1.0  | N.D.      |

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

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|                                    |  |   |
|------------------------------------|--|---|
| <br>02/04/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/04/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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



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|   |  |                                    |   |                 |
|---|--|------------------------------------|---|-----------------|
| <b>Name &amp; Address Of The Customer</b><br><b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA,</b><br><b>POST -MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | <b>REPORT NO</b>                   | UES/TR/21-22/3502                         |                 |
|   |  | <b>LAB REF NO</b>                  | UES/21-22/W/6283                          |                 |
|   |  | <b>DATE OF SAMPLING</b>            | 27/10/2021                                |                 |
|   |  | <b>DATE OF RECEIPT</b>             | 28/10/2021                                |                 |
|   |  | <b>DATE OF REPORT</b>              | 01/11/2021                                |                 |
|   |  | <b>DATE OF ANALYSIS</b>            | START: 28/10/2021                         | END: 01/11/2021 |
| <b>SAMPLE DETAILS</b>   |  |                                    |   |                 |
| <b>SAMPLE TYPE</b>  | WASTE WATER  | <b>ORDER /REFERENCE:</b>           | N/PO/ERV/2122/0045,<br>DTD, 124-JULY-2021 |                 |
| <b>CUSTOMER SAMPLE ID</b>   | ETP OUTLET BANKHETA  | <b>SAMPLE CONDITION AT RECEIPT</b> | OK  |                 |
| <b>PACKING OF SAMPLE</b>  | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | <b>SEALED</b>                      | <b>SAMPLE COLLECTED BY</b>                | CHEMIST         |
| <b>SAMPLING PROCEDURE</b>   | IS:3025(PART 1):1987 RA 2003; APHA<br>22ND ED. 2012, 1060-B, 1-39      | <b>QUANTITY RECEIVED</b>           | 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 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | <1        |
| 2       | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | Agreeable |
| 3       | Temperature  | °C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13                 | Shall not exceed 5°C above the receiving water temperature                         | 24.0      |
| 4       | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>-</sup> -B, 4-92 | 5.5 to 9.0   | 7.56      |
| 5       | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-G, 4-69              | 1.0  | N.D.      |
| 6       | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540-D, 2-66                 | 100  | 22.0      |
| 7       | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153              | 5.0  | N.D.      |
| 8       | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B 4D, 4-84 & 87       | 2.0  | N.D.      |
| 9       | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 0.1  | N.D.      |
| 10      | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 5.0  | N.D.      |
| 11      | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 3.0  | N.D.      |
| 12      | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105               | 2.0  | N.D.      |
| 13      | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23                 | 0.01   | N.D.      |
| 14      | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.2  | N.D.      |
| 15      | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.05   | N.D.      |
| 16      | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69              | 2.0  | N.D.      |
| 17      | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 5520-B, 5-17                 | 250  | 14.0      |
| 18      | Biochemical Oxygen Demand (BOD)                          | mg/L  | IS 3025 (Part 4):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 <sub>6</sub> H <sub>5</sub> OH) | mg/L  | IS 3025 (Part 43):1992, RA 2003                              | 1.0  | N.D.      |

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

#### Terms & conditions

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

|                        |  |                                 |
|------------------------|--|---------------------------------|
| <br><b>REVIEWED BY</b> |  | <br><b>AUTHORIZED SIGNATORY</b> |
|------------------------|--|---------------------------------|

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

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



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

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| Name & Address Of The Customer   |  | REPORT NO                   | UES/TR/21-22/04172                       |                 |
|--|--|-----------------------------|--|-----------------|
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA,</b><br><b>POST -MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO                  | UES/21-22/W/07486                        |                 |
|  |  | DATE OF SAMPLING            | 23/11/2021                               |                 |
|  |  | DATE OF RECEIPT             | 24/11/2021                               |                 |
|  |  | DATE OF REPORT              | 01/12/2021                               |                 |
|  |  | DATE OF ANALYSIS            | START: 24/11/2021                        | END: 27/11/2021 |
| SAMPLE DETAILS   |  |                             |  |                 |
| SAMPLE TYPE  | WASTE WATER  | ORDER /REFERENCE:-          | R/PO/BBV/2112/0045,<br>DTD. 24-JULY-2021 |                 |
| CUSTOMER SAMPLE ID   | ETP OUTLET BANJERHOL   | SAMPLE CONDITION AT RECEIPT | OK                                       |                 |
| PACKING OF SAMPLE  | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | SEALED                      | SAMPLE COLLECTED BY                      | CHEMIST         |
| SAMPLING PROCEDURE   | IS-3025 (PART 1):1997 RA 2003; APHA<br>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 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | <1        |
| 2       | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | Agreeable |
| 3       | Temperature  | °C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13                 | Shall not exceed 5°C above the receiving water temperature                         | 24.8      |
| 4       | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>-</sup> -B, 4-92 | 5.5 to 9.0   | 7.10      |
| 5       | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-G, 4-69              | 1.0  | N.D.      |
| 6       | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540- D, 2-66                | 100  | 22.0      |
| 7       | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153              | 5.0  | N.D.      |
| 8       | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B & D, 4-84 & 87      | 2.0  | N.D.      |
| 9       | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 0.1  | N.D.      |
| 10      | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 5.0  | N.D.      |
| 11      | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 3.0  | N.D.      |
| 12      | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105               | 2.0  | N.D.      |
| 13      | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23                 | 0.01   | N.D.      |
| 14      | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.2  | N.D.      |
| 15      | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.05   | N.D.      |
| 16      | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69              | 2.0  | N.D.      |
| 17      | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 5520-B, 5-17                 | 250  | 16.0      |
| 18      | Biochemical Oxygen Demand (BOD)                          | mg/L  | IS 3025 (Part 44):1993, RA 2003                              | 30   | 2.8       |
| 19      | Oil & Grease   | mg/L  | IS 3025 (Part 39):1991, RA 2003                              | 10.0   | N.D.      |
| 20      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> 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.

|   |   |  |
|---|---|--|
| <br>01/12/21<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>01/12/21<br><b>AUTHORIZED SIGNATORY</b> |
|---|---|--|

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

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

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

|  |  |                  |                             |   |
|--|--|------------------|-----------------------------|---|
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA,</b><br><b>POST -MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | REPORT NO        | UES/TR/21-22/04915          |   |
|  |  | LAB REF NO       | UES/21-22/W/08754           |   |
|  |  | DATE OF SAMPLING | 22/12/2021                  |   |
|  |  | DATE OF RECEIPT  | 23/12/2021                  |   |
|  |  | DATE OF REPORT   | 01/01/2022                  |   |
|  |  | DATE OF ANALYSIS | START: 24/12/2021           | END: 28/12/2021                         |
| <b>SAMPLE DETAILS</b>  |  |                  |                             |   |
| SAMPLE TYPE  | WASTE WATER  |                  | ORDER /REFERENCE:           | N/PO/009/212/0045,<br>DPO: 24-July-2021 |
| CUSTOMER SAMPLE ID   | EYP OUTLET BANJIRAO  |                  | SAMPLE CONDITION AT RECEIPT | OK                                      |
| PACKING OF SAMPLE  | 3 L X 1 NO. PVC CAN  | SEALED           | SAMPLE COLLECTED BY         | CHEMIST                                 |
|  | 1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE                  |                  |                             |   |
| SAMPLING PROCEDURE   | IS: 3025 (PART I):1997 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39 |                  | QUANTITY RECEIVED           | 5 LTR                                   |

| <b>TEST REPORT</b> |  |       |   |  |           |
|--------------------|--|-------|---|--|-----------|
| 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 <sup>nd</sup> Ed. 2012, 2120-B, 2-6             | See 6 of Annexure-I  | <1        |
| 2                  | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6             | See 6 of Annexure-I  | Agreeable |
| 3                  | Temperature  | °C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13            | Shall not exceed 5°C above the receiving water temperature.                        | 24.9      |
| 4                  | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H-B, 4-92          | 5.5 to 9.0   | 7.23      |
| 5                  | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-C1-G, 4-69         | 1.0  | N.D.      |
| 6                  | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540-D, 2-66            | 100  | 24.0      |
| 7                  | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153         | 5.0  | N.D.      |
| 8                  | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-B & D, 4-B4 & 87 | 2.0  | N.D.      |
| 9                  | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18            | 0.1  | N.D.      |
| 10                 | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18            | 5.0  | N.D.      |
| 11                 | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18            | 3.0  | N.D.      |
| 12                 | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105          | 2.0  | N.D.      |
| 13                 | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23            | 0.01   | N.D.      |
| 14                 | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38            | 0.2  | N.D.      |
| 15                 | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38            | 0.05   | N.D.      |
| 16                 | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69         | 2.0  | N.D.      |
| 17                 | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 5520-B, 5-17            | 250  | 20.0      |
| 18                 | Biochemical Oxygen Demand (BOD)                          | mg/L  | IS 3025 (Part 44):1993, RA 2003                         | 30   | 3.2       |
| 19                 | Oil & Grease   | mg/L  | IS 3025 (Part 39):1991, RA 2003                         | 10.0   | N.D.      |
| 20                 | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> 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 returned for 15 days after issue of test report. Any other agreement with customer.
- > This is for information as the party has asked for above test.

|                 |  |  |
|-----------------|--|--|
| <br>REVIEWED BY |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY |
|-----------------|--|--|

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

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|  |  |                             |  |                 |
|--|--|-----------------------------|--|-----------------|
| Name & Address Of The Customer   |  | REPORT NO                   | UES/TR/21-22/05976                       |                 |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA,</b><br><b>POST -MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO                  | UES/21-22/W/010294                       |                 |
|  |  | DATE OF SAMPLING            | 24/01/2022                               |                 |
|  |  | DATE OF RECEIPT             | 25/01/2022                               |                 |
|  |  | DATE OF REPORT              | 02/02/2022                               |                 |
|  |  | DATE OF ANALYSIS            | START: 25/01/2022                        | END: 29/01/2022 |
|  |  | <b>SAMPLE DETAILS</b>       |  |                 |
| SAMPLE TYPE  | WASTE WATER  | ORDER /REFERENCE:           | N/PO/SRV/2122/0045,<br>DSD. 24-JULY-2021 |                 |
| CUSTOMER SAMPLE ID   | ETP OUTLET BANJIKROL   | SAMPLE CONDITION AT RECEIPT | OK                                       |                 |
| PACKING OF SAMPLE  | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | SEALED                      | SAMPLE COLLECTED BY                      | CHMMIST         |
| SAMPLING PROCEDURE   | IS:3025(PART I):1987 RA 2003/ APHA<br>22ND ED. 2012, 1060-B, 1-39      | QUANTITY RECEIVED           | 5 LTR                                    |                 |

| <b>TEST REPORT</b> |  |       |   |  |           |
|--------------------|--|-------|---|--|-----------|
| 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 <sup>nd</sup> Ed. 2012, 2120-B, 2-6             | See 6 of Annexure-I  | <1        |
| 2                  | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6             | See 6 of Annexure-I  | Agreeable |
| 3                  | Temperature  | °C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13            | Shall not exceed 5°C above the receiving water temperature                         | 25.1      |
| 4                  | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H-B, 4-92          | 5.5 to 9.0   | 7.46      |
| 5                  | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-G, 4-69         | 1.0  | N.D.      |
| 6                  | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540-D, 2-66            | 100  | 28.0      |
| 7                  | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153         | 5.0  | N.D.      |
| 8                  | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B & D, 4-84 & 87 | 2.0  | N.D.      |
| 9                  | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18            | 0.1  | N.D.      |
| 10                 | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18            | 5.0  | N.D.      |
| 11                 | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18            | 3.0  | N.D.      |
| 12                 | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105          | 2.0  | N.D.      |
| 13                 | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23            | 0.01   | N.D.      |
| 14                 | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38            | 0.2  | N.D.      |
| 15                 | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38            | 0.05   | N.D.      |
| 16                 | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69         | 2.0  | N.D.      |
| 17                 | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 5520-B, 5-17            | 250  | 24.0      |
| 18                 | Biochemical Oxygen Demand (BOD)                          | mg/L  | IS 3025 (Part 44):1993, RA 2003                         | 30   | 3.4       |
| 19                 | Oil & Grease   | mg/L  | IS 3025 (Part 39):1991, RA 2003                         | 10.0   | N.D.      |
| 20                 | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> 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 15 days after issue of test report unless otherwise agreed with customer.
- ▶ This is for information as the party has asked for above testing only.

|                                    |  |   |
|------------------------------------|--|---|
| <br>02/02/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/02/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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

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Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
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|  |  |                             |  |                 |
|--|--|-----------------------------|--|-----------------|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                   | UES/TR/21-22/07924                       |                 |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST -MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO                  | UES/21-22/W/013108                       |                 |
|  |  | DATE OF SAMPLING            | 24/02/2022                               |                 |
|  |  | DATE OF RECEIPT             | 25/02/2022                               |                 |
|  |  | DATE OF REPORT              | 01/03/2022                               |                 |
|  |  | DATE OF ANALYSIS            | START: 25/02/2022                        | END: 01/03/2022 |
|  |  | <b>SAMPLE DETAILS</b>       |  |                 |
| SAMPLE TYPE  | WASTE WATER  | ORDER /REFERENCE:           | H/PO/ENV/2122/0445,<br>DTD. 24-JULY-2021 |                 |
| CUSTOMER SAMPLE ID   | ETP OUTLET BANJIKROL   | SAMPLE CONDITION AT RECEIPT | OK                                       |                 |
| PACKING OF SAMPLE  | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | SEALED                      | SAMPLE COLLECTED BY                      | CHEMIST         |
| SAMPLING PROCEDURE   | IS:3025 (PART I):1987 RA 2003; APHA<br>22ND ED. 2012, 1060-B, 1-39     | QUANTITY RECEIVED           | 5 LTR                                    |                 |

| <b>TEST REPORT</b> |  |       |  |  |           |
|--------------------|--|-------|--|--|-----------|
| 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 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | <1        |
| 2                  | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | Agreeable |
| 3                  | Temperature  | °C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13                 | Shall not exceed 5°C above the receiving water temperature                         | 24.8      |
| 4                  | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>-</sup> -B, 4-92 | 5.5 to 9.0   | 7.36      |
| 5                  | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-G, 4-69              | 1.0  | N.D.      |
| 6                  | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540-D, 2-66                 | 100  | 22.0      |
| 7                  | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153              | 5.0  | N.D.      |
| 8                  | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B & D, 4-84 & 87      | 2.0  | N.D.      |
| 9                  | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 0.1  | N.D.      |
| 10                 | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 5.0  | N.D.      |
| 11                 | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 3.0  | N.D.      |
| 12                 | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105               | 2.0  | N.D.      |
| 13                 | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23                 | 0.01   | N.D.      |
| 14                 | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.2  | N.D.      |
| 15                 | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.05   | N.D.      |
| 16                 | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69              | 2.0  | N.D.      |
| 17                 | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 5520-B, 5-17                 | 250  | 30.0      |
| 18                 | Biochemical Oxygen Demand (BOD)                          | mg/L  | IS 3025 (Part 44):1993, RA 2003                              | 30   | 4.6       |
| 19                 | Oil & Grease   | mg/L  | IS 3025 (Part 39):1991, RA 2003                              | 10.0   | N.D.      |
| 20                 | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) | mg/L  | IS 3025 (Part 43):1992, RA 2003                              | 1.0  | N.D.      |

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

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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 tested only.

|                                    |   |   |
|------------------------------------|---|---|
| <br>01/03/22<br><b>REVIEWED BY</b> | <br><b>For ULTIMATE ENVIROLYTICAL SOLUTIONS</b> | <br>01/03/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|---|---|

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

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

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

|   |  |                                    |   |
|---|--|------------------------------------|---|
| <b>Home &amp; Address Of The Customer</b><br><b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA,</b><br><b>POST -MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> | <b>REPORT NO</b>   | UES/TR/21-22/08931                 |   |
|   | <b>LAB REF NO</b>  | UES/21-22/W/014624                 |   |
|   | <b>DATE OF SAMPLING</b>  | 28/03/2022                         |   |
|   | <b>DATE OF RECEIPT</b>   | 29/03/2022                         |   |
|   | <b>DATE OF REPORT</b>  | 02/04/2022                         |   |
|   | <b>DATE OF ANALYSIS</b>  | START: 29/03/2022                  | END: 02/04/2022                           |
| <b>SAMPLE DETAILS</b>   |  |                                    |   |
| <b>SAMPLE TYPE</b>  | WASTE WATER  | <b>ORDER /REFERENCE:</b>           | N/PO/SBY/2122/0043-<br>2021, 24-JULY-2021 |
| <b>CUSTOMER SAMPLE ID</b>   | ETP OUTLET BANJIRHOL   | <b>SAMPLE CONDITION AT RECEIPT</b> | OK  |
| <b>PACKING OF SAMPLE</b>  | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | SEALED                             | <b>SAMPLE COLLECTED BY</b><br>CHEMIST     |
| <b>SAMPLING PROCEDURE</b>   | IS:3025 (PART 1):1987 RA 2003; APHA<br>22ND ED. 2012, 1060-B, 1-39     | <b>QUANTITY RECEIVED</b>           | 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 <sup>nd</sup> Ed. 2012, 2120-B, 2-6            | See 6 of Annexure-I  | <1        |
| 2       | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6            | See 6 of Annexure-I  | Agreeable |
| 3       | Temperature  | °C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13           | Shall not exceed 5°C above the receiving water temperature                         | 25.4      |
| 4       | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H-8, 4-92         | 5.5 to 9.0   | 7.32      |
| 5       | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-C1-G, 4-69        | 1.0  | N.D.      |
| 6       | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540- D, 2-66          | 100  | 20.0      |
| 7       | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153        | 5.0  | N.D.      |
| 8       | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B 6D, 4-84 & 87 | 2.0  | N.D.      |
| 9       | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18           | 0.1  | N.D.      |
| 10      | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18           | 5.0  | N.D.      |
| 11      | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18           | 3.0  | N.D.      |
| 12      | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105         | 2.0  | N.D.      |
| 13      | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23           | 0.01   | N.D.      |
| 14      | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38           | 0.2  | N.D.      |
| 15      | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38           | 0.05   | N.D.      |
| 16      | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69        | 2.0  | N.D.      |
| 17      | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 5520-B, 5-17           | 250  | 34.0      |
| 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 2001                        | 10.0   | N.D.      |
| 20      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> 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 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.

|   |   |  |
|---|---|--|
| <br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br><b>AUTHORIZED SIGNATORY</b> |
|---|---|--|

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

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



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

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|   |  |                                    |   |                 |
|---|--|------------------------------------|---|-----------------|
| <b>Name &amp; Address Of The Customer</b>   |  | <b>REPORT NO</b>                   | UES/TR/21-22/3503                         |                 |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | <b>LAB REF NO</b>                  | UES/21-22/W/6284                          |                 |
|   |  | <b>DATE OF SAMPLING</b>            | 27/10/2021                                |                 |
|   |  | <b>DATE OF RECEIPT</b>             | 28/10/2021                                |                 |
|   |  | <b>DATE OF REPORT</b>              | 01/11/2021                                |                 |
|   |  | <b>DATE OF ANALYSIS</b>            | START: 28/10/2021                         | END: 01/11/2021 |
| <b>SAMPLE DETAILS</b>   |  |                                    |   |                 |
| <b>SAMPLE TYPE</b>  | <b>EFFLUENT WATER</b>  | <b>ORDER /REFERENCE:</b>           | N/PO/SRV/2122/0045,<br>MTO. :24-JULY-2021 |                 |
| <b>CUSTOMER SAMPLE ID</b>   | SUMP WATER PATCH "B"   | <b>SAMPLE CONDITION AT RECEIPT</b> | OK  |                 |
| <b>PACKING OF SAMPLE</b>  | 3 L X 1 NO. PVC CAR<br>1 L X 1 NO. PVC CAR<br>1 L X 1 NO. GLASS BOTTLE | <b>SEALED</b>                      | <b>SAMPLE COLLECTED BY</b>                | CHROMIST        |
| <b>SAMPLING PROCEDURE</b>   | IS:3025 (PART 1):1997 RA 2003; APHA 22ND ED.<br>2012, 1040-B, 1-39     | <b>QUANTITY RECEIVED</b>           | 3 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 <sup>nd</sup> Ed. 2012, 2120-B, 2-6            | See 6 of Annexure-I  | <1        |
| 2       | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6            | See 6 of Annexure-I  | Agreeable |
| 3       | Temperature  | 'C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13           | Shall not exceed 5°C above the receiving water temperature                         | 24.8      |
| 4       | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H-B, 4-92         | 5.5 to 9.0   | 7.24      |
| 5       | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-G, 4-69        | 1.0  | N.D.      |
| 6       | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540-D, 2-66           | 100  | 48.0      |
| 7       | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153        | 5.0  | N.D.      |
| 8       | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-B 4D, 4-84 & 87 | 2.0  | N.D.      |
| 9       | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18           | 0.1  | N.D.      |
| 10      | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18           | 5.0  | N.D.      |
| 11      | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18           | 3.0  | N.D.      |
| 12      | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105         | 2.0  | N.D.      |
| 13      | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23           | 0.01   | N.D.      |
| 14      | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38           | 0.2  | N.D.      |
| 15      | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38           | 0.05   | N.D.      |
| 16      | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69        | 2.0  | N.D.      |
| 17      | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 5520-B, 5-17           | 250  | 114.0     |
| 18      | Biochemical Oxygen Demand (BOD)                          | mg/L  | IS 3025 (Part 44):1993, RA 2003                        | 30   | 12.8      |
| 19      | Oil & Grease   | mg/L  | IS 3025 (Part 39):1991, RA 2003,                       | 10.0   | N.D.      |
| 20      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> 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 13 days after issue of test report.
- > This is for information as the party has asked for above.

|                 |  |                          |
|-----------------|--|--------------------------|
| <br>REVIEWED BY | <br>For ULTIMATE ENVIROLYTICAL SOLUTIONS | <br>AUTHORIZED SIGNATORY |
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-----End of the test report-----



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

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|  |  |                                    |   |                    |                 |
|--|--|------------------------------------|---|--------------------|-----------------|
| <b>Name &amp; Address Of The Customer</b><br><b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA,</b><br><b>POST MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | <b>REPORT NO</b>                   |   | UES/TR/21-22/04173 |                 |
|  |  | <b>LAB REF NO</b>                  |   | UES/21-22/W/07487  |                 |
|  |  | <b>DATE OF SAMPLING</b>            |   | 23/11/2021         |                 |
|  |  | <b>DATE OF RECEIPT</b>             |   | 24/11/2021         |                 |
|  |  | <b>DATE OF REPORT</b>              |   | 01/12/2021         |                 |
|  |  | <b>DATE OF ANALYSIS</b>            |   | START: 24/11/2021  | END: 27/11/2021 |
| <b>SAMPLE DETAILS</b>  |  |                                    |   |                    |                 |
| <b>SAMPLE TYPE</b>   | <b>EFFLUENT WATER</b>  | <b>ORIGIN /REFERENCE:</b>          | R/TO/SRV/112/0045,<br>DTH. 24-JULY-2021 |                    |                 |
| <b>CUSTOMER SAMPLE ID</b>  | 3387 WATER PATCH "B"   | <b>SAMPLE CONDITION AT RECEIPT</b> | OK                                      |                    |                 |
| <b>PACKING OF SAMPLE</b>   | 3 X 1 X 1 NO. PVC CAR<br>1 X 1 X 1 NO. PVC CAP<br>1 X 1 X 1 NO. GLASS BOTTLE | <b>SEALED</b>                      | <b>SAMPLE COLLECTED BY</b>              | CHMIST             |                 |
| <b>SAMPLING PROCEDURE</b>  | IS:3025 (PART 1):1997 RA 2003; APHA 22ND ED.<br>2012, 1060-B, 1-38           | <b>QUANTITY RECEIVED</b>           | 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 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                 | See 6 of Annexure-I  | <1        |
| 2       | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                 | See 6 of Annexure-I  | Agreeable |
| 3       | Temperature  | °C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 3-13                | Shall not exceed 5°C above the receiving water temperature                         | 24.6      |
| 4       | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>-</sup> B, 4-92 | 5.5 to 9.0   | 7.34      |
| 5       | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-G, 4-69             | 1.0  | N.D.      |
| 6       | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540-D, 2-66                | 100  | 46.0      |
| 7       | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-193             | 5.0  | N.D.      |
| 8       | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B 6D, 4-84 & 87      | 2.0  | N.D.      |
| 9       | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                | 0.1  | N.D.      |
| 10      | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                | 5.0  | N.D.      |
| 11      | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                | 3.0  | N.D.      |
| 12      | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105              | 2.0  | N.D.      |
| 13      | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23                | 0.01   | N.D.      |
| 14      | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                | 0.2  | N.D.      |
| 15      | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                | 0.05   | N.D.      |
| 16      | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69             | 2.0  | N.D.      |
| 17      | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 5520-B, 5-17                | 250  | 64.0      |
| 18      | Biochemical Oxygen Demand (BOD)                          | mg/L  | IS 3025 (Part 44):1993, RA 2003                             | 30   | 5.8       |
| 19      | Oil & Grease   | mg/L  | IS 3025 (Part 39):1991, RA 2003,                            | 10.0   | N.D.      |
| 20      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) | mg/L  | IS 3025 (Part 43):1992, RA 2003                             | 1.0  | N.D.      |

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

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

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| <br><b>REVIEWED BY</b> |  | <br><b>AUTHORIZED SIGNATORY</b> |
|------------------------|--|---------------------------------|

End of the test report



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|  |                  |                                    |
|--|------------------|------------------------------------|
| Name & Address Of The Customer<br><br><b>TO,<br/>                 HINDALCO INDUSTRIES LIMITED,<br/>                 GARE PALMA - IV/4, COAL MINE,<br/>                 VILLAGE - BANKHETA,<br/>                 POST MILUPARA,<br/>                 DISTT. - RAIGARH (C.G.) 496107</b> | REPORT NO        | UES/TR/21-22/04916                 |
|  | LAB REF NO       | UES/21-22/W/08755                  |
|  | DATE OF SAMPLING | 22/12/2021                         |
|  | DATE OF RECEIPT  | 23/12/2021                         |
|  | DATE OF REPORT   | 01/01/2022                         |
|  | DATE OF ANALYSIS | START:24/12/2021    END:28/12/2021 |

| SAMPLE DETAILS     |  |                             |   |
|--------------------|--|-----------------------------|---|
| SAMPLE TYPE        | EFFLUENT WATER   | ORDER /REFERENCE:           | M/PO/SW/2122/0045,<br>Dtd. 24-JULY-2021 |
| CUSTOMER SAMPLE ID | SUMP WATER PATCH "B"   | SAMPLE CONDITION AT RECEIPT | OK                                      |
| PACKING OF SAMPLE  | 3 L X 1 NO. PVC CAR<br>1 L X 1 NO. PVC CAR<br>1 L X 1 NO. GLASS BOTTLE | SEALED                      | SAMPLE COLLECTED BY<br>CMBGIST          |
| SAMPLING PROCEDURE | IS:3025(PART 1):1997 RA 2003; APHA 22ND ED.<br>2012, 1040-B, 1-29      | 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 <sup>nd</sup> Ed. 2012, 2120-B, 2-6            | See 6 of Annexure-I  | <1        |
| 2           | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6            | See 6 of Annexure-I  | Agreeable |
| 3           | Temperature  | 'C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13           | Shall not exceed 5°C above the receiving water temperature                         | 25.1      |
| 4           | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H-B, 4-92         | 5.5 to 9.0   | 7.42      |
| 5           | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-G, 4-69        | 1.0  | N.D.      |
| 6           | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540-D, 2-66           | 100  | 48.0      |
| 7           | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-C, 4-153        | 5.0  | N.D.      |
| 8           | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B 4D, 4-84 & 87 | 2.0  | N.D.      |
| 9           | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18           | 0.1  | N.D.      |
| 10          | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18           | 5.0  | N.D.      |
| 11          | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18           | 3.0  | N.D.      |
| 12          | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105         | 2.0  | N.D.      |
| 13          | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23           | 0.01   | N.D.      |
| 14          | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38           | 0.2  | N.D.      |
| 15          | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38           | 0.05   | N.D.      |
| 16          | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69        | 2.0  | N.D.      |
| 17          | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 5520-B, 5-17           | 250  | 68.0      |
| 18          | Biochemical Oxygen Demand (BOD)                          | mg/L  | IS 3025 (Part 44):1993, RA 2003                        | 30   | 5.2       |
| 19          | Oil & Grease   | mg/L  | IS 3025 (Part 39):1991, RA 2003,                       | 10.0   | N.D.      |
| 20          | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) | mg/L  | IS 3025 (Part 43):1992, RA 2003                        | 1.0  | N.D.      |

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

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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 mentioned.

|  |   |   |
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| <br>REVIEWED BY |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY |
|--|---|---|

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



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|   |  |                             |  |                 |
|---|--|-----------------------------|--|-----------------|
| <i>Name &amp; Address Of The Customer</i>   |  | REPORT NO                   | UES/TK/21-22/05977                       |                 |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO                  | UES/21-22/W/010295                       |                 |
|   |  | DATE OF SAMPLING            | 24/01/2022                               |                 |
|   |  | DATE OF RECEIPT             | 25/01/2022                               |                 |
|   |  | DATE OF REPORT              | 02/02/2022                               |                 |
|   |  | DATE OF ANALYSIS            | START: 25/01/2022                        | END: 29/01/2022 |
| <b>SAMPLE DETAILS</b>   |  |                             |  |                 |
| SAMPLE TYPE   | EFFLUENT WATER   | ORDER /REFERENCE:           | M/PO/ENV/2122/0045,<br>DPO. 24-JULY-2021 |                 |
| CUSTOMER SAMPLE ID  | RIMP WATER PATCH "B"   | SAMPLE CONDITION AT RECEIPT | OK                                       |                 |
| PACKING OF SAMPLE   | 3 L X 1 NO. PVC CAR<br>1 L X 1 NO. PVC CAR<br>1 L X 1 NO. GLASS BOTTLE | SEALED                      | SAMPLE COLLECTED BY                      | CHODIST         |
| SAMPLING PROCEDURE  | IS:3025 (PART 1):1997 RA 2003; APHA 22ND ED.<br>2012, 1000-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 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | <1        |
| 2       | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | Agresable |
| 3       | Temperature  | °C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13                 | Shall not exceed 5°C above the receiving water temperature                         | 25.8      |
| 4       | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>-</sup> -B, 4-92 | 5.5 to 9.0   | 7.47      |
| 5       | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-G, 4-69              | 1.0  | N.D.      |
| 6       | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540- D, 2-66                | 100  | 50.4      |
| 7       | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-C, 4-153              | 5.0  | N.D.      |
| 8       | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B & D, 4-84 & 87      | 2.0  | N.D.      |
| 9       | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 0.1  | N.D.      |
| 10      | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 5.0  | N.D.      |
| 11      | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 3.0  | N.D.      |
| 12      | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105               | 2.0  | N.D.      |
| 13      | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23                 | 0.01   | N.D.      |
| 14      | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.2  | N.D.      |
| 15      | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.05   | N.D.      |
| 16      | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69              | 2.0  | N.D.      |
| 17      | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 9520-B, 5-17                 | 250  | 64.0      |
| 18      | Biochemical Oxygen Demand (BOD)                          | mg/L  | IS 3025 (Part 44):1993, RA 2003                              | 30   | 4.6       |
| 19      | Oil & Grease   | mg/L  | IS 3025 (Part 39):1991, RA 2003,                             | 10.0   | N.D.      |
| 20      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) | mg/L  | IS 3025 (Part 43):1992, RA 2003                              | 1.0  | N.D.      |

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

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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.

|                                    |  |   |
|------------------------------------|--|---|
| <br>02/02/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/02/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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

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

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|   |  |                                    |                                       |                 |
|---|--|------------------------------------|---------------------------------------|-----------------|
| <b>Name &amp; Address Of The Customer</b>   |  | <b>REPORT NO</b>                   | UES/TR/21-22/07925                    |                 |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | <b>LAB REF NO</b>                  | UES/21-22/W/013109                    |                 |
|   |  | <b>DATE OF SAMPLING</b>            | 24/02/2022                            |                 |
|   |  | <b>DATE OF RECEIPT</b>             | 25/02/2022                            |                 |
|   |  | <b>DATE OF REPORT</b>              | 01/03/2022                            |                 |
|   |  | <b>DATE OF ANALYSIS</b>            | START: 25/02/2022                     | END: 01/03/2022 |
| <b>SAMPLE DETAILS</b>   |  |                                    |                                       |                 |
| <b>SAMPLE TYPE</b>  | EFFLUENT WATER   | <b>ORDER /REFERENCE:</b>           | N/TO/SHV/2122/0045, DTG. 24-JULY-2022 |                 |
| <b>CUSTOMER SAMPLE ID</b>   | SDMP WATER PATCH "B"   | <b>SAMPLE CONDITION AT RECEIPT</b> | OK                                    |                 |
| <b>PACKING OF SAMPLE</b>  | 3 X 1 X 1 NO. PVC CAN<br>1 X 1 X 1 NO. PVC CAN<br>1 X 1 X 1 NO. GLASS BOTTLE | <b>SEALED</b>                      | SAMPLE COLLECTED BY<br>CHHROT         |                 |
| <b>SAMPLING PROCEDURE</b>   | IS:3025(PART 1):1997 RA 2003; APHA 22ND ED.<br>2012, 1062-D, 1-29            | <b>QUANTITY RECEIVED</b>           | 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 <sup>nd</sup> Ed. 2012,2120-B,2-6                  | See 6 of Annexure-I  | <1        |
| 2       | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012,2120-B,2-6                  | See 6 of Annexure-I  | Agreeable |
| 3       | Temperature  | °C    | APHA 22 <sup>nd</sup> Ed.2012,2130-B,2-13                  | Shall not exceed 5°C above the receiving water temperature                         | 26.4      |
| 4       | pH   | -     | APHA 22 <sup>nd</sup> Ed.2012,4500-H <sup>-</sup> -B, 4-92 | 5.5 to 9.0   | 7.56      |
| 5       | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,4500-C1-G, 4-69              | 1.0  | N.D.      |
| 6       | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,2540- D, 2-66                | 100  | 48.4      |
| 7       | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,4500-F-C, 4-153              | 5.0  | N.D.      |
| 8       | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,4500-F-B 4D, 4-84 & 87       | 2.0  | N.D.      |
| 9       | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18                 | 0.1  | N.D.      |
| 10      | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18                 | 5.0  | N.D.      |
| 11      | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18                 | 3.0  | N.D.      |
| 12      | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3500-Cd, 3-105               | 2.0  | N.D.      |
| 13      | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3112-B, 3-23                 | 0.01   | N.D.      |
| 14      | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38                 | 0.2  | N.D.      |
| 15      | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38                 | 0.05   | N.D.      |
| 16      | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3500-Cr-B,3-69               | 2.0  | N.D.      |
| 17      | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed.2012, 5520-B, 5-17                | 250  | 48.0      |
| 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 <sub>6</sub> H <sub>5</sub> OH) | mg/L  | IS 3025 (Part 43):1992, RA 2003                            | 1.0  | N.D.      |

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

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- > This is for information as the party has asked for above tested 2017.

|                                    |   |   |
|------------------------------------|---|---|
| <br>01/03/22<br><b>REVIEWED BY</b> | <br><b>For ULTIMATE ENVIROLYTICAL SOLUTIONS</b> | <br>01/03/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|---|---|

End of the test report

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Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
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|  |  |                                    |                                       |
|--|--|------------------------------------|---------------------------------------|
| <b>Name &amp; Address Of The Customer</b><br><b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA,</b><br><b>POST MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> | <b>REPORT NO</b>   | UES/TR/21-22/08932                 |                                       |
|  | <b>LAB REF NO</b>  | UES/21-22/W/014625                 |                                       |
|  | <b>DATE OF SAMPLING</b>  | 28/03/2022                         |                                       |
|  | <b>DATE OF RECEIPT</b>   | 29/03/2022                         |                                       |
|  | <b>DATE OF REPORT</b>  | 02/04/2022                         |                                       |
|  | <b>DATE OF ANALYSIS</b>  | <b>START: 29/03/2022</b>           | <b>END: 02/04/2022</b>                |
| <b>SAMPLE DETAILS</b>  |  |                                    |                                       |
| <b>SAMPLE TYPE</b>   | EFFLUENT WATER   | <b>ORDER /REFERENCE:</b>           | W/PO/SRV/2152/0045, DTD. 24-JULY-2021 |
| <b>CUSTOMER SAMPLE ID</b>  | GMP WATER PATCH "B"  | <b>SAMPLE CONDITION AT RECEIPT</b> | OK                                    |
| <b>PACKING OF SAMPLE</b>   | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | <b>SAMPLE COLLECTED BY</b>         | CHENGET                               |
| <b>SAMPLING PROCEDURE</b>  | IS:3025(PART 11)1997 RA 2003; APHA 22ND ED. 2012, 1040-B, 1-39         | <b>QUANTITY RECEIVED</b>           | 3 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 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | <1        |
| 2       | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | Agreeable |
| 3       | Temperature  | °C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13                 | Shall not exceed 5°C above the receiving water temperature                         | 25.5      |
| 4       | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>-</sup> -B, 4-92 | 5.5 to 9.0   | 7.62      |
| 5       | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-G, 4-69              | 1.0  | N.D.      |
| 6       | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540-D, 2-66                 | 100  | 54.2      |
| 7       | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153              | 5.0  | N.D.      |
| 8       | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B 4D, 4-84 & 87       | 2.0  | N.D.      |
| 9       | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 0.1  | N.D.      |
| 10      | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 5.0  | N.D.      |
| 11      | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 3.0  | N.D.      |
| 12      | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-cd, 3-105               | 2.0  | N.D.      |
| 13      | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23                 | 0.01   | N.D.      |
| 14      | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.2  | N.D.      |
| 15      | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.05   | N.D.      |
| 16      | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3508-Cr-B, 3-69              | 2.0  | N.D.      |
| 17      | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 5520-B, 5-17                 | 250  | 42.0      |
| 18      | Biochemical Oxygen Demand (BOD)                          | mg/L  | IS 3025 (Part 44):1993, RA 2003                              | 30   | 8.4       |
| 19      | Oil & Grease   | mg/L  | IS 3025 (Part 39):1991, RA 2003,                             | 10.0   | N.D.      |
| 20      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) | mg/L  | IS 3025 (Part 43):1992, RA 2003                              | 1.0  | N.D.      |

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

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

|                                    |  |   |
|------------------------------------|--|---|
| <br>02/04/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/04/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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

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| <b>Name &amp; Address Of The Customer</b><br><b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA,</b><br><b>POST MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |   | <b>REPORT NO</b><br>UES/TR/21-22/3504                           |
|--|---|---|
|  |   | <b>LAB REF NO</b><br>UES/21-22/W/6285                           |
|  |   | <b>DATE OF SAMPLING</b><br>27/10/2021                           |
|  |   | <b>DATE OF RECEIPT</b><br>28/10/2021                            |
|  |   | <b>DATE OF REPORT</b><br>01/11/2021                             |
|  |   | <b>DATE OF ANALYSIS</b><br>START:28/10/2021      END:01/11/2021 |
| SAMPLE DETAILS   |   |   |
| <b>SAMPLE TYPE</b><br>EFFLUENT WATER   | <b>ORDER /REFERENCE:</b><br>N/PO/SRV/2122/0045,<br>STD. :24-JULY-2021 |   |
| <b>CUSTOMER SAMPLE ID</b><br>DUMP WATER PATCH "C"  | <b>SAMPLE CONDITION AT RECEIPT</b><br>OK                              |   |
| <b>PACKING OF SAMPLE</b><br>3 L X 1 NO. PVC CAR<br>1 L X 1 NO. PVC CAR<br>1 L X 1 NO. GLASS BOTTLE   | <b>SAMPLE COLLECTED BY</b><br>UMESH                                   | <b>QUANTITY RECEIVED</b><br>3 LTR                               |
| <b>SAMPLING PROCEDURE</b><br>IS:3025 (PART 1):1997 RA 2003; APHA 22ND ED.<br>2012, 1040-B, 1-39  |   |   |

| TEST REPORT |  |       |  |  |           |
|-------------|--|-------|--|--|-----------|
| SR. NO.     | PARAMETER  | UNIT  | METHOD OF TEST   | THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER | RESULT    |
| 1           | Colour   | Hazen | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | <1        |
| 2           | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | Agreeable |
| 3           | Temperature  | °C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13                 | Shall not exceed 5°C above the receiving water temperature                         | 25.2      |
| 4           | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>+</sup> -B, 4-92 | 5.5 to 9.0   | 7.36      |
| 5           | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-G, 4-69              | 1.0  | N.D.      |
| 6           | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540-D, 2-66                 | 100  | 46.0      |
| 7           | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153              | 5.0  | N.D.      |
| 8           | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B & D, 4-84 & 87      | 2.0  | N.D.      |
| 9           | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 0.1  | N.D.      |
| 10          | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 5.0  | N.D.      |
| 11          | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 3.0  | N.D.      |
| 12          | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105               | 2.0  | N.D.      |
| 13          | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23                 | 0.01   | N.D.      |
| 14          | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.2  | N.D.      |
| 15          | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.05   | N.D.      |
| 16          | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69              | 2.0  | N.D.      |
| 17          | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 5520-B, 5-17                 | 250  | 52.0      |
| 18          | Biochemical Oxygen Demand (BOD)                          | mg/L  | IS 3025 (Part 4):1993, RA 2003                               | 30   | 4.2       |
| 19          | Oil & Grease   | mg/L  | IS 3025 (Part 39):1991, RA 2003,                             | 10.0   | N.D.      |
| 20          | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) | mg/L  | IS 3025 (Part 43):1992, RA 2003                              | 1.0  | N.D.      |

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

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- > Test sample will be retained for 15 days after issue of report, if agreed with customer.
- > This is for information as the party has asked for above.

|                 |  |  |
|-----------------|--|--|
| <br>REVIEWED BY |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY |
|-----------------|--|--|

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

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Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
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|   |  |                             |   |                 |
|---|--|-----------------------------|---|-----------------|
| <i>Name &amp; Address Of The Customer</i>   |  | REPORT NO                   | UES/TR/21-22/04174                      |                 |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO                  | UES/21-22/W/07488                       |                 |
|   |  | DATE OF SAMPLING            | 23/11/2021                              |                 |
|   |  | DATE OF RECEIPT             | 24/11/2021                              |                 |
|   |  | DATE OF REPORT              | 01/12/2021                              |                 |
|   |  | DATE OF ANALYSIS            | START: 24/11/2021                       | END: 27/11/2021 |
| <b>SAMPLE DETAILS</b>   |  |                             |   |                 |
| SAMPLE TYPE   | EFFLUENT WATER   | ORDER /REFERENCE:           | M/PO/SW/2122/0045,<br>DTC. 24-JULY-2021 |                 |
| CUSTOMER SAMPLE ID  | DOMP WATER PATCH °C  | SAMPLE CONDITION AT RECEIPT | OK                                      |                 |
| PACKING OF SAMPLE   | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | SEALED                      | SAMPLE COLLECTED BY                     | CHEMIST         |
| SAMPLING PROCEDURE  | IS:3025(PART 1):1997 RA 2003/ APHA 22ND ED.<br>2012, 1060-B, 1-23      | QUANTITY RECEIVED           | 3 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 <sup>nd</sup> Ed. 2012, 2120-B, 2-6            | See 6 of Annexure-I  | <1        |
| 2       | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6            | See 6 of Annexure-I  | Agreeable |
| 3       | Temperature  | °C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13           | Shall not exceed 5°C above the receiving water temperature                         | 25.4      |
| 4       | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H-B, 4-92         | 5.5 to 9.0   | 7.19      |
| 5       | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-C1-G, 4-69        | 1.0  | N.D.      |
| 6       | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540- D, 2-66          | 100  | 24.0      |
| 7       | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153        | 5.0  | N.D.      |
| 8       | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B 4D, 4-84 & 87 | 2.0  | N.D.      |
| 9       | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18           | 0.1  | N.D.      |
| 10      | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18           | 5.0  | N.D.      |
| 11      | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18           | 3.0  | N.D.      |
| 12      | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105         | 2.0  | N.D.      |
| 13      | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23           | 0.01   | N.D.      |
| 14      | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38           | 0.2  | N.D.      |
| 15      | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38           | 0.05   | N.D.      |
| 16      | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69        | 2.0  | N.D.      |
| 17      | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 5520-B, 5-17           | 250  | 56.0      |
| 18      | Biochemical Oxygen Demand (BOD)                          | mg/L  | IS 3025 (Part 44):1993, RA 2003                        | 30   | 2.1       |
| 19      | Oil & Grease   | mg/L  | IS 3025 (Part 39):1991, RA 2003,                       | 10.0   | N.D.      |
| 20      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) | mg/L  | IS 3025 (Part 43):1992, RA 2003                        | 1.0  | N.D.      |

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

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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 only.

|                        |   |                                 |
|------------------------|---|---------------------------------|
| <br><b>REVIEWED BY</b> | <br><b>For ULTIMATE ENVIROLYTICAL SOLUTIONS</b> | <br><b>AUTHORIZED SIGNATORY</b> |
|------------------------|---|---------------------------------|

End of the test report



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

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|   |  |                             |  |                 |
|---|--|-----------------------------|--|-----------------|
| Name & Address Of The Customer  |  | REPORT NO                   | UES/TR/21-22/04917                       |                 |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA,</b><br><b>POST MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO                  | UES/21-22/W/08756                        |                 |
|   |  | DATE OF SAMPLING            | 22/12/2021                               |                 |
|   |  | DATE OF RECEIPT             | 23/12/2021                               |                 |
|   |  | DATE OF REPORT              | 01/01/2022                               |                 |
|   |  | DATE OF ANALYSIS            | START: 24/12/2021                        | END: 28/12/2021 |
| <b>SAMPLE DETAILS</b>   |  |                             |  |                 |
| SAMPLE TYPE   | EFFLUENT WATER   | ORDER /REFERENCE:           | N/PO/DSM/2123/0045,<br>DED. 24-JULY-2021 |                 |
| CUSTOMER SAMPLE ID  | RIND WATER PATCH "C"   | SAMPLE CONDITION AT RECEIPT | OK                                       |                 |
| PACKING OF SAMPLE   | 3 L X 1 NO. PVC CAN<br>3 L X 1 NO. PVC CAN<br>3 L X 1 NO. GLASS BOTTLE | SEALED                      | SAMPLE COLLECTED BY                      | CYNDIEPT        |
| SAMPLING PROCEDURE  | IS-3025 (PART 11:1997 RA 2003)/ APHA 22ND Ed.                          | QUANTITY RECEIVED           | 5 LTR                                    |                 |

| <b>TEST REPORT</b> |  |       |  |  |           |
|--------------------|--|-------|--|--|-----------|
| 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 <sup>nd</sup> Ed. 2012, 2120-B, 2-6            | See 6 of Annexure-I  | <1        |
| 2                  | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6            | See 6 of Annexure-I  | Agreeable |
| 3                  | Temperature  | °C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-11           | Shall not exceed 5°C above the receiving water temperature                         | 25.2      |
| 4                  | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H-B, 4-92         | 5.5 to 9.0   | 7.19      |
| 5                  | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-G, 4-69        | 1.0  | N.D.      |
| 6                  | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540-D, 2-66           | 100  | 28.0      |
| 7                  | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153        | 5.0  | N.D.      |
| 8                  | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B 6D, 4-84 & 87 | 2.0  | N.D.      |
| 9                  | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18           | 0.1  | N.D.      |
| 10                 | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18           | 5.0  | N.D.      |
| 11                 | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18           | 3.0  | N.D.      |
| 12                 | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105         | 2.0  | N.D.      |
| 13                 | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23           | 0.01   | N.D.      |
| 14                 | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38           | 0.2  | N.D.      |
| 15                 | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38           | 0.05   | N.D.      |
| 16                 | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69        | 2.0  | N.D.      |
| 17                 | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 5520-B, 5-17           | 250  | 52.0      |
| 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 <sub>6</sub> H <sub>5</sub> 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 test(s) only.

|  |   |  |
|--|---|--|
| <br>REVIEWED BY |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY |
|--|---|--|

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



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|   |  |                                    |  |                 |
|---|--|------------------------------------|--|-----------------|
| <b>Name &amp; Address Of The Customer</b>   |  | <b>REPORT NO</b>                   | UES/TR/21-22/05978                       |                 |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | <b>LAB REF NO</b>                  | UES/21-22/W/010296                       |                 |
|   |  | <b>DATE OF SAMPLING</b>            | 24/01/2022                               |                 |
|   |  | <b>DATE OF RECEIPT</b>             | 25/01/2022                               |                 |
|   |  | <b>DATE OF REPORT</b>              | 02/02/2022                               |                 |
|   |  | <b>DATE OF ANALYSIS</b>            | START: 25/01/2022                        | END: 29/01/2022 |
| <b>SAMPLE DETAILS</b>   |  |                                    |  |                 |
| <b>SAMPLE TYPE</b>  | EFFLUENT WATER   | <b>ORDER /REFERENCE:-</b>          | M/PO/SRV/2122/0045,<br>DTE. 24-JULY-2021 |                 |
| <b>CUSTOMER SAMPLE ID</b>   | SIMP BATCH PATCH 'C'   | <b>SAMPLE CONDITION AT RECEIPT</b> | OK                                       |                 |
| <b>PACKING OF SAMPLE</b>  | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | <b>SEALED</b>                      | <b>SAMPLE COLLECTED BY</b>               | CHHIC/OT        |
| <b>SAMPLING PROTOCOL</b>  | IS:3025(PART 2):1987 RA 2003; APHA 22ND ED.<br>2012, 1050-B, 1-39      | <b>QUANTITY RECEIVED</b>           | 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 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | <1        |
| 2       | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | Agreeable |
| 3       | Temperature  | °C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13                 | Shall not exceed 5°C above the receiving water temperature                         | 25.4      |
| 4       | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>+</sup> -B, 4-92 | 5.5 to 9.0   | 7.29      |
| 5       | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-G, 4-69              | 1.0  | N.D.      |
| 6       | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540-D, 2-66                 | 100  | 32.0      |
| 7       | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153              | 5.0  | N.D.      |
| 8       | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B 4D, 4-84 & 87       | 2.0  | N.D.      |
| 9       | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 0.1  | N.D.      |
| 10      | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 5.0  | N.D.      |
| 11      | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 3.0  | N.D.      |
| 12      | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105               | 2.0  | N.D.      |
| 13      | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23                 | 0.01   | N.D.      |
| 14      | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.2  | N.D.      |
| 15      | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.05   | N.D.      |
| 16      | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69              | 2.0  | N.D.      |
| 17      | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 5520-B, 5-17                 | 250  | 60.0      |
| 18      | Biochemical Oxygen Demand (BOD)                          | mg/L  | IS 3025 (Part 4):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 <sub>6</sub> H <sub>5</sub> OH) | mg/L  | IS 3025 (Part 43):1992, RA 2003                              | 1.0  | N.D.      |

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

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

|                                    |  |   |
|------------------------------------|--|---|
| <br>02/02/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/02/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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

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



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|  |  |                                    |                                  |                 |
|--|--|------------------------------------|----------------------------------|-----------------|
| <b>Name &amp; Address Of The Customer</b><br><b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA,</b><br><b>POST MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | <b>REPORT NO</b>                   | UES/TR/21-22/07926               |                 |
|  |  | <b>LAB REF NO</b>                  | UES/21-22/W/013110               |                 |
|  |  | <b>DATE OF SAMPLING</b>            | 24/02/2022                       |                 |
|  |  | <b>DATE OF RECEIPT</b>             | 25/02/2022                       |                 |
|  |  | <b>DATE OF REPORT</b>              | 01/03/2022                       |                 |
|  |  | <b>DATE OF ANALYSIS</b>            | START: 25/02/2022                | END: 01/03/2022 |
| <b>SAMPLE DETAILS</b>  |  |                                    |                                  |                 |
| <b>SAMPLE TYPE</b>   | EFFLUENT WATER   | <b>ORDER /REFERENCE:</b>           | M/PO/SPP/2122/0045,<br>JULY-2021 | STD. 24-        |
| <b>CUSTOMER SAMPLE ID</b>  | DISP WATER PATCH "C"   | <b>SAMPLE CONDITION AT RECEIPT</b> | OK                               |                 |
| <b>PACKING OF SAMPLE</b>   | 3 L X 1 NO. PVC CAP<br>1 L X 1 NO. PVC CAP<br>1 L X 1 NO. GLASS BOTTLE | SEALED                             | <b>SAMPLE COLLECTED BY</b>       | CUSTOMER        |
| <b>SAMPLING PROCKONE</b>   | IS: 3025 (PART 1):1997 RA 2003; APHA 22ND ED.<br>2012, 1040-R, 1-39    | <b>QUANTITY RECEIVED</b>           | 3 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 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | <1        |
| 2       | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | Agreeable |
| 3       | Temperature  | 'C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13                 | Shall not exceed 5°C above the receiving water temperature                         | 25.6      |
| 4       | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>+</sup> -B, 4-92 | 5.5 to 9.0   | 7.54      |
| 5       | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-G, 4-69              | 1.0  | N.D.      |
| 6       | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540- D, 2-66                | 100  | 44.0      |
| 7       | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153              | 5.0  | N.D.      |
| 8       | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B 6D, 4-84 & 87       | 2.0  | N.D.      |
| 9       | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 0.1  | N.D.      |
| 10      | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 5.0  | N.D.      |
| 11      | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 3.0  | N.D.      |
| 12      | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105               | 2.0  | N.D.      |
| 13      | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23                 | 0.01   | N.D.      |
| 14      | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.2  | N.D.      |
| 15      | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.05   | N.D.      |
| 16      | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69              | 2.0  | N.D.      |
| 17      | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> 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 <sub>6</sub> H <sub>5</sub> OH) | mg/L  | IS 3025 (Part 43):1992, RA 2003                              | 1.0  | N.D.      |

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

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- This is for informative as the party has asked for above tested only.

|                                    |  |
|------------------------------------|--|
| <br>01/03/22<br><b>REVIEWED BY</b> | <br><b>For ULTIMATE ENVIROLYTICAL SOLUTIONS</b><br><br>01/03/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|

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



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|   |  |                                    |  |
|---|--|------------------------------------|--|
| <i>Name &amp; Address Of The Customer</i>   |  | <b>REPORT NO</b>                   | UES/TR/21-22/08933                             |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | <b>LAB REF NO</b>                  | UES/21-22/W/014626                             |
|   |  | <b>DATE OF SAMPLING</b>            | 28/03/2022                                     |
|   |  | <b>DATE OF RECEIPT</b>             | 29/03/2022                                     |
|   |  | <b>DATE OF REPORT</b>              | 02/04/2022                                     |
|   |  | <b>DATE OF ANALYSIS</b>            | START:29/03/2022      END:02/04/2022           |
| <b>SAMPLE DETAILS</b>   |  |                                    |  |
| <b>SAMPLE TYPE</b>  | EFFLUENT WATER   | <b>ORDER /REFERENCE:</b>           | M/PO/SHV/2122/0945,      DED. 24-<br>JULY-2021 |
| <b>CHANGED SAMPLE ID</b>  | PUMP WATER PATCH "C"   | <b>SAMPLE CONDITION AT RECEIPT</b> | OK   |
| <b>PACKING OF SAMPLE</b>  | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | <b>SEALED</b>                      | <b>SAMPLE COLLECTED BY</b>                     |
| <b>SAMPLING PROCEDURE</b>   | IS:3025 (PART 1):1997 RA 2003; APHA 2290 ED.<br>2012, 1050-B, 1-39     | <b>QUANTITY RECEIVED</b>           | 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 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | <1        |
| 2       | Odour  | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | Agreeable |
| 3       | Temperature  | °C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13                 | Shell not exceed 5°C above the receiving water temperature                         | 24.8      |
| 4       | pH   | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>-</sup> -B, 4-92 | 5.5 to 9.0   | 7.16      |
| 5       | Total Residual Chlorine                                  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-G, 4-69              | 1.0  | N.D.      |
| 6       | Total Suspended Solids                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540-D, 2-66                 | 100  | 48.0      |
| 7       | Dissolved Phosphate (as P)                               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153              | 5.0  | N.D.      |
| 8       | Fluoride (as F)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B & D, 4-84 & 97      | 2.0  | N.D.      |
| 9       | Lead (as Pb)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 0.1  | N.D.      |
| 10      | Zinc (as Zn)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 5.0  | N.D.      |
| 11      | Copper (as Cu)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 3.0  | N.D.      |
| 12      | Cadmium (as Cd)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105               | 2.0  | N.D.      |
| 13      | Mercury (as Hg)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23                 | 0.01   | N.D.      |
| 14      | Arsenic (as As)  | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.2  | N.D.      |
| 15      | Selenium (as Se)   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.05   | N.D.      |
| 16      | Total Chromium (as Cr)                                   | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69              | 2.0  | N.D.      |
| 17      | Chemical Oxygen Demand (COD)                             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 5520-B, 5-17                 | 250  | 74.0      |
| 18      | Biochemical Oxygen Demand (BOD)                          | mg/L  | IS 3025 (Part 4):1993, RA 2003                               | 30   | 6.4       |
| 19      | Oil & Grease   | mg/L  | IS 3025 (Part 39):1991, RA 2003,                             | 10.0   | N.D.      |
| 20      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> 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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- > This is for information as the party has asked for above test(s) only.

|   |   |  |
|---|---|--|
| <br>02/04/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/04/22<br><b>AUTHORIZED SIGNATORY</b> |
|---|---|--|

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

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|   |  |                  |                             |   |
|---|--|------------------|-----------------------------|---|
| <i>Name &amp; Address Of The Customer</i>   |  | REPORT NO        | UES/TR/21-22/3507           |   |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA, POST MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO       | UES/21-22/W/6288-6289       |   |
|   |  | DATE OF SAMPLING | 27/10/2021                  |   |
|   |  | DATE OF RECEIPT  | 28/10/2021                  |   |
|   |  | DATE OF REPORT   | 01/11/2021                  |   |
|   |  | DATE OF ANALYSIS | START: 28/10/2021           | END: 01/11/2021                           |
| <b>SAMPLE DETAILS</b>   |  |                  |                             |   |
| SAMPLE TYPE   | WASTE WATER  |                  | ORDER /REFERENCE:           | M/PO/SRV/2122/0045,<br>DTD. :24-JULY-2021 |
| CUSTOMER SAMPLE ID  | ETP INLET & OUTLET, BANKHETA   |                  | SAMPLE CONDITION AT RECEIPT | OK  |
| PACKING OF SAMPLE   | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | SEALED           | SAMPLE COLLECTED BY         | CHEMIST                                   |
| SAMPLING PROCEDURE  | IS:3025(PART 1):1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39         |                  | QUANTITY RECEIVED           | 5 LTR                                     |

Report No.3507

| <b>TEST REPORT</b> |                            |       |   |  |                    |                     |
|--------------------|----------------------------|-------|---|--|--------------------|---------------------|
| 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 |
| 1                  | Colour                     | Hazen | APHA 22 <sup>nd</sup> Ed. 2012,2120-B,2-6           | See 6 of Annexure-I  | 4.2                | <1                  |
| 2                  | Odour                      | -     | APHA 22 <sup>nd</sup> Ed. 2012,2120-B,2-6           | See 6 of Annexure-I  | Agreeable          | Agreeable           |
| 3                  | Temperature                | °C    | APHA 22 <sup>nd</sup> Ed.2012,2130-B,2-13           | Shall not exceed 5°C above the receiving water temperature                         | 25.0               | 25.4                |
| 4                  | pH                         | -     | APHA 22 <sup>nd</sup> Ed.2012,4500-H'-B,4-92        | 5.5 to 9.0   | 7.48               | 7.35                |
| 5                  | Total Residual Chlorine    | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,4500-C1-G,4-69        | 1.0  | N.D.               | N.D.                |
| 6                  | Total Suspended Solids     | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,2540- D, 2-66         | 100  | 134.0              | 28.0                |
| 7                  | Dissolved Phosphate (as P) | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,4500-P-C,4-153        | 5.0  | 0.4                | 0.1                 |
| 8                  | Fluoride (as F)            | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,4500-F-B &D,4-84 & 87 | 2.0  | 0.18               | 0.06                |
| 9                  | Lead (as Pb)               | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18          | 0.1  | N.D.               | N.D.                |
| 10                 | Zinc (as Zn)               | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18          | 5.0  | 0.26               | 0.08                |
| 11                 | Copper (as Cu)             | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18          | 3.0  | N.D.               | N.D.                |
| 12                 | Cadmium (as Cd)            | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3500-Cd, 3-105        | 2.0  | N.D.               | N.D.                |
| 13                 | Mercury (as Hg)            | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3112-B, 3-23          | 0.01   | N.D.               | N.D.                |
| 14                 | Arsenic (as As)            | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38          | 0.2  | N.D.               | N.D.                |
| 15                 | Selenium (as Se)           | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38          | 0.05   | N.D.               | N.D.                |
| 16                 | Total Chromium (as Cr)     | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3500-Cr-B,3-69        | 2.0  | N.D.               | N.D.                |

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Report No.3507

| 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 <sup>nd</sup> Ed.2012, 5520-B, 5-17 | 250  | 94.0               | 24.0                |
| 18          | Biochemical Oxygen Demand (BOD)                          | mg/L | IS 3025 (Part 44):1993, RA 2003             | 30   | 16.6               | 2.2                 |
| 19          | Oil & Grease   | mg/L | IS 3025 (Part 39):1991, RA 2003             | 10   | N.D.               | N.D.                |
| 20          | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> 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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- This is for information as the party has asked for above test report.

|                 |  |  |
|-----------------|--|--|
| <br>REVIEWED BY |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY |
|-----------------|--|--|

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



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|  |  |                             |  |
|--|--|-----------------------------|--|
| <b>Name &amp; Address Of The Customer</b><br><b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA, POST MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | REPORT NO                   | UES/TR/21-22/04177                       |
|  |  | LAB REF NO                  | UES/21-22/W/07491                        |
|  |  | DATE OF SAMPLING            | 23/11/2021                               |
|  |  | DATE OF RECEIPT             | 24/11/2021                               |
|  |  | DATE OF REPORT              | 01/12/2021                               |
|  |  | DATE OF ANALYSIS            | START:24/11/2021    END: 27/11/2021      |
| <b>SAMPLE DETAILS</b>  |  |                             |  |
| SAMPLE TYPE  | WASTE WATER  | ORDER /REFERENCE:           | N/NO/SRV/1122/0043,<br>Dtd. 24-JULY-2021 |
| CUSTOMER SAMPLE ID   | ETP INLET & OUTLET, BANKHETA   | SAMPLE CONDITION AT RECEIPT | OK                                       |
| PACKING OF SAMPLE  | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | SEALED                      | SAMPLE COLLECTED BY                      |
| SAMPLING PROCEDURE   | IS:3025 (PART 1):1987 RA 2003; APHA<br>22ND ED. 2012, 1060-B, 1-39     | QUANTITY RECEIVED           | 5 LTR                                    |

Report No.04177

| <b>TEST REPORT</b> |                            |       |  |  |                    |                     |
|--------------------|----------------------------|-------|--|--|--------------------|---------------------|
| 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 |
| 1                  | Colour                     | Hazen | APHA 22 <sup>nd</sup> Ed. 2012,2120-B,2-6                  | See 6 of Annexure-I  | 2.6                | 1.8                 |
| 2                  | Odour                      | -     | APHA 22 <sup>nd</sup> Ed. 2012,2120-B,2-6                  | See 6 of Annexure-I  | Agreeable          | Agreeable           |
| 3                  | Temperature                | °C    | APHA 22 <sup>nd</sup> Ed.2012,2130-B,2-13                  | Shall not exceed 5°C above the receiving water temperature                         | 25.5               | 24.8                |
| 4                  | pH                         | -     | APHA 22 <sup>nd</sup> Ed.2012,4500-H <sup>+</sup> -B, 4-92 | 5.5 to 9.0   | 7.53               | 7.28                |
| 5                  | Total Residual Chlorine    | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,4500-C1-G, 4-69              | 1.0  | N.D.               | N.D.                |
| 6                  | Total Suspended Solids     | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,2540- D, 2-66                | 100  | 136.0              | 28.0                |
| 7                  | Dissolved Phosphate (as P) | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,4500-P-C,4-153               | 5.0  | 0.52               | 0.31                |
| 8                  | Fluoride (as F)            | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,4500-F-B 6D,4-84 & 87        | 2.0  | 0.5                | 0.3                 |
| 9                  | Lead (as Pb)               | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18                 | 0.1  | N.D.               | N.D.                |
| 10                 | Zinc (as Zn)               | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18                 | 5.0  | 0.18               | 0.10                |
| 11                 | Copper (as Cu)             | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18                 | 3.0  | N.D.               | N.D.                |
| 12                 | Cadmium (as Cd)            | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3500-Cd, 3-105               | 2.0  | N.D.               | N.D.                |
| 13                 | Mercury (as Hg)            | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3112-B, 3-23                 | 0.01   | N.D.               | N.D.                |
| 14                 | Arsenic (as As)            | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38                 | 0.2  | N.D.               | N.D.                |
| 15                 | Selenium (as Se)           | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38                 | 0.05   | N.D.               | N.D.                |
| 16                 | Total Chromium (as Cr)     | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3500-Cr-B, 3-69              | 2.0  | N.D.               | N.D.                |

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Report No.04177

| 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 <sup>nd</sup> Ed.2012, 5520-B, 5-17 | 250  | 60.0               | 24.0                |
| 18          | Biochemical Oxygen Demand (BOD)                          | mg/L | IS 3025 (Part 44):1993, RA 2003             | 30   | 8.2                | 2.2                 |
| 19          | Oil & Grease   | mg/L | IS 3025 (Part 39):1991, RA 2003             | 10   | N.D.               | N.D.                |
| 20          | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> 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.

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- This is for information as the party has asked for above test/parameter.

|                                    |  |   |
|------------------------------------|--|---|
| <br>01/12/21<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>01/12/21<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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



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|   |  |                             |  |
|---|--|-----------------------------|--|
| Name & Address Of The Customer  |  | REPORT NO                   | UES/TR/21-22/05009                       |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA, POST MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO                  | UES/21-22/W/09013                        |
|   |  | DATE OF SAMPLING            | 22/12/2021                               |
|   |  | DATE OF RECEIPT             | 23/12/2021                               |
|   |  | DATE OF REPORT              | 01/01/2022                               |
|   |  | DATE OF ANALYSIS            | START: 24/12/2021    END: 28/12/2021     |
| <b>SAMPLE DETAILS</b>   |  |                             |  |
| SAMPLE TYPE   | WASTE WATER  | ORDER /REFERENCE:           | R/PO/GRV/2122/0043,<br>DTD. 24-JULY-2021 |
| CUSTOMER SAMPLE ID  | ETP INLET & OUTLET, BANKHETA   | SAMPLE CONDITION AT RECEIPT | OK                                       |
| PACKING OF SAMPLE   | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | SEALED                      | SAMPLE COLLECTED BY<br>CHEMIST           |
| SAMPLING PROCEDURE  | IS:3025(PART I):1987 RA 2003: APHA<br>22ND ED. 2012, 1060-B, 1-39      | QUANTITY RECEIVED           | 5 LTR                                    |

Report No.05009

| <b>TEST REPORT</b> |                            |       |  |   |                    |                     |
|--------------------|----------------------------|-------|--|---|--------------------|---------------------|
| SR. NO.            | PARAMETER                  | UNIT  | METHOD OF TEST   | THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-V] PART-A INLAND SURFACE WATER | BHANKETA ETP INLET | BANKHETA ETP OUTLET |
| 1                  | Colour                     | Hazen | APHA 22 <sup>nd</sup> Ed. 2012,2120-B,2-6                  | See 6 of Annexure-I   | 2.4                | 1.6                 |
| 2                  | Odour                      | -     | APHA 22 <sup>nd</sup> Ed. 2012,2120-B,2-6                  | See 6 of Annexure-I   | Agreeable          | Agreeable           |
| 3                  | Temperature                | °C    | APHA 22 <sup>nd</sup> Ed.2012,2130-B,2-13                  | Should not exceed 5°C above the receiving water temperature                       | 25.2               | 24.9                |
| 4                  | pH                         | -     | APHA 22 <sup>nd</sup> Ed.2012,4500-H <sup>+</sup> -B,4-92  | 5.5 to 9.0  | 7.57               | 7.32                |
| 5                  | Total Residual Chlorine    | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl <sup>-</sup> -G,4-69 | 1.0   | N.D.               | N.D.                |
| 6                  | Total Suspended Solids     | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,2540- D, 2-66                | 100   | 142.0              | 32.0                |
| 7                  | Dissolved Phosphate (as P) | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,4500-P-C,4-153               | 5.0   | 0.58               | 0.34                |
| 8                  | Fluoride (as F)            | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,4500-F-B 4D,4-84 & 87        | 2.0   | 0.4                | 0.2                 |
| 9                  | Lead (as Pb)               | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18                 | 0.1   | N.D.               | N.D.                |
| 10                 | Zinc (as Zn)               | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18                 | 5.0   | 0.20               | 0.13                |
| 11                 | Copper (as Cu)             | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18                 | 3.0   | N.D.               | N.D.                |
| 12                 | Cadmium (as Cd)            | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3500-Cd, 3-105               | 2.0   | N.D.               | N.D.                |
| 13                 | Mercury (as Hg)            | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3112-B, 3-23                 | 0.01  | N.D.               | N.D.                |
| 14                 | Arsenic (as As)            | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38                 | 0.2   | N.D.               | N.D.                |
| 15                 | Selenium (as Se)           | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38                 | 0.05  | N.D.               | N.D.                |
| 16                 | Total Chromium (as Cr)     | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3500-Cr-B,3-69               | 2.0   | N.D.               | N.D.                |

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Report No.05009

| 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 <sup>nd</sup> Ed.2012, 5520-B, 5-17 | 250  | 64.0               | 28.0                |
| 18          | Biochemical Oxygen Demand (BOD)                          | mg/L | IS 3025 (Part 44):1993, RA 2003             | 30   | 8.1                | 2.1                 |
| 19          | Oil & Grease   | mg/L | IS 3025 (Part 39):1991, RA 2003             | 10   | N.D.               | N.D.                |
| 20          | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> 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 otherwise agreed with customer.
- > This is for information as the party has asked for above test(s) only.

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| <br>01/01/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>01/01/2022<br><b>AUTHORIZED SIGNATORY</b> |
|--|--|---|

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



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|  |  |                             |  |
|--|--|-----------------------------|--|
| <i>Name &amp; Address Of The Customer</i><br><b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA, POST MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> | REPORT NO  | UES/TR/21-22/06002          |  |
|  | LAB REF NO   | UES/21-22/W/010320-10321    |  |
|  | DATE OF SAMPLING   | 24/01/2022                  |  |
|  | DATE OF RECEIPT  | 25/01/2022                  |  |
|  | DATE OF REPORT   | 02/02/2022                  |  |
|  | DATE OF ANALYSIS   | START: 25/01/2022           | END: 29/01/2022                          |
| <b>SAMPLE DETAILS</b>  |  |                             |  |
| SAMPLE TYPE  | WASTE WATER  | ORDER /REFERENCE:           | S/PO/GRY/2122/0045,<br>Dtd. 24-July-2021 |
| CUSTOMER SAMPLE ID   | ETP INLET & OUTLET, BANKHETA   | SAMPLE CONDITION AT RECEIPT | OK                                       |
| PACKING OF SAMPLE  | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | SEALED                      | SAMPLE COLLECTED BY<br>CHEMIST           |
| SAMPLING PROCEDURE   | IS:2025(PART I):1987 RA 2003; APHA<br>22ND ED. 2012, 1060-B, 1-39      | QUANTITY RECEIVED           | 5 LTR                                    |

Report No. 6002

| <b>TEST REPORT</b> |                            |       |  |  |                    |                     |
|--------------------|----------------------------|-------|--|--|--------------------|---------------------|
| 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 |
| 1                  | Colour                     | Hazen | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | 2.6                | 1.8                 |
| 2                  | Odour                      | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | Agreeable          | Agreeable           |
| 3                  | Temperature                | °C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13                 | Shall not exceed 5°C above the receiving water temperature                         | 25.4               | 24.6                |
| 4                  | pH                         | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>+</sup> -B, 4-92 | 5.5 to 9.0   | 7.62               | 7.48                |
| 5                  | Total Residual Chlorine    | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-G, 4-69              | 1.0  | N.D.               | N.D.                |
| 6                  | Total Suspended Solids     | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540-D, 2-66                 | 100  | 148.0              | 36.0                |
| 7                  | Dissolved Phosphata (as P) | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153              | 5.0  | 0.62               | 0.30                |
| 8                  | Fluoride (as F)            | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B 4D, 4-84 & 87       | 2.0  | 0.5                | 0.4                 |
| 9                  | Lead (as Pb)               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 0.1  | N.D.               | N.D.                |
| 10                 | Zinc (as Zn)               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 5.0  | 0.22               | 0.16                |
| 11                 | Copper (as Cu)             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 3.0  | N.D.               | N.D.                |
| 12                 | Cadmium (as Cd)            | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105               | 2.0  | N.D.               | N.D.                |
| 13                 | Mercury (as Hg)            | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23                 | 0.01   | N.D.               | N.D.                |
| 14                 | Arsenic (as As)            | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.2  | N.D.               | N.D.                |
| 15                 | Selenium (as Se)           | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.05   | N.D.               | N.D.                |
| 16                 | Total Chromium (as Cr)     | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69              | 2.0  | N.D.               | N.D.                |

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Report No. 6002

| 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 <sup>nd</sup> 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 <sub>6</sub> H <sub>5</sub> 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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- > This is for information as the party has asked for above test(s) only.

|                                    |  |   |
|------------------------------------|--|---|
| <br>02/02/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/02/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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





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|   |  |                             |                                       |                 |
|---|--|-----------------------------|---------------------------------------|-----------------|
| Name & Address Of The Customer  |  | REPORT NO                   | UES/TR/21-22/07927                    |                 |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA, POST MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO                  | UES/21-22/W/013111                    |                 |
|   |  | DATE OF SAMPLING            | 24/02/2022                            |                 |
|   |  | DATE OF RECEIPT             | 25/02/2022                            |                 |
|   |  | DATE OF REPORT              | 01/03/2022                            |                 |
|   |  | DATE OF ANALYSIS            | START: 25/02/2022                     | END: 01/03/2022 |
| <b>SAMPLE DETAILS</b>   |  |                             |                                       |                 |
| SAMPLE TYPE   | WASTE WATER  | ORDER /REFERENCE:           | M/PO/SRV/2122/0043, DPO. 24-JULY-2021 |                 |
| CUSTOMER SAMPLE ID  | ETP INLET & OUTLET, BANKHETA   | SAMPLE CONDITION AT RECEIPT | OK                                    |                 |
| PACKING OF SAMPLE   | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | SEALED                      | SAMPLE COLLECTED BY                   | CHEMIST         |
| SAMPLING PROCEDURE  | IS:3025(PART 1):1987 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39         | QUANTITY RECEIVED           | 5 LTR                                 |                 |

Report No. 7927

| <b>TEST REPORT</b> |                            |       |  |  |                    |                     |
|--------------------|----------------------------|-------|--|--|--------------------|---------------------|
| 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 |
| 1                  | Colour                     | Hazen | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | 3.8                | <1.0                |
| 2                  | Odour                      | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6                  | See 6 of Annexure-I  | Agreeable          | Agreeable           |
| 3                  | Temperature                | °C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13                 | Shall not exceed 5°C above the receiving water temperature                         | 25.2               | 24.8                |
| 4                  | pH                         | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>+</sup> -B, 4-92 | 5.5 to 9.0   | 7.98               | 7.34                |
| 5                  | Total Residual Chlorine    | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-G, 4-69              | 1.0  | N.D.               | N.D.                |
| 6                  | Total Suspended Solids     | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540-D, 2-66                 | 100  | 162.0              | 28.0                |
| 7                  | Dissolved Phosphate (as P) | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153              | 5.0  | 0.58               | 0.24                |
| 8                  | Fluoride (as F)            | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B 4D, 4-84 & 87       | 2.0  | 0.6                | 0.3                 |
| 9                  | Lead (as Pb)               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 0.1  | N.D.               | N.D.                |
| 10                 | Zinc (as Zn)               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 5.0  | 0.21               | 0.11                |
| 11                 | Copper (as Cu)             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18                 | 3.0  | N.D.               | N.D.                |
| 12                 | Cadmium (as Cd)            | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105               | 2.0  | N.D.               | N.D.                |
| 13                 | Mercury (as Hg)            | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23                 | 0.01   | N.D.               | N.D.                |
| 14                 | Arsenic (as As)            | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.2  | N.D.               | N.D.                |
| 15                 | Selenium (as Se)           | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38                 | 0.05   | N.D.               | N.D.                |
| 16                 | Total Chromium (as Cr)     | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69              | 2.0  | N.D.               | N.D.                |

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Report No. 7927

### TEST REPORT

| SR. NO. | PARAMETER  | UNIT | METHOD OF TEST                              | THE ENVIRONMENT (PROTECTION) RULES, 1986 [SCHEDULE-VI] PART-A INLAND SURFACE WATER | BHANKETA ETP INLET | BHANKETA ETP OUTLET |
|---------|--|------|---|--|--------------------|---------------------|
| 17      | Chemical Oxygen Demand (COD)                             | mg/L | APHA 22 <sup>nd</sup> Ed.2012, 5520-B, 5-17 | 250  | 74.0               | 34.0                |
| 18      | Biochemical Oxygen Demand (BOD)                          | mg/L | IS 3025 (Part 44):1993, RA 2003             | 30   | 9.4                | 3.8                 |
| 19      | Oil & Grease .   | mg/L | IS 3025 (Part 39):1991, RA 2003             | 10   | N.D.               | N.D.                |
| 20      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> 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.

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

|                                    |  |   |
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| <br>01/03/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>01/03/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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



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|   |  |                             |                                     |                 |
|---|--|-----------------------------|-------------------------------------|-----------------|
| <i>Name &amp; Address Of The Customer</i>   |  | REPORT NO                   | UES/TR/21-22/08934                  |                 |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA, POST MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO                  | UES/21-22/W/014627                  |                 |
|   |  | DATE OF SAMPLING            | 28/03/2022                          |                 |
|   |  | DATE OF RECEIPT             | 29/03/2022                          |                 |
|   |  | DATE OF REPORT              | 02/04/2022                          |                 |
|   |  | DATE OF ANALYSIS            | START: 29/03/2022                   | END: 02/04/2022 |
|   |  | <b>SAMPLE DETAILS</b>       |                                     |                 |
| SAMPLE TYPE   | WASTE WATER  | ORDER /REFERENCE:           | N/PO/SRV/2122/0045, DTD. 24-03-2022 |                 |
| CUSTOMER SAMPLE ID  | ETP INLET & OUTLET, BANKHETA   | SAMPLE CONDITION AT RECEIPT | OK                                  |                 |
| PACKING OF SAMPLE   | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | SEALED                      | SAMPLE COLLECTED BY                 | CHEMIST         |
| SAMPLING PROCEDURE  | IS:3025(PART I):1967 RA 2003; APHA 22ND ED. 2012, 1060-B, 1-39         | QUANTITY RECEIVED           | 5 LTR                               |                 |

Report No. 08934

| <b>TEST REPORT</b> |                            |       |  |  |                    |                     |
|--------------------|----------------------------|-------|--|--|--------------------|---------------------|
| 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 |
| 1                  | Colour                     | Hazen | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6            | See 6 of Annexure-I  | 4.5                | <1.0                |
| 2                  | Odour                      | -     | APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6            | See 6 of Annexure-I  | Agreeable          | Agreeable           |
| 3                  | Temperature                | °C    | APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13           | Shall not exceed 5°C above the receiving water temperature                         | 25.8               | 25.2                |
| 4                  | pH                         | -     | APHA 22 <sup>nd</sup> Ed. 2012, 4500-H-B, 4-92         | 5.5 to 9.0   | 7.64               | 7.18                |
| 5                  | Total Residual Chlorine    | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-G, 4-69        | 1.0  | N.D.               | N.D.                |
| 6                  | Total Suspended Solids     | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 2540-D, 2-66           | 100  | 182.0              | 22.0                |
| 7                  | Dissolved Phosphate (as P) | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-P-C, 4-153        | 5.0  | 0.62               | 0.32                |
| 8                  | Fluoride (as F)            | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 4500-F-B 4D, 4-84 & 87 | 2.0  | 0.8                | 0.4                 |
| 9                  | Lead (as Pb)               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18           | 0.1  | N.D.               | N.D.                |
| 10                 | Zinc (as Zn)               | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18           | 5.0  | 0.41               | 0.08                |
| 11                 | Copper (as Cu)             | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18           | 3.0  | N.D.               | N.D.                |
| 12                 | Cadmium (as Cd)            | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cd, 3-105         | 2.0  | N.D.               | N.D.                |
| 13                 | Mercury (as Hg)            | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3112-B, 3-23           | 0.01   | N.D.               | N.D.                |
| 14                 | Arsenic (as As)            | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38           | 0.2  | N.D.               | N.D.                |
| 15                 | Selenium (as Se)           | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3114-C, 3-38           | 0.05   | N.D.               | N.D.                |
| 16                 | Total Chromium (as Cr)     | mg/L  | APHA 22 <sup>nd</sup> Ed. 2012, 3500-Cr-B, 3-69        | 2.0  | N.D.               | N.D.                |

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### 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 <sup>nd</sup> Ed. 2012, 5520-B, 5-17 | 250  | 86.0               | 24.0                |
| 18      | Biochemical Oxygen Demand (BOD)                          | mg/L | IS 3025 (Part 44):1993, RA 2003              | 30   | 12.8               | 4.6                 |
| 19      | Oil & Grease   | mg/L | IS 3025 (Part 39):1991, RA 2003              | 10   | N.D.               | N.D.                |
| 20      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> 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 otherwise agreed with customer.
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|                                    |  |   |
|------------------------------------|--|---|
| <br>02/04/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/04/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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

# Annexure-5A

# CONTINUOUS ONLINE EFFLUENT QUALITY MONITORING SYSTEM (COEQMS - 01 Nos.) AT GARE PALMA IV/4 COAL MINE, BANKHETA, RAIGARH



# Annexure-6

**Ground Water Level Monitoring Report in and around the Coal Mine Area  
(From Oct 2021 to Dec 2021)**

| Sr. No. | Location                                | Types of Structure | In Meters                         |                                   |                                   |
|---------|---|--------------------|-----------------------------------|-----------------------------------|-----------------------------------|
|         |   |                    | Ground Water level (BGL) Oct 2021 | Ground Water level (BGL) Nov 2021 | Ground Water level (BGL) Dec 2021 |
| 1       | Bankheta (Near HIL Office)              | Borewell/<br>AWLR  | 7.10                              | 9.82                              | 10.65                             |
| 2       | Banjikhol (Near Office)                 | Borewell/<br>AWLR  | 24.33                             | 24.29                             | 24.35                             |
| 3       | Milupara (Near Office)                  | Borewell/<br>AWLR  | 9.12                              | 9.70                              | 10.42                             |
| 4       | HIL Staff Quarter                       | Borewell/<br>AWLR  | 4.40                              | 4.72                              | 5.65                              |
| 5       | Milupara Village (PHC-HIL)              | Dugwell            | 1.66                              | 2.70                              | 2.74                              |
| 6       | Sakta Village (Near Primary School)     | Dugwell            | 2.30                              | 2.70                              | 2.97                              |
| 7       | Sidarpara Village (Near Primary School) | Dugwell            | 7.13                              | 7.90                              | 8.50                              |
| 8       | Beljor Village                          | Dugwell            | 5.16                              | 5.80                              | 5.70                              |





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|  |  |                             |                                       |                |
|--|--|-----------------------------|---------------------------------------|----------------|
| <b>Name &amp; Address Of The Customer</b><br><b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA,</b><br><b>POST -MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107.</b> |  | REPORT NO                   | UES/TR/21-22/04189                    |                |
|  |  | LAB REF NO                  | UES/21-22/W/07511                     |                |
|  |  | DATE OF SAMPLING            | 23/11/2021                            |                |
|  |  | DATE OF RECEIPT             | 24/11/2021                            |                |
|  |  | DATE OF REPORT              | 01/12/2021                            |                |
|  |  | DATE OF ANALYSIS            | START:24/11/2021                      | END:27/11/2021 |
| <b>SAMPLE DETAILS</b>  |  |                             |                                       |                |
| SAMPLE TYPE  | GROUNDWATER  | ORDER /REFERENCE:           | N/PO/SRV/2122/0045, DTD. 24-JULY-2021 |                |
| CUSTOMER SAMPLE ID   | BANKHETA MINE (PIEZOMETER) AWLR  | SAMPLE CONDITION AT RECEIPT | OK                                    |                |
| PACKING OF SAMPLE  | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | SEALED                      | SAMPLE COLLECTED BY                   | CHEMIST        |
| SAMPLING PROCEDURE   | IS:3025 (PART I):1987 RA<br>2003; APHA 22ND ED. 2012,<br>1060-B, 1-39  | QUANTITY RECEIVED           | 5 LTR                                 |                |

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### TEST REPORT

| SR. NO. | PARAMETER                                  | UNIT   | METHOD OF TEST   | AS PER IS 10500:2012 |                   | RESULT    |
|---------|--|--------|--|----------------------|-------------------|-----------|
|         |  |        |  | Acceptable Limit     | Permissible limit |           |
| 1       | Colour                                     | Hazen  | IS:3025:(Part-4)   | 5                    | 15                | <1        |
| 2       | Odour                                      | -      | IS 3025(part-5)  | Agreeable            | Agreeable         | Agreeable |
| 3       | Taste                                      | -      | IS 3025(part-8)  | Agreeable            | Agreeable         | Agreeable |
| 4       | pH   | -      | APHA 22 <sup>nd</sup> Ed.2012,4500-H <sup>+</sup> -B, 4-92   | 6.5-8.5              | NoRelaxation      | 7.93      |
| 5       | Turbidity                                  | NTU    | APHA 22 <sup>nd</sup> Ed.2012,2130-B,2-13                    | 1                    | 5                 | 1.12      |
| 6       | Electrical Conductivity                    | µS/cm  | IS 3025(part-14):1984, RA 2013                               | -                    | -                 | 162.0     |
| 7       | Residual Chlorine                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-G, 4-69                | 0.2                  | 1                 | N.D.      |
| 8       | Total Solid                                | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- B, 2-64                  | -                    | -                 | 100.2     |
| 9       | Total Dissolved Solids                     | mg/Lit | IS 3025(part-16):1984, RA 2006                               | 500                  | 2000              | 98.2      |
| 10      | Total Suspended Solids                     | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- D, 2-66                  | -                    | -                 | 2.0       |
| 11      | Alkalinity Total (as CaCO <sub>3</sub> )   | mg/Lit | IS 3025(part-23):1986, RA 2003                               | 200                  | 600               | 34.0      |
| 12      | Total Hardness ( as CaCO <sub>3</sub> )    | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2340-C, 2-44,45                | 200                  | 600               | 48.0      |
| 13      | Calcium Hardness (as CaCO <sub>3</sub> )   | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67                | -                    | -                 | 26.0      |
| 14      | Magnesium Hardness (as CaCO <sub>3</sub> ) | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84                | -                    | -                 | 22.0      |
| 15      | Calcium (as Ca)                            | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67                | 75                   | 200               | 10.4      |
| 16      | Magnesium (as Mg)                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84                | 30                   | 100               | 5.34      |
| 17      | Chloride (as Cl)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-B, 4-72                | 250                  | 1000              | 15.9      |
| 18      | Sulphate (as SO <sub>4</sub> )             | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-SO <sub>4</sub> -E, 4-190 | 200                  | 400               | 11.4      |
| 19      | Nitrate (as NO <sub>3</sub> )              | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-NO <sub>3</sub> -B, 4-122 | 45                   | NoRelaxation      | 0.21      |
| 20      | Phosphate (as P)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-P-C, 4-153                | -                    | -                 | N.D.      |

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### TEST REPORT

| SR. NO.                         | PARAMETER   | UNIT       | METHOD OF TEST                           | AS PER IS 10500:2012                         |                   | RESULT |
|---------------------------------|---|------------|--|--|-------------------|--------|
|                                 |   |            |  | Acceptable Limit                             | Permissible limit |        |
| 21                              | Sodium (as Na)  | mg/Lit     | APHA 22nd Ed.2012,3500-Na-B, 3-97        | -  | -                 | 16.4   |
| 22                              | Potassium (as K)  | mg/Lit     | APHA 22nd Ed.2012,3500-K-B, 3-87         | -  | -                 | 1.18   |
| 23                              | Boron (as B)  | mg/Lit     | APHA 22nd Ed.2012,4500-B-B, 4-25         | 0.5  | 1.0               | N.D.   |
| 24                              | Iron (as Fe)  | mg/Lit     | APHA 22nd Ed.2012,3111-B,3-18            | 0.3  | NoRelaxation      | N.D.   |
| 25                              | Fluoride (as F)   | mg/Lit     | APHA 22nd Ed.2012,4500-F-B &D, 4-84 & 87 | 1  | 1.5               | 0.10   |
| 26                              | Manganese (as Mn)                                       | mg/Lit     | APHA 22nd Ed.2012,3111-B, 3-18           | 0.1  | 0.3               | N.D.   |
| 27                              | Lead (as Pb)  | mg/Lit     | APHA 22nd Ed.2012,3111-B, 3-18           | 0.01   | NoRelaxation      | N.D.   |
| 28                              | Nickel (as Ni)  | mg/Lit     | APHA 22nd Ed.2012,3500-Ni, 3-108         | 0.02   | No Relaxation     | N.D.   |
| 29                              | Zinc (as Zn)  | mg/Lit     | APHA 22nd Ed.2012,3111-B, 3-18           | 5  | 15                | N.D.   |
| 30                              | Copper (as Cu)  | mg/Lit     | APHA 22nd Ed.2012,3111-B, 3-18           | 0.05   | 1.5               | N.D.   |
| 31                              | Cadmium (as Cd)   | mg/Lit     | APHA 22nd Ed.2012,3500-Cd, 3-105         | 0.003  | NoRelaxation      | N.D.   |
| 32                              | Mercury (as Hg)   | mg/Lit     | APHA 22nd Ed.2012,3112-B, 3-23           | 0.001  | NoRelaxation      | N.D.   |
| 33                              | Arsenic (as As)   | mg/Lit     | APHA 22nd Ed.2012,3114-C, 3-38           | 0.01   | 0.05              | N.D.   |
| 34                              | Selenium (as Se)  | mg/Lit     | APHA 22nd Ed.2012,3114-C, 3-38           | 0.01   | NoRelaxation      | N.D.   |
| 35                              | Chromium (as Cr)  | mg/Lit     | APHA 22nd Ed.2012,3500-Cr-B, 3-69        | 0.05   | NoRelaxation      | N.D.   |
| 36                              | Anionic Detergent (as MBAS)                             | mg/Lit     | APHA 22nd Ed.2012,5540-C, 5-53           | 0.2  | 1.0               | N.D.   |
| 37                              | Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH) | mg/Lit     | APHA 22nd Ed.2012,5540-B & C, 5-47       | 0.001  | 0.002             | N.D.   |
| 38                              | Poly-nuclear Aromatic Hydrocarbon (PAH)                 | µg/Lit     | APHA 22nd Ed.2012,6440-6-93              | 0.0001                                       | 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.   |
| <b>Microbiological Analysis</b> |   |            |  |  |                   |        |
| 1                               | Total Coliforms   | MPN/100 ML | IS:1622:1981: RA:2019                    | Shall not be detectable in any 100 ml sample |                   | Absent |
| 2                               | Faecal Coliform   | MPN/100ml  | IS:1622:1981: RA:2019                    | Shall not be detectable in any 100 ml sample |                   | Absent |
| 3                               | E. Coli   | MPN/100ml  | IS:1622:1981:RA:2019                     | Shall not be detectable in any 100ml sample  |                   | Absent |
| <b>Pesticides</b>               |   |            |  |  |                   |        |
| 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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### TEST REPORT

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

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

#### REMARKS: RESULTS ARE AS ABOVE

##### Terms & conditions

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

|   |   |  |
|---|---|--|
| <br>01/12/21<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>01/12/21<br><b>AUTHORIZED SIGNATORY</b> |
|---|---|--|

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



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|  |  |                  |                             |                                       |
|--|--|------------------|-----------------------------|---------------------------------------|
| <b>Home &amp; Address Of The Customer</b><br><b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA – IV/4, COAL MINE,</b><br><b>VILLAGE – BANKHETA,</b><br><b>POST -MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107.</b> |  | REPORT NO        | UES/TR/21-22/04190          |                                       |
|  |  | LAB REF NO       | UES/21-22/W/07512           |                                       |
|  |  | DATE OF SAMPLING | 23/11/2021                  |                                       |
|  |  | DATE OF RECEIPT  | 24/11/2021                  |                                       |
|  |  | DATE OF REPORT   | 01/12/2021                  |                                       |
|  |  | DATE OF ANALYSIS | START: 24/11/2021           | END: 27/11/2021                       |
| <b>SAMPLE DETAILS</b>  |  |                  |                             |                                       |
| SAMPLE TYPE  | GROUND WATER   |                  | ORDER /REFERENCE:           | N/PO/SRV/2122/0045, DTD. 24-JULY-2021 |
| CUSTOMER SAMPLE ID   | BANJIKHOL MINE (PIEZOMETER) AWLR                                       |                  | SAMPLE CONDITION AT RECEIPT | OK                                    |
| PACKING OF SAMPLE  | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | SEALED           | SAMPLE COLLECTED BY         | CHEMIST                               |
| SAMPLING PROCEDURE   | IS:3025 (PART I):1987 RA 2003;<br>APHA 22ND ED. 2012, 1060-B,1-39      |                  | QUANTITY RECEIVED           | 5 LTR                                 |

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| <b>TEST REPORT</b> |  |        |  |                      |                   |           |
|--------------------|--|--------|--|----------------------|-------------------|-----------|
| SR. NO.            | PARAMETER                                  | UNIT   | METHOD OF TEST   | AS PER IS 10500:2012 |                   | RESULT    |
|                    |  |        |  | Acceptable Limit     | Permissible limit |           |
| 1                  | Colour                                     | Hazen  | IS:3025:(Part-4)   | 5                    | 15                | <1        |
| 2                  | Odour                                      | -      | IS 3025(part-5)  | Agreeable            | Agreeable         | Agreeable |
| 3                  | Taste                                      | -      | IS 3025(part-8)  | Agreeable            | Agreeable         | Agreeable |
| 4                  | pH   | -      | APHA 22 <sup>nd</sup> Ed.2012,4500-H <sup>+</sup> -B, 4-92   | 6.5-8.5              | NoRelaxation      | 6.84      |
| 5                  | Turbidity                                  | NTU    | APHA 22 <sup>nd</sup> Ed.2012,2130-B,2-13                    | 1                    | 5                 | 2.3       |
| 6                  | Electrical Conductivity                    | µS/cm  | IS 3025(part-14):1984, RA 2013                               | -                    | -                 | 169.4     |
| 7                  | Residual Chlorine                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-G, 4-69                | 0.2                  | 1                 | N.D.      |
| 8                  | Total Solid                                | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- B, 2-64                  | -                    | -                 | 104.2     |
| 9                  | Total Dissolved Solids                     | mg/Lit | IS 3025(part-16):1984, RA 2006                               | 500                  | 2000              | 102.4     |
| 10                 | Total Suspended Solids                     | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- D, 2-66                  | -                    | -                 | 1.8       |
| 11                 | Alkalinity Total (as CaCO <sub>3</sub> )   | mg/Lit | IS 3025(part-23):1986, RA 2003                               | 200                  | 600               | 44.0      |
| 12                 | Total Hardness ( as CaCO <sub>3</sub> )    | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2340-C, 2-44,45                | 200                  | 600               | 78.0      |
| 13                 | Calcium Hardness (as CaCO <sub>3</sub> )   | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67                | -                    | -                 | 38.0      |
| 14                 | Magnesium Hardness (as CaCO <sub>3</sub> ) | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84                | -                    | -                 | 40.0      |
| 15                 | Calcium (as Ca)                            | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67                | 75                   | 200               | 15.2      |
| 16                 | Magnesium (as Mg)                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84                | 30                   | 100               | 9.72      |
| 17                 | Chloride (as Cl)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-B, 4-72                | 250                  | 1000              | 14.9      |
| 18                 | Sulphate (as SO <sub>4</sub> )             | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-SO <sub>4</sub> -E, 4-190 | 200                  | 400               | 11.3      |
| 19                 | Nitrate (as NO <sub>3</sub> )              | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-NO <sub>3</sub> -B,4-122  | 45                   | NoRelaxation      | 2.1       |
| 20                 | Phosphate (as P)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-P-C, 4-153                | -                    | -                 | N.D.      |

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### TEST REPORT

| SR. NO.                         | PARAMETER   | UNIT       | METHOD OF TEST                                       | AS PER IS 10500:2012                         |                   | RESULT |
|---------------------------------|---|------------|--|--|-------------------|--------|
|                                 |   |            |  | Acceptable Limit                             | Permissible limit |        |
| 21                              | Sodium (as Na)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Na-B, 3-97        | -  | -                 | 8.2    |
| 22                              | Potassium (as K)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-K-B, 3-87         | -  | -                 | 0.21   |
| 23                              | Boron (as B)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-B-B, 4-25         | 0.5  | 1.0               | N.D.   |
| 24                              | Iron (as Fe)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.3  | NoRelaxation      | N.D.   |
| 25                              | Fluoride (as F)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-F-B &D, 4-84 & 87 | 1  | 1.5               | N.D.   |
| 26                              | Manganese (as Mn)                                       | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.1  | 0.3               | N.D.   |
| 27                              | Lead (as Pb)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.01   | NoRelaxation      | N.D.   |
| 28                              | Nickel (as Ni)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Ni, 3-108         | 0.02   | No Relaxation     | N.D.   |
| 29                              | Zinc (as Zn)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 5  | 15                | N.D.   |
| 30                              | Copper (as Cu)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.05   | 1.5               | N.D.   |
| 31                              | Cadmium (as Cd)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cd, 3-105         | 0.003  | NoRelaxation      | N.D.   |
| 32                              | Mercury (as Hg)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3112-B, 3-23           | 0.001  | NoRelaxation      | N.D.   |
| 33                              | Arsenic (as As)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38           | 0.01   | 0.05              | N.D.   |
| 34                              | Selenium (as Se)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38           | 0.01   | NoRelaxation      | N.D.   |
| 35                              | Chromium (as Cr)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cr-B, 3-69        | 0.05   | NoRelaxation      | N.D.   |
| 36                              | Anionic Detergent (as MBAS)                             | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-C, 5-53           | 0.2  | 1.0               | N.D.   |
| 37                              | Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH) | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-B & C, 5-47       | 0.001  | 0.002             | N.D.   |
| 38                              | Poly-nuclear Aromatic Hydrocarbon (PAH)                 | µg/Lit     | APHA 22 <sup>nd</sup> 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.   |
| <b>Microbiological Analysis</b> |   |            |  |  |                   |        |
| 1                               | Total Coliforms   | MPN/100 ML | IS:1622:1981: RA:2019                                | Shall not be detectable in any 100 ml sample |                   | Absent |
| 2                               | Faecal Coliform   | MPN/100ml  | IS:1622:1981: RA:2019                                | Shall not be detectable in any 100 ml sample |                   | Absent |
| 3                               | E. Coli   | MPN/100ml  | IS:1622:1981:RA:2019                                 | Shall not be detectable in any 100ml sample  |                   | Absent |
| <b>Pesticides</b>               |   |            |  |  |                   |        |
| 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.04190

### TEST REPORT

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

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

**REMARKS: RESULTS ARE AS ABOVE**

#### Terms & conditions

- 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.

|                                    |  |   |
|------------------------------------|--|---|
| <br>01/12/21<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>01/12/21<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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



HDD-272, Phase III - Near JP Chowk  
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|  |   |                  |                                |  |
|--|---|------------------|--------------------------------|--|
| <i>Name &amp; Address Of The Customer</i>  |   | REPORT NO        | UES/TR/21-22/04225             |  |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/5, MILUPARA<br/>U/G COAL MINE,VILLAGE - MILUPARA,<br/>BLOCK-TAMNAR,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |   | LAB REF NO       | UES/21-22/W/07585              |  |
|  |   | DATE OF SAMPLING | 24/11/2021                     |  |
|  |   | DATE OF RECEIPT  | 25/11/2021                     |  |
|  |   | DATE OF REPORT   | 01/12/2021                     |  |
|  |   | DATE OF ANALYSIS | START: 25/11/2021              | END: 29/11/2021                          |
| <b>SAMPLE DETAILS</b>  |   |                  |                                |  |
| SAMPLE TYPE  | GROUND WATER  |                  | ORDER /REFERENCE:              | M/PO/SRV/2122/0049,<br>DTD. 24-JULY-2021 |
| CUSTOMER SAMPLE ID   | NEAR MILUPARA MINES OFFICE<br>PIEZOMETER -AWLR                            |                  | SAMPLE CONDITION AT<br>RECEIPT | OK                                       |
| PACKING OF SAMPLE  | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS<br>BOTTLE | SEALED           | SAMPLE COLLECTED BY            | CHEMIST                                  |
| SAMPLING PROCEDURE   | IS:3025(PART I):1987 RA 2003;<br>APHA 22ND ED. 2012, 1060-B, 1-39         |                  | QUANTITY RECEIVED              | 5 LTR                                    |

REPORT NO. - 04225

### TEST REPORT

| SR. NO. | PARAMETER                                  | UNIT   | METHOD OF TEST   | AS PER IS 10500:2012 |                   | RESULT    |
|---------|--|--------|--|----------------------|-------------------|-----------|
|         |  |        |  | Acceptable Limit     | Permissible limit |           |
| 1       | Colour                                     | Hazen  | IS:3025:(Part-4)   | 5                    | 15                | <1        |
| 2       | Odour                                      | -      | IS 3025(part-5)  | Agreeable            | Agreeable         | Agreeable |
| 3       | Taste                                      | -      | IS 3025(part-8)  | Agreeable            | Agreeable         | Agreeable |
| 4       | pH   | -      | APHA 22 <sup>nd</sup> Ed.2012,4500-H <sup>+</sup> -B, 4-92   | 6.5-8.5              | NoRelaxation      | 6.54      |
| 5       | Turbidity                                  | NTU    | APHA 22 <sup>nd</sup> Ed.2012,2130-B,2-13                    | 1                    | 5                 | 2.0       |
| 6       | Electrical Conductivity                    | µS/cm  | IS 3025(part-14):1984, RA 2013                               | -                    | -                 | 188.6     |
| 7       | Residual Chlorine                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-G,4-69                 | 0.2                  | 1                 | N.D.      |
| 8       | Total Solid                                | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- B, 2-64                  | -                    | -                 | 120.2     |
| 9       | Total Dissolved Solids                     | mg/Lit | IS 3025(part-16):1984, RA 2006                               | 500                  | 2000              | 114.6     |
| 10      | Total Suspended Solids                     | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- D, 2-66                  | -                    | -                 | 5.6       |
| 11      | Alkalinity Total (as CaCO <sub>3</sub> )   | mg/Lit | IS 3025(part-23):1986, RA 2003                               | 200                  | 600               | 26.0      |
| 12      | Total Hardness ( as CaCO <sub>3</sub> )    | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2340-C, 2-44,45                | 200                  | 600               | 58.0      |
| 13      | Calcium Hardness (as CaCO <sub>3</sub> )   | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67                | -                    | -                 | 32.0      |
| 14      | Magnesium Hardness (as CaCO <sub>3</sub> ) | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84                | -                    | -                 | 26.0      |
| 15      | Calcium (as Ca)                            | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67                | 75                   | 200               | 12.8      |
| 16      | Magnesium (as Mg)                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84                | 30                   | 100               | 6.3       |
| 17      | Chloride (as Cl)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-B, 4-72                | 250                  | 1000              | 15.9      |
| 18      | Sulphate (as SO <sub>4</sub> )             | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-SO <sub>4</sub> -E,4-190  | 200                  | 400               | 11.3      |
| 19      | Nitrate (as NO <sub>3</sub> )              | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-NO <sub>3</sub> -B, 4-122 | 45                   | NoRelaxation      | 2.2       |

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REPORT NO. - 04225

| TEST REPORT                     |   |            |  |  |                   |        |
|---------------------------------|---|------------|--|--|-------------------|--------|
| SR. NO.                         | PARAMETER   | UNIT       | METHOD OF TEST                                       | AS PER IS 10500:2012                         |                   | RESULT |
|                                 |   |            |  | Acceptable Limit                             | Permissible limit |        |
| 20                              | Phosphate (as P)  | mg/Lit     | APHA 22nd Ed.2012,4500-P-C, 4-153                    | -  | -                 | N.D.   |
| 20                              | Sodium (as Na)  | mg/Lit     | APHA 22ndEd.2012,3500-Na-B, 3-97                     | -  | -                 | 7.2    |
| 21                              | Potassium (as K)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-K-B, 3-87         | -  | -                 | 0.39   |
| 22                              | Boron (as B)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-B-B, 4-25         | 0.5  | 1.0               | N.D.   |
| 23                              | Iron (as Fe)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B,3-18            | 0.3  | NoRelaxation      | N.D.   |
| 24                              | Fluoride (as F)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-F-B &D, 4-84 & 87 | 1  | 1.5               | 0.09   |
| 25                              | Manganese (as Mn)                                       | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.1  | 0.3               | N.D.   |
| 26                              | Lead (as Pb)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.01   | NoRelaxation      | N.D.   |
| 27                              | Nickel (as Ni)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Ni, 3-108         | 0.02   | No Relaxation     | N.D.   |
| 28                              | Zinc (as Zn)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 5  | 15                | N.D.   |
| 29                              | Copper (as Cu)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.05   | 1.5               | N.D.   |
| 30                              | Cadmium (as Cd)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cd,3-105          | 0.003  | NoRelaxation      | N.D.   |
| 31                              | Mercury (as Hg)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3112-B, 3-23           | 0.001  | NoRelaxation      | N.D.   |
| 32                              | Arsenic (as As)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38           | 0.01   | 0.05              | N.D.   |
| 33                              | Selenium (as Se)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38           | 0.01   | NoRelaxation      | N.D.   |
| 34                              | Chromium (as Cr)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cr-B, 3-69        | 0.05   | NoRelaxation      | N.D.   |
| 35                              | Anionic Detergent (as MBAS)                             | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-C, 5-53           | 0.2  | 1.0               | N.D.   |
| 36                              | Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH) | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-B & C, 5-47       | 0.001  | 0.002             | N.D.   |
| 37                              | Poly-nuclear Aromatic Hydrocarbon (PAH)                 | µg/Lit     | APHA 22 <sup>nd</sup> 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.   |
| <b>Microbiological Analysis</b> |   |            |  |  |                   |        |
| 1                               | Total Coliforms   | MPN/100 ML | IS:1622:1981: RA:2019                                | Shall not be detectable in any 100 ml sample |                   | Absent |
| 2                               | Faecal coliform   | MPN/100ml  | IS:1622:1981: RA:2019                                | Shall not be detectable in any 100 ml sample |                   | Absent |
| 3                               | E. Coli   | MPN/100ml  | IS:1622:1981:RA:2019                                 | Shall not be detectable in any 100ml sample  |                   | Absent |
| <b>Pesticides</b>               |   |            |  |  |                   |        |
| 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. - 04225

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

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

**REMARKS: RESULTS ARE AS ABOVE**

Terms & conditions

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

|                        |   |                                 |
|------------------------|---|---------------------------------|
| <br><b>REVIEWED BY</b> | <br><b>For ULTIMATE ENVIROLYTICAL SOLUTIONS</b> | <br><b>AUTHORIZED SIGNATORY</b> |
|------------------------|---|---------------------------------|

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



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|  |   |                  |                             |  |
|--|---|------------------|-----------------------------|--|
| <i>Name &amp; Address Of The Customer</i>  |   | REPORT NO        | UES/TR/21-22/04224          |  |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/5, MILUPARA<br/>U/G COAL MINE,VILLAGE - MILUPARA,<br/>BLOCK-TAMNAR,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |   | LAB REF NO       | UES/21-22/W/07584           |  |
|  |   | DATE OF SAMPLING | 24/11/2021                  |  |
|  |   | DATE OF RECEIPT  | 25/11/2021                  |  |
|  |   | DATE OF REPORT   | 01/12/2021                  |  |
|  |   | DATE OF ANALYSIS | START: 25/11/2021           | END: 29/11/2021                          |
| <b>SAMPLE DETAILS</b>  |   |                  |                             |  |
| SAMPLE TYPE  | GROUND WATER  |                  | ORDER /REFERENCE:           | M/PO/SRV/2122/0049,<br>DTD. 24-JULY-2021 |
| CUSTOMER SAMPLE ID   | STAFF QUARTER-BANJIKHOL<br>PIEZOMETER (AWLR)                              |                  | SAMPLE CONDITION AT RECEIPT | OK                                       |
| PACKING OF SAMPLE  | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS<br>BOTTLE | SEALED           | SAMPLE COLLECTED BY         | CHEMIST                                  |
| SAMPLING PROCEDURE   | IS:3025(PART I):1987 RA 2003;<br>APHA 22ND ED. 2012, 1060-B, 1-39         |                  | QUANTITY RECEIVED           | 5 LTR                                    |

REPORT NO. 04224

| <b>TEST REPORT</b> |  |        |   |   |                   |           |
|--------------------|--|--------|---|---|-------------------|-----------|
| SR. NO.            | PARAMETER                                  | UNIT   | METHOD OF TEST  | ACCEPTABLE LIMIT FOR DRINKING WATER (IS 10500:2012) |                   | RESULT    |
|                    |  |        |   | Acceptable Limit                                    | Permissible limit |           |
| 1                  | Colour                                     | Hazen  | IS:3025:(Part-4)  | 5   | 15                | <1        |
| 2                  | Odour                                      | -      | IS 3025:(part-5)  | Agreeable   | Agreeable         | Agreeable |
| 3                  | Taste                                      | -      | IS 3025:(part-8)  | Agreeable   | Agreeable         | Agreeable |
| 4                  | pH   | -      | APHA 22 <sup>nd</sup> Ed.2012,4500-H <sup>+</sup> -B, 4-92  | 6.5-8.5   | NoRelaxation      | 6.85      |
| 5                  | Turbidity                                  | NTU    | APHA 22 <sup>nd</sup> Ed.2012,2130-B,2-13                   | 1   | 5                 | 1.20      |
| 6                  | Electrical Conductivity                    | µS/cm  | IS 3025(part-14):1984, RA 2013                              | -   | -                 | 226.0     |
| 7                  | Residual Chlorine                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-G, 4-69               | 0.2   | 1                 | N.D.      |
| 8                  | Total Solid                                | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- B, 2-64                 | -   | -                 | 146.6     |
| 9                  | Total Dissolved Solids                     | mg/Lit | IS 3025(part-16):1984, RA 2006                              | 500   | 2000              | 134.8     |
| 10                 | Total Suspended Solids                     | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- D, 2-66                 | -   | -                 | 11.8      |
| 11                 | Alkalinity Total (as CaCO <sub>3</sub> )   | mg/Lit | IS 3025(part-23):1986, RA 2003                              | 200   | 600               | 38.0      |
| 12                 | Total Hardness ( as CaCO <sub>3</sub> )    | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2340-C, 2-44,45               | 200   | 600               | 82.0      |
| 13                 | Calcium Hardness (as CaCO <sub>3</sub> )   | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67               | -   | -                 | 44.0      |
| 14                 | Magnesium Hardness (as CaCO <sub>3</sub> ) | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84               | -   | -                 | 38.0      |
| 15                 | Calcium (as Ca)                            | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67               | 75  | 200               | 17.6      |
| 16                 | Magnesium (as Mg)                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84               | 30  | 100               | 9.23      |
| 17                 | Chloride (as Cl)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-B, 4-72               | 250   | 1000              | 34.9      |
| 18                 | Sulphate (as SO <sub>4</sub> )             | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-SO <sub>4</sub> -E,4-190 | 200   | 400               | 23.8      |
| 19                 | Nitrate (as NO <sub>3</sub> )              | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-NO <sub>3</sub> -B,4-122 | 45  | NoRelaxation      | 0.74      |
| 20                 | Phosphate (as P)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-P-C, 4-153               | -   | -                 | N.D.      |

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REPORT NO. 04224

| TEST REPORT                     |   |            |  |   |                   |        |
|---------------------------------|---|------------|--|---|-------------------|--------|
| SR. NO.                         | PARAMETER   | UNIT       | METHOD OF TEST                                       | ACCEPTABLE LIMIT FOR DRINKING WATER (IS 10500:2012) |                   | RESULT |
|                                 |   |            |  | Acceptable Limit                                    | Permissible limit |        |
| 21                              | Sodium (as Na)  | mg/Lit     | APHA 22ndEd.2012,3500-Na-B, 3-97                     | -   | -                 | 6.1    |
| 22                              | Potassium (as K)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-K-B, 3-87         | -   | -                 | 2.1    |
| 23                              | Boron (as B)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-B-B, 4-25         | 0.5   | 1.0               | N.D.   |
| 24                              | Iron (as Fe)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B,3-18            | 0.3   | NoRelaxation      | N.D.   |
| 25                              | Fluoride (as F)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-F-B &D, 4-84 & 87 | 1   | 1.5               | 0.17   |
| 26                              | Manganese (as Mn)                                       | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.1   | 0.3               | N.D.   |
| 27                              | Lead (as Pb)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.01  | NoRelaxation      | N.D.   |
| 28                              | Nickel (as Ni)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Ni, 3-108         | 0.02  | No Relaxation     | N.D.   |
| 29                              | Zinc (as Zn)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 5   | 15                | N.D.   |
| 30                              | Copper (as Cu)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.05  | 1.5               | N.D.   |
| 31                              | Cadmium (as Cd)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cd, 3-105         | 0.003   | NoRelaxation      | N.D.   |
| 32                              | Mercury (as Hg)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3112-B, 3-23           | 0.001   | NoRelaxation      | N.D.   |
| 33                              | Arsenic (as As)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38           | 0.01  | 0.05              | N.D.   |
| 34                              | Selenium (as Se)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38           | 0.01  | NoRelaxation      | N.D.   |
| 35                              | Chromium (as Cr)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cr-B, 3-69        | 0.05  | NoRelaxation      | N.D.   |
| 36                              | Anionic Detergent (as MBAS)                             | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-C, 5-53           | 0.2   | 1.0               | N.D.   |
| 37                              | Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH) | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-B & C, 5-47       | 0.001   | 0.002             | N.D.   |
| 38                              | Poly-nuclear Aromatic Hydrocarbon (PAH)                 | µg/Lit     | APHA 22 <sup>nd</sup> 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.   |
| <b>Microbiological Analysis</b> |   |            |  |   |                   |        |
| 1                               | Total Coliforms   | MPN/100 ML | IS:1622:1981: RA:2019                                | Shall not be detectable in any 100 ml sample        |                   | Absent |
| 2                               | Faecal coliform   | MPN/100ml  | IS:1622:1981: RA:2019                                | Shall not be detectable in any 100 ml sample        |                   | Absent |
| 3                               | E. Coli   | MPN/100ml  | IS:1622:1981:RA:2019                                 | Shall not be detectable in any 100ml sample         |                   | Absent |
| <b>Pesticides</b>               |   |            |  |   |                   |        |
| 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. 04224

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

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

**REMARKS: RESULTS ARE AS ABOVE**

**Terms & conditions**

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

|                        |   |                                 |
|------------------------|---|---------------------------------|
| <br><b>REVIEWED BY</b> | <br><b>For ULTIMATE ENVIROLYTICAL SOLUTIONS</b> | <br><b>AUTHORIZED SIGNATORY</b> |
|------------------------|---|---------------------------------|

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



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|  |  |                         |  |  |
|--|--|-------------------------|--|--|
| <i>Name &amp; Address Of The Customer</i>  |  | <b>REPORT NO</b>        | UES/TR/21-22/04226                     |  |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/5, MILUPARA<br/>U/G COAL MINE,VILLAGE - MILUPARA,<br/>BLOCK-TAMNAR,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | <b>LAB REF NO</b>       | UES/21-22/W/07586                      |  |
|  |  | <b>DATE OF SAMPLING</b> | 24/11/2021                             |  |
|  |  | <b>DATE OF RECEIPT</b>  | 25/11/2021                             |  |
|  |  | <b>DATE OF REPORT</b>   | 01/12/2021                             |  |
|  |  | <b>DATE OF ANALYSIS</b> | START: 25/11/2021                      | END: 29/11/2021                          |
| <b>SAMPLE DETAILS</b>  |  |                         |  |  |
| <b>SAMPLE TYPE</b>   | GROUND WATER   |                         | <b>ORDER /REFERENCE:</b>               | M/PO/SRV/2122/0049,<br>DTD. 24-JULY-2021 |
| <b>CUSTOMER SAMPLE ID</b>  | MILUPARA VILLAGE NEAR PHC-<br>HIL (DUGWELL)                            |                         | <b>SAMPLE CONDITION AT<br/>RECEIPT</b> | OK                                       |
| <b>PACKING OF SAMPLE</b>   | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | SEALED                  | <b>SAMPLE COLLECTED BY</b>             | CHEMIST                                  |
| <b>SAMPLING PROCEDURE</b>  | IS:3025 (PART I):1987 RA 2003;<br>APHA 22ND ED. 2012,1060-B,1-39       |                         | <b>QUANTITY RECEIVED</b>               | 5 LTR                                    |

REPORT NO. - 04226

### TEST REPORT

| SR. NO. | PARAMETER                                     | UNIT   | METHOD OF TEST   | AS PER IS 10500:2012 |                   | RESULT    |
|---------|---|--------|--|----------------------|-------------------|-----------|
|         |   |        |  | Acceptable Limit     | Permissible limit |           |
| 1       | Colour  | Hazen  | IS:3025:(Part-4)   | 5                    | 15                | <1        |
| 2       | Odour   | -      | IS 3025(part-5)  | Agreeable            | Agreeable         | Agreeable |
| 3       | Taste   | -      | IS 3025(part-8)  | Agreeable            | Agreeable         | Agreeable |
| 4       | pH  | -      | APHA 22 <sup>nd</sup> Ed.2012,4500-H <sup>+</sup> -B,<br>4-92    | 6.5-8.5              | NoRelaxatio<br>n  | 6.97      |
| 5       | Turbidity                                     | NTU    | APHA 22 <sup>nd</sup> Ed.2012,2130-B,2-13                        | 1                    | 5                 | 1.86      |
| 6       | Electrical Conductivity                       | µS/cm  | IS 3025(part-14):1984, RA<br>2013                                | -                    | -                 | 274.0     |
| 7       | Residual Chlorine                             | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-G,<br>4 - 69               | 0.2                  | 1                 | N.D.      |
| 8       | Total Solid                                   | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- B, 2-<br>64                  | -                    | -                 | 177.4     |
| 9       | Total Dissolved Solids                        | mg/Lit | IS 3025(part-16):1984, RA<br>2006                                | 500                  | 2000              | 164.8     |
| 10      | Total Suspended Solids                        | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- D, 2-<br>66                  | -                    | -                 | 12.6      |
| 11      | Alkalinity Total<br>(as CaCO <sub>3</sub> )   | mg/Lit | IS 3025(part-23):1986, RA<br>2003                                | 200                  | 600               | 40.0      |
| 12      | Total Hardness ( as<br>CaCO <sub>3</sub> )    | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2340-C, 2-<br>44,45                | 200                  | 600               | 92.0      |
| 13      | Calcium Hardness (as<br>CaCO <sub>3</sub> )   | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-<br>B,3-67                 | -                    | -                 | 54.0      |
| 14      | Magnesium Hardness<br>(as CaCO <sub>3</sub> ) | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-<br>B,3-84                 | -                    | -                 | 38.0      |
| 15      | Calcium (as Ca)                               | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-<br>B,3-67                 | 75                   | 200               | 21.6      |
| 16      | Magnesium (as Mg)                             | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B,<br>3-84                 | 30                   | 100               | 9.23      |
| 17      | Chloride (as Cl)                              | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-B,<br>4-72                 | 250                  | 1000              | 18.9      |
| 18      | Sulphate (as SO <sub>4</sub> )                | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-SO <sub>4</sub> -<br>E, 4-190 | 200                  | 400               | 25.2      |
| 19      | Nitrate (as NO <sub>3</sub> )                 | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-NO <sub>3</sub> -<br>B,4-122  | 45                   | NoRelaxatio<br>n  | 4.2       |
| 20      | Phosphate (as P)                              | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-P-C,<br>4-153                 | -                    | -                 | N.D.      |

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REPORT NO. - 04226

### TEST REPORT

| SR. NO.                         | PARAMETER   | UNIT       | METHOD OF TEST                                       | AS PER IS 10500:2012                         |                   | RESULT |
|---------------------------------|---|------------|--|--|-------------------|--------|
|                                 |   |            |  | Acceptable Limit                             | Permissible limit |        |
| 21                              | Sodium (as Na)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Na-B, 3-97        | -  | -                 | 6.4    |
| 22                              | Potassium (as K)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-K-B, 3-87         | -  | -                 | 1.2    |
| 23                              | Boron (as B)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-B-B, 4-25         | 0.5  | 1.0               | N.D.   |
| 24                              | Iron (as Fe)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B,3-18            | 0.3  | NoRelaxation      | N.D.   |
| 25                              | Fluoride (as F)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-F-B &D, 4-84 & 87 | 1  | 1.5               | 0.03   |
| 26                              | Manganese (as Mn)                                       | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.1  | 0.3               | 0.15   |
| 27                              | Lead (as Pb)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.01   | NoRelaxation      | N.D.   |
| 28                              | Nickel (as Ni)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Ni, 3-108         | 0.02   | No Relaxation     | N.D.   |
| 29                              | Zinc (as Zn)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 5  | 15                | N.D.   |
| 30                              | Copper (as Cu)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.05   | 1.5               | N.D.   |
| 31                              | Cadmium (as Cd)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cd, 3-105         | 0.003  | NoRelaxation      | N.D.   |
| 32                              | Mercury (as Hg)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3112-B, 3-23           | 0.001  | NoRelaxation      | N.D.   |
| 33                              | Arsenic (as As)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38           | 0.01   | 0.05              | N.D.   |
| 34                              | Selenium (as Se)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38           | 0.01   | NoRelaxation      | N.D.   |
| 35                              | Chromium (as Cr)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cr-B, 3-69        | 0.05   | NoRelaxation      | N.D.   |
| 36                              | Anionic Detergent (as MBAS)                             | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-C, 5-53           | 0.2  | 1.0               | N.D.   |
| 37                              | Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH) | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-B & C, 5-47       | 0.001  | 0.002             | N.D.   |
| 38                              | Poly-nuclear Aromatic Hydrocarbon (PAH)                 | µg/Lit     | APHA 22 <sup>nd</sup> 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.   |
| <b>Microbiological Analysis</b> |   |            |  |  |                   |        |
| 1                               | Total Coliforms   | MPN/100 ML | IS:1622:1981: RA:2019                                | Shall not be detectable in any 100 ml sample |                   | Absent |
| 2                               | Faecal coliform   | MPN/100ml  | IS:1622:1981: RA:2019                                | Shall not be detectable in any 100 ml sample |                   | Absent |
| 3                               | E. Coli   | MPN/100ml  | IS:1622:1981:RA:2019                                 | Shall not be detectable in any 100ml sample  |                   | Absent |
| <b>Pesticides</b>               |   |            |  |  |                   |        |
| 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. - 04226

### TEST REPORT

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

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

REMARKS: RESULTS ARE AS ABOVE

**Terms & conditions**

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

|                        |   |                                 |
|------------------------|---|---------------------------------|
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|------------------------|---|---------------------------------|

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



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|  |   |                             |                                       |
|--|---|-----------------------------|---------------------------------------|
| <i>Name &amp; Address Of The Customer</i>  |   | REPORT NO                   | UES/TR/21-22/04191                    |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,VILLAGE -<br/>BANKHETA, POST -MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107.</b> |   | LAB REF NO                  | UES/21-22/W/07513                     |
|  |   | DATE OF SAMPLING            | 23/11/2021                            |
|  |   | DATE OF RECEIPT             | 24/11/2021                            |
|  |   | DATE OF REPORT              | 01/12/2021                            |
|  |   | DATE OF ANALYSIS            | START: 24/11/2021    END: 27/11/2021  |
|  |   | <b>SAMPLE DETAILS</b>       |                                       |
| SAMPLE TYPE  | GROUND WATER  | ORDER /REFERENCE:           | N/PO/SRV/2122/0045, DTD. 24-JULY-2021 |
| CUSTOMER SAMPLE ID   | SAKTA VILLAGE, (DUGWELL)  | SAMPLE CONDITION AT RECEIPT | OK                                    |
| PACKING OF SAMPLE  | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE  | SEALED                      | SAMPLE COLLECTED BY<br>CHEMIST        |
| SAMPLING PROCEDURE   | IS: 3025 (PART I): 1987 RA<br>2003; APHA 22ND ED. 2012,<br>1060-B, 1-39 | QUANTITY RECEIVED           | 5 LTR                                 |

Report No.04191

### TEST REPORT

| SR. NO. | PARAMETER                                  | UNIT   | METHOD OF TEST   | AS PER IS 10500:2012 |                   | RESULT    |
|---------|--|--------|--|----------------------|-------------------|-----------|
|         |  |        |  | Acceptable Limit     | Permissible limit |           |
| 1       | Colour                                     | Hazen  | IS:3025:(Part-4)   | 5                    | 15                | 2.4       |
| 2       | Odour                                      | -      | IS 3025(part-5)  | Agreeable            | Agreeable         | Agreeable |
| 3       | Taste                                      | -      | IS 3025(part-8)  | Agreeable            | Agreeable         | Agreeable |
| 4       | pH   | -      | APHA 22 <sup>nd</sup> Ed.2012,4500-H <sup>+</sup> -B, 4-92   | 6.5-8.5              | NoRelaxation      | 7.35      |
| 5       | Turbidity                                  | NTU    | APHA 22 <sup>nd</sup> Ed.2012,2130-B,2-13                    | 1                    | 5                 | 2.4       |
| 6       | Electrical Conductivity                    | µS/cm  | IS 3025(part-14):1984, RA 2013                               | -                    | -                 | 246.4     |
| 7       | Residual Chlorine                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-G, 4-69                | 0.2                  | 1                 | N.D.      |
| 8       | Total Solid                                | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- B, 2-64                  | -                    | -                 | 157.0     |
| 9       | Total Dissolved Solids                     | mg/Lit | IS 3025(part-16):1984, RA 2006                               | 500                  | 2000              | 152.4     |
| 10      | Total Suspended Solids                     | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- D, 2-66                  | -                    | -                 | 4.6       |
| 11      | Alkalinity Total (as CaCO <sub>3</sub> )   | mg/Lit | IS 3025(part-23):1986, RA 2003                               | 200                  | 600               | 78.0      |
| 12      | Total Hardness ( as CaCO <sub>3</sub> )    | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2340-C, 2-44,45                | 200                  | 600               | 104.0     |
| 13      | Calcium Hardness (as CaCO <sub>3</sub> )   | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67                | -                    | -                 | 48.0      |
| 14      | Magnesium Hardness (as CaCO <sub>3</sub> ) | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84                | -                    | -                 | 56.0      |
| 15      | Calcium (as Ca)                            | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67                | 75                   | 200               | 19.2      |
| 16      | Magnesium (as Mg)                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84                | 30                   | 100               | 13.6      |
| 17      | Chloride (as Cl)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-B, 4-72                | 250                  | 1000              | 19.9      |
| 18      | Sulphate (as SO <sub>4</sub> )             | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-SO <sub>4</sub> -E, 4-190 | 200                  | 400               | 27.5      |
| 19      | Nitrate (as NO <sub>3</sub> )              | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-NO <sub>3</sub> -B, 4-122 | 45                   | NoRelaxation      | 0.73      |
| 20      | Phosphate (as P)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-P-C,4-153                 | -                    | -                 | N.D.      |
| 21      | Sodium (as Na)                             | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Na-B,3-97                 | -                    | -                 | 15.1      |

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

Report No.04191

| TEST REPORT                     |   |            |  |  |                   |        |
|---------------------------------|---|------------|--|--|-------------------|--------|
| SR. NO.                         | PARAMETER   | UNIT       | METHOD OF TEST                                       | AS PER IS 10500:2012                         |                   | RESULT |
|                                 |   |            |  | Acceptable Limit                             | Permissible limit |        |
| 22                              | Potassium (as K)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-K-B, 3-87         | -  | -                 | 0.68   |
| 23                              | Boron (as B)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-B-B, 4-25         | 0.5  | 1.0               | N.D.   |
| 24                              | Iron (as Fe)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B,3-18            | 0.3  | NoRelaxation      | N.D.   |
| 25                              | Fluoride (as F)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-F-B &D, 4-84 & 87 | 1  | 1.5               | 0.11   |
| 26                              | Manganese (as Mn)                                       | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.1  | 0.3               | 0.09   |
| 27                              | Lead (as Pb)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.01   | NoRelaxation      | N.D.   |
| 28                              | Nickel (as Ni)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Ni, 3-108         | 0.02   | No Relaxation     | N.D.   |
| 29                              | Zinc (as Zn)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 5  | 15                | N.D.   |
| 30                              | Copper (as Cu)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.05   | 1.5               | N.D.   |
| 31                              | Cadmium (as Cd)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cd, 3-105         | 0.003  | NoRelaxation      | N.D.   |
| 32                              | Mercury (as Hg)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3112-B, 3-23           | 0.001  | NoRelaxation      | N.D.   |
| 33                              | Arsenic (as As)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38           | 0.01   | 0.05              | N.D.   |
| 34                              | Selenium (as Se)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38           | 0.01   | NoRelaxation      | N.D.   |
| 35                              | Chromium (as Cr)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cr-B, 3-69        | 0.05   | NoRelaxation      | N.D.   |
| 36                              | Anionic Detergent (as MBAS)                             | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-C, 5-53           | 0.2  | 1.0               | N.D.   |
| 37                              | Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH) | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-B & C, 5-47       | 0.001  | 0.002             | N.D.   |
| 38                              | Poly-nuclear Aromatic Hydrocarbon (PAH)                 | µg/Lit     | APHA 22 <sup>nd</sup> 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.   |
| <b>Microbiological Analysis</b> |   |            |  |  |                   |        |
| 1                               | Total Coliforms   | MPN/100 ML | IS:1622:1981: RA:2019                                | Shall not be detectable in any 100 ml sample |                   | Absent |
| 2                               | Faecal coliform   | MPN/100ml  | IS:1622:1981: RA:2019                                | Shall not be detectable in any 100 ml sample |                   | Absent |
| 3                               | E. Coli   | MPN/100ml  | IS:1622:1981:RA:2019                                 | Shall not be detectable in any 100ml sample  |                   | Absent |
| <b>Pesticides</b>               |   |            |  |  |                   |        |
| 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.04191

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

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

REMARKS: RESULTS ARE AS ABOVE

**Terms & conditions**

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

|                                    |  |   |
|------------------------------------|--|---|
| <br>01/12/21<br><b>REVIEWED BY</b> | <br>For ULTIMATE ENVIROLYTICAL SOLUTIONS | <br>01/12/21<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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



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|  |   |                         |                                    |  |
|--|---|-------------------------|------------------------------------|--|
| <i>Name &amp; Address Of The Customer</i>  |   | <b>REPORT NO</b>        | UES/TR/21-22/04227                 |  |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/5, MILUPARA<br/>U/G COAL MINE,VILLAGE - MILUPARA,<br/>BLOCK-TAMNAR,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |   | <b>LAB REF NO</b>       | UES/21-22/W/07587                  |  |
|  |   | <b>DATE OF SAMPLING</b> | 24/11/2021                         |  |
|  |   | <b>DATE OF RECEIPT</b>  | 25/11/2021                         |  |
|  |   | <b>DATE OF REPORT</b>   | 01/12/2021                         |  |
|  |   | <b>DATE OF ANALYSIS</b> | START: 25/11/2021                  | END: 29/11/2021                          |
| <b>SAMPLE DETAILS</b>  |   |                         |                                    |  |
| <b>SAMPLE TYPE</b>   | GROUND WATER  |                         | <b>ORDER /REFERENCE:</b>           | M/PO/SRV/2122/0049,<br>DTD. 24-JULY-2021 |
| <b>CUSTOMER SAMPLE ID</b>  | SIDARPARA VILLAGE (DUGWELL)   |                         | <b>SAMPLE CONDITION AT RECEIPT</b> | OK                                       |
| <b>PACKING OF SAMPLE</b>   | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS<br>BOTTLE | SEALED                  | <b>SAMPLE COLLECTED BY</b>         | CHEMIST                                  |
| <b>SAMPLING PROCEDURE</b>  | IS: 3025 (PART I): 1987 RA 2003;<br>APHA 22ND ED. 2012, 1060-B, 1-39      |                         | <b>QUANTITY RECEIVED</b>           | 5 LTR                                    |

REPORT NO. - 04227

### TEST REPORT

| SR. NO. | PARAMETER                                  | UNIT   | METHOD OF TEST   | AS PER IS 10500:2012 |                   | RESULT    |
|---------|--|--------|--|----------------------|-------------------|-----------|
|         |  |        |  | Acceptable Limit     | Permissible limit |           |
| 1       | Colour                                     | Hazen  | IS:3025:(Part-4)   | 5                    | 15                | <1        |
| 2       | Odour                                      | -      | IS 3025(part-5)  | Agreeable            | Agreeable         | Agreeable |
| 3       | Taste                                      | -      | IS 3025(part-8)  | Agreeable            | Agreeable         | Agreeable |
| 4       | pH   | -      | APHA 22 <sup>nd</sup> Ed.2012,4500-H <sup>+</sup> -B, 4-92   | 6.5-8.5              | NoRelaxation      | 7.54      |
| 5       | Turbidity                                  | NTU    | APHA 22 <sup>nd</sup> Ed.2012,2130-B,2-13                    | 1                    | 5                 | 0.43      |
| 6       | Electrical Conductivity                    | µS/cm  | IS 3025(part-14):1984, RA 2013                               | -                    | -                 | 332.0     |
| 7       | Residual Chlorine                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-G, 4-69                | 0.2                  | 1                 | N.D.      |
| 8       | Total Solid                                | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- B, 2-64                  | -                    | -                 | 207.0     |
| 9       | Total Dissolved Solids                     | mg/Lit | IS 3025(part-16):1984, RA 2006                               | 500                  | 2000              | 204.4     |
| 10      | Total Suspended Solids                     | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- D, 2-66                  | -                    | -                 | 2.6       |
| 11      | Alkalinity Total (as CaCO <sub>3</sub> )   | mg/Lit | IS 3025(part-23):1986, RA 2003                               | 200                  | 600               | 58.0      |
| 12      | Total Hardness ( as CaCO <sub>3</sub> )    | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2340-C, 2-44,45                | 200                  | 600               | 92.0      |
| 13      | Calcium Hardness (as CaCO <sub>3</sub> )   | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B,3-67                 | -                    | -                 | 54.0      |
| 14      | Magnesium Hardness (as CaCO <sub>3</sub> ) | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B,3-84                 | -                    | -                 | 38.0      |
| 15      | Calcium (as Ca)                            | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B,3-67                 | 75                   | 200               | 21.6      |
| 16      | Magnesium (as Mg)                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84                | 30                   | 100               | 9.23      |
| 17      | Chloride (as Cl)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-B, 4-72                | 250                  | 1000              | 18.9      |
| 18      | Sulphate (as SO <sub>4</sub> )             | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-SO <sub>4</sub> -E, 4-190 | 200                  | 400               | 15.3      |
| 19      | Nitrate (as NO <sub>3</sub> )              | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-NO <sub>3</sub> -B,4-122  | 45                   | NoRelaxation      | 4.1       |
| 20      | Phosphate (as P)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-P-C, 4-153                | -                    | -                 | N.D.      |

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REPORT NO. - 04227

### TEST REPORT

| SR. NO.                         | PARAMETER   | UNIT       | METHOD OF TEST                                       | AS PER IS 10500:2012                         |                   | RESULT |
|---------------------------------|---|------------|--|--|-------------------|--------|
|                                 |   |            |  | Acceptable Limit                             | Permissible limit |        |
| 21                              | Sodium (as Na)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Na-B, 3-97        | -  | -                 | 13.5   |
| 22                              | Potassium (as K)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-K-B, 3-87         | -  | -                 | 0.9    |
| 23                              | Boron (as B)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-B-B, 4-25         | 0.5  | 1.0               | N.D.   |
| 24                              | Iron (as Fe)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B,3-18            | 0.3  | NoRelaxation      | N.D.   |
| 25                              | Fluoride (as F)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-F-B &D, 4-84 & 87 | 1  | 1.5               | 0.12   |
| 26                              | Manganese (as Mn)                                       | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.1  | 0.3               | 0.09   |
| 27                              | Lead (as Pb)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.01   | NoRelaxation      | N.D.   |
| 28                              | Nickel (as Ni)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Ni, 3-108         | 0.02   | No Relaxation     | N.D.   |
| 29                              | Zinc (as Zn)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 5  | 15                | N.D.   |
| 30                              | Copper (as Cu)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.05   | 1.5               | N.D.   |
| 31                              | Cadmium (as Cd)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cd, 3-105         | 0.003  | NoRelaxation      | N.D.   |
| 32                              | Mercury (as Hg)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3112-B, 3-23           | 0.001  | NoRelaxation      | N.D.   |
| 33                              | Arsenic (as As)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38           | 0.01   | 0.05              | N.D.   |
| 34                              | Selenium (as Se)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38           | 0.01   | NoRelaxation      | N.D.   |
| 35                              | Chromium (as Cr)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cr-B, 3-69        | 0.05   | NoRelaxation      | N.D.   |
| 36                              | Anionic Detergent (as MBAS)                             | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-C, 5-53           | 0.2  | 1.0               | N.D.   |
| 37                              | Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH) | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-B & C, 5-47       | 0.001  | 0.002             | N.D.   |
| 38                              | Poly-nuclear Aromatic Hydrocarbon (PAH)                 | µg/Lit     | APHA 22 <sup>nd</sup> 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.   |
| <b>Microbiological Analysis</b> |   |            |  |  |                   |        |
| 1                               | Total Coliforms   | MPN/100 ML | IS:1622:1981: RA:2019                                | Shall not be detectable in any 100 ml sample |                   | Absent |
| 2                               | Faecal coliform   | MPN/100ml  | IS:1622:1981: RA:2019                                | Shall not be detectable in any 100 ml sample |                   | Absent |
| 3                               | E. Coli   | MPN/100ml  | IS:1622:1981:RA:2019                                 | Shall not be detectable in any 100ml sample  |                   | Absent |
| <b>Pesticides</b>               |   |            |  |  |                   |        |
| 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. - 04227

### TEST REPORT

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

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

**REMARKS: RESULTS ARE AS ABOVE**

**Terms & conditions**

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

|                        |   |                                 |
|------------------------|---|---------------------------------|
| <br><b>REVIEWED BY</b> | <br><b>For ULTIMATE ENVIROLYTICAL SOLUTIONS</b> | <br><b>AUTHORIZED SIGNATORY</b> |
|------------------------|---|---------------------------------|

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



HDD-272, Phase III - Near JP Chowk  
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|   |  |                  |                             |                                       |
|---|--|------------------|-----------------------------|---------------------------------------|
| Name & Address Of The Customer  |  | REPORT NO        | UES/TR/21-22/04192          |                                       |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE, VILLAGE -</b><br><b>BANKHETA, POST -MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107.</b> |  | LAB REF NO       | UES/21-22/W/07514           |                                       |
|   |  | DATE OF SAMPLING | 23/11/2021                  |                                       |
|   |  | DATE OF RECEIPT  | 24/11/2021                  |                                       |
|   |  | DATE OF REPORT   | 01/12/2021                  |                                       |
|   |  | DATE OF ANALYSIS | START:24/11/2021            | END:27/11/2021                        |
| <b>SAMPLE DETAILS</b>   |  |                  |                             |                                       |
| SAMPLE TYPE   | GROUND WATER   |                  | ORDER /REFERENCE:           | N/PO/SRV/2122/0045, DTD. 24-JULY-2021 |
| CUSTOMER SAMPLE ID  | BELJOR VILLAGE (DUGWELL)   |                  | SAMPLE CONDITION AT RECEIPT | OK                                    |
| PACKING OF SAMPLE   | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | SEALED           | SAMPLE COLLECTED BY         | CHEMIST                               |
| SAMPLING PROCEDURE  | IS:3025 (PART I):1987 RA<br>2003; APHA 22ND ED. 2012,<br>1060-B, 1-39  |                  | QUANTITY RECEIVED           | 5 LTR                                 |

Report No. 04192

### TEST REPORT

| SR. NO. | PARAMETER                                  | UNIT   | METHOD OF TEST   | AS PER IS 10500:2012 |                   | RESULT    |
|---------|--|--------|--|----------------------|-------------------|-----------|
|         |  |        |  | Acceptable Limit     | Permissible limit |           |
| 1       | Colour                                     | Hazen  | IS:3025:(Part-4)   | 5                    | 15                | <1        |
| 2       | Odour                                      | -      | IS 3025(part-5)  | Agreeable            | Agreeable         | Agreeable |
| 3       | Taste                                      | -      | IS 3025(part-8)  | Agreeable            | Agreeable         | Agreeable |
| 4       | pH   | -      | APHA 22 <sup>nd</sup> Ed.2012,4500-H <sup>+</sup> -B, 4-92   | 6.5-8.5              | NoRelaxation      | 7.53      |
| 5       | Turbidity                                  | NTU    | APHA 22 <sup>nd</sup> Ed.2012,2130-B,2-13                    | 1                    | 5                 | 0.36      |
| 6       | Electrical Conductivity                    | µS/cm  | IS 3025(part-14):1984, RA 2013                               | -                    | -                 | 564.0     |
| 7       | Residual Chlorine                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-G, 4-69                | 0.2                  | 1                 | N.D.      |
| 8       | Total Solid                                | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- B, 2-64                  | -                    | -                 | 351.0     |
| 9       | Total Dissolved Solids                     | mg/Lit | IS 3025(part-16):1984, RA 2006                               | 500                  | 2000              | 346.2     |
| 10      | Total Suspended Solids                     | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- D, 2-66                  | -                    | -                 | 4.8       |
| 11      | Alkalinity Total (as CaCO <sub>3</sub> )   | mg/Lit | IS 3025(part-23):1986, RA 2003                               | 200                  | 600               | 166.0     |
| 12      | Total Hardness ( as CaCO <sub>3</sub> )    | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2340-C, 2-44,45                | 200                  | 600               | 192.0     |
| 13      | Calcium Hardness (as CaCO <sub>3</sub> )   | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67                | -                    | -                 | 112.0     |
| 14      | Magnesium Hardness (as CaCO <sub>3</sub> ) | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84                | -                    | -                 | 80.0      |
| 15      | Calcium (as Ca)                            | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67                | 75                   | 200               | 44.8      |
| 16      | Magnesium (as Mg)                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84                | 30                   | 100               | 19.4      |
| 17      | Chloride (as Cl)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-B, 4-72                | 250                  | 1000              | 46.9      |
| 18      | Sulphate (as SO <sub>4</sub> )             | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-SO <sub>4</sub> -E, 4-190 | 200                  | 400               | 27.3      |
| 19      | Nitrate (as NO <sub>3</sub> )              | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-NO <sub>3</sub> -B, 4-122 | 45                   | NoRelaxation      | 1.56      |
| 20      | Phosphate (as P)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-P-C,4-153                 | -                    | -                 | N.D.      |

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### TEST REPORT

| SR. NO.                         | PARAMETER   | UNIT       | METHOD OF TEST  | AS PER IS 10500:2012                         |                   | RESULT |
|---------------------------------|---|------------|---|--|-------------------|--------|
|                                 |   |            |   | Acceptable Limit                             | Permissible limit |        |
| 21                              | Sodium (as Na)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Na-B,3-97          | -  | -                 | 5.6    |
| 22                              | Potassium (as K)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-K-B,3-87           | -  | -                 | 1.18   |
| 23                              | Boron (as B)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-B-B,4-25           | 0.5  | 1.0               | N.D.   |
| 24                              | Iron (as Fe)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B,3-18             | 0.3  | NoRelaxation      | N.D.   |
| 25                              | Fluoride (as F)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-F-B & D, 4-84 & 87 | 1  | 1.5               | 0.09   |
| 26                              | Manganese (as Mn)                                       | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B,3-18             | 0.1  | 0.3               | 0.14   |
| 27                              | Lead (as Pb)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B,3-18             | 0.01   | NoRelaxation      | N.D.   |
| 28                              | Nickel (as Ni)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Ni,3-108           | 0.02   | No Relaxation     | N.D.   |
| 29                              | Zinc (as Zn)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B,3-18             | 5  | 15                | N.D.   |
| 30                              | Copper (as Cu)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B,3-18             | 0.05   | 1.5               | N.D.   |
| 31                              | Cadmium (as Cd)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cd,3-105           | 0.003  | NoRelaxation      | N.D.   |
| 32                              | Mercury (as Hg)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3112-B,3-23             | 0.001  | NoRelaxation      | N.D.   |
| 33                              | Arsenic (as As)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C,3-38             | 0.01   | 0.05              | N.D.   |
| 34                              | Selenium (as Se)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C,3-38             | 0.01   | NoRelaxation      | N.D.   |
| 35                              | Chromium (as Cr)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cr-B,3-69          | 0.05   | NoRelaxation      | N.D.   |
| 36                              | Anionic Detergent (as MBAS)                             | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-C,5-53             | 0.2  | 1.0               | N.D.   |
| 37                              | Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH) | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-B & C,5-47         | 0.001  | 0.002             | N.D.   |
| 38                              | Poly-nuclear Aromatic Hydrocarbon (PAH)                 | µg/Lit     | APHA 22 <sup>nd</sup> 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.   |
| <b>Microbiological Analysis</b> |   |            |   |  |                   |        |
| 1                               | Total Coliforms   | MPN/100 ML | IS:1622:1981: RA:2019                                 | Shall not be detectable in any 100 ml sample |                   | Absent |
| 2                               | Faecal Coliform   | MPN/100ml  | IS:1622:1981: RA:2019                                 | Shall not be detectable in any 100 ml sample |                   | Absent |
| 3                               | E. Coli   | MPN/100ml  | IS:1622:1981:RA:2019                                  | Shall not be detectable in any 100 ml sample |                   | Absent |
| <b>Pesticides</b>               |   |            |   |  |                   |        |
| 1                               | p,p DDT   | µg/L       | US EPA 508-1995                                       | 1  |                   | N.D.   |
| 2                               | o,p DDT   | µg/L       | US EPA 508-1995                                       | 1  |                   | N.D.   |
| 3                               | p,pDDE  | µg/L       | US EPA 508-1995                                       | 1  |                   | N.D.   |
| 4                               | p,p DDD   | µg/L       | US EPA 508-1995                                       | 1  |                   | N.D.   |
| 5                               | O,p DDD   | µg/L       | US EPA 508-1995                                       | 1  |                   | N.D.   |



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

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

REMARKS: RESULTS ARE AS ABOVE

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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.

|                             |  |  |
|-----------------------------|--|--|
| <br>01/12/21<br>REVIEWED BY |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>01/12/21<br>AUTHORIZED SIGNATORY |
|-----------------------------|--|--|

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



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

| Sr. No. | Location                                | Types of Structure | In Meters                         |                                   |                                   |
|---------|---|--------------------|-----------------------------------|-----------------------------------|-----------------------------------|
|         |   |                    | Ground Water level (BGL) Jan 2022 | Ground Water level (BGL) Feb 2022 | Ground Water level (BGL) Mar 2022 |
| 1       | Bankheta (Near HIL Office)              | Borewell/<br>AWLR  | 11.34                             | 11.74                             | 12.21                             |
| 2       | Banjikhol (Near Office)                 | Borewell/<br>AWLR  | 24.48                             | 24.66                             | 24.85                             |
| 3       | Milupara (Near Office)                  | Borewell/<br>AWLR  | 11.17                             | 11.71                             | 12.21                             |
| 4       | HIL Staff Quarter                       | Borewell/<br>AWLR  | 6.57                              | 7.04                              | 7.96                              |
| 5       | Milupara Village (PHC-HIL)              | Dugwell            | 4.43                              | 4.68                              | 5.58                              |
| 6       | Sakta Village (Near Primary School)     | Dugwell            | 3.18                              | 3.31                              | 3.85                              |
| 7       | Sidarpara Village (Near Primary School) | Dugwell            | 8.68                              | 8.83                              | 9.90                              |
| 8       | Beljor Village                          | Dugwell            | 6.47                              | 6.72                              | 6.84                              |



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|  |   |                             |                                       |                 |
|--|---|-----------------------------|---------------------------------------|-----------------|
| <b>Name &amp; Address Of The Customer</b><br><b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA,</b><br><b>POST -MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107.</b> |   | REPORT NO                   | UES/TR/21-22/05991                    |                 |
|  |   | LAB REF NO                  | UES/21-22/W/010309                    |                 |
|  |   | DATE OF SAMPLING            | 24/01/2022                            |                 |
|  |   | DATE OF RECEIPT             | 25/01/2022                            |                 |
|  |   | DATE OF REPORT              | 02/02/2022                            |                 |
|  |   | DATE OF ANALYSIS            | START: 25/01/2022                     | END: 29/01/2022 |
| <b>SAMPLE DETAILS</b>  |   |                             |                                       |                 |
| SAMPLE TYPE  | GROUNDWATER   | ORDER /REFERENCE:           | N/PO/SRV/2122/0045, DTD. 24-JULY-2021 |                 |
| CUSTOMER SAMPLE ID   | BANKHETA MINE (PIEZOMETER) AWLR   | SAMPLE CONDITION AT RECEIPT | OK                                    |                 |
| PACKING OF SAMPLE  | 3 L X 1 NO. PPC CAN<br>1 L X 1 NO. PPC CAN<br>1 L X 1 NO. GLASS BOTTLE  | SEALED                      | SAMPLE COLLECTED BY                   | CHEMIST         |
| SAMPLING PROCEDURE   | IS: 3025 (PART I): 1987 RA<br>2003; APHA 22ND ED. 2012,<br>1060-B, 1-39 | QUANTITY RECEIVED           | 5 LTR                                 |                 |

Report No.05991

### TEST REPORT

| SR. NO. | PARAMETER                                  | UNIT   | METHOD OF TEST   | AS PER IS 10500:2012 |                   | RESULT    |
|---------|--|--------|--|----------------------|-------------------|-----------|
|         |  |        |  | Acceptable Limit     | Permissible limit |           |
| 1       | Colour                                     | Hazen  | IS:3025:(Part-4)   | 5                    | 15                | <1        |
| 2       | Odour                                      | -      | IS 3025(part-5)  | Agreeable            | Agreeable         | Agreeable |
| 3       | Taste                                      | -      | IS 3025(part-8)  | Agreeable            | Agreeable         | Agreeable |
| 4       | pH   | -      | APHA 22 <sup>nd</sup> Ed.2012,4500-H <sup>+</sup> -B, 4-92   | 6.5-8.5              | NoRelaxation      | 7.72      |
| 5       | Turbidity                                  | NTU    | APHA 22 <sup>nd</sup> Ed.2012,2130-B,2-13                    | 1                    | 5                 | 1.21      |
| 6       | Electrical Conductivity                    | µS/cm  | IS 3025(part-14):1984, RA 2013                               | -                    | -                 | 178.4     |
| 7       | Residual Chlorine                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-G, 4-69                | 0.2                  | 1                 | N.D.      |
| 8       | Total Solid                                | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540-B, 2-64                   | -                    | -                 | 111.4     |
| 9       | Total Dissolved Solids                     | mg/Lit | IS 3025(part-16):1984, RA 2006                               | 500                  | 2000              | 108.6     |
| 10      | Total Suspended Solids                     | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540-D, 2-66                   | -                    | -                 | 2.8       |
| 11      | Alkalinity Total (as CaCO <sub>3</sub> )   | mg/Lit | IS 3025(part-23):1986, RA 2003                               | 200                  | 600               | 40.0      |
| 12      | Total Hardness ( as CaCO <sub>3</sub> )    | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2340-C, 2-44,45                | 200                  | 600               | 54.0      |
| 13      | Calcium Hardness (as CaCO <sub>3</sub> )   | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67                | -                    | -                 | 32.0      |
| 14      | Magnesium Hardness (as CaCO <sub>3</sub> ) | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84                | -                    | -                 | 22.0      |
| 15      | Calcium (as Ca)                            | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67                | 75                   | 200               | 12.8      |
| 16      | Magnesium (as Mg)                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84                | 30                   | 100               | 5.34      |
| 17      | Chloride (as Cl)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-B, 4-72                | 250                  | 1000              | 14.9      |
| 18      | Sulphate (as SO <sub>4</sub> )             | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-SO <sub>4</sub> -E, 4-190 | 200                  | 400               | 11.6      |
| 19      | Nitrate (as NO <sub>3</sub> )              | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-NO <sub>3</sub> -B, 4-122 | 45                   | NoRelaxation      | 0.36      |
| 20      | Phosphate (as P)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-P-C, 4-153                | -                    | -                 | N.D.      |
| 21      | Sodium (as Na)                             | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Na-B, 3-97                | -                    | -                 | 16.4      |
| 22      | Potassium (as K)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-K-B, 3-                   | -                    | -                 | 1.26      |

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Report No.05991

### TEST REPORT

| SR. NO.                         | PARAMETER   | UNIT       | METHOD OF TEST                                       | AS PER IS 10500:2012                         |                   | RESULT |
|---------------------------------|---|------------|--|--|-------------------|--------|
|                                 |   |            |  | Acceptable Limit                             | Permissible limit |        |
|                                 |   |            | 87   |  |                   |        |
| 23                              | Boron (as B)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-B-B, 4-25         | 0.5  | 1.0               | N.D.   |
| 24                              | Iron (as Fe)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B,3-18            | 0.3  | NoRelaxation      | N.D.   |
| 25                              | Fluoride (as F)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-F-B &D, 4-84 & 87 | 1  | 1.5               | 0.13   |
| 26                              | Manganese (as Mn)                                       | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.1  | 0.3               | N.D.   |
| 27                              | Lead (as Pb)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.01   | NoRelaxation      | N.D.   |
| 28                              | Nickel (as Ni)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-NI, 3-108         | 0.02   | No Relaxation     | N.D.   |
| 29                              | Zinc (as Zn)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 5  | 15                | N.D.   |
| 30                              | Copper (as Cu)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.05   | 1.5               | N.D.   |
| 31                              | Cadmium (as Cd)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cd, 3-105         | 0.003  | NoRelaxation      | N.D.   |
| 32                              | Mercury (as Hg)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3112-B, 3-23           | 0.001  | NoRelaxation      | N.D.   |
| 33                              | Arsenic (as As)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38           | 0.01   | 0.05              | N.D.   |
| 34                              | Selenium (as Se)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38           | 0.01   | NoRelaxation      | N.D.   |
| 35                              | Chromium (as Cr)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cr-B, 3-69        | 0.05   | NoRelaxation      | N.D.   |
| 36                              | Anionic Detergent (as MBAS)                             | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-C, 5-53           | 0.2  | 1.0               | N.D.   |
| 37                              | Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH) | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-B & C, 5-47       | 0.001  | 0.002             | N.D.   |
| 38                              | Poly-nuclear Aromatic Hydrocarbon (PAH)                 | µg/Lit     | APHA 22 <sup>nd</sup> 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.   |
| <b>Microbiological Analysis</b> |   |            |  |  |                   |        |
| 1                               | Total Coliforms   | MPN/100 ML | IS:1622:1981: RA:2019                                | Shall not be detectable in any 100 ml sample |                   | Absent |
| 2                               | Faecal Coliform   | MPN/100ml  | IS:1622:1981: RA:2019                                | Shall not be detectable in any 100 ml sample |                   | Absent |
| 3                               | E. Coli   | MPN/100ml  | IS:1622:1981:RA:2019                                 | Shall not be detectable in any 100ml sample  |                   | Absent |
| <b>Pesticides</b>               |   |            |  |  |                   |        |
| 1                               | p,p DDT   | µg/L       | US EPA 508-1995                                      | 1  |                   | N.D.   |
| 2                               | o,p DDT   | µg/L       | US EPA 508-1995                                      | 1  |                   | N.D.   |
| 3                               | p,pDDE  | µg/L       | US EPA 508-1995                                      | 1  |                   | N.D.   |
| 4                               | p,p DDD   | µg/L       | US EPA 508-1995                                      | 1  |                   | N.D.   |
| 5                               | O,p DDD   | µg/L       | US EPA 508-1995                                      | 1  |                   | N.D.   |
| 6                               | Gamma-HCH (Lindane)                                     | µg/L       | US EPA 508-1995                                      | 2  |                   | N.D.   |
| 7                               | Alpha-HCH   | µg/L       | US EPA 508-1995                                      | 0.01   |                   | N.D.   |
| 8                               | Beta-HCH  | µg/L       | US EPA 508-1995                                      | 0.04   |                   | N.D.   |

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

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

Report No.05991

### TEST REPORT

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

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

#### REMARKS: RESULTS ARE AS ABOVE

##### Terms & conditions

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

|                                    |  |   |
|------------------------------------|--|---|
| <br>02/02/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/02/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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



HDD-272, Phase III - Near JP Chowk  
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|   |  |                             |                                       |
|---|--|-----------------------------|---------------------------------------|
| Name & Address Of The Customer  |  | REPORT NO                   | UES/TR/21-22/05992                    |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA,</b><br><b>POST -MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107.</b> |  | LAB REF NO                  | UES/21-22/W/010310                    |
|   |  | DATE OF SAMPLING            | 24/01/2022                            |
|   |  | DATE OF RECEIPT             | 25/01/2022                            |
|   |  | DATE OF REPORT              | 02/02/2022                            |
|   |  | DATE OF ANALYSIS            | START: 25/01/2022    END: 29/01/2022  |
|   |  | <b>SAMPLE DETAILS</b>       |                                       |
| SAMPLE TYPE   | GROUND WATER   | ORDER /REFERENCE:           | N/PO/SRV/2122/0045, DTD. 24-JULY-2021 |
| CUSTOMER SAMPLE ID  | BANJIKHOL MINE (PIEZOMETRIC) AMLR                                      | SAMPLE CONDITION AT RECEIPT | OK                                    |
| PACKING OF SAMPLE   | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | SEALED                      | SAMPLE COLLECTED BY<br>CHEMIST        |
| SAMPLING PROCEDURE  | IS:3025(PART I):1987 RA 2003;<br>APHA 22ND ED. 2012, 1060-B,1-39       | QUANTITY RECEIVED           | 5 LTR                                 |

Report No.05992

| <b>TEST REPORT</b> |  |        |  |                      |                   |           |
|--------------------|--|--------|--|----------------------|-------------------|-----------|
| SR. NO.            | PARAMETER                                  | UNIT   | METHOD OF TEST   | AS PER IS 10500:2012 |                   | RESULT    |
|                    |  |        |  | Acceptable Limit     | Permissible limit |           |
| 1                  | Colour                                     | Hazen  | IS:3025:(Part-4)   | 5                    | 15                | <1        |
| 2                  | Odour                                      | -      | IS 3025(part-5)  | Agreeable            | Agreeable         | Agreeable |
| 3                  | Taste                                      | -      | IS 3025(part-8)  | Agreeable            | Agreeable         | Agreeable |
| 4                  | pH   | -      | APHA 22 <sup>nd</sup> Ed.2012,4500-H <sup>+</sup> -B, 4-92   | 6.5-8.5              | NoRelaxation      | 6.84      |
| 5                  | Turbidity                                  | NTU    | APHA 22 <sup>nd</sup> Ed.2012,2130-B,2-13                    | 1                    | 5                 | 2.4       |
| 6                  | Electrical Conductivity                    | µS/cm  | IS 3025(part-14):1984, RA 2013                               | -                    | -                 | 170.2     |
| 7                  | Residual Chlorine                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-G, 4-69                | 0.2                  | 1                 | N.D.      |
| 8                  | Total Solid                                | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- B, 2-64                  | -                    | -                 | 115.4     |
| 9                  | Total Dissolved Solids                     | mg/Lit | IS 3025(part-16):1984, RA 2006                               | 500                  | 2000              | 112.6     |
| 10                 | Total Suspended Solids                     | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- D, 2-66                  | -                    | -                 | 2.8       |
| 11                 | Alkalinity Total (as CaCO <sub>3</sub> )   | mg/Lit | IS 3025(part-23):1986, RA 2003                               | 200                  | 600               | 48.0      |
| 12                 | Total Hardness ( as CaCO <sub>3</sub> )    | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2340-C, 2-44,45                | 200                  | 600               | 80.0      |
| 13                 | Calcium Hardness (as CaCO <sub>3</sub> )   | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67                | -                    | -                 | 46.0      |
| 14                 | Magnesium Hardness (as CaCO <sub>3</sub> ) | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84                | -                    | -                 | 34.0      |
| 15                 | Calcium (as Ca)                            | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67                | 75                   | 200               | 18.4      |
| 16                 | Magnesium (as Mg)                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84                | 30                   | 100               | 8.26      |
| 17                 | Chloride (as Cl)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-B, 4-72                | 250                  | 1000              | 14.9      |
| 18                 | Sulphate (as SO <sub>4</sub> )             | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-SO <sub>4</sub> -E, 4-190 | 200                  | 400               | 13.4      |
| 19                 | Nitrate (as NO <sub>3</sub> )              | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-NO <sub>3</sub> -B,4-122  | 45                   | NoRelaxation      | 2.1       |
| 20                 | Phosphate (as P)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-P-C, 4-153                | -                    | -                 | N.D.      |

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### TEST REPORT

| SR. NO.                         | PARAMETER   | UNIT       | METHOD OF TEST                            | AS PER IS 10500:2012                         |                   | RESULT |
|---------------------------------|---|------------|---|--|-------------------|--------|
|                                 |   |            |   | Acceptable Limit                             | Permissible limit |        |
| 21                              | Sodium (as Na)  | mg/Lit     | APHA 22nd Ed.2012,3500-Na-B, 3-97         | -  | -                 | 8.4    |
| 22                              | Potassium (as K)  | mg/Lit     | APHA 22nd Ed.2012,3500-K-B, 3-87          | -  | -                 | 0.20   |
| 23                              | Boron (as B)  | mg/Lit     | APHA 22nd Ed.2012,4500-B-B, 4-25          | 0.5  | 1.0               | N.D.   |
| 24                              | Iron (as Fe)  | mg/Lit     | APHA 22nd Ed.2012,3111-B, 3-18            | 0.3  | NoRelaxation      | N.D.   |
| 25                              | Fluoride (as F)   | mg/Lit     | APHA 22nd Ed.2012,4500-F-B & D, 4-84 & 87 | 1  | 1.5               | N.D.   |
| 26                              | Manganese (as Mn)                                       | mg/Lit     | APHA 22nd Ed.2012,3111-B, 3-18            | 0.1  | 0.3               | N.D.   |
| 27                              | Lead (as Pb)  | mg/Lit     | APHA 22nd Ed.2012,3111-B, 3-18            | 0.01   | NoRelaxation      | N.D.   |
| 28                              | Nickel (as Ni)  | mg/Lit     | APHA 22nd Ed.2012,3500-Ni, 3-108          | 0.02   | No Relaxation     | N.D.   |
| 29                              | Zinc (as Zn)  | mg/Lit     | APHA 22nd Ed.2012,3111-B, 3-18            | 5  | 15                | N.D.   |
| 30                              | Copper (as Cu)  | mg/Lit     | APHA 22nd Ed.2012,3111-B, 3-18            | 0.05   | 1.5               | N.D.   |
| 31                              | Cadmium (as Cd)   | mg/Lit     | APHA 22nd Ed.2012,3500-Cd, 3-105          | 0.003  | NoRelaxation      | N.D.   |
| 32                              | Mercury (as Hg)   | mg/Lit     | APHA 22nd Ed.2012,3112-B, 3-23            | 0.001  | NoRelaxation      | N.D.   |
| 33                              | Arsenic (as As)   | mg/Lit     | APHA 22nd Ed.2012,3114-C, 3-38            | 0.01   | 0.05              | N.D.   |
| 34                              | Selenium (as Se)  | mg/Lit     | APHA 22nd Ed.2012,3114-C, 3-38            | 0.01   | NoRelaxation      | N.D.   |
| 35                              | Chromium (as Cr)  | mg/Lit     | APHA 22nd Ed.2012,3500-Cr-B, 3-69         | 0.05   | NoRelaxation      | N.D.   |
| 36                              | Anionic Detergent (as MBAS)                             | mg/Lit     | APHA 22nd Ed.2012,5540-C, 5-53            | 0.2  | 1.0               | N.D.   |
| 37                              | Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH) | mg/Lit     | APHA 22nd Ed.2012,5540-B & C, 5-47        | 0.001  | 0.002             | N.D.   |
| 38                              | Poly-nuclear Aromatic Hydrocarbon (PAH)                 | µg/Lit     | APHA 22nd Ed.2012,6440-6-93               | 0.0001                                       | 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.   |
| <b>Microbiological Analysis</b> |   |            |   |  |                   |        |
| 1                               | Total Coliforms   | MPN/100 ML | IS:1622:1981: RA:2019                     | Shall not be detectable in any 100 ml sample |                   | Absent |
| 2                               | Faecal Colliform  | MPN/100ml  | IS:1622:1981: RA:2019                     | Shall not be detectable in any 100 ml sample |                   | Absent |
| 3                               | E. Coli   | MPN/100ml  | IS:1622:1981:RA:2019                      | Shall not be detectable in any 100ml sample  |                   | Absent |
| <b>Pesticides</b>               |   |            |   |  |                   |        |
| 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.05992

### TEST REPORT

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

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

#### REMARKS: RESULTS ARE AS ABOVE

#### Terms & conditions

- > 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.

|                                    |  |   |
|------------------------------------|--|---|
| <br>02/02/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/02/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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



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|   |   |                  |                             |  |
|---|---|------------------|-----------------------------|--|
| Name & Address Of The Customer  |   | REPORT NO        | UES/TR/21-22/06049          |  |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/S, MILUPARA</b><br><b>U/G COAL MINE,VILLAGE - MILUPARA,</b><br><b>BLOCK-TAMNAR,</b><br><b>DIST. - RAIGARH (C.G.) 496107</b> |   | LAB REF NO       | UES/21-22/W/010456          |  |
|   |   | DATE OF SAMPLING | 24/01/2022                  |  |
|   |   | DATE OF RECEIPT  | 25/01/2022                  |  |
|   |   | DATE OF REPORT   | 02/02/2022                  |  |
|   |   | DATE OF ANALYSIS | START: 25/01/2022           | END: 29/01/2022                          |
| <b>SAMPLE DETAILS</b>   |   |                  |                             |  |
| SAMPLE TYPE   | GROUND WATER  |                  | ORDER /REFERENCE:           | M/PO/RRV/2122/0049,<br>DTD. 24-JULY-2021 |
| CUSTOMER SAMPLE ID  | NEAR MILUPARA MINES OFFICE<br>PIESOMETER -ANLR                            |                  | SAMPLE CONDITION AT RECEIPT | OK                                       |
| PACKING OF SAMPLE   | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS<br>BOTTLE | SEALED           | SAMPLE COLLECTED BY         | CHINZAP                                  |
| SAMPLING PROCEDURE  | IS: 3025 (PART I):1987 RA 2003,<br>APHA 22ND ED. 2012, 1060-B, 1-39       |                  | QUANTITY RECEIVED           | 5 LTR                                    |

REPORT NO. 06049

### TEST REPORT

| SR. NO. | PARAMETER                                  | UNIT   | METHOD OF TEST   | AS PER IS 10500:2012 |                   | RESULT    |
|---------|--|--------|--|----------------------|-------------------|-----------|
|         |  |        |  | Acceptable Limit     | Permissible limit |           |
| 1       | Colour                                     | Hazen  | IS:3025:(Part-4)   | 5                    | 15                | <1        |
| 2       | Odour                                      | -      | IS 3025(part-5)  | Agreeable            | Agreeable         | Agreeable |
| 3       | Taste                                      | -      | IS 3025(part-8)  | Agreeable            | Agreeable         | Agreeable |
| 4       | pH   | -      | APHA 22 <sup>nd</sup> Ed.2012,4500-H <sup>1</sup> -B, 4-92   | 6.5-8.5              | No Relaxation     | 6.53      |
| 5       | Turbidity                                  | NTU    | APHA 22 <sup>nd</sup> Ed.2012,2130-B,2-13                    | 1                    | 5                 | 2.2       |
| 6       | Electrical Conductivity                    | µS/cm  | IS 3025(part-14):1984, RA 2013                               | -                    | -                 | 194.0     |
| 7       | Residual Chlorine                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-G,4-69                 | 0.2                  | 1                 | N.D.      |
| 8       | Total Solid                                | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- B, 2-64                  | -                    | -                 | 128.8     |
| 9       | Total Dissolved Solids                     | mg/Lit | IS 3025(part-16):1984, RA 2006                               | 500                  | 2000              | 120.4     |
| 10      | Total Suspended Solids                     | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- D, 2-66                  | -                    | -                 | 8.4       |
| 11      | Alkalinity Total (as CaCO <sub>3</sub> )   | mg/Lit | IS 3025(part-23):1986, RA 2003                               | 200                  | 600               | 32.0      |
| 12      | Total Hardness ( as CaCO <sub>3</sub> )    | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2340-C, 2-44,45                | 200                  | 600               | 68.0      |
| 13      | Calcium Hardness (as CaCO <sub>3</sub> )   | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67                | -                    | -                 | 38.0      |
| 14      | Magnesium Hardness (as CaCO <sub>3</sub> ) | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84                | -                    | -                 | 30.0      |
| 15      | Calcium (as Ca)                            | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67                | 75                   | 200               | 15.2      |
| 16      | Magnesium (as Mg)                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84                | 30                   | 100               | 7.2       |
| 17      | Chloride (as Cl)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-B, 4-72                | 250                  | 1000              | 13.9      |
| 18      | Sulphate (as SO <sub>4</sub> )             | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-SO <sub>4</sub> -E,4-190  | 200                  | 400               | 12.4      |
| 19      | Nitrate (as NO <sub>3</sub> )              | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-NO <sub>3</sub> -B, 4-122 | 45                   | No Relaxation     | 2.3       |

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REPORT NO. 06049

### TEST REPORT

| SR. NO.                         | PARAMETER   | UNIT       | METHOD OF TEST                                       | AS PER IS 10500:2012                         |                   | RESULT |
|---------------------------------|---|------------|--|--|-------------------|--------|
|                                 |   |            |  | Acceptable Limit                             | Permissible limit |        |
| 20                              | Phosphate (as P)  | mg/Lit     | APHA 22nd Ed.2012,4500-P-C, 4-153                    | -  | -                 | N.D.   |
| 20                              | Sodium (as Na)  | mg/Lit     | APHA 22ndEd.2012,3500-Na-B, 3-97                     | -  | -                 | 7.4    |
| 21                              | Potassium (as K)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-K-B, 3-87         | -  | -                 | 0.38   |
| 22                              | Boron (as B)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-B-B, 4-25         | 0.5  | 1.0               | N.D.   |
| 23                              | Iron (as Fe)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B,3-18            | 0.3  | No Relaxation     | N.D.   |
| 24                              | Fluoride (as F)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-F-B &D, 4-84 & 87 | 1  | 1.5               | 0.09   |
| 25                              | Manganese (as Mn)                                       | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.1  | 0.3               | N.D.   |
| 26                              | Lead (as Pb)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.01   | No Relaxation     | N.D.   |
| 27                              | Nickel (as Ni)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Ni, 3-108         | 0.02   | No Relaxation     | N.D.   |
| 28                              | Zinc (as Zn)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 5  | 15                | N.D.   |
| 29                              | Copper (as Cu)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.05   | 1.5               | N.D.   |
| 30                              | Cadmium (as Cd)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cd,3-105          | 0.003  | No Relaxation     | N.D.   |
| 31                              | Mercury (as Hg)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3112-B, 3-23           | 0.001  | No Relaxation     | N.D.   |
| 32                              | Arsenic (as As)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38           | 0.01   | 0.05              | N.D.   |
| 33                              | Selenium (as Se)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38           | 0.01   | No Relaxation     | N.D.   |
| 34                              | Chromium (as Cr)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cr-B, 3-69        | 0.05   | No Relaxation     | N.D.   |
| 35                              | Anionic Detergent (as MBAS)                             | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-C, 5-53           | 0.2  | 1.0               | N.D.   |
| 36                              | Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH) | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-B & C, 5-47       | 0.001  | 0.002             | N.D.   |
| 37                              | Poly-nuclear Aromatic Hydrocarbon (PAH)                 | µg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,6440-6-93              | 0.0001                                       | No Relaxation     | N.D.   |
| 38                              | Mineral Oil   | mg/Lit     | IS 3025 (part-39) : 1991, RA 2003                    | 0.5  | No Relaxation     | N.D.   |
| 39                              | Oil & Grease  | mg/Lit     | IS 3025 (Part 39):1991, RA 2003                      | -  | -                 | N.D.   |
| <b>Microbiological Analysis</b> |   |            |  |  |                   |        |
| 1                               | Total Coliforms   | MPN/100 ML | IS:1622:1981: RA:2019                                | Shall not be detectable in any 100 ml sample |                   | Absent |
| 2                               | Faecal coliform   | MPN/100ml  | IS:1622:1981: RA:2019                                | Shall not be detectable in any 100 ml sample |                   | Absent |
| 3                               | E. Coli   | MPN/100ml  | IS:1622:1981:RA:2019                                 | Shall not be detectable in any 100ml sample  |                   | Absent |
| <b>Pesticides</b>               |   |            |  |  |                   |        |
| 1                               | p,p DDT   | µg/L       | US EPA 508-1995                                      | 1  |                   | N.D.   |
| 2                               | o,p DDT   | µg/L       | US EPA 508-1995                                      | 1  |                   | N.D.   |

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REPORT NO. 06049

### TEST REPORT

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

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

#### REMARKS: RESULTS ARE AS ABOVE

##### Terms & conditions

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

|                        |  |                                 |
|------------------------|--|---------------------------------|
| <br><b>REVIEWED BY</b> |  | <br><b>AUTHORIZED SIGNATORY</b> |
|------------------------|--|---------------------------------|

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

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|  |   |                             |  |                 |
|--|---|-----------------------------|--|-----------------|
| Name & Address Of The Customer   |   | REPORT NO                   | UES/TR/21-22/06048                       |                 |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/S, MILUPARA</b><br><b>U/G COAL MINE,VILLAGE - MILUPARA,</b><br><b>BLOCK-TAMNAR,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |   | LAB REF NO                  | UES/21-22/W/010455                       |                 |
|  |   | DATE OF SAMPLING            | 24/01/2022                               |                 |
|  |   | DATE OF RECEIPT             | 25/01/2022                               |                 |
|  |   | DATE OF REPORT              | 02/02/2022                               |                 |
|  |   | DATE OF ANALYSIS            | START: 25/01/2022                        | END: 29/01/2022 |
| <b>SAMPLE DETAILS</b>  |   |                             |  |                 |
| SAMPLE TYPE  | GROUND WATER  | ORDER /REFERENCE:           | M/PO/SRV/2122/0049,<br>DTD. 24-JULY-2021 |                 |
| CUSTOMER SAMPLE ID   | STAFF QUARTER-BANJIKHOL<br>PIEZOMETER (ANLR)                              | SAMPLE CONDITION AT RECEIPT | OK                                       |                 |
| PACKING OF SAMPLE  | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS<br>BOTTLE | SEALED                      | SAMPLE COLLECTED BY                      | CHEMIST         |
| SAMPLING PROCEDURE   | IS: 3025 (PART I): 1987 RA 2003;<br>APHA 22ND ED. 2012, 1060-B, 1-39      | QUANTITY RECEIVED           | 5 LTR                                    |                 |

REPORT NO. 06048

### TEST REPORT

| SR. NO. | PARAMETER                                  | UNIT   | METHOD OF TEST  | ACCEPTABLE LIMIT FOR DRINKING WATER (IS 10500:2012) |                   | RESULT    |
|---------|--|--------|---|---|-------------------|-----------|
|         |  |        |   | Acceptable Limit                                    | Permissible limit |           |
| 1       | Colour                                     | Hazen  | IS:3025:(Part-4)  | 5   | 15                | <1        |
| 2       | Odour                                      | -      | IS 3025:(part-5)  | Agreeable   | Agreeable         | Agreeable |
| 3       | Taste                                      | -      | IS 3025:(part-8)  | Agreeable   | Agreeable         | Agreeable |
| 4       | pH   | -      | APHA 22 <sup>nd</sup> Ed.2012,4500-H <sup>+</sup> -B, 4-92  | 6.5-8.5   | No Relaxation     | 6.54      |
| 5       | Turbidity                                  | NTU    | APHA 22 <sup>nd</sup> Ed.2012,2130-B,2-13                   | 1   | 5                 | 0.98      |
| 6       | Electrical Conductivity                    | µS/cm  | IS 3025(part-14):1984, RA 2013                              | -   | -                 | 232.4     |
| 7       | Residual Chlorine                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-G, 4-69               | 0.2   | 1                 | N.D.      |
| 8       | Total Solid                                | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- B, 2-64                 | -   | -                 | 161.0     |
| 9       | Total Dissolved Solids                     | mg/Lit | IS 3025(part-16):1984, RA 2006                              | 500   | 2000              | 146.8     |
| 10      | Total Suspended Solids                     | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- D, 2-66                 | -   | -                 | 14.2      |
| 11      | Alkalinity Total (as CaCO <sub>3</sub> )   | mg/Lit | IS 3025(part-23):1986, RA 2003                              | 200   | 600               | 42.0      |
| 12      | Total Hardness ( as CaCO <sub>3</sub> )    | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2340-C, 2-44,45               | 200   | 600               | 88.0      |
| 13      | Calcium Hardness (as CaCO <sub>3</sub> )   | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67               | -   | -                 | 50.0      |
| 14      | Magnesium Hardness (as CaCO <sub>3</sub> ) | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84               | -   | -                 | 38.0      |
| 15      | Calcium (as Ca)                            | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67               | 75  | 200               | 20.0      |
| 16      | Magnesium (as Mg)                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84               | 30  | 100               | 9.23      |
| 17      | Chloride (as Cl)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-B, 4-72               | 250   | 1000              | 30.9      |
| 18      | Sulphate (as SO <sub>4</sub> )             | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-SO <sub>4</sub> -E,4-190 | 200   | 400               | 21.8      |
| 19      | Nitrate (as NO <sub>3</sub> )              | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-NO <sub>3</sub> -B,4-122 | 45  | No Relaxation     | 0.54      |
| 20      | Phosphate (as P)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-P-C, 4-153               | -   | -                 | N.D.      |

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REPORT NO. 06048

| TEST REPORT                     |   |            |  |   |                   |        |
|---------------------------------|---|------------|--|---|-------------------|--------|
| SR. NO.                         | PARAMETER   | UNIT       | METHOD OF TEST                           | ACCEPTABLE LIMIT FOR DRINKING WATER (IS 10500:2012) |                   | RESULT |
|                                 |   |            |  | Acceptable Limit                                    | Permissible limit |        |
| 21                              | Sodium (as Na)  | mg/Lit     | APHA 22nd Ed.2012,3500-Na-B, 3-97        | -   | -                 | 5.4    |
| 22                              | Potassium (as K)  | mg/Lit     | APHA 22nd Ed.2012,3500-K-B, 3-87         | -   | -                 | 2.1    |
| 23                              | Boron (as B)  | mg/Lit     | APHA 22nd Ed.2012,4500-B-B, 4-25         | 0.5   | 1.0               | N.D.   |
| 24                              | Iron (as Fe)  | mg/Lit     | APHA 22nd Ed.2012,3111-B,3-18            | 0.3   | No Relaxation     | N.D.   |
| 25                              | Fluoride (as F)   | mg/Lit     | APHA 22nd Ed.2012,4500-F-B &D, 4-84 & 87 | 1   | 1.5               | 0.12   |
| 26                              | Manganese (as Mn)                                       | mg/Lit     | APHA 22nd Ed.2012,3111-B, 3-18           | 0.1   | 0.3               | N.D.   |
| 27                              | Lead (as Pb)  | mg/Lit     | APHA 22nd Ed.2012,3111-B, 3-18           | 0.01  | No Relaxation     | N.D.   |
| 28                              | Nickel (as Ni)  | mg/Lit     | APHA 22nd Ed.2012,3500-NI, 3-108         | 0.02  | No Relaxation     | N.D.   |
| 29                              | Zinc (as Zn)  | mg/Lit     | APHA 22nd Ed.2012,3111-B, 3-18           | 5   | 15                | N.D.   |
| 30                              | Copper (as Cu)  | mg/Lit     | APHA 22nd Ed.2012,3111-B, 3-18           | 0.05  | 1.5               | N.D.   |
| 31                              | Cadmium (as Cd)   | mg/Lit     | APHA 22nd Ed.2012,3500-Cd, 3-105         | 0.003   | No Relaxation     | N.D.   |
| 32                              | Mercury (as Hg)   | mg/Lit     | APHA 22nd Ed.2012,3112-B, 3-23           | 0.001   | No Relaxation     | N.D.   |
| 33                              | Arsenic (as As)   | mg/Lit     | APHA 22nd Ed.2012,3114-C, 3-38           | 0.01  | 0.05              | N.D.   |
| 34                              | Selenium (as Se)  | mg/Lit     | APHA 22nd Ed.2012,3114-C, 3-38           | 0.01  | No Relaxation     | N.D.   |
| 35                              | Chromium (as Cr)  | mg/Lit     | APHA 22nd Ed.2012,3500-Cr-B, 3-69        | 0.05  | No Relaxation     | N.D.   |
| 36                              | Anionic Detergent (as MBAS)                             | mg/Lit     | APHA 22nd Ed.2012,5540-C, 5-53           | 0.2   | 1.0               | N.D.   |
| 37                              | Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH) | mg/Lit     | APHA 22nd Ed.2012,5540-B & C, 5-47       | 0.001   | 0.002             | N.D.   |
| 38                              | Poly-nuclear Aromatic Hydrocarbon (PAH)                 | µg/Lit     | APHA 22nd Ed.2012,6440-6-93              | 0.0001  | No Relaxation     | N.D.   |
| 39                              | Mineral Oil   | mg/Lit     | IS 3025 (part-39) : 1991, RA 2003        | 0.5   | No Relaxation     | N.D.   |
| 40                              | Oil & Grease  | mg/Lit     | IS 3025 (Part 39):1991, RA 2003          | -   | -                 | N.D.   |
| <b>Microbiological Analysis</b> |   |            |  |   |                   |        |
| 1                               | Total Coliforms   | MPN/100 ML | IS:1622:1981: RA:2019                    | Shall not be detectable in any 100 ml sample        |                   | Absent |
| 2                               | Faecal coliform   | MPN/100ml  | IS:1622:1981: RA:2019                    | Shall not be detectable in any 100 ml sample        |                   | Absent |
| 3                               | E. Coll   | MPN/100ml  | IS:1622:1981:RA:2019                     | Shall not be detectable in any 100ml sample         |                   | Absent |
| <b>Pesticides</b>               |   |            |  |   |                   |        |
| 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. 06048

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

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

**REMARKS: RESULTS ARE AS ABOVE**

**Terms & conditions**

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

|                                    |  |   |
|------------------------------------|--|---|
| <br>02/02/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/02/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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



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|  |  |        |                                |  |                 |
|--|--|--------|--------------------------------|--|-----------------|
| Name & Address Of The Customer   |  |        | REPORT NO                      | UES/TR/21-22/06050                       |                 |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/S, MILUPARA</b><br><b>U/G COAL MINE,VILLAGE - MILUPARA,</b><br><b>BLOCK-TAMNAR,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  |        | LAB REF NO                     | UES/21-22/W/010457                       |                 |
|  |  |        | DATE OF SAMPLING               | 24/01/2022                               |                 |
|  |  |        | DATE OF RECEIPT                | 25/01/2022                               |                 |
|  |  |        | DATE OF REPORT                 | 02/02/2022                               |                 |
|  |  |        | DATE OF ANALYSIS               | START: 25/01/2022                        | END: 29/01/2022 |
| <b>SAMPLE DETAILS</b>  |  |        |                                |  |                 |
| SAMPLE TYPE  | GROUND WATER   |        | ORDER /REFERENCE:              | M/PO/SRV/2122/0049,<br>DTD. 24-JULY-2021 |                 |
| CUSTOMER SAMPLE ID   | MILUPARA VILLAGE REAR PNC-<br>HIL(DUGWELL)                             |        | SAMPLE CONDITION AT<br>RECEIPT | OK                                       |                 |
| PACKING OF SAMPLE  | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | SEALED | SAMPLE COLLECTED BY            | CHEMIST                                  |                 |
| SAMPLING PROCEDURE   | IS:3025(PART 1):1987 RA 2003:<br>APHA 22ND ED. 2012,1060-B,1-39        |        | QUANTITY RECEIVED              | 5 LTR                                    |                 |

REPORT NO.06050

### TEST REPORT

| SR. NO. | PARAMETER                                  | UNIT   | METHOD OF TEST   | AS PER IS 10500:2012 |                   | RESULT    |
|---------|--|--------|--|----------------------|-------------------|-----------|
|         |  |        |  | Acceptable Limit     | Permissible limit |           |
| 1       | Colour                                     | Hazen  | IS:3025:(Part-4)   | 5                    | 15                | <1        |
| 2       | Odour                                      | -      | IS 3025(part-5)  | Agreeable            | Agreeable         | Agreeable |
| 3       | Taste                                      | -      | IS 3025(part-8)  | Agreeable            | Agreeable         | Agreeable |
| 4       | pH   | -      | APHA 22 <sup>nd</sup> Ed.2012,4500-H <sup>+</sup> -B, 4-92   | 6.5-8.5              | No Relaxation     | 6.74      |
| 5       | Turbidity                                  | NTU    | APHA 22 <sup>nd</sup> Ed.2012,2130-B,2-13                    | 1                    | 5                 | 1.26      |
| 6       | Electrical Conductivity                    | µS/cm  | IS 3025(part-14):1984, RA 2013                               | -                    | -                 | 272.4     |
| 7       | Residual Chlorine                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-CI-G, 4 - 69              | 0.2                  | 1                 | N.D.      |
| 8       | Total Solid                                | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- B, 2-64                  | -                    | -                 | 187.0     |
| 9       | Total Dissolved Solids                     | mg/Lit | IS 3025(part-16):1984, RA 2006                               | 500                  | 2000              | 174.6     |
| 10      | Total Suspended Solids                     | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- D, 2-66                  | -                    | -                 | 12.4      |
| 11      | Alkalinity Total (as CaCO <sub>3</sub> )   | mg/Lit | IS 3025(part-23):1986, RA 2003                               | 200                  | 600               | 44.0      |
| 12      | Total Hardness ( as CaCO <sub>3</sub> )    | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2340-C, 2-44,45                | 200                  | 600               | 102.0     |
| 13      | Calcium Hardness (as CaCO <sub>3</sub> )   | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B,3-67                 | -                    | -                 | 50.0      |
| 14      | Magnesium Hardness (as CaCO <sub>3</sub> ) | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B,3-84                 | -                    | -                 | 52.0      |
| 15      | Calcium (as Ca)                            | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B,3-67                 | 75                   | 200               | 20.0      |
| 16      | Magnesium (as Mg)                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B,3-84                 | 30                   | 100               | 12.6      |
| 17      | Chloride (as Cl)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-CI-B, 4-72                | 250                  | 1000              | 23.9      |
| 18      | Sulphate (as SO <sub>4</sub> )             | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-SO <sub>4</sub> -E, 4-190 | 200                  | 400               | 20.7      |
| 19      | Nitrate (as NO <sub>3</sub> )              | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-NO <sub>3</sub> -B,4-122  | 45                   | No Relaxation     | 2.6       |

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REPORT NO. 06050

### TEST REPORT

| SR. NO.                         | PARAMETER   | UNIT       | METHOD OF TEST  | AS PER IS 10500:2012                         |                   | RESULT |
|---------------------------------|---|------------|---|--|-------------------|--------|
|                                 |   |            |   | Acceptable Limit                             | Permissible limit |        |
| 20                              | Phosphate (as P)  | mg/Lit     | APHA 22nd Ed.2012,4500-P-C, 4-153                     | -  | -                 | N.D.   |
| 21                              | Sodium (as Na)  | mg/Lit     | APHA 22nd Ed.2012,3500-Na-B, 3-97                     | -  | -                 | 5.2    |
| 22                              | Potassium (as K)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-K-B, 3-87          | -  | -                 | 1.13   |
| 23                              | Boron (as B)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-B-B, 4-25          | 0.5  | 1.0               | N.D.   |
| 24                              | Iron (as Fe)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B,3-18             | 0.3  | No Relaxation     | N.D.   |
| 25                              | Fluoride (as F)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-F-B B.D, 4-84 & 87 | 1  | 1.5               | 0.06   |
| 26                              | Manganese (as Mn)                                       | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18            | 0.1  | 0.3               | 0.14   |
| 27                              | Lead (as Pb)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18            | 0.01   | No Relaxation     | N.D.   |
| 28                              | Nickel (as Ni)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Ni, 3-108          | 0.02   | No Relaxation     | N.D.   |
| 29                              | Zinc (as Zn)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18            | 5  | 15                | N.D.   |
| 30                              | Copper (as Cu)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18            | 0.05   | 1.5               | N.D.   |
| 31                              | Cadmium (as Cd)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cd, 3-105          | 0.003  | No Relaxation     | N.D.   |
| 32                              | Mercury (as Hg)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3112-B, 3-23            | 0.001  | No Relaxation     | N.D.   |
| 33                              | Arsenic (as As)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38            | 0.01   | 0.05              | N.D.   |
| 34                              | Selenium (as Se)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38            | 0.01   | No Relaxation     | N.D.   |
| 35                              | Chromium (as Cr)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cr-B, 3-69         | 0.05   | No Relaxation     | N.D.   |
| 36                              | Anionic Detergent (as MBAS)                             | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-C, 5-53            | 0.2  | 1.0               | N.D.   |
| 37                              | Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH) | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-B & C, 5-47        | 0.001  | 0.002             | N.D.   |
| 38                              | Poly-nuclear Aromatic Hydrocarbon (PAH)                 | µg/Lit     | APHA 22 <sup>nd</sup> 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.   |
| <b>Microbiological Analysis</b> |   |            |   |  |                   |        |
| 1                               | Total Coliforms   | MPN/100 ML | IS:1622:1981: RA:2019                                 | Shall not be detectable in any 100 ml sample |                   | Absent |
| 2                               | Faecal coliform   | MPN/100ml  | IS:1622:1981: RA:2019                                 | Shall not be detectable in any 100 ml sample |                   | Absent |
| 3                               | E. Coli   | MPN/100ml  | IS:1622:1981:RA:2019                                  | Shall not be detectable in any 100ml sample  |                   | Absent |
| <b>Pesticides</b>               |   |            |   |  |                   |        |
| 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. 06050

### TEST REPORT

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

|                                    |  |   |
|------------------------------------|--|---|
| <br>02/02/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/02/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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





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|  |  |                             |                                       |
|--|--|-----------------------------|---------------------------------------|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                   | UES/TR/21-22/05993                    |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,VILLAGE -</b><br><b>BANKHETA, POST -MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107.</b> |  | LAB REF NO                  | UES/21-22/W/010311                    |
|  |  | DATE OF SAMPLING            | 24/01/2022                            |
|  |  | DATE OF RECEIPT             | 25/01/2022                            |
|  |  | DATE OF REPORT              | 02/02/2022                            |
|  |  | DATE OF ANALYSIS            | START:25/01/2022    END: 29/01/2022   |
| <b>SAMPLE DETAILS</b>  |  |                             |                                       |
| SAMPLE TYPE  | GROUND WATER   | ORDER /REFERENCE:           | N/PO/SRV/2122/0045, DTD. 24-JULY-2021 |
| CUSTOMER SAMPLE ID   | SANTA VILLAGE, (DUGWELL)   | SAMPLE CONDITION AT RECEIPT | OK                                    |
| PACKING OF SAMPLE  | 3 X 1 NO. PVC CAN<br>1 X 1 NO. PVC CAN<br>1 X 1 NO. GLASS BOTTLE     | SAMPLE COLLECTED BY         | CHEMIST                               |
| SAMPLING PROCEDURE   | IS:3025(PART I):1987 RA<br>2003; APHA 22ND ED. 2012,<br>1060-B, 1-39 | QUANTITY RECEIVED           | 5 LTR                                 |

Report No.05993

### TEST REPORT

| SR. NO. | PARAMETER                                  | UNIT   | METHOD OF TEST   | AS PER IS 10500:2012 |                   | RESULT    |
|---------|--|--------|--|----------------------|-------------------|-----------|
|         |  |        |  | Acceptable Limit     | Permissible limit |           |
| 1       | Colour                                     | Hazen  | IS:3025:(Part-4)   | 5                    | 15                | 2.1       |
| 2       | Odour                                      | -      | IS 3025(part-5)  | Agreeable            | Agreeable         | Agreeable |
| 3       | Taste                                      | -      | IS 3025(part-8)  | Agreeable            | Agreeable         | Agreeable |
| 4       | pH   | -      | APHA 22 <sup>nd</sup> Ed.2012,4500-H <sup>1</sup> -B, 4-92   | 6.5-8.5              | NoRelaxation      | 7.53      |
| 5       | Turbidity                                  | NTU    | APHA 22 <sup>nd</sup> Ed.2012,2130-B,2-13                    | 1                    | 5                 | 2.4       |
| 6       | Electrical Conductivity                    | µS/cm  | IS 3025(part-14):1984, RA 2013                               | -                    | -                 | 256.4     |
| 7       | Residual Chlorine                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-G, 4-69                | 0.2                  | 1                 | N.D.      |
| 8       | Total Solid                                | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- B, 2-64                  | -                    | -                 | 164.0     |
| 9       | Total Dissolved Solids                     | mg/Lit | IS 3025(part-16):1984, RA 2006                               | 500                  | 2000              | 158.8     |
| 10      | Total Suspended Solids                     | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- D, 2-66                  | -                    | -                 | 5.2       |
| 11      | Alkalinity Total (as CaCO <sub>3</sub> )   | mg/Lit | IS 3025(part-23):1986, RA 2003                               | 200                  | 600               | 86.0      |
| 12      | Total Hardness ( as CaCO <sub>3</sub> )    | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2340-C, 2-44,45                | 200                  | 600               | 104.0     |
| 13      | Calcium Hardness (as CaCO <sub>3</sub> )   | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67                | -                    | -                 | 54.0      |
| 14      | Magnesium Hardness (as CaCO <sub>3</sub> ) | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84                | -                    | -                 | 50.0      |
| 15      | Calcium (as Ca)                            | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67                | 75                   | 200               | 21.6      |
| 16      | Magnesium (as Mg)                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84                | 30                   | 100               | 12.1      |
| 17      | Chloride (as Cl)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-B, 4-72                | 250                  | 1000              | 22.9      |
| 18      | Sulphate (as SO <sub>4</sub> )             | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-SO <sub>4</sub> -E, 4-190 | 200                  | 400               | 27.6      |
| 19      | Nitrate (as NO <sub>3</sub> )              | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-NO <sub>3</sub> -B, 4-122 | 45                   | NoRelaxation      | 0.56      |
| 20      | Phosphate (as P)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-P-C,4-153                 | -                    | -                 | N.D.      |
| 21      | Sodium (as Na)                             | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Na-B,3-97                 | -                    | -                 | 16.1      |

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Report No.05993

| TEST REPORT                     |   |            |  |  |                   |        |
|---------------------------------|---|------------|--|--|-------------------|--------|
| SR. NO.                         | PARAMETER   | UNIT       | METHOD OF TEST                                       | AS PER IS 10500:2012                         |                   | RESULT |
|                                 |   |            |  | Acceptable Limit                             | Permissible limit |        |
| 22                              | Potassium (as K)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-K-B, 3-87         | -  | -                 | 0.38   |
| 23                              | Boron (as B)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-B-B, 4-25         | 0.5  | 1.0               | N.D.   |
| 24                              | Iron (as Fe)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B,3-18            | 0.3  | NoRelaxation      | N.D.   |
| 25                              | Fluoride (as F)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-F-B &D, 4-84 & 87 | 1  | 1.5               | 0.12   |
| 26                              | Manganese (as Mn)                                       | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.1  | 0.3               | 0.09   |
| 27                              | Lead (as Pb)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.01   | NoRelaxation      | N.D.   |
| 28                              | Nickel (as Ni)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Ni, 3-108         | 0.02   | No Relaxation     | N.D.   |
| 29                              | Zinc (as Zn)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 5  | 15                | N.D.   |
| 30                              | Copper (as Cu)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.05   | 1.5               | N.D.   |
| 31                              | Cadmium (as Cd)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cd, 3-105         | 0.003  | NoRelaxation      | N.D.   |
| 32                              | Mercury (as Hg)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3112-B, 3-23           | 0.001  | NoRelaxation      | N.D.   |
| 33                              | Arsenic (as As)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38           | 0.01   | 0.05              | N.D.   |
| 34                              | Selenium (as Se)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38           | 0.01   | NoRelaxation      | N.D.   |
| 35                              | Chromium (as Cr)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cr-B, 3-69        | 0.05   | NoRelaxation      | N.D.   |
| 36                              | Anionic Detergent (as MBAS)                             | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-C, 5-53           | 0.2  | 1.0               | N.D.   |
| 37                              | Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH) | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-B & C, 5-47       | 0.001  | 0.002             | N.D.   |
| 38                              | Poly-nuclear Aromatic Hydrocarbon (PAH)                 | µg/Lit     | APHA 22 <sup>nd</sup> 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.   |
| <b>Microbiological Analysis</b> |   |            |  |  |                   |        |
| 1                               | Total Coliforms   | MPN/100 ML | IS:1622:1981: RA:2019                                | Shall not be detectable in any 100 ml sample |                   | Absent |
| 2                               | Faecal coliform   | MPN/100ml  | IS:1622:1981: RA:2019                                | Shall not be detectable in any 100 ml sample |                   | Absent |
| 3                               | E. Coli   | MPN/100ml  | IS:1622:1981:RA:2019                                 | Shall not be detectable in any 100ml sample  |                   | Absent |
| <b>Pesticides</b>               |   |            |  |  |                   |        |
| 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. 05993

### TEST REPORT

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

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

REMARKS: RESULTS ARE AS ABOVE

#### Terms & conditions

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

|                                    |  |   |
|------------------------------------|--|---|
| <br>02/02/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/02/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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



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|  |  |                             |  |
|--|--|-----------------------------|--|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                   | UES/TR/21-22/06051                       |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/S, MILUPARA<br/>U/G COAL MINE,VILLAGE - MILUPARA,<br/>BLOCK-TAMNAR,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO                  | URS/21-22/W/010459                       |
|  |  | DATE OF SAMPLING            | 24/01/2022                               |
|  |  | DATE OF RECEIPT             | 25/01/2022                               |
|  |  | DATE OF REPORT              | 02/02/2022                               |
|  |  | DATE OF ANALYSIS            | START:25/01/2022    END:29/01/2022       |
| <b>SAMPLE DETAILS</b>  |  |                             |  |
| SAMPLE TYPE  | GROUND WATER   | ORDER /REFERENCE:           | M/PO/SRV/2122/0049,<br>DED. 24-JULY-2021 |
| CUSTOMER SAMPLE ID   | GIDANPARA VILLAGE (DUGWELL)  | SAMPLE CONDITION AT RECEIPT | OK                                       |
| PACKING OF SAMPLE  | 3 X X I NO. PVC CAN<br>1 X X I NO. PVC CAN<br>1 X X I NO. GLASS BOTTLE | SEALED                      | SAMPLE COLLECTED BY<br>CHEMIST           |
| SAMPLING PROCEDURE   | IS:3025(PART I):1987 RA 2003;<br>APHA 22ND ED. 2012,1060-B,1-39        | QUANTITY RECEIVED           | 5 LTR                                    |

REPORT NO.06051

### TEST REPORT

| SR. NO. | PARAMETER                                  | UNIT   | METHOD OF TEST   | AS PER IS 10500:2012 |                   | RESULT    |
|---------|--|--------|--|----------------------|-------------------|-----------|
|         |  |        |  | Acceptable Limit     | Permissible limit |           |
| 1       | Colour                                     | Hazen  | IS:3025:(Part-4)   | 5                    | 15                | <1        |
| 2       | Odour                                      | -      | IS 3025(part-5)  | Agreeable            | Agreeable         | Agreeable |
| 3       | Taste                                      | -      | IS 3025(part-8)  | Agreeable            | Agreeable         | Agreeable |
| 4       | pH   | -      | APHA 22 <sup>nd</sup> Ed.2012,4500-H <sup>+</sup> -B, 4-92   | 6.5-8.5              | NoRelaxati<br>on  | 7.28      |
| 5       | Turbidity                                  | NTU    | APHA 22 <sup>nd</sup> Ed.2012,2130-B,2-13                    | 1                    | 5                 | 0.43      |
| 6       | Electrical Conductivity                    | µS/cm  | IS 3025(part-14):1984, RA 2013                               | -                    | -                 | 342.0     |
| 7       | Residual Chlorine                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-G, 4-69                | 0.2                  | 1                 | N.D.      |
| 8       | Total Solid                                | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- B, 2-64                  | -                    | -                 | 216.0     |
| 9       | Total Dissolved Solids                     | mg/Lit | IS 3025(part-16):1984, RA 2006                               | 500                  | 2000              | 212.4     |
| 10      | Total Suspended Solids                     | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- D, 2-66                  | -                    | -                 | 3.6       |
| 11      | Alkalinity Total (as CaCO <sub>3</sub> )   | mg/Lit | IS 3025(part-23):1986, RA 2003                               | 200                  | 600               | 62.0      |
| 12      | Total Hardness ( as CaCO <sub>3</sub> )    | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2340-C, 2-44,45                | 200                  | 600               | 98.0      |
| 13      | Calcium Hardness (as CaCO <sub>3</sub> )   | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B,3-67                 | -                    | -                 | 56.0      |
| 14      | Magnesium Hardness (as CaCO <sub>3</sub> ) | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B,3-84                 | -                    | -                 | 42.0      |
| 15      | Calcium (as Ca)                            | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B,3-67                 | 75                   | 200               | 22.4      |
| 16      | Magnesium (as Mg)                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B,3-84                 | 30                   | 100               | 10.2      |
| 17      | Chloride (as Cl)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-B, 4-72                | 250                  | 1000              | 21.9      |
| 18      | Sulphate (as SO <sub>4</sub> )             | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-SO <sub>4</sub> -E, 4-190 | 200                  | 400               | 12.4      |
| 19      | Nitrate (as NO <sub>3</sub> )              | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-NO <sub>3</sub> -B,4-122  | 45                   | NoRelaxati<br>on  | 3.6       |

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REPORT NO. 06051

### TEST REPORT

| SR. NO.                         | PARAMETER   | UNIT       | METHOD OF TEST                                       | AS PER IS 10500:2012                         |                   | RESULT |
|---------------------------------|---|------------|--|--|-------------------|--------|
|                                 |   |            |  | Acceptable Limit                             | Permissible limit |        |
| 20                              | Phosphate (as P)  | mg/Lit     | APHA 22nd Ed.2012,4500-P-C, 4-153                    | -  | -                 | N.D.   |
| 21                              | Sodium (as Na)  | mg/Lit     | APHA 22nd Ed.2012,3500-Na-B, 3-97                    | -  | -                 | 10.7   |
| 22                              | Potassium (as K)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-K-B, 3-87         | -  | -                 | 0.9    |
| 23                              | Boron (as B)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-B-B, 4-25         | 0.5  | 1.0               | N.D.   |
| 24                              | Iron (as Fe)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B,3-18            | 0.3  | NoRelaxation      | N.D.   |
| 25                              | Fluoride (as F)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-F-B &D, 4-84 & 87 | 1  | 1.5               | 0.12   |
| 26                              | Manganese (as Mn)                                       | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.1  | 0.3               | 0.09   |
| 27                              | Lead (as Pb)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.01   | NoRelaxation      | N.D.   |
| 28                              | Nickel (as Ni)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Ni, 3-108         | 0.02   | No Relaxation     | N.D.   |
| 29                              | Zinc (as Zn)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 5  | 15                | N.D.   |
| 30                              | Copper (as Cu)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18           | 0.05   | 1.5               | N.D.   |
| 31                              | Cadmium (as Cd)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cd, 3-105         | 0.003  | NoRelaxation      | N.D.   |
| 32                              | Mercury (as Hg)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3112-B, 3-23           | 0.001  | NoRelaxation      | N.D.   |
| 33                              | Arsenic (as As)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38           | 0.01   | 0.05              | N.D.   |
| 34                              | Selenium (as Se)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38           | 0.01   | NoRelaxation      | N.D.   |
| 35                              | Chromium (as Cr)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cr-B, 3-69        | 0.05   | NoRelaxation      | N.D.   |
| 36                              | Anionic Detergent (as MBAS)                             | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-C, 5-53           | 0.2  | 1.0               | N.D.   |
| 37                              | Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH) | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-B & C, 5-47       | 0.001  | 0.002             | N.D.   |
| 38                              | Poly-nuclear Aromatic Hydrocarbon (PAH)                 | µg/Lit     | APHA 22 <sup>nd</sup> 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.   |
| <b>Microbiological Analysis</b> |   |            |  |  |                   |        |
| 1                               | Total Coliforms   | MPN/100 ML | IS:1622:1981: RA:2019                                | Shall not be detectable in any 100 ml sample |                   | Absent |
| 2                               | Faecal coliform   | MPN/100ml  | IS:1622:1981: RA:2019                                | Shall not be detectable in any 100 ml sample |                   | Absent |
| 3                               | E. Coli   | MPN/100ml  | IS:1622:1981:RA:2019                                 | Shall not be detectable in any 100ml sample  |                   | Absent |
| <b>Pesticides</b>               |   |            |  |  |                   |        |
| 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. 06051

### TEST REPORT

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

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

#### REMARKS: RESULTS ARE AS ABOVE

##### Terms & conditions

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

|                                    |  |   |
|------------------------------------|--|---|
| <br>02/02/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/02/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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



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| Name & Address Of The Customer<br><b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,VILLAGE -<br/>BANKHETA, POST -MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107.</b> |  | REPORT NO        | UES/TR/21-22/05994          |                                       |
|--|--|------------------|-----------------------------|---------------------------------------|
|  |  | LAB REF NO       | UES/21-22/W/010312          |                                       |
|  |  | DATE OF SAMPLING | 24/01/2022                  |                                       |
|  |  | DATE OF RECEIPT  | 25/01/2022                  |                                       |
|  |  | DATE OF REPORT   | 02/02/2022                  |                                       |
|  |  | DATE OF ANALYSIS | START: 25/01/2022           | END: 29/01/2022                       |
| SAMPLE DETAILS   |  |                  |                             |                                       |
| SAMPLE TYPE  | GROUND WATER   |                  | ORDER /REFERENCE:           | N/PO/SRV/2122/0045, DTD. 24-JULY-2021 |
| CUSTOMER SAMPLE ID   | HELJOR VILLAGE (DUGWELL)   |                  | SAMPLE CONDITION AT RECEIPT | OK                                    |
| PACKING OF SAMPLE  | 3 L X 1 NO. PPC CAN<br>1 L X 1 NO. PPC CAN<br>1 L X 1 NO. GLASS BOTTLE | SEALED           | SAMPLE COLLECTED BY         | CHEMIST                               |
| SAMPLING PROCEDURE   | IS:3025 (PART 1):1987 RA<br>2003; APHA 22ND ED. 2012,<br>1060-B, 1-39  |                  | QUANTITY RECEIVED           | 5 LTR                                 |

Report No.05994

### TEST REPORT

| SR. NO. | PARAMETER                                  | UNIT   | METHOD OF TEST   | AS PER IS 10500:2012 |                   | RESULT    |
|---------|--|--------|--|----------------------|-------------------|-----------|
|         |  |        |  | Acceptable Limit     | Permissible limit |           |
| 1       | Colour                                     | Hazen  | IS:3025:(Part-4)   | 5                    | 15                | <1        |
| 2       | Odour                                      | -      | IS 3025(part-5)  | Agreeable            | Agreeable         | Agreeable |
| 3       | Taste                                      | -      | IS 3025(part-8)  | Agreeable            | Agreeable         | Agreeable |
| 4       | pH   | -      | APHA 22 <sup>nd</sup> Ed.2012,4500-H*-B, 4-92                | 6.5-8.5              | No Relaxation     | 7.58      |
| 5       | Turbidity                                  | NTU    | APHA 22 <sup>nd</sup> Ed.2012,2130-B,2-13                    | 1                    | 5                 | 0.42      |
| 6       | Electrical Conductivity                    | µS/cm  | IS 3025(part-14):1984, RA 2013                               | -                    | -                 | 576.0     |
| 7       | Residual Chlorine                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-CI-G, 4-69                | 0.2                  | 1                 | N.D.      |
| 8       | Total Solid                                | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- B, 2-64                  | -                    | -                 | 353.4     |
| 9       | Total Dissolved Solids                     | mg/Lit | IS 3025(part-16):1984, RA 2006                               | 500                  | 2000              | 348.6     |
| 10      | Total Suspended Solids                     | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2540- D, 2-66                  | -                    | -                 | 4.8       |
| 11      | Alkalinity Total (as CaCO <sub>3</sub> )   | mg/Lit | IS 3025(part-23):1986, RA 2003                               | 200                  | 600               | 166.0     |
| 12      | Total Hardness ( as CaCO <sub>3</sub> )    | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,2340-C, 2-44,45                | 200                  | 600               | 196.0     |
| 13      | Calcium Hardness (as CaCO <sub>3</sub> )   | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67                | -                    | -                 | 106.0     |
| 14      | Magnesium Hardness (as CaCO <sub>3</sub> ) | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84                | -                    | -                 | 90.0      |
| 15      | Calcium (as Ca)                            | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Ca-B, 3-67                | 75                   | 200               | 42.4      |
| 16      | Magnesium (as Mg)                          | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,3500-Mg-B, 3-84                | 30                   | 100               | 21.8      |
| 17      | Chloride (as Cl)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-CI-B, 4-72                | 250                  | 1000              | 46.9      |
| 18      | Sulphate (as SO <sub>4</sub> )             | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-SO <sub>4</sub> -E, 4-190 | 200                  | 400               | 25.2      |
| 19      | Nitrate (as NO <sub>3</sub> )              | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-NO <sub>3</sub> -B, 4-122 | 45                   | No Relaxation     | 1.32      |
| 20      | Phosphate (as P)                           | mg/Lit | APHA 22 <sup>nd</sup> Ed.2012,4500-P-C,4-153                 | -                    | -                 | N.D.      |

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

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

Report No.05994

| TEST REPORT                     |   |            |   |  |                   |        |
|---------------------------------|---|------------|---|--|-------------------|--------|
| SR. NO.                         | PARAMETER   | UNIT       | METHOD OF TEST  | AS PER IS 10500:2012                         |                   | RESULT |
|                                 |   |            |   | Acceptable Limit                             | Permissible limit |        |
| 21                              | Sodium (as Na)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Na-B,3-97          | -  | -                 | 6.8    |
| 22                              | Potassium (as K)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-K-B,3-87           | -  | -                 | 1.34   |
| 23                              | Boron (as B)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-B-B,4-25           | 0.5  | 1.0               | N.D.   |
| 24                              | Iron (as Fe)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B,3-18             | 0.3  | No Relaxation     | N.D.   |
| 25                              | Fluoride (as F)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,4500-F-B & D, 4-84 & 87 | 1  | 1.5               | 0.09   |
| 26                              | Manganese (as Mn)                                       | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B,3-18             | 0.1  | 0.3               | 0.12   |
| 27                              | Lead (as Pb)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B,3-18             | 0.01   | No Relaxation     | N.D.   |
| 28                              | Nickel (as Ni)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Ni,3-108           | 0.02   | No Relaxation     | N.D.   |
| 29                              | Zinc (as Zn)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B,3-18             | 5  | 15                | N.D.   |
| 30                              | Copper (as Cu)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3111-B,3-18             | 0.05   | 1.5               | N.D.   |
| 31                              | Cadmium (as Cd)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cd,3-105           | 0.003  | No Relaxation     | N.D.   |
| 32                              | Mercury (as Hg)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3112-B,3-23             | 0.001  | No Relaxation     | N.D.   |
| 33                              | Arsenic (as As)   | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C,3-38             | 0.01   | 0.05              | N.D.   |
| 34                              | Selenium (as Se)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3114-C,3-38             | 0.01   | No Relaxation     | N.D.   |
| 35                              | Chromium (as Cr)  | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,3500-Cr-B,3-69          | 0.05   | No Relaxation     | N.D.   |
| 36                              | Anionic Detergent (as MBAS)                             | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-C,5-53             | 0.2  | 1.0               | N.D.   |
| 37                              | Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH) | mg/Lit     | APHA 22 <sup>nd</sup> Ed.2012,5540-B & C,5-47         | 0.001  | 0.002             | N.D.   |
| 38                              | Poly-nuclear Aromatic Hydrocarbon (PAH)                 | µg/Lit     | APHA 22 <sup>nd</sup> 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.   |
| <b>Microbiological Analysis</b> |   |            |   |  |                   |        |
| 1                               | Total Coliforms   | MPN/100 ML | IS:1622:1981: RA:2019                                 | Shall not be detectable in any 100 ml sample |                   | Absent |
| 2                               | Faecal Coliform   | MPN/100ml  | IS:1622:1981: RA:2019                                 | Shall not be detectable in any 100 ml sample |                   | Absent |
| 3                               | E. Coli   | MPN/100ml  | IS:1622:1981:RA:2019                                  | Shall not be detectable in any 100 ml sample |                   | Absent |
| <b>Pesticides</b>               |   |            |   |  |                   |        |
| 1                               | p,p DDT   | µg/L       | US EPA 508-1995                                       | 1  |                   | N.D.   |
| 2                               | o,p DDT   | µg/L       | US EPA 508-1995                                       | 1  |                   | N.D.   |
| 3                               | p,pDDE  | µg/L       | US EPA 508-1995                                       | 1  |                   | N.D.   |
| 4                               | p,p DDD   | µg/L       | US EPA 508-1995                                       | 1  |                   | N.D.   |
| 5                               | O,p DDD   | µg/L       | US EPA 508-1995                                       | 1  |                   | N.D.   |

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

Report No.05994

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

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

REMARKS: RESULTS ARE AS ABOVE

**Terms & conditions**

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

|                                    |  |   |
|------------------------------------|--|---|
| <br>02/02/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/02/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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

# Annexure-7

ADITYA BIRLA



o/c

Letter No. : HIL/EC/GP-IV/4-Q3/2021-22/ 499

11 January, 2022

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

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 Oct. 2021 to December 2021) & GW Quality for the month of November 2021 – Post monsoon period of Gare Palma IV/4 Coal Mine, M/s Hindalco Industries Limited, Village – Bhanjikhoh, Tehsil – Tamnar, District – Raigarh, Chhattisgarh.

Thanking you,

Yours faithfully,

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



Encl: As above

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

Hindalco Industries Limited

Gare Palma Mines ( IV/4 & IV/5), Vill & Po: Milupara, Tehsil: Tamnar, Dist: Raigarh- 496107, Chhattisgarh

T: +91 7762 228212, Website : www.hindalco.com E mail : hindalco@adityabirla.com

Registered Office : Ahura Centre, 1st Floor, B Wing, Mahakali Caves Road Andheri (East), Mumbai 400093, India

T: + 912266917000 | Fax: + 912266917001

Corporate ID No: L27020MH1958PLC011238



Letter No. : HIL/EC/GP-IV/4 –Q4/2021-22/23

07<sup>TH</sup> April, 2022

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

**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 Jan. 2022 to Mar. 2022) & GW Quality for the month of January 2022 – Winter Season of Gare Palma IV/4 Coal Mine, M/s Hindalco Industries Limited, Village – Bhanjikhola, Tehsil – Tamnar, District – Raigarh, Chhattisgarh.

Thanking you,

Yours faithfully,

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



Encl: As above

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

**Hindalco industries Limited**

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

# Annexure-8



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

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

|   |  |                          |  |                |
|---|--|--------------------------|--|----------------|
| <i>Name &amp; Address Of The Customer</i>   |  | REPORT NO.               | UES/TR/21-22/3494                        |                |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST - MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO.              | UES/21-22/AAQM/6246-6253                 |                |
|   |  | DATE OF SAMPLING         | 01/10/2021 to 25/10/2021                 |                |
|   |  | DATE OF RECEIPT          | 02/10/2021 to 26/10/2021                 |                |
|   |  | DATE OF REPORT           | 01/11/2021                               |                |
|   |  | DATE OF ANALYSIS         | START:03/10/2021                         | END:01/11/2021 |
| <b>SAMPLE DETAILS</b>   |  |                          |  |                |
| MONITORING FOR  | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | N/PO/SRV/2122/0045,<br>DTD.:24-JULY-2021 |                |
| SAMPLING LOCATION   | OFFICE AREA, BANJIKHOL   |                          |  |                |
| DURATION OF SAMPLING  | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                       |                |
| SAMPLING PROCEDURE  | AS PER METHOD REFERENCE  |                          |  |                |
| SAMPLE QUANTITY/PACKING   | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182 (Part 10):1999, RA 2003                          | 4.0            |
| Mercury (Hg)   | EPA Method IO-05   | --             |

### TEST REPORT

| Date of Sampling | PM <sub>10</sub><br>µg/m <sup>3</sup> | PM <sub>2.5</sub><br>µg/m <sup>3</sup> | SO <sub>2</sub><br>µg/m <sup>3</sup> | NO <sub>2</sub><br>µg/m <sup>3</sup> | CO*<br>mg/m <sup>3</sup> | Hg<br>ng/m <sup>3</sup> |
|------------------|---------------------------------------|--|--------------------------------------|--------------------------------------|--------------------------|-------------------------|
| 01.10.2021       | 54                                    | 22                                     | 12                                   | 28                                   | 0.8                      | N.D.                    |
| 04.10.2021       | 50                                    | 28                                     | 09                                   | 20                                   | 0.9                      | N.D.                    |
| 08.10.2021       | 48                                    | 26                                     | 18                                   | 26                                   | 0.4                      | N.D.                    |
| 11.10.2021       | 40                                    | 20                                     | 14                                   | 20                                   | 0.6                      | N.D.                    |
| 14.10.2021       | 44                                    | 24                                     | 10                                   | 28                                   | 0.2                      | N.D.                    |
| 18.10.2021       | 40                                    | 28                                     | 16                                   | 24                                   | 0.8                      | N.D.                    |
| 22.10.2021       | 48                                    | 20                                     | 10                                   | 26                                   | 0.5                      | N.D.                    |
| 25.10.2021       | 52                                    | 22                                     | 18                                   | 22                                   | 0.9                      | N.D.                    |

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

#### Terms & conditions

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

|                               |  |  |
|-------------------------------|--|--|
| <br>REVIEWED BY<br>01/11/2021 |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY<br>01/11/21 |
|-------------------------------|--|--|

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

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



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

FUTURE PRO. . QUALITY MONITORING

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|  |  |                          |   |                |
|--|--|--------------------------|---|----------------|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                | UES/TR/21-22/04167                      |                |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST -MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/07453-07460              |                |
|  |  | DATE OF SAMPLING         | 01/11/2021 to 27/11/2021                |                |
|  |  | DATE OF RECEIPT          | 02/11/2021 to 29/11/2021                |                |
|  |  | DATE OF REPORT           | 01/12/2021                              |                |
|  |  | DATE OF ANALYSIS         | START:02/11/2021                        | END:29/11/2021 |
| <b>SAMPLE DETAILS</b>  |  |                          |   |                |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | N/PO/SW/2122/0045,<br>DTD. 24-JULY-2021 |                |
| SAMPLING LOCATION  | OFFICE AREA, BANJIKHOL   |                          |   |                |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                      |                |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |   |                |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): 1XI NO., FILTER PAPER (PM <sub>2.5</sub> ): 1XI NO.<br>SO <sub>2</sub> : 30MLXI NO. PVC BOTTLE, NO <sub>2</sub> : 30MLXI NO. PVC BOTTLE<br>RUBBER BLADDER: 1XI NO. |                          |   |                |

**Test Method and NAAQM Standard for Ambient Air Quality Monitoring**

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

**TEST REPORT**

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 01.11.2021       | 56                                 | 24                                  | 14                                | 30                                | 0.9                   | N.D.                 |
| 06.11.2021       | 52                                 | 30                                  | 10                                | 22                                | 0.8                   | N.D.                 |
| 08.11.2021       | 50                                 | 28                                  | 20                                | 28                                | 0.5                   | N.D.                 |
| 13.11.2021       | 42                                 | 22                                  | 16                                | 22                                | 0.8                   | N.D.                 |
| 15.11.2021       | 46                                 | 26                                  | 12                                | 30                                | 0.4                   | N.D.                 |
| 20.11.2021       | 42                                 | 30                                  | 18                                | 26                                | 0.6                   | N.D.                 |
| 22.11.2021       | 50                                 | 22                                  | 12                                | 28                                | 0.4                   | N.D.                 |
| 27.11.2021       | 54                                 | 24                                  | 20                                | 24                                | 0.8                   | N.D.                 |

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

**Terms & conditions**

- The report is confidential, retention or its legal disposal is forbidden.
- Final sample will be retained for 15 days after issues of test report unless otherwise agreed with customer.
- This is for information as the party has asked for advice testing only.

|                                    |  |   |
|------------------------------------|--|---|
| <br>01/12/21<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>01/12/21<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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

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Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
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|  |  |                          |  |                |
|--|--|--------------------------|--|----------------|
| Name & Address of The Customer   |  | REPORT NO                | UES/TR/21-22/04910                       |                |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA,</b><br><b>POST -MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/08721-08728               |                |
|  |  | DATE OF SAMPLING         | 04/12/2021 to 27/12/2021                 |                |
|  |  | DATE OF RECEIPT          | 05/12/2021 to 28/12/2021                 |                |
|  |  | DATE OF REPORT           | 01/01/2022                               |                |
|  |  | DATE OF ANALYSIS         | START:05/12/2021                         | END:30/12/2021 |
|  |  | <b>SAMPLE DETAILS</b>    |  |                |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | N/PO/SRV/2122/0045,<br>DTD. 24-JULY-2021 |                |
| SAMPLING LOCATION  | OFFICE AREA, BANJIRHOL   |                          |  |                |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                       |                |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |  |                |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182(Part 10):1999, RA 2003                           | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

### TEST REPORT

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 04.12.2021       | 58                                 | 26                                  | 16                                | 32                                | 1.0                   | N.D.                 |
| 06.12.2021       | 54                                 | 32                                  | 12                                | 24                                | 0.9                   | N.D.                 |
| 11.12.2021       | 52                                 | 30                                  | 22                                | 30                                | 0.6                   | N.D.                 |
| 13.12.2021       | 44                                 | 24                                  | 18                                | 24                                | 0.9                   | N.D.                 |
| 18.12.2021       | 48                                 | 28                                  | 14                                | 32                                | 0.6                   | N.D.                 |
| 20.12.2021       | 44                                 | 32                                  | 20                                | 28                                | 0.8                   | N.D.                 |
| 25.12.2021       | 52                                 | 24                                  | 14                                | 30                                | 0.6                   | N.D.                 |
| 27.12.2021       | 56                                 | 26                                  | 22                                | 26                                | 1.0                   | N.D.                 |

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

#### Terms & conditions

- The report for publication, withdrawal or as legal dispute is forbidden.
- This 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 control for please check/it only.

|                                    |   |   |
|------------------------------------|---|---|
| <br>01/01/22<br><b>REVIEWED BY</b> | <br><b>ULTIMATE ENVIROLYTICAL SOLUTIONS</b> | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>01/01/2022<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|---|---|

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





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|  |  |                                     |  |
|--|--|-------------------------------------|--|
| <b>Name &amp; Address Of The Customer</b>  |  | <b>REPORT NO</b>                    | UES/TR/21-22/05971                       |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST -MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | <b>LAB REF NO</b>                   | UES/21-22/AAQM/010260-010267             |
|  |  | <b>DATE OF SAMPLING</b>             | 03/01/2022 to 28/01/2022                 |
|  |  | <b>DATE OF RECEIPT</b>              | 04/01/2022 to 29/01/2022                 |
|  |  | <b>DATE OF REPORT</b>               | 02/02/2022                               |
|  |  | <b>DATE OF ANALYSIS</b>             | START: 04/01/2022    END: 01/02/2022     |
| <b>SAMPLE DETAILS</b>  |  |                                     |  |
| <b>MONITORING FOR</b>  | AMBIENT AIR QUALITY MONITORING   | <b>CUSTOMER REF. NO. &amp; DATE</b> | N/PO/SRV/2122/0045,<br>DTD. 24-JULY-2021 |
| <b>SAMPLING LOCATION</b>   | OFFICE AREA, BANJIKHOL   |                                     |  |
| <b>DURATION OF SAMPLING</b>  | 24 HOURS   | <b>SAMPLE COLLECTED BY</b>          | LABORATORY CHEMIST                       |
| <b>SAMPLING PROCEDURE</b>  | AS PER METHOD REFERENCE  |                                     |  |
| <b>SAMPLE QUANTITY/PACKING</b>   | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO) *   | IS 5182 (Part 10): 1999, RA 2003                         | 4.0            |
| Mercury (Hg)   | EPA Method 10-5  | ---            |

### TEST REPORT

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 03.01.2022       | 64                                 | 30                                  | 18                                | 30                                | 0.6                   | N.D.                 |
| 07.01.2022       | 60                                 | 24                                  | 10                                | 26                                | 0.8                   | N.D.                 |
| 10.01.2022       | 62                                 | 28                                  | 14                                | 32                                | 0.7                   | N.D.                 |
| 14.01.2022       | 54                                 | 26                                  | 08                                | 28                                | 0.2                   | N.D.                 |
| 17.01.2022       | 58                                 | 20                                  | 14                                | 22                                | 0.6                   | N.D.                 |
| 21.01.2022       | 54                                 | 38                                  | 10                                | 26                                | 0.5                   | N.D.                 |
| 24.01.2022       | 62                                 | 26                                  | 14                                | 20                                | 0.8                   | N.D.                 |
| 28.01.2022       | 66                                 | 22                                  | 12                                | 24                                | 1.1                   | N.D.                 |

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

#### Terms & conditions

- The report for publication, circulation or all legal purposes is forbidden.
- The samples 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.

|                                      |  |   |
|--------------------------------------|--|---|
| <br>02/02/2022<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/02/22<br><b>AUTHORIZED SIGNATORY</b> |
|--------------------------------------|--|---|

End of the test report

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|  |  |                                     |  |
|--|--|-------------------------------------|--|
| <b>Name &amp; Address Of The Customer</b>  |  | <b>REPORT NO</b>                    | UES/TR/21-22/07918                       |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST -MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | <b>LAB REF NO</b>                   | UES/21-22/AAQM/013075-013082             |
|  |  | <b>DATE OF SAMPLING</b>             | 01/02/2022 to 25/02/2022                 |
|  |  | <b>DATE OF RECEIPT</b>              | 02/02/2022 to 26/02/2022                 |
|  |  | <b>DATE OF REPORT</b>               | 01/03/2022                               |
|  |  | <b>DATE OF ANALYSIS</b>             | START: 03/02/2022      END: 01/03/2022   |
| <b>SAMPLE DETAILS</b>  |  |                                     |  |
| <b>MONITORING FOR</b>  | AMBIENT AIR QUALITY MONITORING   | <b>CUSTOMER REF. NO. &amp; DATE</b> | N/FO/ERV/2122/0045,<br>DID. 24-JULY-2021 |
| <b>SAMPLING LOCATION</b>   | OFFICE AREA, BANJIKHOL   |                                     |  |
| <b>DURATION OF SAMPLING</b>  | 24 HOURS   | <b>SAMPLE COLLECTED BY</b>          | LABORATORY CHEMIST                       |
| <b>SAMPLING PROCEDURE</b>  | AS PER METHOD REFERENCE  |                                     |  |
| <b>SAMPLE QUANTITY/PACKING</b>   | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I           | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182 (Part 10): 1999, RA 2003                         | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

### TEST REPORT

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 01.02.2022       | 68                                 | 32                                  | 14                                | 32                                | 0.6                   | N.D.                 |
| 04.02.2022       | 58                                 | 20                                  | 08                                | 28                                | 0.9                   | N.D.                 |
| 07.02.2022       | 70                                 | 30                                  | 12                                | 30                                | 0.4                   | N.D.                 |
| 11.02.2022       | 62                                 | 22                                  | 08                                | 26                                | 0.8                   | N.D.                 |
| 14.02.2022       | 68                                 | 28                                  | 16                                | 20                                | 0.6                   | N.D.                 |
| 18.02.2022       | 58                                 | 36                                  | 12                                | 28                                | 0.4                   | N.D.                 |
| 21.02.2022       | 65                                 | 24                                  | 18                                | 23                                | 0.9                   | N.D.                 |
| 25.02.2022       | 62                                 | 28                                  | 14                                | 28                                | 1.0                   | N.D.                 |

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

#### Terms & conditions

- > This report for publication, submission or as legal document in India.
- > This sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- > This is for information on the party has asked for above test(s) only.

|                                    |  |  |
|------------------------------------|--|--|
| <br>01/03/22<br><b>REVIEWED BY</b> |  | <b>For ULTIMATE ENVIROLYTICAL SOLUTIONS</b><br><br>01/03/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|--|

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

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|   |  |                          |  |                 |
|---|--|--------------------------|--|-----------------|
| <i>Name &amp; Address Of The Customer</i>   |  | REPORT NO                | UES/TR/21-22/08926                       |                 |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA,</b><br><b>POST - MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/014619                    |                 |
|   |  | DATE OF SAMPLING         | 02/03/2022 to 28/03/2022                 |                 |
|   |  | DATE OF RECEIPT          | 03/03/2022 to 29/03/2022                 |                 |
|   |  | DATE OF REPORT           | 02/04/2022                               |                 |
|   |  | DATE OF ANALYSIS         | START: 04/03/2022                        | END: 02/04/2022 |
|   |  | <b>SAMPLE DETAILS</b>    |  |                 |
| MONITORING FOR  | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | N/PO/SRV/2122/0045,<br>DTD. 24-JULY-2021 |                 |
| SAMPLING LOCATION   | OFFICE AREA, BANJINGHOL  |                          |  |                 |
| DURATION OF SAMPLING  | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                       |                 |
| SAMPLING PROCEDURE  | AS PER METHOD REFERENCE  |                          |  |                 |
| SAMPLE QUANTITY/PACKING   | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | IS 5182 (Part 24): 2019, CPCB Guidelines Vol.-I          | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182 (Part 10): 1999, RA 2003                         | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

#### TEST REPORT

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 02.03.2022       | 78                                 | 30                                  | 12                                | 30                                | 0.8                   | N.D.                 |
| 07.03.2022       | 68                                 | 26                                  | 10                                | 28                                | 0.6                   | N.D.                 |
| 11.03.2022       | 80                                 | 28                                  | 14                                | 24                                | 0.8                   | N.D.                 |
| 14.03.2022       | 72                                 | 30                                  | 06                                | 22                                | 0.5                   | N.D.                 |
| 18.03.2022       | 78                                 | 34                                  | 10                                | 24                                | 0.6                   | N.D.                 |
| 21.03.2022       | 68                                 | 32                                  | 08                                | 28                                | 0.2                   | N.D.                 |
| 25.03.2022       | 55                                 | 28                                  | 14                                | 20                                | 0.8                   | N.D.                 |
| 28.03.2022       | 62                                 | 20                                  | 12                                | 22                                | 0.5                   | N.D.                 |

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

#### Terms & conditions

- The report for publication, exhibition or as legal evidence is forbidden.
- This 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.

|                                    |  |   |
|------------------------------------|--|---|
| <br>02/04/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/04/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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

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|   |  |                          |  |                 |
|---|--|--------------------------|--|-----------------|
| <i>Name &amp; Address Of The Customer</i>   |  | REPORT NO.               | UES/TR/21-22/3495                          |                 |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,VILLAGE -<br/>BANKHETA,<br/>POST -MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO.              | UES/21-22/AAQM/6254-6261                   |                 |
|   |  | DATE OF SAMPLING         | 01/10/2021 to 25/10/2021                   |                 |
|   |  | DATE OF RECEIPT          | 02/10/2021 to 26/10/2021                   |                 |
|   |  | DATE OF REPORT           | 01/11/2021                                 |                 |
|   |  | DATE OF ANALYSIS         | START: 03/10/2021                          | END: 01/11/2021 |
| <b>SAMPLE DETAILS</b>   |  |                          |  |                 |
| MONITORING FOR  | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | M/PO/SRV/2122/0045,<br>DTD. : 24-JULY-2021 |                 |
| SAMPLING LOCATION   | ETP AREA, BANJINGOL  |                          |  |                 |
| DURATION OF SAMPLING  | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                         |                 |
| SAMPLING PROCEDURE  | AS PER METHOD REFERENCE  |                          |  |                 |
| SAMPLE QUANTITY/PACKING   | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182 (Part 10): 1999, RA 2003                         | 4.0            |
| Mercury (Hg)   | EPA Method IO-05   | --             |

#### TEST REPORT

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 01.10.2021       | 48                                 | 22                                  | 08                                | 26                                | 0.7                   | N.D.                 |
| 04.10.2021       | 40                                 | 26                                  | 12                                | 22                                | 0.4                   | N.D.                 |
| 08.10.2021       | 46                                 | 22                                  | 16                                | 28                                | 0.8                   | N.D.                 |
| 11.10.2021       | 38                                 | 28                                  | 10                                | 20                                | 0.6                   | N.D.                 |
| 14.10.2021       | 36                                 | 20                                  | 08                                | 26                                | 0.2                   | N.D.                 |
| 18.10.2021       | 42                                 | 26                                  | 12                                | 28                                | 0.7                   | N.D.                 |
| 22.10.2021       | 46                                 | 28                                  | 09                                | 20                                | 0.6                   | N.D.                 |
| 25.10.2021       | 40                                 | 20                                  | 14                                | 24                                | 0.2                   | N.D.                 |

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

#### Terms & conditions

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

|                               |  |  |
|-------------------------------|--|--|
| <br>REVIEWED BY<br>01/11/2021 |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY<br>01/11/21 |
|-------------------------------|--|--|

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



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

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

|  |  |                          |  |                 |
|--|--|--------------------------|--|-----------------|
| <b>Name &amp; Address Of The Customer</b>  |  | REPORT NO                | UES/TR/21-22/04169                       |                 |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST -MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/07461-07468               |                 |
|  |  | DATE OF SAMPLING         | 01/11/2021 to 27/11/2021                 |                 |
|  |  | DATE OF RECEIPT          | 02/11/2021 to 29/11/2021                 |                 |
|  |  | DATE OF REPORT           | 01/12/2021                               |                 |
|  |  | DATE OF ANALYSIS         | START: 02/11/2021                        | END: 29/11/2021 |
| <b>SAMPLE DETAILS</b>  |  |                          |  |                 |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | N/PO/SRV/2122/0045,<br>DTD. 24-JULY-2021 |                 |
| SAMPLING LOCATION  | ETP AREA, BANJIKHOL  |                          |  |                 |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                       |                 |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |  |                 |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182 (Part 10): 1999, RA 2003                         | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

### TEST REPORT

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 01.11.2021       | 50                                 | 24                                  | 10                                | 28                                | 0.8                   | N.D.                 |
| 06.11.2021       | 42                                 | 28                                  | 14                                | 24                                | 0.2                   | N.D.                 |
| 08.11.2021       | 48                                 | 24                                  | 18                                | 26                                | 0.6                   | N.D.                 |
| 13.11.2021       | 40                                 | 30                                  | 12                                | 22                                | 0.8                   | N.D.                 |
| 15.11.2021       | 38                                 | 22                                  | 10                                | 28                                | 0.4                   | N.D.                 |
| 20.11.2021       | 44                                 | 28                                  | 14                                | 30                                | 0.6                   | N.D.                 |
| 22.11.2021       | 46                                 | 30                                  | 10                                | 22                                | 0.8                   | N.D.                 |
| 27.11.2021       | 42                                 | 22                                  | 16                                | 26                                | 0.4                   | N.D.                 |

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

#### Terms & conditions

- The report for publication, arbitration or in legal dispute in Rajasthan.
- Test sample will be retained for 10 days after issue of test report unless otherwise agreed with customer.
- This is for information as the only test report for above test/analysis.

|                 |  |  |
|-----------------|--|--|
| <br>REVIEWED BY |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY |
|-----------------|--|--|

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



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

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|  |  |                          |                                       |                 |
|--|--|--------------------------|---------------------------------------|-----------------|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                | UES/TR/21-22/04911                    |                 |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA,</b><br><b>POST -MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/08729-08736            |                 |
|  |  | DATE OF SAMPLING         | 04/12/2021 to 27/12/2021              |                 |
|  |  | DATE OF RECEIPT          | 05/12/2021 to 28/12/2021              |                 |
|  |  | DATE OF REPORT           | 01/01/2022                            |                 |
|  |  | DATE OF ANALYSIS         | START: 05/12/2021                     | END: 30/12/2021 |
| <b>SAMPLE DETAILS</b>  |  |                          |                                       |                 |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | N/PO/SRV/2122/0045, DTD. 24-JULY-2021 |                 |
| SAMPLING LOCATION  | ETP AREA, BANJINGHOL   |                          |                                       |                 |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                    |                 |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |                                       |                 |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182 (Part 10): 1999, RA 2003                         | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

| TEST REPORT      |                                    |                                     |                                   |                                   |                       |                      |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
| 04.12.2021       | 52                                 | 26                                  | 12                                | 30                                | 0.9                   | N.D.                 |
| 06.12.2021       | 44                                 | 30                                  | 16                                | 26                                | 0.4                   | N.D.                 |
| 11.12.2021       | 50                                 | 26                                  | 20                                | 28                                | 0.8                   | N.D.                 |
| 13.12.2021       | 42                                 | 32                                  | 14                                | 24                                | 0.9                   | N.D.                 |
| 18.12.2021       | 40                                 | 24                                  | 12                                | 26                                | 0.6                   | N.D.                 |
| 20.12.2021       | 46                                 | 30                                  | 16                                | 32                                | 0.8                   | N.D.                 |
| 25.12.2021       | 48                                 | 32                                  | 12                                | 24                                | 0.9                   | N.D.                 |
| 27.12.2021       | 44                                 | 24                                  | 18                                | 28                                | 0.5                   | N.D.                 |

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

**Terms & conditions**

- The report for publication, attestation or as legal document is forbidden.
- Test sample will be retained for 10 days after issue of test report unless otherwise agreed with customer.
- Wait is for information as the party has acted for above things only.

|                 |  |  |
|-----------------|--|--|
| <br>REVIEWED BY |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY |
|-----------------|--|--|

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



HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
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|  |  |                          |  |
|--|--|--------------------------|--|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                | UES/TR/21-22/05972                       |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST -MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/010268-010275             |
|  |  | DATE OF SAMPLING         | 03/01/2022 to 28/01/2022                 |
|  |  | DATE OF RECEIPT          | 04/01/2022 to 29/01/2022                 |
|  |  | DATE OF REPORT           | 02 /02/2022                              |
|  |  | DATE OF ANALYSIS         | START:04/01/2022    END:01/02/2022       |
| <b>SAMPLE DETAILS</b>  |  |                          |  |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | N/PO/SRV/2122/0045,<br>DTD. 24-JULY-2021 |
| SAMPLING LOCATION  | KTP AREA, BANJIKHOL  |                          |  |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                       |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |  |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLXI NO. PVC BOTTLE, NO <sub>2</sub> : 30MLXI NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182(Part 10):1999, RA 2003                           | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

### TEST REPORT

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 03.01.2022       | 58                                 | 28                                  | 16                                | 24                                | 0.7                   | N.D.                 |
| 07.01.2022       | 48                                 | 32                                  | 14                                | 22                                | 0.8                   | N.D.                 |
| 10.01.2022       | 56                                 | 26                                  | 10                                | 20                                | 0.5                   | N.D.                 |
| 14.01.2022       | 48                                 | 30                                  | 18                                | 28                                | 0.4                   | N.D.                 |
| 17.01.2022       | 50                                 | 28                                  | 12                                | 24                                | 0.9                   | N.D.                 |
| 21.01.2022       | 54                                 | 32                                  | 14                                | 30                                | 0.7                   | N.D.                 |
| 24.01.2022       | 46                                 | 30                                  | 10                                | 26                                | 0.5                   | N.D.                 |
| 28.01.2022       | 58                                 | 28                                  | 16                                | 22                                | 0.7                   | N.D.                 |

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

#### Terms & conditions

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- Test samples will be analyzed for 15 days after issue of test report unless otherwise agreed with customer.
- This is for information as the party has asked for others report only.

|                               |  |  |
|-------------------------------|--|--|
| <br>REVIEWED BY<br>02/02/2022 |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY<br>02/02/22 |
|-------------------------------|--|--|

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

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HDD-272, Phase III - Near JP Chowk  
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|  |  |                          |  |                 |
|--|--|--------------------------|--|-----------------|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                | UES/TR/21-22/07919                       |                 |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST -MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/013083-13090              |                 |
|  |  | DATE OF SAMPLING         | 01/02/2022 to 25/02/2022                 |                 |
|  |  | DATE OF RECEIPT          | 02/02/2022 to 26/02/2022                 |                 |
|  |  | DATE OF REPORT           | 01/03/2022                               |                 |
|  |  | DATE OF ANALYSIS         | START: 03/02/2022                        | END: 01/03/2022 |
| <b>SAMPLE DETAILS</b>  |  |                          |  |                 |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | N/PO/SRV/2122/0045,<br>DTD. 24-JULY-2021 |                 |
| SAMPLING LOCATION  | ETP AREA, BANJINGHOL   |                          |  |                 |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                       |                 |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |  |                 |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I           | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182 (Part 10): 1999, RA 2003                         | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | ---            |

### TEST REPORT

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 01.02.2022       | 64                                 | 24                                  | 10                                | 28                                | 0.6                   | N.D.                 |
| 04.02.2022       | 58                                 | 30                                  | 18                                | 24                                | 0.2                   | N.D.                 |
| 07.02.2022       | 50                                 | 22                                  | 12                                | 18                                | 0.8                   | N.D.                 |
| 11.02.2022       | 42                                 | 26                                  | 16                                | 26                                | 0.4                   | N.D.                 |
| 14.02.2022       | 62                                 | 32                                  | 10                                | 20                                | 0.8                   | N.D.                 |
| 18.02.2022       | 58                                 | 28                                  | 18                                | 28                                | 0.2                   | N.D.                 |
| 21.02.2022       | 40                                 | 20                                  | 16                                | 24                                | 0.6                   | N.D.                 |
| 25.02.2022       | 56                                 | 30                                  | 12                                | 26                                | 0.8                   | N.D.                 |

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

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

|                                    |   |  |
|------------------------------------|---|--|
| <br>01/03/22<br><b>REVIEWED BY</b> | <br><b>ULTIMATE ENVIROLYTICAL SOLUTIONS</b> | For <b>ULTIMATE ENVIROLYTICAL SOLUTIONS</b><br><br>01/03/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|---|--|

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

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HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
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|  |  |                          |   |                 |
|--|--|--------------------------|---|-----------------|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                | UES/TR/21-22/08927                        |                 |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST -MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/014620                     |                 |
|  |  | DATE OF SAMPLING         | 02/03/2022 to 28/03/2022                  |                 |
|  |  | DATE OF RECEIPT          | 03/03/2022 to 29/03/2022                  |                 |
|  |  | DATE OF REPORT           | 02/04/2022                                |                 |
|  |  | DATE OF ANALYSIS         | START: 04/03/2022                         | END: 02/04/2022 |
| <b>SAMPLE DETAILS</b>  |  |                          |   |                 |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | N/PO/SRV/2122/0045,<br>D.YD. 24-JULY-2021 |                 |
| SAMPLING LOCATION  | ETP AREA, BANJIKHOL  |                          |   |                 |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                        |                 |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |   |                 |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I           | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO) *   | IS 5182 (Part 10): 1999, RA 2003                         | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

#### TEST REPORT

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 02.03.2022       | 70                                 | 28                                  | 14                                | 24                                | 0.5                   | N.D.                 |
| 07.03.2022       | 64                                 | 36                                  | 12                                | 28                                | 0.9                   | N.D.                 |
| 11.03.2022       | 60                                 | 30                                  | 18                                | 20                                | 0.2                   | N.D.                 |
| 14.03.2022       | 58                                 | 28                                  | 12                                | 28                                | 0.8                   | N.D.                 |
| 18.03.2022       | 70                                 | 38                                  | 10                                | 20                                | 0.4                   | N.D.                 |
| 21.03.2022       | 66                                 | 34                                  | 14                                | 24                                | 0.6                   | N.D.                 |
| 25.03.2022       | 58                                 | 26                                  | 18                                | 22                                | 0.2                   | N.D.                 |
| 28.03.2022       | 62                                 | 32                                  | 16                                | 28                                | 0.8                   | N.D.                 |

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

#### Terms & conditions

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- > This 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.

|                                    |  |   |
|------------------------------------|--|---|
| <br>02/04/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/04/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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

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|   |  |                          |   |                 |
|---|--|--------------------------|---|-----------------|
| <i>Name &amp; Address Of The Customer</i>   |  | REPORT NO.               | UES/TR/21-22/3496                       |                 |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,VILLAGE</b><br><b>- BANKHETA,</b><br><b>POST -MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO.              | URS/21-22/AAQM/6262-6269                |                 |
|   |  | DATE OF SAMPLING         | 01/10/2021 to 25/10/2021                |                 |
|   |  | DATE OF RECEIPT          | 02/10/2021 to 26/10/2021                |                 |
|   |  | DATE OF REPORT           | 01/11/2021                              |                 |
|   |  | DATE OF ANALYSIS         | START: 03/10/2021                       | END: 01/11/2021 |
| <b>SAMPLE DETAILS</b>   |  |                          |   |                 |
| MONITORING FOR  | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | N/PO/SRV/2122/0045, DTD. : 24-JULY-2021 |                 |
| SAMPLING LOCATION   | OFFICE AREA, BANKHETA  |                          |   |                 |
| DURATION OF SAMPLING  | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                      |                 |
| SAMPLING PROCEDURE  | AS PER METHOD REFERENCE  |                          |   |                 |
| SAMPLE QUANTITY/PACKING   | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182 (Part 10): 1999, RA 2003                         | 4.0            |
| Mercury (Hg)   | EPA Method IO-05   | --             |

#### TEST REPORT

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 01.10.2021       | 52                                 | 28                                  | 10                                | 20                                | 0.7                   | N.D.                 |
| 04.10.2021       | 60                                 | 20                                  | 16                                | 26                                | 0.9                   | N.D.                 |
| 08.10.2021       | 48                                 | 22                                  | 10                                | 22                                | 0.2                   | N.D.                 |
| 11.10.2021       | 54                                 | 26                                  | 18                                | 27                                | 0.5                   | N.D.                 |
| 14.10.2021       | 46                                 | 28                                  | 12                                | 28                                | 0.7                   | N.D.                 |
| 18.10.2021       | 42                                 | 24                                  | 10                                | 20                                | 0.8                   | N.D.                 |
| 22.10.2021       | 48                                 | 30                                  | 14                                | 26                                | 0.4                   | N.D.                 |
| 25.10.2021       | 56                                 | 28                                  | 12                                | 28                                | 0.9                   | N.D.                 |

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

#### Terms & conditions

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

|                                      |  |   |
|--------------------------------------|--|---|
| <br>01/11/2021<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>01/11/21<br><b>AUTHORIZED SIGNATORY</b> |
|--------------------------------------|--|---|

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

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



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|  |  |                          |  |                 |
|--|--|--------------------------|--|-----------------|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                | UES/TR/21-22/04169                       |                 |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST -MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/07469-07476               |                 |
|  |  | DATE OF SAMPLING         | 01/11/2021 to 27/11/2021                 |                 |
|  |  | DATE OF RECEIPT          | 02/11/2021 to 29/11/2021                 |                 |
|  |  | DATE OF REPORT           | 01/12/2021                               |                 |
|  |  | DATE OF ANALYSIS         | START: 02/11/2021                        | END: 29/11/2021 |
| <b>SAMPLE DETAILS</b>  |  |                          |  |                 |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | N/PO/SRV/2122/0045,<br>DTD. 24-JULY-2021 |                 |
| SAMPLING LOCATION  | OFFICE AREA, BANKHETA  |                          |  |                 |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                       |                 |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |  |                 |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182 (Part 10): 1999, RA 2003                         | 4.0            |
| Mercury (Hg)   | EPA Method 10-5  | --             |

### TEST REPORT

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 01.11.2021       | 54                                 | 30                                  | 12                                | 22                                | 0.8                   | N.D.                 |
| 06.11.2021       | 62                                 | 22                                  | 18                                | 28                                | 0.6                   | N.D.                 |
| 08.11.2021       | 50                                 | 24                                  | 12                                | 24                                | 0.4                   | N.D.                 |
| 13.11.2021       | 56                                 | 28                                  | 20                                | 28                                | 0.6                   | N.D.                 |
| 15.11.2021       | 48                                 | 26                                  | 14                                | 26                                | 0.8                   | N.D.                 |
| 20.11.2021       | 44                                 | 22                                  | 12                                | 22                                | 0.6                   | N.D.                 |
| 22.11.2021       | 46                                 | 28                                  | 16                                | 28                                | 0.2                   | N.D.                 |
| 27.11.2021       | 58                                 | 30                                  | 14                                | 26                                | 0.8                   | N.D.                 |

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

#### Terms & conditions

- The report is job/contract, arbitration or as legal document in the facilities
- Test sample will be returned for 15 days after issue of test report unless otherwise specified with customer.
- This is for information as the party has asked for above test(s) only.

|                                    |   |  |
|------------------------------------|---|--|
| <br>01/12/21<br><b>REVIEWED BY</b> | <br><b>ULTIMATE ENVIROLYTICAL SOLUTIONS</b><br>PHASE III, NEAR JP CHOWK, RING ROAD NO. 2, KABIR NAGAR, RAIPUR (C.G.) - 492099 | For <b>ULTIMATE ENVIROLYTICAL SOLUTIONS</b><br><br>01/12/21<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|---|--|

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



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Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
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|  |  |                          |  |                 |
|--|--|--------------------------|--|-----------------|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                | UES/TR/21-22/04912                       |                 |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST -MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/08737-08744               |                 |
|  |  | DATE OF SAMPLING         | 04/12/2021 to 27/12/2021                 |                 |
|  |  | DATE OF RECEIPT          | 05/12/2021 to 28/12/2021                 |                 |
|  |  | DATE OF REPORT           | 01/01/2022                               |                 |
|  |  | DATE OF ANALYSIS         | START: 05/12/2021                        | END: 30/12/2021 |
| <b>SAMPLE DETAILS</b>  |  |                          |  |                 |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | N/PO/SRV/2122/0045,<br>DTD. 24-JULY-2021 |                 |
| SAMPLING LOCATION  | OFFICE AREA, BANKHETA  |                          |  |                 |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                       |                 |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |  |                 |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182(Part 10):1999, RA 2003                           | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

#### TEST REPORT

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 04.12.2021       | 56                                 | 32                                  | 14                                | 24                                | 0.9                   | N.D.                 |
| 06.12.2021       | 64                                 | 24                                  | 20                                | 30                                | 0.8                   | N.D.                 |
| 11.12.2021       | 52                                 | 26                                  | 14                                | 26                                | 0.6                   | N.D.                 |
| 13.12.2021       | 58                                 | 30                                  | 22                                | 30                                | 0.8                   | N.D.                 |
| 18.12.2021       | 50                                 | 28                                  | 16                                | 28                                | 0.9                   | N.D.                 |
| 20.12.2021       | 46                                 | 24                                  | 14                                | 24                                | 0.8                   | N.D.                 |
| 25.12.2021       | 48                                 | 30                                  | 18                                | 30                                | 0.4                   | N.D.                 |
| 27.12.2021       | 60                                 | 32                                  | 16                                | 28                                | 0.6                   | N.D.                 |

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

#### Terms & conditions

- The report for publication, activation or as legal evidence is restricted.
- First sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- This is for information on the party (not valid for other test) only.

|                                    |   |   |
|------------------------------------|---|---|
| <br>01/01/22<br><b>REVIEWED BY</b> | <br><b>For ULTIMATE ENVIROLYTICAL SOLUTIONS</b> | <br>01/01/2022<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|---|---|

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



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|  |  |                          |  |
|--|--|--------------------------|--|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                | UES/TR/21-22/05973                       |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST -MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/010276-010283             |
|  |  | DATE OF SAMPLING         | 03/01/2022 to 28/01/2022                 |
|  |  | DATE OF RECEIPT          | 04/01/2022 to 29/01/2022                 |
|  |  | DATE OF REPORT           | 02 /02/2022                              |
|  |  | DATE OF ANALYSIS         | START: 04/01/2022      END: 01/02/2022   |
|  |  | <b>SAMPLE DETAILS</b>    |  |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | N/PO/SRV/2122/0045,<br>DTD. 24-JULY-2021 |
| SAMPLING LOCATION  | OFFICE AREA, BANKHETA  |                          |  |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                       |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |  |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182(Part 10):1999, RA 2003                           | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

### TEST REPORT

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 03.01.2022       | 60                                 | 34                                  | 18                                | 28                                | 0.5                   | N.D.                 |
| 07.01.2022       | 66                                 | 28                                  | 12                                | 24                                | 0.7                   | N.D.                 |
| 10.01.2022       | 58                                 | 24                                  | 08                                | 22                                | 0.9                   | N.D.                 |
| 14.01.2022       | 52                                 | 32                                  | 10                                | 28                                | 0.5                   | N.D.                 |
| 17.01.2022       | 58                                 | 26                                  | 12                                | 22                                | 0.7                   | N.D.                 |
| 21.01.2022       | 56                                 | 22                                  | 14                                | 20                                | 0.8                   | N.D.                 |
| 24.01.2022       | 50                                 | 26                                  | 12                                | 26                                | 0.6                   | N.D.                 |
| 28.01.2022       | 68                                 | 30                                  | 10                                | 24                                | 0.8                   | N.D.                 |

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

#### Terms & conditions

- The report for publication, withdrawal or as legal document is forbidden.
- Test samples 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 listed only.

|                               |  |   |
|-------------------------------|--|---|
| <br>REVIEWED BY<br>02/02/2022 |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS*<br><br>AUTHORIZED SIGNATORY<br>02/02/22 |
|-------------------------------|--|---|

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



HDD-272, Phase III - Near JP Chowk  
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|  |  |                          |  |
|--|--|--------------------------|--|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                | UES/TR/21-22/07920                       |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST -MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAS REF NO               | UES/21-22/AAQM/013091-013098             |
|  |  | DATE OF SAMPLING         | 01/02/2022 to 25/02/2022                 |
|  |  | DATE OF RECEIPT          | 02/02/2022 to 26/02/2022                 |
|  |  | DATE OF REPORT           | 01/03/2022                               |
|  |  | DATE OF ANALYSIS         | START: 03/02/2022      END: 01/03/2022   |
| <b>SAMPLE DETAILS</b>  |  |                          |  |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | N/PO/SRV/2122/0045,<br>DTD. 24-JULY-2021 |
| SAMPLING LOCATION  | OFFICE AREA, BANKHETA  |                          |  |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                       |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |  |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): 1XI NO., FILTER PAPER (PM <sub>2.5</sub> ): 1XI NO.<br>SO <sub>2</sub> : 30MLXI NO. PVC BOTTLE, NO <sub>2</sub> : 30MLXI NO. PVC BOTTLE<br>RUBBER BLADDER: 1XI NO. |                          |  |

### Test Method and NAAQM Standard for Ambient Air Quality Monitoring

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

### TEST REPORT

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 01.02.2022       | 68                                 | 38                                  | 10                                | 26                                | 0.8                   | N.D.                 |
| 04.02.2022       | 64                                 | 34                                  | 16                                | 22                                | 0.6                   | N.D.                 |
| 07.02.2022       | 56                                 | 30                                  | 10                                | 24                                | 0.9                   | N.D.                 |
| 11.02.2022       | 48                                 | 24                                  | 08                                | 20                                | 0.7                   | N.D.                 |
| 14.02.2022       | 68                                 | 30                                  | 06                                | 18                                | 0.5                   | N.D.                 |
| 18.02.2022       | 52                                 | 28                                  | 10                                | 24                                | 0.8                   | N.D.                 |
| 21.02.2022       | 60                                 | 28                                  | 14                                | 22                                | 0.4                   | N.D.                 |
| 25.02.2022       | 72                                 | 36                                  | 12                                | 28                                | 0.9                   | N.D.                 |

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

#### Terms & conditions

- The report for publication, submission or as legal document is final.
- Test sample will be retained for 18 days after issue of test report unless otherwise agreed with customer.
- This is for information as the early test result for above sample only.

|                                    |  |   |
|------------------------------------|--|---|
| <br>01/03/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>01/03/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

End of the test report



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

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

|   |  |                          |                                       |
|---|--|--------------------------|---------------------------------------|
| <b>Name &amp; Address Of The Customer</b><br><b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA,</b><br><b>POST -MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> | REPORT NO  | UES/TR/21-22/08928       |                                       |
|   | LAB REF NO   | UES/21-22/AAQM/014621    |                                       |
|   | DATE OF SAMPLING   | 02/03/2022 to 28/03/2022 |                                       |
|   | DATE OF RECEIPT  | 03/03/2022 to 29/03/2022 |                                       |
|   | DATE OF REPORT   | 02/04/2022               |                                       |
|   | DATE OF ANALYSIS   | START: 04/03/2022        | END: 02/04/2022                       |
| <b>SAMPLE DETAILS</b>   |  |                          |                                       |
| MONITORING FOR  | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | N/PO/SRV/2122/0045, DTD. 24-JULY-2021 |
| SAMPLING LOCATION   | OFFICE AREA, BANKHETA  |                          |                                       |
| DURATION OF SAMPLING  | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                    |
| SAMPLING PROCEDURE  | AS PER METHOD REFERENCE  |                          |                                       |
| SAMPLE QUANTITY/PACKING   | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I           | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182 (Part 10): 1999, RA 2003                         | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

**TEST REPORT**

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 02.03.2022       | 72                                 | 32                                  | 14                                | 22                                | 0.9                   | N.D.                 |
| 07.03.2022       | 70                                 | 38                                  | 12                                | 26                                | 0.5                   | N.D.                 |
| 11.03.2022       | 66                                 | 32                                  | 18                                | 24                                | 0.8                   | N.D.                 |
| 14.03.2022       | 58                                 | 24                                  | 06                                | 28                                | 0.5                   | N.D.                 |
| 18.03.2022       | 79                                 | 36                                  | 10                                | 20                                | 0.2                   | N.D.                 |
| 21.03.2022       | 68                                 | 28                                  | 08                                | 26                                | 0.6                   | N.D.                 |
| 25.03.2022       | 62                                 | 22                                  | 12                                | 28                                | 0.8                   | N.D.                 |
| 28.03.2022       | 80                                 | 38                                  | 10                                | 22                                | 0.7                   | N.D.                 |

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

**Terms & conditions**

- The report for publication, circulation or as legal document 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 same (except slip).

|                                    |   |   |
|------------------------------------|---|---|
| <br>02/04/22<br><b>REVIEWED BY</b> | <br><b>For ULTIMATE ENVIROLYTICAL SOLUTIONS</b> | <br>02/04/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|---|---|

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

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|   |  |                                     |   |                |
|---|--|-------------------------------------|---|----------------|
| <b>Name &amp; Address Of The Customer</b>   |  | <b>REPORT NO.</b>                   | UES/TR/21-22/3497                         |                |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,VILLAGE -<br/>BANKHETA,<br/>POST -MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | <b>LAB REF NO.</b>                  | UES/21-22/AAQM/6270-6278                  |                |
|   |  | <b>DATE OF SAMPLING</b>             | 01/10/2021 to 25/10/2021                  |                |
|   |  | <b>DATE OF RECEIPT</b>              | 02/10/2021 to 26/10/2021                  |                |
|   |  | <b>DATE OF REPORT</b>               | 01/11/2021                                |                |
|   |  | <b>DATE OF ANALYSIS</b>             | START:03/10/2021                          | END:01/11/2021 |
| <b>SAMPLE DETAILS</b>   |  |                                     |   |                |
| <b>MONITORING FOR</b>   | AMBIENT AIR QUALITY MONITORING   | <b>CUSTOMER REF. NO. &amp; DATE</b> | N/PO/SRV/2122/0045,<br>DED. :24-JULY-2021 |                |
| <b>SAMPLING LOCATION</b>  | PIT OFFICE AREA, BANKHETA  |                                     |   |                |
| <b>DURATION OF SAMPLING</b>   | 24 HOURS   | <b>SAMPLE COLLECTED BY</b>          | LABORATORY CHEMIST                        |                |
| <b>SAMPLING PROCEDURE</b>   | AS PER METHOD REFERENCE  |                                     |   |                |
| <b>SAMPLE QUANTITY/PACKING</b>  | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182(Part 10):1999, RA 2003                           | 4.0            |
| Mercury (Hg)   | EPA Method IO-05   | --             |

#### TEST REPORT

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 01.10.2021       | 60                                 | 28                                  | 14                                | 28                                | 0.5                   | N.D.                 |
| 04.10.2021       | 52                                 | 24                                  | 12                                | 26                                | 0.8                   | N.D.                 |
| 08.10.2021       | 48                                 | 26                                  | 18                                | 20                                | 0.6                   | N.D.                 |
| 11.10.2021       | 46                                 | 28                                  | 10                                | 26                                | 0.7                   | N.D.                 |
| 14.10.2021       | 42                                 | 22                                  | 16                                | 22                                | 0.4                   | N.D.                 |
| 18.10.2021       | 50                                 | 20                                  | 08                                | 28                                | 0.6                   | N.D.                 |
| 22.10.2021       | 52                                 | 28                                  | 12                                | 25                                | 0.5                   | N.D.                 |
| 25.10.2021       | 40                                 | 26                                  | 10                                | 22                                | 0.9                   | N.D.                 |

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

#### Terms & conditions

- > The report for publication, arbitration or in legal dispute is forbidden.
- > Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- > No is for information as the party has asked for above test(s) only.

|                               |  |  |
|-------------------------------|--|--|
| <br>REVIEWED BY<br>01/11/2021 |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY<br>01/11/21 |
|-------------------------------|--|--|

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

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|  |  |                          |  |                 |
|--|--|--------------------------|--|-----------------|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                | UES/TR/21-22/04170                       |                 |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA,</b><br><b>POST -MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/07477-7484                |                 |
|  |  | DATE OF SAMPLING         | 01/11/2021 to 27/11/2021                 |                 |
|  |  | DATE OF RECEIPT          | 02/11/2021 to 29/11/2021                 |                 |
|  |  | DATE OF REPORT           | 01/12/2021                               |                 |
|  |  | DATE OF ANALYSIS         | START: 02/11/2021                        | END: 29/11/2021 |
| <b>SAMPLE DETAILS</b>  |  |                          |  |                 |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | N/PO/SRV/2122/0045,<br>DTD. 24-JULY-2021 |                 |
| SAMPLING LOCATION  | FIT OFFICE AREA, BANKHETA  |                          |  |                 |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                       |                 |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |  |                 |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO) *   | IS 5182 (Part 10): 1999, RA 2003                         | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

**TEST REPORT**

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 01.11.2021       | 62                                 | 30                                  | 16                                | 30                                | 0.6                   | N.D.                 |
| 06.11.2021       | 54                                 | 26                                  | 14                                | 28                                | 0.9                   | N.D.                 |
| 08.11.2021       | 50                                 | 28                                  | 16                                | 22                                | 0.8                   | N.D.                 |
| 13.11.2021       | 48                                 | 30                                  | 12                                | 28                                | 0.9                   | N.D.                 |
| 15.11.2021       | 44                                 | 24                                  | 18                                | 24                                | 0.6                   | N.D.                 |
| 20.11.2021       | 52                                 | 22                                  | 10                                | 30                                | 0.8                   | N.D.                 |
| 22.11.2021       | 54                                 | 26                                  | 14                                | 26                                | 0.6                   | N.D.                 |
| 27.11.2021       | 42                                 | 28                                  | 12                                | 24                                | 0.8                   | N.D.                 |

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

**Terms & conditions**

- This report for publication, circulation or as legal document is restricted.
- Test samples will be returned for 15 days after issue of test report unless otherwise agreed with customer.
- This is for information as the party has asked for above listed only.

|                                    |  |   |
|------------------------------------|--|---|
| <br>01/12/21<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>01/12/21<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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



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|  |  |                          |  |                 |
|--|--|--------------------------|--|-----------------|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                | UES/TR/21-22/04913                       |                 |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA,</b><br><b>POST -MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/08745-08752               |                 |
|  |  | DATE OF SAMPLING         | 04/12/2021 to 27/12/2021                 |                 |
|  |  | DATE OF RECEIPT          | 05/12/2021 to 28/12/2021                 |                 |
|  |  | DATE OF REPORT           | 01/01/2022                               |                 |
|  |  | DATE OF ANALYSIS         | START: 05/12/2021                        | END: 30/12/2021 |
| <b>SAMPLE DETAILS</b>  |  |                          |  |                 |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | N/PO/SRV/2122/0045,<br>DTD. 24-JULY-2021 |                 |
| SAMPLING LOCATION  | PIT OFFICE AREA, BANKHETA  |                          |  |                 |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                       |                 |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |  |                 |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182 (Part 10): 1999, RA 2003                         | 4.0            |
| Mercury (Hg)   | EPA Method 10-5  | ---            |

**TEST REPORT**

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 04.12.2021       | 64                                 | 32                                  | 18                                | 32                                | 0.9                   | N.D.                 |
| 06.12.2021       | 56                                 | 28                                  | 16                                | 30                                | 0.8                   | N.D.                 |
| 11.12.2021       | 52                                 | 30                                  | 18                                | 24                                | 0.6                   | N.D.                 |
| 13.12.2021       | 50                                 | 32                                  | 14                                | 30                                | 0.8                   | N.D.                 |
| 18.12.2021       | 46                                 | 26                                  | 20                                | 26                                | 0.4                   | N.D.                 |
| 20.12.2021       | 54                                 | 24                                  | 12                                | 32                                | 0.9                   | N.D.                 |
| 25.12.2021       | 56                                 | 28                                  | 16                                | 28                                | 0.8                   | N.D.                 |
| 27.12.2021       | 44                                 | 30                                  | 14                                | 26                                | 0.9                   | N.D.                 |

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

**Terms & conditions**

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- Test samples 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 only.

|                 |  |  |
|-----------------|--|--|
| <br>REVIEWED BY |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY |
|-----------------|--|--|

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



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|  |  |                          |  |
|--|--|--------------------------|--|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                | UES/TR/21-22/05974                       |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST -MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/010284-010292             |
|  |  | DATE OF SAMPLING         | 03/01/2022 to 28/01/2022                 |
|  |  | DATE OF RECEIPT          | 04/01/2022 to 29/01/2022                 |
|  |  | DATE OF REPORT           | 02 /02/2022                              |
|  |  | DATE OF ANALYSIS         | START: 04/01/2022      END: 01/02/2022   |
| <b>SAMPLE DETAILS</b>  |  |                          |  |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | N/PO/SRV/2122/0045,<br>DTD. 24-JULY-2021 |
| SAMPLING LOCATION  | PIT OFFICE AREA, BANKHETA  |                          |  |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                       |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |  |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182 (Part 10): 1999, RA 2003                         | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

### TEST REPORT

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 03.01.2022       | 60                                 | 20                                  | 14                                | 24                                | 0.7                   | N.D.                 |
| 07.01.2022       | 50                                 | 24                                  | 12                                | 22                                | 0.5                   | N.D.                 |
| 10.01.2022       | 58                                 | 22                                  | 16                                | 26                                | 0.8                   | N.D.                 |
| 14.01.2022       | 56                                 | 26                                  | 10                                | 20                                | 0.5                   | N.D.                 |
| 17.01.2022       | 48                                 | 24                                  | 08                                | 28                                | 0.4                   | N.D.                 |
| 21.01.2022       | 52                                 | 28                                  | 16                                | 24                                | 0.7                   | N.D.                 |
| 24.01.2022       | 58                                 | 22                                  | 12                                | 20                                | 0.5                   | N.D.                 |
| 28.01.2022       | 50                                 | 26                                  | 10                                | 28                                | 0.8                   | N.D.                 |

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

#### Terms & conditions

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

|                               |  |  |
|-------------------------------|--|--|
| <br>REVIEWED BY<br>02/02/2022 |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY<br>02/02/22 |
|-------------------------------|--|--|

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



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|  |  |                          |  |                 |
|--|--|--------------------------|--|-----------------|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                | UES/TR/21-22/07921                       |                 |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA,</b><br><b>POST -MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/013099-013106             |                 |
|  |  | DATE OF SAMPLING         | 01/02/2022 to 25/02/2022                 |                 |
|  |  | DATE OF RECEIPT          | 02/02/2022 to 26/02/2022                 |                 |
|  |  | DATE OF REPORT           | 01/03/2022                               |                 |
|  |  | DATE OF ANALYSIS         | START: 03/02/2022                        | END: 01/03/2022 |
| <b>SAMPLE DETAILS</b>  |  |                          |  |                 |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | N/PO/SRV/2122/0045,<br>DTD, 24-JULY-2021 |                 |
| SAMPLING LOCATION  | PIT OFFICE AREA, BANKHETA  |                          |  |                 |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                       |                 |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |  |                 |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): IXI NO., FILTER PAPER (PM <sub>2.5</sub> ): IXI NO.<br>SO <sub>2</sub> : 30MLXI NO. PVC BOTTLE, NO <sub>2</sub> : 30MLXI NO. PVC BOTTLE<br>RUBBER BLADDER: IXI NO. |                          |  |                 |

### Test Method and NAAQM Standard for Ambient Air Quality Monitoring

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

### TEST REPORT

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 01.02.2022       | 68                                 | 22                                  | 14                                | 28                                | 0.6                   | N.D.                 |
| 04.02.2022       | 70                                 | 26                                  | 18                                | 20                                | 0.8                   | N.D.                 |
| 07.02.2022       | 64                                 | 28                                  | 16                                | 24                                | 0.5                   | N.D.                 |
| 11.02.2022       | 68                                 | 30                                  | 12                                | 28                                | 0.9                   | N.D.                 |
| 14.02.2022       | 58                                 | 28                                  | 08                                | 22                                | 0.7                   | N.D.                 |
| 18.02.2022       | 56                                 | 24                                  | 14                                | 28                                | 0.2                   | N.D.                 |
| 21.02.2022       | 52                                 | 26                                  | 18                                | 26                                | 0.6                   | N.D.                 |
| 25.02.2022       | 60                                 | 28                                  | 16                                | 22                                | 0.8                   | N.D.                 |

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

#### Terms & conditions

- The report for publication, circulation or any legal dispute is prohibited.
- 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 testing only.

|                                    |  |   |
|------------------------------------|--|---|
| <br>01/03/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>01/03/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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

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 Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
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|  |  |                          |  |                 |
|--|--|--------------------------|--|-----------------|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                | UES/TR/21-22/08929                       |                 |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA,</b><br><b>POST -MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/014622                    |                 |
|  |  | DATE OF SAMPLING         | 02/03/2022 to 28/03/2022                 |                 |
|  |  | DATE OF RECEIPT          | 03/03/2022 to 29/03/2022                 |                 |
|  |  | DATE OF REPORT           | 02/04/2022                               |                 |
|  |  | DATE OF ANALYSIS         | START: 04/03/2022                        | END: 02/04/2022 |
| <b>SAMPLE DETAILS</b>  |  |                          |  |                 |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | N/PO/SRV/2122/0045,<br>DTD. 24-JULY-2021 |                 |
| SAMPLING LOCATION  | PIT OFFICE AREA, BANKHETA  |                          |  |                 |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                       |                 |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |  |                 |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | IS 5182 (Part 24): 2019CPCBGuidelines Vol.-I             | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182(Part 10):1999, RA 2003                           | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

**TEST REPORT**

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 02.03.2022       | 78                                 | 32                                  | 10                                | 16                                | 0.9                   | N.D.                 |
| 07.03.2022       | 80                                 | 36                                  | 16                                | 18                                | 0.4                   | N.D.                 |
| 11.03.2022       | 74                                 | 38                                  | 10                                | 22                                | 0.8                   | N.D.                 |
| 14.03.2022       | 78                                 | 40                                  | 18                                | 24                                | 0.6                   | N.D.                 |
| 18.03.2022       | 68                                 | 28                                  | 09                                | 22                                | 0.5                   | N.D.                 |
| 21.03.2022       | 66                                 | 34                                  | 12                                | 26                                | 0.8                   | N.D.                 |
| 25.03.2022       | 82                                 | 36                                  | 16                                | 24                                | 0.4                   | N.D.                 |
| 28.03.2022       | 70                                 | 38                                  | 12                                | 28                                | 0.9                   | N.D.                 |

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

**Terms & conditions**

- The report for publication, circulation or as legal document is forbidden.
- The sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- This is for information at the party has asked for above noted only.

|                                    |  |   |
|------------------------------------|--|---|
| <br>02/04/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/04/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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

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|   |  |                          |  |                |
|---|--|--------------------------|--|----------------|
| <i>Name &amp; Address Of The Customer</i>   |  | REPORT NO.               | UES/TR/21-22/3510                          |                |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/5, MILUPARA U/G<br/>COAL MINE, VILLAGE - MILUPARA,<br/>BLOCK - TAMNAR,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO.              | UES/21-22/AAQM/6302-6309                   |                |
|   |  | DATE OF SAMPLING         | 01/10/2021 to 25/10/2021                   |                |
|   |  | DATE OF RECEIPT          | 02/10/2021 to 26/10/2021                   |                |
|   |  | DATE OF REPORT           | 01/11/2021                                 |                |
|   |  | DATE OF ANALYSIS         | START:03/10/2021                           | END:01/11/2021 |
| <b>SAMPLE DETAILS</b>   |  |                          |  |                |
| MONITORING FOR  | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | M/PO/SRV/2122/0049,<br>DTD. : 24-JULY-2021 |                |
| SAMPLING LOCATION   | MAIN OFFICE AREA, MILUPARA   |                          |  |                |
| DURATION OF SAMPLING  | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                         |                |
| SAMPLING PROCEDURE  | AS PER METHOD REFERENCE  |                          |  |                |
| SAMPLE QUANTITY/PACKING   | FILTER PAPER (PM <sub>10</sub> ): 1XI NO., FILTER PAPER (PM <sub>2.5</sub> ): 1XI NO.<br>SO <sub>2</sub> : 30MLXI NO. PVC BOTTLE, NO <sub>2</sub> : 30MLXI NO. PVC BOTTLE<br>RUBBER BLADDER: 1XI NO. |                          |  |                |

#### Test Method and NAAQM Standard for Ambient Air Quality Monitoring

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

#### TEST REPORT

| Date of Sampling | PM <sub>10</sub><br>µg /m <sup>3</sup> | PM <sub>2.5</sub><br>µg/m <sup>3</sup> | SO <sub>2</sub><br>µg/m <sup>3</sup> | NO <sub>2</sub><br>µg/m <sup>3</sup> | CO*<br>mg/m <sup>3</sup> | Hg<br>ng/m <sup>3</sup> |
|------------------|--|--|--------------------------------------|--------------------------------------|--------------------------|-------------------------|
| 01.10.2021       | 46                                     | 28                                     | 18                                   | 28                                   | 0.7                      | N.D.                    |
| 04.10.2021       | 40                                     | 20                                     | 12                                   | 26                                   | 0.5                      | N.D.                    |
| 08.10.2021       | 46                                     | 26                                     | 16                                   | 24                                   | 0.9                      | N.D.                    |
| 11.10.2021       | 38                                     | 22                                     | 10                                   | 22                                   | 0.6                      | N.D.                    |
| 14.10.2021       | 34                                     | 28                                     | 18                                   | 28                                   | 0.4                      | N.D.                    |
| 18.10.2021       | 36                                     | 22                                     | 12                                   | 26                                   | 0.8                      | N.D.                    |
| 22.10.2021       | 48                                     | 26                                     | 10                                   | 20                                   | 0.6                      | N.D.                    |
| 25.10.2021       | 36                                     | 20                                     | 16                                   | 28                                   | 0.9                      | N.D.                    |

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

#### Terms & conditions

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

|                        |   |                                 |
|------------------------|---|---------------------------------|
| <br><b>REVIEWED BY</b> | <br><b>For ULTIMATE ENVIROLYTICAL SOLUTIONS</b> | <br><b>AUTHORIZED SIGNATORY</b> |
|------------------------|---|---------------------------------|

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

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|   |  |                          |                                       |
|---|--|--------------------------|---------------------------------------|
| <i>Name &amp; Address of The Customer</i>   |  | REPORT NO                | UES/TR/21-22/04200                    |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED, GARE<br/>PALMA - IV/5, MILUPARA U/G COAL<br/>MINE, VILLAGE - MILUPARA,<br/>BLOCK-TAMNAR,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/07523-07530            |
|   |  | DATE OF SAMPLING         | 02/11/2021 to 26/11/2021              |
|   |  | DATE OF RECEIPT          | 03/11/2021 to 27/11/2021              |
|   |  | DATE OF REPORT           | 01/12/2021                            |
|   |  | DATE OF ANALYSIS         | START:03/11/2021      END:28/11/2021  |
| <b>SAMPLE DETAILS</b>   |  |                          |                                       |
| MONITORING FOR  | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | M/PO/SRV/2122/0049, DTD. 24-JULY-2021 |
| SAMPLING LOCATION   | MAIN OFFICE AREA, MILUPARA   |                          |                                       |
| DURATION OF SAMPLING  | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                    |
| SAMPLING PROCEDURE  | AS PER METHOD REFERENCE  |                          |                                       |
| SAMPLE QUANTITY/PACKING   | FILTER PAPER (PM10): 1X1 NO., FILTER PAPER (PM2.5): 1X1 NO.<br>SO2: 30MLX1 NO. PVC BOTTLE, NO2: 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182 (Part 10):1999, RA 2003                          | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

**TEST REPORT**

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 02.11.2021       | 48                                 | 30                                  | 20                                | 26                                | 0.8                   | N.D.                 |
| 05.11.2021       | 42                                 | 22                                  | 14                                | 24                                | 0.6                   | N.D.                 |
| 09.11.2021       | 48                                 | 28                                  | 18                                | 26                                | 0.8                   | N.D.                 |
| 12.11.2021       | 40                                 | 24                                  | 12                                | 24                                | 0.4                   | N.D.                 |
| 16.11.2021       | 36                                 | 30                                  | 20                                | 26                                | 0.6                   | N.D.                 |
| 19.11.2021       | 38                                 | 24                                  | 14                                | 22                                | 0.9                   | N.D.                 |
| 23.11.2021       | 46                                 | 28                                  | 12                                | 26                                | 0.7                   | N.D.                 |
| 26.11.2021       | 38                                 | 22                                  | 18                                | 24                                | 0.8                   | N.D.                 |

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

- Terms & conditions**
- The report for publication, circulation or its legal effects is final.
  - Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
  - This is for information on the only test report for above health sets.

|                 |  |  |
|-----------------|--|--|
| <br>REVIEWED BY |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY |
|-----------------|--|--|

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



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 Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
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|   |   |  |
|---|---|--|
| Name & Address Of The Customer<br><b>TO,<br/>                 HINDALCO INDUSTRIES LIMITED, GARE<br/>                 PALMA - IV/5, MILUPARA U/G COAL<br/>                 MINE,VILLAGE - MILUPARA,<br/>                 BLOCK-TAMNAR,<br/>                 DISTT. - RAIGARH (C.G.) 496107</b> |   | REPORT NO<br>UES/TR/21-22/04940                            |
|   |   | LAB REF NO<br>UES/21-22/AAQM/08789-08796                   |
|   |   | DATE OF SAMPLING<br>03/12/2021 to 28/12/2021               |
|   |   | DATE OF RECEIPT<br>04/12/2021 to 29/12/2021                |
|   |   | DATE OF REPORT<br>01/01/2022                               |
|   |   | DATE OF ANALYSIS<br>START: 04/12/2021      END: 31/12/2021 |
| <b>SAMPLE DETAILS</b>   |   |  |
| MONITORING FOR<br>AMBIENT AIR QUALITY<br>MONITORING   | CUSTOMER REF. NO. &<br>DATE<br>M/PO/SRV/2122/0049,<br>DTD. 24-JULY-2021 |  |
| SAMPLING LOCATION<br>MAIN OFFICE AREA, MILUPARA   |   |  |
| DURATION OF SAMPLING<br>24 HOURS  | SAMPLE COLLECTED BY<br>LABORATORY CHEMIST                               |  |
| SAMPLING PROCEDURE<br>AS PER METHOD REFERENCE   |   |  |
| SAMPLE<br>QUANTITY/PACKING<br>FILTER PAPER (PM10): 1X1 NO., FILTER PAPER (PM2.5): 1X1 NO.<br>SO2: 30MLX1 NO. PVC BOTTLE, NO2: 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182 (Part 10): 1999, RA 2003                         | 4.0            |
| Mercury (Hg)   | EPA Method 10-5  | --             |

**TEST REPORT**

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 03.12.2021       | 50                                 | 32                                  | 22                                | 28                                | 0.9                   | N.D.                 |
| 07.12.2021       | 44                                 | 24                                  | 16                                | 26                                | 0.8                   | N.D.                 |
| 10.12.2021       | 50                                 | 30                                  | 20                                | 28                                | 0.9                   | N.D.                 |
| 14.12.2021       | 42                                 | 26                                  | 14                                | 26                                | 0.6                   | N.D.                 |
| 17.12.2021       | 38                                 | 32                                  | 22                                | 28                                | 0.8                   | N.D.                 |
| 21.12.2021       | 40                                 | 26                                  | 16                                | 24                                | 1.0                   | N.D.                 |
| 24.12.2021       | 48                                 | 30                                  | 14                                | 28                                | 0.8                   | N.D.                 |
| 28.12.2021       | 40                                 | 24                                  | 20                                | 26                                | 0.9                   | N.D.                 |

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

**Terms & conditions**

- The report for publication, circulation or as legal evidence is restricted.
- Test samples will be returned for 15 days after release of test report unless otherwise specified by customer.
- Test of the information on the report has extent for above test only.

|                                    |  |   |
|------------------------------------|--|---|
| <br>01/01/22<br><b>REVIEWED BY</b> | <br>For ULTIMATE ENVIROLYTICAL SOLUTIONS | <br>01/01/2022<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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





HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
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|   |  |                          |  |
|---|--|--------------------------|--|
| <i>Name &amp; Address Of The Customer</i>   |  | REPORT NO                | UES/TR/21-22/06024                     |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED, GARE</b><br><b>PALMA - IV/5, MILUPARA U/G COAL</b><br><b>MINE, VILLAGE - MILUPARA,</b><br><b>BLOCK-TAMNAR,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/010393-010400           |
|   |  | DATE OF SAMPLING         | 04/01/2022 to 28/01/2022               |
|   |  | DATE OF RECEIPT          | 05/01/2022 to 29/01/2022               |
|   |  | DATE OF REPORT           | 02/02/2022                             |
|   |  | DATE OF ANALYSIS         | START: 05/01/2022      END: 01/02/2022 |
| <b>SAMPLE DETAILS</b>   |  |                          |  |
| MONITORING FOR  | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | M/PO/SRV/2122/0049, DTD. 24-JULY-2021  |
| SAMPLING LOCATION   | MAIN OFFICE AREA, MILUPARA   |                          |  |
| DURATION OF SAMPLING  | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                     |
| SAMPLING PROCEDURE  | AS PER METHOD REFERENCE  |                          |  |
| SAMPLE QUANTITY/PACKING   | FILTER PAPER (PM10): 1X1 NO., FILTER PAPER (PM2.5): 1X1 NO.<br>SOP: 30MLX1 NO. PVC BOTTLE, NO2: 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182(Part 10):1999, RA 2003                           | 4.0            |
| Mercury (Hg)   | EPA Method 10-5  | --             |

#### TEST REPORT

| Date of Sampling | PM <sub>10</sub><br>µg/m <sup>3</sup> | PM <sub>2.5</sub><br>µg/m <sup>3</sup> | SO <sub>2</sub><br>µg/m <sup>3</sup> | NO <sub>2</sub><br>µg/m <sup>3</sup> | CO*<br>mg/m <sup>3</sup> | Hg<br>ng/m <sup>3</sup> |
|------------------|---------------------------------------|--|--------------------------------------|--------------------------------------|--------------------------|-------------------------|
| 04.01.2022       | 58                                    | 22                                     | 12                                   | 26                                   | 0.7                      | N.D.                    |
| 08.01.2022       | 60                                    | 28                                     | 18                                   | 22                                   | 0.6                      | N.D.                    |
| 11.01.2022       | 58                                    | 24                                     | 14                                   | 28                                   | 0.8                      | N.D.                    |
| 15.01.2022       | 48                                    | 28                                     | 12                                   | 22                                   | 0.4                      | N.D.                    |
| 18.01.2022       | 40                                    | 30                                     | 16                                   | 24                                   | 0.8                      | N.D.                    |
| 22.01.2022       | 46                                    | 28                                     | 10                                   | 20                                   | 1.2                      | N.D.                    |
| 25.01.2022       | 44                                    | 32                                     | 18                                   | 26                                   | 0.7                      | N.D.                    |
| 28.01.2022       | 48                                    | 28                                     | 14                                   | 22                                   | 0.5                      | N.D.                    |

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

#### Terms & conditions

- The report is valid only for the parameters and methods mentioned in the report.
- Test sample will be retained for 10 days after issue of test report unless otherwise specified by customer.
- This is for information as the party has asked for above facility only.

|                               |  |  |
|-------------------------------|--|--|
| <br>REVIEWED BY<br>02/02/2022 |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY<br>02/02/22 |
|-------------------------------|--|--|

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



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

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|  |  |                                     |                                       |
|--|--|-------------------------------------|---------------------------------------|
| <b>Name &amp; Address Of The Customer</b>  |  | <b>REPORT NO</b>                    | UES/TR/21-22/07900                    |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED, GARE<br/>PALMA - IV/5, MILUPARA U/G COAL<br/>MINE,VILLAGE - MILUPARA,<br/>BLOCK-TAMNAR,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | <b>LAB REF NO</b>                   | UES/21-22/AAQM/013026-013033          |
|  |  | <b>DATE OF SAMPLING</b>             | 01/02/2022 to 25/02/2022              |
|  |  | <b>DATE OF RECEIPT</b>              | 02/02/2022 to 26/02/2022              |
|  |  | <b>DATE OF REPORT</b>               | 01/03/2022                            |
|  |  | <b>DATE OF ANALYSIS</b>             | START:03/02/2022      END:01/03/2022  |
|  |  | <b>SAMPLE DETAILS</b>               |                                       |
| <b>MONITORING FOR</b>  | AMBIENT AIR QUALITY MONITORING   | <b>CUSTOMER REF. NO. &amp; DATE</b> | M/PO/SRV/2122/0049, DTD. 24-JULY-2021 |
| <b>SAMPLING LOCATION</b>   | MAIN OFFICE AREA, MILUPARA   |                                     |                                       |
| <b>DURATION OF SAMPLING</b>  | 24 HOURS   | <b>SAMPLE COLLECTED BY</b>          | LABORATORY CHEMIST                    |
| <b>SAMPLING PROCEDURE</b>  | AS PER METHOD REFERENCE  |                                     |                                       |
| <b>SAMPLE QUANTITY/PACKING</b>   | FILTER PAPER (PM10): 1X1 NO., FILTER PAPER (PM2.5): 1X1 NO.<br>SO2: 30MLX1 NO. PVC BOTTLE, NO2: 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I           | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182(Part 10):1999, RA 2003                           | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

### TEST REPORT

| Date of Sampling | PM <sub>10</sub><br>µg/m <sup>3</sup> | PM <sub>2.5</sub><br>µg/m <sup>3</sup> | SO <sub>2</sub><br>µg/m <sup>3</sup> | NO <sub>2</sub><br>µg/m <sup>3</sup> | CO*<br>mg/m <sup>3</sup> | Hg<br>ng/m <sup>3</sup> |
|------------------|---------------------------------------|--|--------------------------------------|--------------------------------------|--------------------------|-------------------------|
| 01.02.2022       | 60                                    | 26                                     | 10                                   | 22                                   | 0.5                      | N.D.                    |
| 04.02.2022       | 64                                    | 22                                     | 14                                   | 26                                   | 0.4                      | N.D.                    |
| 07.02.2022       | 52                                    | 28                                     | 10                                   | 22                                   | 0.2                      | N.D.                    |
| 11.02.2022       | 44                                    | 20                                     | 18                                   | 28                                   | 0.8                      | N.D.                    |
| 14.02.2022       | 48                                    | 24                                     | 12                                   | 20                                   | 0.2                      | N.D.                    |
| 18.02.2022       | 42                                    | 26                                     | 16                                   | 21                                   | 0.6                      | N.D.                    |
| 21.02.2022       | 48                                    | 30                                     | 10                                   | 22                                   | 0.9                      | N.D.                    |
| 25.02.2022       | 44                                    | 22                                     | 16                                   | 28                                   | 0.5                      | N.D.                    |

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

#### Terms & conditions

- The report for publication, circulation or as legal document is voidable.
- 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 tested only.

|                                    |   |   |
|------------------------------------|---|---|
| <br>01/03/22<br><b>REVIEWED BY</b> | <br><b>For ULTIMATE ENVIROLYTICAL SOLUTIONS</b> | <br>01/03/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|---|---|

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



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

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|  |  |                          |                                       |
|--|--|--------------------------|---------------------------------------|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                | UES/TR/21-22/08940                    |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED, GARE<br/>PALMA - IV/5, MILUPARA U/G COAL<br/>MINE,VILLAGE - MILUPARA,<br/>BLOCK-TAMNAR,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/014643                 |
|  |  | DATE OF SAMPLING         | 02/03/2022 to 28/03/2022              |
|  |  | DATE OF RECEIPT          | 03/03/2022 to 29/03/2022              |
|  |  | DATE OF REPORT           | 02/04/2022                            |
|  |  | DATE OF ANALYSIS         | START:04/03/2022      END:02/04/2022  |
| <b>SAMPLE DETAILS</b>  |  |                          |                                       |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | M/PO/SRV/2122/0049, DTD. 24-JULY-2021 |
| SAMPLING LOCATION  | MAIN OFFICE AREA, MILUPARA   |                          |                                       |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                    |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |                                       |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM10): 1X1 NO., FILTER PAPER (PM2.5): 1X1 NO.<br>SO2: 30MLX1 NO. PVC BOTTLE, NO2: 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I           | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182(Part 10):1999, RA 2003                           | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

#### TEST REPORT

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO <sup>+</sup> mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|----------------------|
| 02.03.2022       | 68                                 | 22                                  | 14                                | 28                                | 0.9                               | N.D.                 |
| 07.03.2022       | 62                                 | 28                                  | 16                                | 24                                | 0.5                               | N.D.                 |
| 11.03.2022       | 70                                 | 26                                  | 12                                | 20                                | 0.8                               | N.D.                 |
| 14.03.2022       | 54                                 | 28                                  | 14                                | 26                                | 0.2                               | N.D.                 |
| 18.03.2022       | 58                                 | 34                                  | 18                                | 28                                | 0.8                               | N.D.                 |
| 21.03.2022       | 52                                 | 36                                  | 12                                | 22                                | 0.4                               | N.D.                 |
| 25.03.2022       | 68                                 | 40                                  | 16                                | 28                                | 0.6                               | N.D.                 |
| 28.03.2022       | 54                                 | 32                                  | 12                                | 24                                | 0.8                               | N.D.                 |

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

#### Terms & conditions

- The report for publication, circulation or as legal document is forbidden.
- Test samples will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- This is for information as the user has asked for above results only.

|                 |  |  |
|-----------------|--|--|
| <br>REVIEWED BY |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY |
|-----------------|--|--|

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

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



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|   |  |                                     |  |                 |
|---|--|-------------------------------------|--|-----------------|
| <b>Name &amp; Address Of The Customer</b>   |  | <b>REPORT NO.</b>                   | UES/TR/21-22/3511                          |                 |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/5, MILUPARA U/G<br/>COAL MINE, VILLAGE - MILUPARA,<br/>BLOCK - TAMNAR,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | <b>LAS REF NO.</b>                  | UES/21-22/AAQM/6310-6317                   |                 |
|   |  | <b>DATE OF SAMPLING</b>             | 01/10/2021 to 25/10/2021                   |                 |
|   |  | <b>DATE OF RECEIPT</b>              | 02/10/2021 to 26/10/2021                   |                 |
|   |  | <b>DATE OF REPORT</b>               | 01/11/2021                                 |                 |
|   |  | <b>DATE OF ANALYSIS</b>             | START: 03/10/2021                          | END: 01/11/2021 |
| <b>SAMPLE DETAILS</b>   |  |                                     |  |                 |
| <b>MONITORING FOR</b>   | AMBIENT AIR QUALITY MONITORING   | <b>CUSTOMER REF. NO. &amp; DATE</b> | M/FO/SRV/2122/0049,<br>DTD. : 24-JULY-2021 |                 |
| <b>SAMPLING LOCATION</b>  | STAFF QUANTAR, MALUPARA  |                                     |  |                 |
| <b>DURATION OF SAMPLING</b>   | 24 HOURS   | <b>SAMPLE COLLECTED BY</b>          | LABORATORY CHEMIST                         |                 |
| <b>SAMPLING PROCEDURE</b>   | AS PER METHOD REFERENCE  |                                     |  |                 |
| <b>SAMPLE QUANTITY/PACKING</b>  | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLXI NO. PVC BOTTLE, NO <sub>2</sub> : 30MLXI NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO) *   | IS 5182 (Part 10): 1999, RA 2003                         | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

#### TEST REPORT

| Date of Sampling | PM <sub>10</sub><br>µg /m <sup>3</sup> | PM <sub>2.5</sub><br>µg/m <sup>3</sup> | SO <sub>2</sub><br>µg/m <sup>3</sup> | NO <sub>2</sub><br>µg/m <sup>3</sup> | CO*<br>mg/m <sup>3</sup> | Hg<br>ng/m <sup>3</sup> |
|------------------|--|--|--------------------------------------|--------------------------------------|--------------------------|-------------------------|
| 01.10.2021       | 44                                     | 28                                     | 16                                   | 28                                   | 0.6                      | N.D.                    |
| 04.10.2021       | 52                                     | 24                                     | 12                                   | 22                                   | 0.2                      | N.D.                    |
| 08.10.2021       | 48                                     | 26                                     | 14                                   | 28                                   | 0.9                      | N.D.                    |
| 11.10.2021       | 38                                     | 22                                     | 18                                   | 30                                   | 0.8                      | N.D.                    |
| 14.10.2021       | 40                                     | 28                                     | 12                                   | 26                                   | 0.5                      | N.D.                    |
| 18.10.2021       | 48                                     | 26                                     | 16                                   | 24                                   | 0.8                      | N.D.                    |
| 22.10.2021       | 46                                     | 24                                     | 10                                   | 18                                   | 0.5                      | N.D.                    |
| 25.10.2021       | 42                                     | 28                                     | 12                                   | 26                                   | 0.7                      | N.D.                    |

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

#### Terms & conditions

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

|                 |  |                          |
|-----------------|--|--------------------------|
| <br>REVIEWED BY |  | <br>AUTHORIZED SIGNATORY |
|-----------------|--|--------------------------|

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



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|   |  |                          |                                       |
|---|--|--------------------------|---------------------------------------|
| <i>Name &amp; Address Of The Customer</i>   |  | REPORT NO                | UES/TR/21-22/04201                    |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED, GARE<br/>PALMA - IV/5, MILUPARA U/G COAL<br/>MINE, VILLAGE - MILUPARA,<br/>BLOCK-TAMNAR,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/07531-07538            |
|   |  | DATE OF SAMPLING         | 02/11/2021 to 26/11/2021              |
|   |  | DATE OF RECEIPT          | 03/11/2021 to 27/11/2021              |
|   |  | DATE OF REPORT           | 01/12/2021                            |
|   |  | DATE OF ANALYSIS         | START: 03/11/2021    END: 28/11/2021  |
|   |  | <b>SAMPLE DETAILS</b>    |                                       |
| MONITORING FOR  | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | M/PO/SRV/2122/0049, DTD, 24-JULY-2021 |
| SAMPLING LOCATION   | STAFF QUARTER, MILUPARA  |                          |                                       |
| DURATION OF SAMPLING  | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                    |
| SAMPLING PROCEDURE  | AS PER METHOD REFERENCE  |                          |                                       |
| SAMPLE QUANTITY/PACKING   | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO., SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182 (Part 10): 1999, RA 2003                         | 4.0            |
| Mercury (Hg)   | EPA Method 10-5  | --             |

**TEST REPORT**

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 02.11.2021       | 46                                 | 30                                  | 18                                | 26                                | 0.7                   | N.D.                 |
| 05.11.2021       | 54                                 | 26                                  | 14                                | 24                                | 0.3                   | N.D.                 |
| 09.11.2021       | 50                                 | 28                                  | 16                                | 26                                | 0.8                   | N.D.                 |
| 12.11.2021       | 40                                 | 24                                  | 20                                | 28                                | 0.6                   | N.D.                 |
| 16.11.2021       | 42                                 | 30                                  | 14                                | 24                                | 0.4                   | N.D.                 |
| 19.11.2021       | 50                                 | 28                                  | 18                                | 26                                | 0.9                   | N.D.                 |
| 23.11.2021       | 48                                 | 26                                  | 12                                | 20                                | 0.6                   | N.D.                 |
| 26.11.2021       | 44                                 | 30                                  | 14                                | 28                                | 0.8                   | N.D.                 |

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

**Terms & conditions**

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

|                 |  |  |
|-----------------|--|--|
| <br>REVIEWED BY |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY |
|-----------------|--|--|

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



HDD-272, Phase III - Near JP Chowk  
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|  |  |                          |                                       |                |
|--|--|--------------------------|---------------------------------------|----------------|
| Name & Address Of The Customer   |  | REPORT NO                | UES/TR/21-22/04941                    |                |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED, GARE</b><br><b>PALMA - IV/5, MILUPARA U/G COAL</b><br><b>MINE,VILLAGE - MILUPARA,</b><br><b>BLOCK-TAMNAR,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/08797-08804            |                |
|  |  | DATE OF SAMPLING         | 03/12/2021 to 28/12/2021              |                |
|  |  | DATE OF RECEIPT          | 04/12/2021 to 29/12/2021              |                |
|  |  | DATE OF REPORT           | 01/01/2022                            |                |
|  |  | DATE OF ANALYSIS         | START:04/12/2021                      | END:31/12/2021 |
| <b>SAMPLE DETAILS</b>  |  |                          |                                       |                |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | M/PO/SRV/2122/0049, DTD. 24-JULY-2021 |                |
| SAMPLING LOCATION  | STAFF QUARTER, MILUPARA  |                          |                                       |                |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                    |                |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |                                       |                |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182(Part 10):1999, RA 2003                           | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

**TEST REPORT**

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 03.12.2021       | 48                                 | 32                                  | 20                                | 28                                | 0.8                   | N.D.                 |
| 07.12.2021       | 56                                 | 28                                  | 16                                | 26                                | 0.4                   | N.D.                 |
| 10.12.2021       | 52                                 | 30                                  | 20                                | 28                                | 0.9                   | N.D.                 |
| 14.12.2021       | 42                                 | 26                                  | 22                                | 30                                | 0.8                   | N.D.                 |
| 17.12.2021       | 44                                 | 32                                  | 16                                | 26                                | 0.6                   | N.D.                 |
| 21.12.2021       | 52                                 | 30                                  | 20                                | 28                                | 0.8                   | N.D.                 |
| 24.12.2021       | 50                                 | 28                                  | 14                                | 22                                | 0.9                   | N.D.                 |
| 28.12.2021       | 46                                 | 32                                  | 16                                | 30                                | 0.6                   | N.D.                 |

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

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

|                                    |  |   |
|------------------------------------|--|---|
| <br>01/01/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>01/01/2022<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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



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

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|   |  |                          |                                       |                 |
|---|--|--------------------------|---------------------------------------|-----------------|
| <i>Name &amp; Address Of The Customer</i>   |  | REPORT NO                | UES/TR/21-22/06025                    |                 |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED, GARE</b><br><b>PALMA - IV/5, MILUPARA U/G COAL</b><br><b>MINE, VILLAGE - MILUPARA,</b><br><b>BLOCK-TAMNAR,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/010401-010408          |                 |
|   |  | DATE OF SAMPLING         | 04/01/2022 to 28/01/2022              |                 |
|   |  | DATE OF RECEIPT          | 05/01/2022 to 29/01/2022              |                 |
|   |  | DATE OF REPORT           | 02/02/2022                            |                 |
|   |  | DATE OF ANALYSIS         | START: 05/01/2022                     | END: 01/02/2022 |
| <b>SAMPLE DETAILS</b>   |  |                          |                                       |                 |
| MONITORING FOR  | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | M/PO/SRV/2122/0049, DTD. 24-JULY-2021 |                 |
| SAMPLING LOCATION   | STAFF QUARTER, MILUPARA  |                          |                                       |                 |
| DURATION OF SAMPLING  | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                    |                 |
| SAMPLING PROCEDURE  | AS PER METHOD REFERENCE  |                          |                                       |                 |
| SAMPLE QUANTITY/PACKING   | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182 (Part 10): 1999, RA 2003                         | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

### TEST REPORT

| Date of Sampling | PM <sub>10</sub><br>µg/m <sup>3</sup> | PM <sub>2.5</sub><br>µg/m <sup>3</sup> | SO <sub>2</sub><br>µg/m <sup>3</sup> | NO <sub>2</sub><br>µg/m <sup>3</sup> | CO <sup>+</sup><br>mg/m <sup>3</sup> | Hg<br>ng/m <sup>3</sup> |
|------------------|---------------------------------------|--|--------------------------------------|--------------------------------------|--------------------------------------|-------------------------|
| 04.01.2022       | 56                                    | 20                                     | 10                                   | 22                                   | 0.6                                  | N.D.                    |
| 08.01.2022       | 62                                    | 26                                     | 12                                   | 24                                   | 0.4                                  | N.D.                    |
| 11.01.2022       | 58                                    | 20                                     | 16                                   | 20                                   | 0.7                                  | N.D.                    |
| 15.01.2022       | 50                                    | 28                                     | 10                                   | 26                                   | 0.8                                  | N.D.                    |
| 18.01.2022       | 54                                    | 24                                     | 14                                   | 22                                   | 0.4                                  | N.D.                    |
| 22.01.2022       | 68                                    | 26                                     | 12                                   | 24                                   | 0.8                                  | N.D.                    |
| 25.01.2022       | 56                                    | 22                                     | 12                                   | 28                                   | 0.6                                  | N.D.                    |
| 28.01.2022       | 48                                    | 24                                     | 16                                   | 20                                   | 0.7                                  | N.D.                    |

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

#### Terms & conditions

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

|                               |  |  |
|-------------------------------|--|--|
| <br>REVIEWED BY<br>02/02/2022 |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY<br>02/02/22 |
|-------------------------------|--|--|

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



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|  |  |                                     |                                       |
|--|--|-------------------------------------|---------------------------------------|
| <b>Name &amp; Address Of The Customer</b>  |  | <b>REPORT NO</b>                    | UES/TR/21-22/07901                    |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED, GARE<br/>PALMA - IV/5, MILUPARA U/G COAL<br/>MINE,VILLAGE - MILUPARA,<br/>BLOCK-TAMNAR,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | <b>LAB REF NO</b>                   | UES/21-22/AAQM/013034-013035          |
|  |  | <b>DATE OF SAMPLING</b>             | 01/02/2022 to 25/02/2022              |
|  |  | <b>DATE OF RECEIPT</b>              | 02/02/2022 to 26/02/2022              |
|  |  | <b>DATE OF REPORT</b>               | 01/03/2022                            |
|  |  | <b>DATE OF ANALYSIS</b>             | START: 03/02/2022    END: 01/03/2022  |
| <b>SAMPLE DETAILS</b>  |  |                                     |                                       |
| <b>MONITORING FOR</b>  | AMBIENT AIR QUALITY MONITORING   | <b>CUSTOMER REF. NO. &amp; DATE</b> | M/PO/SRV/2122/0049, DTD. 24-JULY-2021 |
| <b>SAMPLING LOCATION</b>   | STAFF QUARTER, MILUPARA  |                                     |                                       |
| <b>DURATION OF SAMPLING</b>  | 24 HOURS   | <b>SAMPLE COLLECTED BY</b>          | LABORATORY CHEMIST                    |
| <b>SAMPLING PROCEDURE</b>  | AS PER METHOD REFERENCE  |                                     |                                       |
| <b>SAMPLE QUANTITY/PACKING</b>   | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I           | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182(Part 10):1999, RA 2003                           | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

**TEST REPORT**

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 01.02.2022       | 52                                 | 22                                  | 16                                | 26                                | 0.7                   | N.D.                 |
| 04.02.2022       | 68                                 | 25                                  | 12                                | 26                                | 0.5                   | N.D.                 |
| 07.02.2022       | 52                                 | 20                                  | 10                                | 22                                | 0.8                   | N.D.                 |
| 11.02.2022       | 46                                 | 24                                  | 18                                | 28                                | 0.6                   | N.D.                 |
| 14.02.2022       | 58                                 | 28                                  | 14                                | 20                                | 0.5                   | N.D.                 |
| 18.02.2022       | 60                                 | 20                                  | 18                                | 26                                | 0.9                   | N.D.                 |
| 21.02.2022       | 58                                 | 26                                  | 10                                | 20                                | 0.7                   | N.D.                 |
| 25.02.2022       | 62                                 | 28                                  | 16                                | 18                                | 0.5                   | N.D.                 |

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

**Terms & conditions**

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

|                                    |  |  |
|------------------------------------|--|--|
| <br>01/03/22<br><b>REVIEWED BY</b> |  | For <b>ULTIMATE ENVIROLYTICAL SOLUTIONS</b><br><br>01/03/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|--|

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





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

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|  |  |                          |                                       |
|--|--|--------------------------|---------------------------------------|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                | UES/TR/21-22/06941                    |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED, GARE<br/>PALMA - IV/5, MILUPARA U/G COAL<br/>MINE,VILLAGE - MILUPARA,<br/>BLOCK-TAMNAR,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | URS/21-22/AAQM/014644                 |
|  |  | DATE OF SAMPLING         | 02/03/2022 to 28/03/2022              |
|  |  | DATE OF RECEIPT          | 03/03/2022 to 29/03/2022              |
|  |  | DATE OF REPORT           | 02/04/2022                            |
|  |  | DATE OF ANALYSIS         | START: 04/03/2022    END: 02/04/2022  |
| <b>SAMPLE DETAILS</b>  |  |                          |                                       |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | M/PO/SRV/2122/0049, DTD. 24-JULY-2021 |
| SAMPLING LOCATION  | STAFF QUARTER, MILUPARA  |                          |                                       |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                    |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |                                       |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): 1XI NO., FILTER PAPER (PM <sub>2.5</sub> ): 1XI NO.<br>SO <sub>2</sub> : 30MLXI NO. PVC BOTTLE, NO <sub>2</sub> : 30MLXI NO. PVC BOTTLE<br>RUBBER BLADDER: 1XI NO. |                          |                                       |

#### Test Method and NAAQM Standard for Ambient Air Quality Monitoring

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

#### TEST REPORT

| Date of Sampling | PM <sub>10</sub><br>µg/m <sup>3</sup> | PM <sub>2.5</sub><br>µg/m <sup>3</sup> | SO <sub>2</sub><br>µg/m <sup>3</sup> | NO <sub>2</sub><br>µg/m <sup>3</sup> | CO*<br>mg/m <sup>3</sup> | Hg<br>ng/m <sup>3</sup> |
|------------------|---------------------------------------|--|--------------------------------------|--------------------------------------|--------------------------|-------------------------|
| 02.03.2022       | 62                                    | 30                                     | 16                                   | 28                                   | 0.8                      | N.D.                    |
| 07.03.2022       | 78                                    | 34                                     | 10                                   | 26                                   | 0.6                      | N.D.                    |
| 11.03.2022       | 62                                    | 28                                     | 12                                   | 25                                   | 0.2                      | N.D.                    |
| 14.03.2022       | 56                                    | 20                                     | 14                                   | 22                                   | 0.4                      | N.D.                    |
| 18.03.2022       | 78                                    | 28                                     | 18                                   | 26                                   | 0.8                      | N.D.                    |
| 21.03.2022       | 70                                    | 34                                     | 10                                   | 28                                   | 0.2                      | N.D.                    |
| 25.03.2022       | 68                                    | 28                                     | 12                                   | 22                                   | 0.9                      | N.D.                    |
| 28.03.2022       | 72                                    | 38                                     | 18                                   | 20                                   | 0.7                      | N.D.                    |

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

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

|                                    |  |   |
|------------------------------------|--|---|
| <br>02/04/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/04/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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

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



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Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
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|   |  |                          |  |                 |
|---|--|--------------------------|--|-----------------|
| <i>Name &amp; Address Of The Customer</i>   |  | REPORT NO.               | UES/TR/21-22/3512                      |                 |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/5, MILUPARA U/G<br/>COAL MINE, VILLAGE - MILUPARA,<br/>BLOCK - TAMNAR,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO.              | UES/21-22/AAQM/6318-6325               |                 |
|   |  | DATE OF SAMPLING         | 01/10/2021 to 25/10/2021               |                 |
|   |  | DATE OF RECEIPT          | 02/10/2021 to 26/10/2021               |                 |
|   |  | DATE OF REPORT           | 01/11/2021                             |                 |
|   |  | DATE OF ANALYSIS         | START: 03/10/2021                      | END: 01/11/2021 |
| <b>SAMPLE DETAILS</b>   |  |                          |  |                 |
| MONITORING FOR  | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | M/PO/SRV/2122/0049, DTD.: 24-JULY-2021 |                 |
| SAMPLING LOCATION   | HIL COLONY, KONDEL   |                          |  |                 |
| DURATION OF SAMPLING  | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                     |                 |
| SAMPLING PROCEDURE  | AS PER METHOD REFERENCE  |                          |  |                 |
| SAMPLE QUANTITY/PACKING   | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182 (Part 10): 1999, RA 2003                         | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

#### TEST REPORT

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 01.10.2021       | 50                                 | 25                                  | 18                                | 20                                | 0.9                   | N.D.                 |
| 04.10.2021       | 58                                 | 32                                  | 10                                | 24                                | 0.6                   | N.D.                 |
| 08.10.2021       | 52                                 | 28                                  | 14                                | 26                                | 0.2                   | N.D.                 |
| 11.10.2021       | 44                                 | 36                                  | 10                                | 28                                | 0.8                   | N.D.                 |
| 14.10.2021       | 52                                 | 34                                  | 16                                | 20                                | 0.9                   | N.D.                 |
| 18.10.2021       | 58                                 | 20                                  | 12                                | 26                                | 1.0                   | N.D.                 |
| 22.10.2021       | 64                                 | 22                                  | 10                                | 22                                | 0.8                   | N.D.                 |
| 25.10.2021       | 58                                 | 38                                  | 14                                | 29                                | 0.5                   | N.D.                 |

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

#### Terms & conditions

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

|                        |   |                                 |
|------------------------|---|---------------------------------|
| <br><b>REVIEWED BY</b> | <br><b>For ULTIMATE ENVIROLYTICAL SOLUTIONS</b> | <br><b>AUTHORIZED SIGNATORY</b> |
|------------------------|---|---------------------------------|

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

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



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|   |  |                             |  |                 |
|---|--|-----------------------------|--|-----------------|
| <i>Name &amp; Address Of The Customer</i>   |  | REPORT NO                   | UES/TR/21-22/04202                         |                 |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED, GARE<br/>PALMA - IV/5, MILUPARA U/G COAL<br/>MINE, VILLAGE - MILUPARA,<br/>BLOCK-TAMNAR,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO                  | UES/21-22/AAQM/07539-07546                 |                 |
|   |  | DATE OF SAMPLING            | 02/11/2021 to 26/11/2021                   |                 |
|   |  | DATE OF RECEIPT             | 03/11/2021 to 27/11/2021                   |                 |
|   |  | DATE OF REPORT              | 01/12/2021                                 |                 |
|   |  | DATE OF ANALYSIS            | START: 03/11/2021                          | END: 28/11/2021 |
| <b>SAMPLE DETAILS</b>   |  |                             |  |                 |
| MONITORING FOR  | AMBIENT AIR QUALITY<br>MONITORING  | CUSTOMER REF. NO.<br>& DATE | M/PO/SRV/2122/0049,<br>D.Y.D. 24-JULY-2021 |                 |
| SAMPLING LOCATION   | HIL COLONY, KONDREL  |                             |  |                 |
| DURATION OF SAMPLING  | 24 HOURS   | SAMPLE COLLECTED<br>BY      | LABORATORY CHEMIST                         |                 |
| SAMPLING PROCEDURE  | AS PER METHOD REFERENCE  |                             |  |                 |
| SAMPLE<br>QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): 1XI NO., FILTER PAPER (PM <sub>2.5</sub> ): 1XI NO.<br>SO <sub>2</sub> : 30MLXI NO. PVC BOTTLE, NO <sub>2</sub> : 30MLXI NO. PVC BOTTLE<br>RUBBER BLADDER: 1XI NO. |                             |  |                 |

### Test Method and NAAQM Standard for Ambient Air Quality Monitoring

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

### TEST REPORT

| Date of Sampling | PM <sub>10</sub><br>µg/m <sup>3</sup> | PM <sub>2.5</sub><br>µg/m <sup>3</sup> | SO <sub>2</sub><br>µg/m <sup>3</sup> | NO <sub>2</sub><br>µg/m <sup>3</sup> | CO*<br>mg/m <sup>3</sup> | Hg<br>ng/m <sup>3</sup> |
|------------------|---------------------------------------|--|--------------------------------------|--------------------------------------|--------------------------|-------------------------|
| 02.11.2021       | 52                                    | 26                                     | 20                                   | 22                                   | 0.8                      | N.D.                    |
| 05.11.2021       | 60                                    | 34                                     | 12                                   | 26                                   | 0.5                      | N.D.                    |
| 09.11.2021       | 54                                    | 30                                     | 16                                   | 28                                   | 0.4                      | N.D.                    |
| 12.11.2021       | 46                                    | 38                                     | 12                                   | 30                                   | 0.9                      | N.D.                    |
| 16.11.2021       | 54                                    | 32                                     | 18                                   | 22                                   | 0.8                      | N.D.                    |
| 19.11.2021       | 60                                    | 24                                     | 14                                   | 28                                   | 1.1                      | N.D.                    |
| 23.11.2021       | 66                                    | 26                                     | 12                                   | 24                                   | 0.6                      | N.D.                    |
| 26.11.2021       | 60                                    | 36                                     | 16                                   | 30                                   | 0.4                      | N.D.                    |

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

#### Terms & conditions

- The report for publication, attestation or any legal document is the holder's.
- Final sample will be retained for 15 days after issue of test report unless otherwise specified by customer.
- This is for information on the party that asked for above testing only.

|                                    |   |   |
|------------------------------------|---|---|
| <br>01/12/21<br><b>REVIEWED BY</b> | <br><b>ULTIMATE ENVIRONMENTAL SOLUTIONS</b> | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>01/12/21<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|---|---|

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



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

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

|  |  |                          |  |
|--|--|--------------------------|--|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                | UES/TR/21-22/04942                     |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED, GARE<br/>PALMA - IV/5, MILUPARA U/G COAL<br/>MINE,VILLAGE - MILUPARA,<br/>BLOCK-TAMNAR,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/08805-08812             |
|  |  | DATE OF SAMPLING         | 03/12/2021 to 28/12/2021               |
|  |  | DATE OF RECEIPT          | 04/12/2021 to 29/12/2021               |
|  |  | DATE OF REPORT           | 01/01/2022                             |
|  |  | DATE OF ANALYSIS         | START: 04/12/2021      END: 31/12/2021 |
| <b>SAMPLE DETAILS</b>  |  |                          |  |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | M/PO/SRV/2122/0049, ETD. 24-JULY-2021  |
| SAMPLING LOCATION  | HIL COLONY, KONGKEL  |                          |  |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                     |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |  |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): IXI NO., FILTER PAPER (PM <sub>2.5</sub> ): IXI NO.<br>SO <sub>2</sub> : 30MLXI NO. PVC BOTTLE, NO <sub>2</sub> : 30MLXI NO. PVC BOTTLE<br>RUBBER BLADDER: IXI NO. |                          |  |

### Test Method and NAAQM Standard for Ambient Air Quality Monitoring

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

### TEST REPORT

| Date of Sampling | PM <sub>10</sub><br>µg/m <sup>3</sup> | PM <sub>2.5</sub><br>µg/m <sup>3</sup> | SO <sub>2</sub><br>µg/m <sup>3</sup> | NO <sub>2</sub><br>µg/m <sup>3</sup> | CO*<br>mg/m <sup>3</sup> | Hg<br>ng/m <sup>3</sup> |
|------------------|---------------------------------------|--|--------------------------------------|--------------------------------------|--------------------------|-------------------------|
| 03.12.2021       | 54                                    | 28                                     | 22                                   | 24                                   | 0.9                      | N.D.                    |
| 07.12.2021       | 62                                    | 36                                     | 14                                   | 28                                   | 0.6                      | N.D.                    |
| 10.12.2021       | 56                                    | 32                                     | 18                                   | 30                                   | 0.5                      | N.D.                    |
| 14.12.2021       | 48                                    | 36                                     | 14                                   | 32                                   | 0.8                      | N.D.                    |
| 17.12.2021       | 56                                    | 34                                     | 20                                   | 24                                   | 0.6                      | N.D.                    |
| 21.12.2021       | 62                                    | 26                                     | 16                                   | 30                                   | 1.0                      | N.D.                    |
| 24.12.2021       | 68                                    | 28                                     | 14                                   | 26                                   | 0.8                      | N.D.                    |
| 28.12.2021       | 62                                    | 38                                     | 18                                   | 32                                   | 0.6                      | N.D.                    |

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

#### Terms & conditions

- The report for publication, advisory or as legal evidence is restricted.
- Test sample will be retained for 15 days after issue of test report unless otherwise advised by customer.
- This is for information as the party has asked for above test(s) only.

|   |   |   |
|---|---|---|
| <br><b>REVIEWED BY</b> |  | <br><b>AUTHORIZED SIGNATORY</b> |
|---|---|---|

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



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

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

|   |  |                          |                                       |                |
|---|--|--------------------------|---------------------------------------|----------------|
| <i>Name &amp; Address Of The Customer</i>   |  | REPORT NO                | UES/TR/21-22/06026                    |                |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED, GARE</b><br><b>PALMA - IV/5, MILUPARA U/G COAL</b><br><b>MINE, VILLAGE - MILUPARA,</b><br><b>BLOCK-TAMNAR,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/010409-010416          |                |
|   |  | DATE OF SAMPLING         | 04/01/2022 to 28/01/2022              |                |
|   |  | DATE OF RECEIPT          | 05/01/2022 to 29/01/2022              |                |
|   |  | DATE OF REPORT           | 02/02/2022                            |                |
|   |  | DATE OF ANALYSIS         | START:05/01/2022                      | END:01/02/2022 |
| <b>SAMPLE DETAILS</b>   |  |                          |                                       |                |
| MONITORING FOR  | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | M/PO/SRV/2122/0049, DTD. 24-JULY-2021 |                |
| SAMPLING LOCATION   | NIL COLONY, KONDREL  |                          |                                       |                |
| DURATION OF SAMPLING  | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                    |                |
| SAMPLING PROCEDURE  | AS PER METHOD REFERENCE  |                          |                                       |                |
| SAMPLE QUANTITY/PACKING   | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182 (Part 10):1999, RA 2003                          | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | ---            |

### TEST REPORT

| Date of Sampling | PM <sub>10</sub><br>µg/m <sup>3</sup> | PM <sub>2.5</sub><br>µg/m <sup>3</sup> | SO <sub>2</sub><br>µg/m <sup>3</sup> | NO <sub>2</sub><br>µg/m <sup>3</sup> | CO*<br>mg/m <sup>3</sup> | Hg<br>ng/m <sup>3</sup> |
|------------------|---------------------------------------|--|--------------------------------------|--------------------------------------|--------------------------|-------------------------|
| 04.01.2022       | 58                                    | 26                                     | 10                                   | 28                                   | 0.7                      | N.D.                    |
| 08.01.2022       | 68                                    | 20                                     | 16                                   | 22                                   | 0.5                      | N.D.                    |
| 11.01.2022       | 62                                    | 28                                     | 12                                   | 34                                   | 0.9                      | N.D.                    |
| 15.01.2022       | 54                                    | 26                                     | 18                                   | 22                                   | 0.4                      | N.D.                    |
| 18.01.2022       | 68                                    | 22                                     | 14                                   | 24                                   | 0.8                      | N.D.                    |
| 22.01.2022       | 60                                    | 28                                     | 12                                   | 22                                   | 1.2                      | N.D.                    |
| 25.01.2022       | 54                                    | 24                                     | 12                                   | 28                                   | 0.9                      | N.D.                    |
| 28.01.2022       | 68                                    | 20                                     | 11                                   | 22                                   | 0.5                      | N.D.                    |

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

#### Terms & conditions

- The report for professional, scientific or as legal evidence is for information.
- This report will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- This is for information as the same has asked for above test(s) only.

|                               |  |  |
|-------------------------------|--|--|
| <br>02/02/2022<br>REVIEWED BY |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/02/22<br>AUTHORIZED SIGNATORY |
|-------------------------------|--|--|

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



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

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|  |  |                          |                                       |                 |
|--|--|--------------------------|---------------------------------------|-----------------|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                | UES/TR/21-22/07902                    |                 |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED, GARE<br/>PALMA - IV/5, MILUPARA U/G COAL<br/>MINE,VILLAGE - MILUPARA,<br/>BLOCK-TAMNAR,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/013036-013043          |                 |
|  |  | DATE OF SAMPLING         | 01/02/2022 to 25/02/2022              |                 |
|  |  | DATE OF RECEIPT          | 02/02/2022 to 26/02/2022              |                 |
|  |  | DATE OF REPORT           | 01/03/2022                            |                 |
|  |  | DATE OF ANALYSIS         | START:03/02/2022                      | END: 01/03/2022 |
| <b>SAMPLE DETAILS</b>  |  |                          |                                       |                 |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | M/PO/SRV/2122/0049, DTD. 24-JULY-2021 |                 |
| SAMPLING LOCATION  | HIL COLONY, KONDREL  | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                    |                 |
| DURATION OF SAMPLING   | 24 HOURS   |                          |                                       |                 |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |                                       |                 |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I           | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182 (Part 10): 1999, RA 2003                         | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

#### TEST REPORT

| Date of Sampling | PM <sub>10</sub><br>µg/m <sup>3</sup> | PM <sub>2.5</sub><br>µg/m <sup>3</sup> | SO <sub>2</sub><br>µg/m <sup>3</sup> | NO <sub>2</sub><br>µg/m <sup>3</sup> | CO*<br>mg/m <sup>3</sup> | Hg<br>ng/m <sup>3</sup> |
|------------------|---------------------------------------|--|--------------------------------------|--------------------------------------|--------------------------|-------------------------|
| 01.02.2022       | 68                                    | 24                                     | 16                                   | 20                                   | 0.9                      | N.D.                    |
| 04.02.2022       | 62                                    | 28                                     | 10                                   | 28                                   | 0.4                      | N.D.                    |
| 07.02.2022       | 58                                    | 24                                     | 18                                   | 30                                   | 0.6                      | N.D.                    |
| 11.02.2022       | 56                                    | 22                                     | 14                                   | 28                                   | 0.2                      | N.D.                    |
| 14.02.2022       | 70                                    | 26                                     | 12                                   | 20                                   | 0.8                      | N.D.                    |
| 18.02.2022       | 62                                    | 22                                     | 18                                   | 22                                   | 0.6                      | N.D.                    |
| 21.02.2022       | 58                                    | 28                                     | 16                                   | 26                                   | 0.2                      | N.D.                    |
| 25.02.2022       | 50                                    | 18                                     | 12                                   | 24                                   | 0.8                      | N.D.                    |

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

#### Terms & conditions

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

|                                    |  |   |
|------------------------------------|--|---|
| <br>01/03/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>01/03/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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



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

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|  |                                |  |                                       |                |
|--|--------------------------------|--|---------------------------------------|----------------|
| <i>Name &amp; Address Of The Customer</i>  |                                | REPORT NO  | UES/TR/21-22/08942                    |                |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED, GARE<br/>PALMA - IV/5, MILUPARA U/G COAL<br/>MINE,VILLAGE - MILUPARA,<br/>BLOCK-TAMNAR,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |                                | LAB REF NO   | UES/21-22/AAQM/014645                 |                |
|  |                                | DATE OF SAMPLING   | 02/03/2022 to 28/03/2022              |                |
|  |                                | DATE OF RECEIPT  | 03/03/2022 to 29/03/2022              |                |
|  |                                | DATE OF REPORT   | 02/04/2022                            |                |
|  |                                | DATE OF ANALYSIS   | START:04/03/2022                      | END:02/04/2022 |
| <b>SAMPLE DETAILS</b>  |                                |  |                                       |                |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING | CUSTOMER REF. NO. & DATE   | M/PO/SRV/2122/0049, DTD. 24-JULY-2021 |                |
| SAMPLING LOCATION  | HIL COLONY, KONDKEL            | SAMPLE COLLECTED BY  | LABORATORY CHEMIST                    |                |
| DURATION OF SAMPLING   | 24 HOURS                       | SAMPLING PROCEDURE   |                                       |                |
| AS PER METHOD REFERENCE  |                                | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>RUBBER BLADDER: 1X1 NO. |                                       |                |
| SAMPLE QUANTITY/PACKING  |                                |  |                                       |                |

### Test Method and NAAQM Standard for Ambient Air Quality Monitoring

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

### TEST REPORT

| Date of Sampling | PM <sub>10</sub><br>µg/m <sup>3</sup> | PM <sub>2.5</sub><br>µg/m <sup>3</sup> | SO <sub>2</sub><br>µg/m <sup>3</sup> | NO <sub>2</sub><br>µg/m <sup>3</sup> | CO*<br>mg/m <sup>3</sup> | Hg<br>ng/m <sup>3</sup> |
|------------------|---------------------------------------|--|--------------------------------------|--------------------------------------|--------------------------|-------------------------|
| 02.03.2022       | 76                                    | 28                                     | 14                                   | 22                                   | 0.9                      | N.D.                    |
| 07.03.2022       | 68                                    | 26                                     | 18                                   | 26                                   | 0.4                      | N.D.                    |
| 11.03.2022       | 48                                    | 22                                     | 10                                   | 32                                   | 0.8                      | N.D.                    |
| 14.03.2022       | 58                                    | 28                                     | 12                                   | 28                                   | 0.4                      | N.D.                    |
| 18.03.2022       | 72                                    | 24                                     | 18                                   | 26                                   | 0.6                      | N.D.                    |
| 21.03.2022       | 68                                    | 26                                     | 16                                   | 20                                   | 0.8                      | N.D.                    |
| 25.03.2022       | 70                                    | 24                                     | 12                                   | 28                                   | 0.5                      | N.D.                    |
| 28.03.2022       | 68                                    | 26                                     | 14                                   | 20                                   | 0.9                      | N.D.                    |

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

#### Terms & conditions

- The report for publication, arbitration or as legal document is forbidden.
- Test sample will be returned for 11 days after issue of test report unless otherwise agreed with customer.
- This is the information as the note has added for above test(s) only.

|                                    |   |   |
|------------------------------------|---|---|
| <br>02/04/22<br><b>REVIEWED BY</b> | <br><b>ULTIMATE ENVIROLYTICAL SOLUTIONS</b> | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/04/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|---|---|

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



HDD-272, Phase III - Near JP Chowk  
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|   |  |                                     |   |                 |
|---|--|-------------------------------------|---|-----------------|
| <b>Name &amp; Address Of The Customer</b>   |  | <b>REPORT NO.</b>                   | UES/TR/21-22/3513                         |                 |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/5, MILUPARA U/G<br/>COAL MINE, VILLAGE - MILUPARA,<br/>BLOCK - TAMNAR,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | <b>LAB REF NO.</b>                  | UES/21-22/AAQM/6326-6334                  |                 |
|   |  | <b>DATE OF SAMPLING</b>             | 01/10/2021 to 25/10/2021                  |                 |
|   |  | <b>DATE OF RECEIPT</b>              | 02/10/2021 to 26/10/2021                  |                 |
|   |  | <b>DATE OF REPORT</b>               | 01/11/2021                                |                 |
|   |  | <b>DATE OF ANALYSIS</b>             | START: 03/10/2021                         | END: 01/11/2021 |
| <b>SAMPLE DETAILS</b>   |  |                                     |   |                 |
| <b>MONITORING FOR</b>   | AMBIENT AIR QUALITY MONITORING   | <b>CUSTOMER REF. NO. &amp; DATE</b> | M/PO/SRV/2122/0049,<br>DTD.: 24-JULY-2021 |                 |
| <b>SAMPLING LOCATION</b>  | ETP AREA, KONDEL   |                                     |   |                 |
| <b>DURATION OF SAMPLING</b>   | 24 HOURS   | <b>SAMPLE COLLECTED BY</b>          | LABORATORY CHEMIST                        |                 |
| <b>SAMPLING PROCEDURE</b>   | AS PER METHOD REFERENCE  |                                     |   |                 |
| <b>SAMPLE QUANTITY/PACKING</b>  | FILTER PAPER (PM <sub>10</sub> ): IXI NO., FILTER PAPER (PM <sub>2.5</sub> ): IXI NO.<br>SO <sub>2</sub> : 30MLXI NO. PVC BOTTLE, NO <sub>2</sub> : 30MLXI NO. PVC BOTTLE<br>RUBBER BLADDER: IXI NO. |                                     |   |                 |

#### Test Method and NAAQM Standard for Ambient Air Quality Monitoring

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

#### TEST REPORT

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 01.10.2021       | 54                                 | 28                                  | 12                                | 26                                | 0.9                   | N.D.                 |
| 04.10.2021       | 42                                 | 22                                  | 10                                | 28                                | 0.7                   | N.D.                 |
| 08.10.2021       | 52                                 | 34                                  | 16                                | 22                                | 0.6                   | N.D.                 |
| 11.10.2021       | 46                                 | 28                                  | 08                                | 20                                | 0.2                   | N.D.                 |
| 14.10.2021       | 50                                 | 32                                  | 12                                | 28                                | 0.8                   | N.D.                 |
| 18.10.2021       | 48                                 | 24                                  | 10                                | 20                                | 0.6                   | N.D.                 |
| 22.10.2021       | 54                                 | 28                                  | 16                                | 16                                | 0.9                   | N.D.                 |
| 25.10.2021       | 68                                 | 30                                  | 14                                | 22                                | 0.5                   | N.D.                 |

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

#### Terms & conditions

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

|                        |  |                                 |
|------------------------|--|---------------------------------|
| <br><b>REVIEWED BY</b> |  | <br><b>AUTHORIZED SIGNATORY</b> |
|------------------------|--|---------------------------------|

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

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





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

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

|   |  |                          |                                       |
|---|--|--------------------------|---------------------------------------|
| <i>Name &amp; Address Of The Customer</i>   |  | REPORT NO                | UES/TR/21-22/04203                    |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED, GARE<br/>PALMA - IV/5, MILUPARA U/G COAL<br/>MINE, VILLAGE - MILUPARA,<br/>BLOCK-TAMNAR,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/07547-07554            |
|   |  | DATE OF SAMPLING         | 02/11/2021 to 26/11/2021              |
|   |  | DATE OF RECEIPT          | 03/11/2021 to 27/11/2021              |
|   |  | DATE OF REPORT           | 01/12/2021                            |
|   |  | DATE OF ANALYSIS         | START:03/11/2021    END:28/11/2021    |
| <b>SAMPLE DETAILS</b>   |  |                          |                                       |
| MONITORING FOR  | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | M/PO/SRV/2122/0049, DTD. 24-JULY-2021 |
| SAMPLING LOCATION   | ETP AREA, KONDHEL  |                          |                                       |
| DURATION OF SAMPLING  | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                    |
| SAMPLING PROCEDURE  | AS PER METHOD REFERENCE  |                          |                                       |
| SAMPLE QUANTITY/PACKING   | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182 (Part 10): 1999, RA 2003                         | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

#### TEST REPORT

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 02.11.2021       | 56                                 | 30                                  | 14                                | 28                                | 1.0                   | N.D.                 |
| 05.11.2021       | 44                                 | 24                                  | 12                                | 30                                | 0.8                   | N.D.                 |
| 09.11.2021       | 54                                 | 36                                  | 18                                | 24                                | 0.8                   | N.D.                 |
| 12.11.2021       | 48                                 | 30                                  | 10                                | 22                                | 0.4                   | N.D.                 |
| 16.11.2021       | 52                                 | 34                                  | 14                                | 30                                | 0.9                   | N.D.                 |
| 19.11.2021       | 50                                 | 26                                  | 12                                | 22                                | 0.8                   | N.D.                 |
| 23.11.2021       | 56                                 | 30                                  | 18                                | 18                                | 1.0                   | N.D.                 |
| 26.11.2021       | 70                                 | 32                                  | 16                                | 24                                | 0.6                   | N.D.                 |

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

#### Terms & conditions

- 1. This report for publication, arbitration or as legal document is forbidden.
- 2. Test sample will be returned for 15 days after issue of test report unless otherwise agreed with customer.
- 3. This is for reference on the party has asked for above analysis only.

|                 |  |  |
|-----------------|--|--|
| <br>REVIEWED BY |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY |
|-----------------|--|--|

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



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

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

|  |  |                          |                                       |
|--|--|--------------------------|---------------------------------------|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                | UES/TR/21-22/04943                    |
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED, GARE</b><br><b>PALMA - IV/5, MILUPARA U/G COAL</b><br><b>MINE,VILLAGE - MILUPARA,</b><br><b>BLOCK-TAMNAR,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/08813-08820            |
|  |  | DATE OF SAMPLING         | 03/12/2021 to 28/12/2021              |
|  |  | DATE OF RECEIPT          | 04/12/2021 to 29/12/2021              |
|  |  | DATE OF REPORT           | 01/01/2022                            |
|  |  | DATE OF ANALYSIS         | START: 04/12/2021    END: 31/12/2021  |
|  |  | <b>SAMPLE DETAILS</b>    |                                       |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | M/PO/SRV/2122/0049, DTD. 24-JULY-2021 |
| SAMPLING LOCATION  | EYP AREA, KONDROL  |                          |                                       |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                    |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |                                       |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182(Part 10):1999, RA 2003                           | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

**TEST REPORT**

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 03.12.2021       | 58                                 | 32                                  | 16                                | 30                                | 1.1                   | N.D.                 |
| 07.12.2021       | 46                                 | 26                                  | 14                                | 32                                | 0.9                   | N.D.                 |
| 10.12.2021       | 56                                 | 38                                  | 20                                | 26                                | 0.6                   | N.D.                 |
| 14.12.2021       | 50                                 | 32                                  | 12                                | 24                                | 0.2                   | N.D.                 |
| 17.12.2021       | 54                                 | 36                                  | 16                                | 32                                | 0.8                   | N.D.                 |
| 21.12.2021       | 52                                 | 28                                  | 14                                | 24                                | 0.9                   | N.D.                 |
| 24.12.2021       | 58                                 | 32                                  | 20                                | 20                                | 1.1                   | N.D.                 |
| 28.12.2021       | 72                                 | 34                                  | 18                                | 26                                | 0.8                   | N.D.                 |

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

- Terms & conditions**
- The report for publication, in deletion or as legal document is free.
  - Test samples will be retained for 15 days after issue of test report unless customer provides with conditions.
  - This is for information on the study has not been used for other testing only.

|  |   |  |
|--|---|--|
| <br>REVIEWED BY |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY |
|--|---|--|

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



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

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| Name & Address of The Customer  |  | REPORT NO                | UES/TR/21-22/06027                     |
|---|--|--------------------------|--|
| <b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED, GARE</b><br><b>PALMA - IV/5, MILUPARA U/G COAL</b><br><b>MINE, VILLAGE - MILUPARA,</b><br><b>BLOCK-TAMNAR,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/010417-010424           |
|   |  | DATE OF SAMPLING         | 04/01/2022 to 28/01/2022               |
|   |  | DATE OF RECEIPT          | 05/01/2022 to 29/01/2022               |
|   |  | DATE OF REPORT           | 02/02/2022                             |
|   |  | DATE OF ANALYSIS         | START: 05/01/2022      END: 01/02/2022 |
| SAMPLE DETAILS  |  |                          |  |
| MONITORING FOR  | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | M/PO/ERV/2122/0049, DTD. 24-JULY-2021  |
| SAMPLING LOCATION   | ETP AREA, KONDREL  |                          |  |
| DURATION OF SAMPLING  | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                     |
| SAMPLING PROCEDURE  | AS PER METHOD REFERENCE  |                          |  |
| SAMPLE QUANTITY/PACKING   | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | CPCB Guidelines Vol.-I                                   | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182(Part 10):1999, RA 2003                           | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

### TEST REPORT

| Date of Sampling | PM <sub>10</sub><br>µg/m <sup>3</sup> | PM <sub>2.5</sub><br>µg/m <sup>3</sup> | SO <sub>2</sub><br>µg/m <sup>3</sup> | NO <sub>2</sub><br>µg/m <sup>3</sup> | CO*<br>mg/m <sup>3</sup> | Hg<br>ng/m <sup>3</sup> |
|------------------|---------------------------------------|--|--------------------------------------|--------------------------------------|--------------------------|-------------------------|
| 04.01.2022       | 52                                    | 24                                     | 10                                   | 28                                   | 0.8                      | N.D.                    |
| 08.01.2022       | 40                                    | 28                                     | 08                                   | 22                                   | 0.6                      | N.D.                    |
| 11.01.2022       | 60                                    | 32                                     | 12                                   | 24                                   | 0.2                      | N.D.                    |
| 15.01.2022       | 56                                    | 38                                     | 10                                   | 20                                   | 0.8                      | N.D.                    |
| 18.01.2022       | 58                                    | 30                                     | 08                                   | 18                                   | 0.5                      | N.D.                    |
| 22.01.2022       | 50                                    | 24                                     | 06                                   | 16                                   | 0.9                      | N.D.                    |
| 25.01.2022       | 64                                    | 30                                     | 10                                   | 18                                   | 0.7                      | N.D.                    |
| 28.01.2022       | 68                                    | 32                                     | 12                                   | 22                                   | 0.5                      | N.D.                    |

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

#### Terms & conditions

- The report for publication, advertisement or as legal document is forbidden.
- The sample will be returned for 14 days after issue of test report unless otherwise agreed with customer.
- Please refer information on the party has asked for above website.

|                               |  |  |
|-------------------------------|--|--|
| <br>REVIEWED BY<br>02/02/2022 |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY<br>02/02/22 |
|-------------------------------|--|--|

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



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

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|  |  |                          |                                       |
|--|--|--------------------------|---------------------------------------|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                | UES/TR/21-22/07903                    |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED, GARE<br/>PALMA - IV/5, MILUPARA U/G COAL<br/>MINE,VILLAGE - MILUPARA,<br/>BLOCK-TAMNAR,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/013044-013051          |
|  |  | DATE OF SAMPLING         | 01/02/2022 to 25/02/2022              |
|  |  | DATE OF RECEIPT          | 02/02/2022 to 26/02/2022              |
|  |  | DATE OF REPORT           | 01/03/2022                            |
|  |  | DATE OF ANALYSIS         | START:03/02/2022    END:01/03/2022    |
| <b>SAMPLE DETAILS</b>  |  |                          |                                       |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | M/PO/SRV/2122/0049, DTD. 24-JULY-2021 |
| SAMPLING LOCATION  | ETP AREA, KONDKEL  |                          |                                       |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                    |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |                                       |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I           | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182(Part 10):1999, RA 2003                           | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

**TEST REPORT**

| Date of Sampling | PM <sub>10</sub> µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>2</sub> µg/m <sup>3</sup> | CO* mg/m <sup>3</sup> | Hg ng/m <sup>3</sup> |
|------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
| 01.02.2022       | 58                                 | 22                                  | 16                                | 24                                | 0.9                   | N.D.                 |
| 04.02.2022       | 48                                 | 26                                  | 08                                | 28                                | 0.5                   | N.D.                 |
| 07.02.2022       | 70                                 | 36                                  | 18                                | 22                                | 0.8                   | N.D.                 |
| 11.02.2022       | 64                                 | 30                                  | 08                                | 26                                | 0.6                   | N.D.                 |
| 14.02.2022       | 52                                 | 32                                  | 12                                | 12                                | 0.4                   | N.D.                 |
| 18.02.2022       | 68                                 | 28                                  | 08                                | 18                                | 0.8                   | N.D.                 |
| 21.02.2022       | 60                                 | 38                                  | 16                                | 20                                | 0.6                   | N.D.                 |
| 25.02.2022       | 72                                 | 42                                  | 10                                | 28                                | 0.8                   | N.D.                 |

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

*Terms & conditions*  
 \* The report for publication, arbitration or as legal evidence is tentative.  
 \* Test sample will be retained for 15 days after issue of last report unless otherwise agreed with customer.  
 \* This is for information on the party (as extent for above listed only).

|                                    |  |   |
|------------------------------------|--|---|
| <br>01/03/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>01/03/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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



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

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|  |  |                          |                                       |                |
|--|--|--------------------------|---------------------------------------|----------------|
| <i>Name &amp; Address Of The Customer</i>  |  | REPORT NO                | UES/TR/21-22/08943                    |                |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED, GARE<br/>PALMA - IV/5, MILUPARA U/G COAL<br/>MINE,VILLAGE - MILUPARA,<br/>BLOCK-TAMNAR,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | LAB REF NO               | UES/21-22/AAQM/014646                 |                |
|  |  | DATE OF SAMPLING         | 02/03/2022 to 28/03/2022              |                |
|  |  | DATE OF RECEIPT          | 03/03/2022 to 29/03/2022              |                |
|  |  | DATE OF REPORT           | 02/04/2022                            |                |
|  |  | DATE OF ANALYSIS         | START:04/03/2022                      | END:02/04/2022 |
| <b>SAMPLE DETAILS</b>  |  |                          |                                       |                |
| MONITORING FOR   | AMBIENT AIR QUALITY MONITORING   | CUSTOMER REF. NO. & DATE | M/PO/SRV/2122/0049, DTD. 24-JULY-2021 |                |
| SAMPLING LOCATION  | ETP AREA, KONDKEL  |                          |                                       |                |
| DURATION OF SAMPLING   | 24 HOURS   | SAMPLE COLLECTED BY      | LABORATORY CHEMIST                    |                |
| SAMPLING PROCEDURE   | AS PER METHOD REFERENCE  |                          |                                       |                |
| SAMPLE QUANTITY/PACKING  | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>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 <sub>10</sub> )   | IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I         | 100            |
| Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> ) | IS 5182 (Part 24): 2019 CPCB Guidelines Vol.-I           | 60             |
| Sulphur Dioxide (SO <sub>2</sub> )                                 | IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I | 80             |
| Nitrogen Dioxide (NO <sub>2</sub> )                                | IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I          | 80             |
| Carbon Monoxide (CO)*  | IS 5182(Part 10):1999, RA 2003                           | 4.0            |
| Mercury (Hg)   | EPA Method IO-5  | --             |

#### TEST REPORT

| Date of Sampling | PM <sub>10</sub><br>µg/m <sup>3</sup> | PM <sub>2.5</sub><br>µg/m <sup>3</sup> | SO <sub>2</sub><br>µg/m <sup>3</sup> | NO <sub>2</sub><br>µg/m <sup>3</sup> | CO*<br>mg/m <sup>3</sup> | Hg<br>ng/m <sup>3</sup> |
|------------------|---------------------------------------|--|--------------------------------------|--------------------------------------|--------------------------|-------------------------|
| 02.03.2022       | 52                                    | 28                                     | 12                                   | 24                                   | 0.6                      | N.D.                    |
| 07.03.2022       | 68                                    | 22                                     | 10                                   | 22                                   | 0.9                      | N.D.                    |
| 11.03.2022       | 86                                    | 36                                     | 06                                   | 26                                   | 0.5                      | N.D.                    |
| 14.03.2022       | 78                                    | 32                                     | 08                                   | 28                                   | 0.8                      | N.D.                    |
| 18.03.2022       | 60                                    | 38                                     | 16                                   | 20                                   | 0.6                      | N.D.                    |
| 21.03.2022       | 58                                    | 35                                     | 14                                   | 28                                   | 0.7                      | N.D.                    |
| 25.03.2022       | 82                                    | 42                                     | 10                                   | 22                                   | 0.5                      | N.D.                    |
| 28.03.2022       | 60                                    | 34                                     | 16                                   | 28                                   | 0.4                      | N.D.                    |

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

#### Terms & conditions

- The report for publication, circulation or at 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 world only.

|                                    |  |   |
|------------------------------------|--|---|
| <br>02/04/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>02/04/22<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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

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

# Annexure-8A

**CONTINUOUS AMBIENT AIR QUALITY MONITORING SYSTEM (CAAQMS - 01 Nos.) AT GARE PALMA IV/4 COAL MINE, BANJIKHOL, RAIGARH**



# Annexure-9





**HDD-272, PHASE III- NEAR JP CHOWK,  
RING ROAD NO - 2, KABIR NAGAR, RAIPUR, C.G. -492099  
PH - 0771 - 4027777 | email - ultimatenviro@gmail.com**

|  |  |                                     |  |                       |
|--|--|-------------------------------------|--|-----------------------|
| <b>Name &amp; Address Of The Customer</b>  |  | <b>REPORT NO</b>                    | UES/TR/21-22/09967                       |                       |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST -MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | <b>LAB REF NO</b>                   | UES/21-22/AAQM/015899                    |                       |
|  |  | <b>DATE OF SAMPLING</b>             | 28/03/2022                               |                       |
|  |  | <b>DATE OF RECEIPT</b>              | 29/03/2022                               |                       |
|  |  | <b>DATE OF REPORT</b>               | 02/04/2022                               |                       |
|  |  | <b>DATE OF ANALYSIS</b>             | <b>START:29/03/2022</b>                  | <b>END:02/04/2022</b> |
| <b>SAMPLE DETAILS</b>  |  |                                     |  |                       |
| <b>MONITORING FOR</b>  | <b>AMBIENT AIR QUALITY MONITORING</b>  | <b>CUSTOMER REF. NO. &amp; DATE</b> | N/PO/SRV/2122/0045,<br>DTD. 24-JULY-2021 |                       |
| <b>SAMPLING LOCATION</b>   | PIT OFFICE AREA, BANKHETA  |                                     |  |                       |
| <b>DURATION OF SAMPLING</b>  | 24 HOURS   | <b>SAMPLE COLLECTED BY</b>          | LABORATORY CHEMIST                       |                       |
| <b>SAMPLING PROCEDURE</b>  | AS PER METHOD REFERENCE  |                                     |  |                       |
| <b>SAMPLE QUANTITY/PACKING</b>   | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>RUBBER BLADDER: 1X1 NO. |                                     |  |                       |

| <b>TEST REPORT</b> |  |                   |               |                       |                              |
|--------------------|--|-------------------|---------------|-----------------------|------------------------------|
| <b>SR. NO.</b>     | <b>PARAMETER</b>                         | <b>UNIT</b>       | <b>RESULT</b> | <b>NAAQM STANDARD</b> | <b>METHOD REFERENCE</b>      |
| 1                  | Arsenic (as As)                          | ng/m <sup>3</sup> | 0.8           | 6.0                   | CPCB Guidelines (AAS Method) |
| 2                  | Nickel (as Ni)                           | ng/m <sup>3</sup> | 1.2           | 20                    | CPCB Guidelines (AAS Method) |
| 3                  | Lead (as Pb)                             | µg/m <sup>3</sup> | 0.04          | 1.0                   | IS 5182 (Part 22) :2004      |
| 4                  | Mercury (Hg)                             | ng/m <sup>3</sup> | N.D.          | -                     | EPA Method IO-5              |
| 5                  | Chromium (as Cr)                         | µg/m <sup>3</sup> | N.D.          | -                     | EPA Method IO-5              |
| 6                  | Cadmium (as Cd)                          | µg/m <sup>3</sup> | N.D.          | -                     | EPA Method IO-5              |
| 7                  | Ozone (O <sub>3</sub> ) *                | µg/m <sup>3</sup> | 8.2           | 180                   | CPCB Guidelines Vol-I        |
| 8                  | Ammonia (NH <sub>3</sub> )               | µg/m <sup>3</sup> | 14.0          | 400                   | CPCB Guidelines Vol-I        |
| 9                  | Benzene (C <sub>6</sub> H <sub>6</sub> ) | µg/m <sup>3</sup> | N.D.          | 5.0                   | IS 5182 (Part 11) :2006      |
| 10                 | Benzo (a) Pyrene                         | ng/m <sup>3</sup> | N.D.          | 1.0                   | IS 5182 (Part 12) :2014      |

Note: All results are on the basis of 24 hour sampling.

**REMARKS: \* THESE RESULTS ARE ON THE BASIS OF 1 HOUR SAMPLING, 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.

|   |   |   |
|---|---|---|
| <br><b>REVIEWED BY</b> |  | For <b>ULTIMATE ENVIROLYTICAL SOLUTIONS</b><br><br><b>AUTHORIZED SIGNATORY</b> |
|---|---|---|

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



**HDD-272, PHASE III- NEAR JP CHOWK,  
RING ROAD NO - 2, KABIR NAGAR, RAIPUR, C.G. -492099**  
PH – 0771 - 4027777 | email - ultimatenviron@gmail.com

|  |  |                                     |  |                        |
|--|--|-------------------------------------|--|------------------------|
| <b>Name &amp; Address Of The Customer</b>  |  | <b>REPORT NO</b>                    | UES/TR/21-22/09968                       |                        |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA – IV/4, COAL MINE,<br/>VILLAGE – BANKHETA,<br/>POST -MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | <b>LAB REF NO</b>                   | UES/21-22/AAQM/015900                    |                        |
|  |  | <b>DATE OF SAMPLING</b>             | 28/03/2022                               |                        |
|  |  | <b>DATE OF RECEIPT</b>              | 29/03/2022                               |                        |
|  |  | <b>DATE OF REPORT</b>               | 02/04/2022                               |                        |
|  |  | <b>DATE OF ANALYSIS</b>             | <b>START: 29/03/2022</b>                 | <b>END: 02/04/2022</b> |
| <b>SAMPLE DETAILS</b>  |  |                                     |  |                        |
| <b>MONITORING FOR</b>  | <b>AMBIENT AIR QUALITY MONITORING</b>  | <b>CUSTOMER REF. NO. &amp; DATE</b> | N/PO/SRV/2122/0045,<br>DTD. 24-JULY-2021 |                        |
| <b>SAMPLING LOCATION</b>   | ETP AREA, BANJIKHOL  |                                     |  |                        |
| <b>DURATION OF SAMPLING</b>  | 24 HOURS   | <b>SAMPLE COLLECTED BY</b>          | LABORATORY CHEMIST                       |                        |
| <b>SAMPLING PROCEDURE</b>  | AS PER METHOD REFERENCE  |                                     |  |                        |
| <b>SAMPLE QUANTITY/PACKING</b>   | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>RUBBER BLADDER: 1X1 NO. |                                     |  |                        |

| <b>TEST REPORT</b> |  |                   |               |                       |                              |
|--------------------|--|-------------------|---------------|-----------------------|------------------------------|
| <b>SR. NO.</b>     | <b>PARAMETER</b>                         | <b>UNIT</b>       | <b>RESULT</b> | <b>NAAQM STANDARD</b> | <b>METHOD REFERENCE</b>      |
| 1                  | Arsenic (as As)                          | ng/m <sup>3</sup> | 0.5           | 6.0                   | CPCB Guidelines (AAS Method) |
| 2                  | Nickel (as Ni)                           | ng/m <sup>3</sup> | 1.4           | 20                    | CPCB Guidelines (AAS Method) |
| 3                  | Lead (as Pb)                             | µg/m <sup>3</sup> | 0.06          | 1.0                   | IS 5182 (Part 22) :2004      |
| 4                  | Mercury (Hg)                             | ng/m <sup>3</sup> | N.D.          | -                     | EPA Method IO-5              |
| 5                  | Chromium (as Cr)                         | µg/m <sup>3</sup> | N.D.          | -                     | EPA Method IO-5              |
| 6                  | Cadmium (as Cd)                          | µg/m <sup>3</sup> | N.D.          | -                     | EPA Method IO-5              |
| 7                  | Ozone (O <sub>3</sub> ) *                | µg/m <sup>3</sup> | 6.8           | 180                   | CPCB Guidelines Vol-I        |
| 8                  | Ammonia (NH <sub>3</sub> )               | µg/m <sup>3</sup> | 20.2          | 400                   | CPCB Guidelines Vol-I        |
| 9                  | Benzene (C <sub>6</sub> H <sub>6</sub> ) | µg/m <sup>3</sup> | N.D.          | 5.0                   | IS 5182 (Part 11) :2006      |
| 10                 | Benzo (a) Pyrene                         | ng/m <sup>3</sup> | N.D.          | 1.0                   | IS 5182 (Part 12) :2014      |

Note: All results are on the basis of 24 hour sampling.

**REMARKS: \* THESE RESULTS ARE ON THE BASIS OF 1 HOUR SAMPLING, N.D.: NOT DETECTED**

### Terms & conditions

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

|   |   |  |
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| <br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br><b>AUTHORIZED SIGNATORY</b> |
|---|---|--|

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



**HDD-272, PHASE III- NEAR JP CHOWK,  
RING ROAD NO - 2, KABIR NAGAR, RAIPUR, C.G. -492099  
PH - 0771 - 4027777 | email - ultimatenviro@gmail.com**

|  |  |                                     |  |                        |
|--|--|-------------------------------------|--|------------------------|
| <b>Name &amp; Address Of The Customer</b>  |  | <b>REPORT NO</b>                    | UES/TR/21-22/09969                       |                        |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST -MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | <b>LAB REF NO</b>                   | UES/21-22/AAQM/015901                    |                        |
|  |  | <b>DATE OF SAMPLING</b>             | 28/03/2022                               |                        |
|  |  | <b>DATE OF RECEIPT</b>              | 29/03/2022                               |                        |
|  |  | <b>DATE OF REPORT</b>               | 02/04/2022                               |                        |
|  |  | <b>DATE OF ANALYSIS</b>             | <b>START: 29/03/2022</b>                 | <b>END: 02/04/2022</b> |
| <b>SAMPLE DETAILS</b>  |  |                                     |  |                        |
| <b>MONITORING FOR</b>  | AMBIENT AIR QUALITY MONITORING   | <b>CUSTOMER REF. NO. &amp; DATE</b> | N/PO/SRV/2122/0045,<br>DTD. 24-JULY-2021 |                        |
| <b>SAMPLING LOCATION</b>   | OFFICE AREA, BANJIKHOL   |                                     |  |                        |
| <b>DURATION OF SAMPLING</b>  | 24 HOURS   | <b>SAMPLE COLLECTED BY</b>          | LABORATORY CHEMIST                       |                        |
| <b>SAMPLING PROCEDURE</b>  | AS PER METHOD REFERENCE  |                                     |  |                        |
| <b>SAMPLE QUANTITY/PACKING</b>   | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>RUBBER BLADDER: 1X1 NO. |                                     |  |                        |

| <b>TEST REPORT</b> |  |                   |        |                |                              |
|--------------------|--|-------------------|--------|----------------|------------------------------|
| SR. NO.            | PARAMETER                                | UNIT              | RESULT | NAAQM STANDARD | METHOD REFERENCE             |
| 1                  | Arsenic (as As)                          | ng/m <sup>3</sup> | 0.9    | 6.0            | CPCB Guidelines (AAS Method) |
| 2                  | Nickel (as Ni)                           | ng/m <sup>3</sup> | 1.7    | 20             | CPCB Guidelines (AAS Method) |
| 3                  | Lead (as Pb)                             | µg/m <sup>3</sup> | 0.05   | 1.0            | IS 5182 (Part 22) :2004      |
| 4                  | Mercury (Hg)                             | ng/m <sup>3</sup> | N.D.   | -              | EPA Method IO-5              |
| 5                  | Chromium (as Cr)                         | µg/m <sup>3</sup> | N.D.   | -              | EPA Method IO-5              |
| 6                  | Cadmium (as Cd)                          | µg/m <sup>3</sup> | N.D.   | -              | EPA Method IO-5              |
| 7                  | Ozone (O <sub>3</sub> ) *                | µg/m <sup>3</sup> | 8.8    | 180            | CPCB Guidelines Vol-I        |
| 8                  | Ammonia (NH <sub>3</sub> )               | µg/m <sup>3</sup> | 18.4   | 400            | CPCB Guidelines Vol-I        |
| 9                  | Benzene (C <sub>6</sub> H <sub>6</sub> ) | µg/m <sup>3</sup> | N.D.   | 5.0            | IS 5182 (Part 11) :2006      |
| 10                 | Benzo (a) Pyrene                         | ng/m <sup>3</sup> | N.D.   | 1.0            | IS 5182 (Part 12) :2014      |

Note: All results are on the basis of 24 hour sampling.

**REMARKS: \* THESE RESULTS ARE ON THE BASIS OF 1 HOUR SAMPLING, N.D.: NOT DETECTED**

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

|   |   |  |
|---|---|--|
| <br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br><b>AUTHORIZED SIGNATORY</b> |
|---|---|--|

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



**HDD-272, PHASE III- NEAR JP CHOWK,  
RING ROAD NO - 2, KABIR NAGAR, RAIPUR, C.G. -492099  
PH - 0771 - 4027777 | email - ultimatenviro@gmail.com**

| <b>Name &amp; Address Of The Customer</b> |  | <b>REPORT NO</b>                    | UES/TR/21-22/09970                       |
|---|--|-------------------------------------|--|
| <b>TO,</b>                                |  | <b>LAB REF NO</b>                   | UES/21-22/AAQM/015902                    |
| <b>HINDALCO INDUSTRIES LIMITED,</b>       |  | <b>DATE OF SAMPLING</b>             | 28/03/2022                               |
| <b>GARE PALMA - IV/4, COAL MINE,</b>      |  | <b>DATE OF RECEIPT</b>              | 29/03/2022                               |
| <b>VILLAGE - BANKHETA,</b>                |  | <b>DATE OF REPORT</b>               | 02/04/2022                               |
| <b>POST -MILUPARA,</b>                    |  | <b>DATE OF ANALYSIS</b>             | START: 29/03/2022      END: 02/04/2022   |
| <b>DISTT. - RAIGARH (C.G.) 496107</b>     |  |                                     |  |
| SAMPLE DETAILS                            |  |                                     |  |
| <b>MONITORING FOR</b>                     | AMBIENT AIR QUALITY MONITORING   | <b>CUSTOMER REF. NO. &amp; DATE</b> | N/PO/SRV/2122/0045,<br>DTD. 24-JULY-2021 |
| <b>SAMPLING LOCATION</b>                  | OFFICE AREA, BANKHETA  |                                     |  |
| <b>DURATION OF SAMPLING</b>               | 24 HOURS   | <b>SAMPLE COLLECTED BY</b>          | LABORATORY CHEMIST                       |
| <b>SAMPLING PROCEDURE</b>                 | AS PER METHOD REFERENCE  |                                     |  |
| <b>SAMPLE QUANTITY/PACKING</b>            | FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO.<br>SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE<br>RUBBER BLADDER: 1X1 NO. |                                     |  |

| TEST REPORT |  |                   |        |                |                              |
|-------------|--|-------------------|--------|----------------|------------------------------|
| SR. NO.     | PARAMETER                                | UNIT              | RESULT | NAAQM STANDARD | METHOD REFERENCE             |
| 1           | Arsenic (as As)                          | ng/m <sup>3</sup> | 0.4    | 6.0            | CPCB Guidelines (AAS Method) |
| 2           | Nickel (as Ni)                           | ng/m <sup>3</sup> | 1.8    | 20             | CPCB Guidelines (AAS Method) |
| 3           | Lead (as Pb)                             | µg/m <sup>3</sup> | 0.02   | 1.0            | IS 5182 (Part 22) :2004      |
| 4           | Mercury (Hg)                             | ng/m <sup>3</sup> | N.D.   | -              | EPA Method IO-5              |
| 5           | Chromium (as Cr)                         | µg/m <sup>3</sup> | N.D.   | -              | EPA Method IO-5              |
| 6           | Cadmium (as Cd)                          | µg/m <sup>3</sup> | N.D.   | -              | EPA Method IO-5              |
| 7           | Ozone (O <sub>3</sub> ) *                | µg/m <sup>3</sup> | 10.0   | 180            | CPCB Guidelines Vol-I        |
| 8           | Ammonia (NH <sub>3</sub> )               | µg/m <sup>3</sup> | 21.2   | 400            | CPCB Guidelines Vol-I        |
| 9           | Benzene (C <sub>6</sub> H <sub>6</sub> ) | µg/m <sup>3</sup> | N.D.   | 5.0            | IS 5182 (Part 11) :2006      |
| 10          | Benzo (a) Pyrene                         | ng/m <sup>3</sup> | N.D.   | 1.0            | IS 5182 (Part 12) :2014      |

Note: All results are on the basis of 24 hour sampling.

**REMARKS: \* THESE RESULTS ARE ON THE BASIS OF 1 HOUR SAMPLING, N.D.: NOT DETECTED**

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

|   |   |  |
|---|---|--|
| <br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br><b>AUTHORIZED SIGNATORY</b> |
|---|---|--|

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

# Annexure-10



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

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

|   |   |                  |                          |
|---|---|------------------|--------------------------|
| <i>Name &amp; Address of The Customer</i>   |   | REPORT NO.       | UES/TR/21-22/3508        |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST - MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |   | LAB REF NO.      | UES/21-22/N/6290-6299    |
|   |   | DATE OF REPORT   | 01/11/2021               |
|   |   | DATE OF SAMPLING | 27/10/2021 to 28/10/2021 |
| <b>SAMPLE DETAILS</b>   |   |                  |                          |
| MONITORING FOR  | NOISE LEVEL MONITORING                                    |                  |                          |
| CUSTOMER REF. NO. & DATE  | N/PO/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

| LOCATION                            | UNIT  | RESULT   |            | LIMIT (INDUSTRIAL ZONE)  |            |
|-------------------------------------|-------|----------|------------|--------------------------|------------|
|                                     |       | DAY TIME | NIGHT TIME | DAY TIME                 | NIGHT TIME |
| OFFICE AREA, BANJIKHOL              | dB(A) | 55       | 42         | 75                       | 70         |
| INCLINE AREA, BANJIKHOL             | dB(A) | 46       | 38         |                          |            |
| BUNKER AREA, BANJIKHOL              | dB(A) | 48       | 36         |                          |            |
| DG SET AREA, BANJIKHOL              | dB(A) | 52       | 44         |                          |            |
| WEIGHBRIDGE AREA, BANJIKHOL         | dB(A) | 60       | 48         |                          |            |
| TRUCK PARKING AREA, BANJIKHOL       | dB(A) | 54       | 42         |                          |            |
| OFFICE AREA, BANKHETA               | dB(A) | 68       | 48         |                          |            |
| WEIGHBRIDGE AREA, BANKHETA          | dB(A) | 56       | 44         |                          |            |
| LOCATION                            | UNIT  | RESULT   |            | LIMIT (RESIDENTIAL ZONE) |            |
|                                     |       | DAY TIME | NIGHT TIME | DAY TIME                 | NIGHT TIME |
| <b>Outside Plant</b>                |       |          |            |                          |            |
| BANJIKHOL VILLAGE (NEAR ANGARBADI)  | dB(A) | 50       | 36         | 55                       | 45         |
| BELJOR VILLAGE (NEAR MANBODH HOUSE) | dB(A) | 46       | 39         |                          |            |

**REMARKS: RESULTS ARE AS ABOVE**

*Terms & conditions*

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

|                 |  |  |
|-----------------|--|--|
| <br>REVIEWED BY |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>AUTHORIZED SIGNATORY |
|-----------------|--|--|

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

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



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

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

|   |   |                       |                          |
|---|---|-----------------------|--------------------------|
| <i>Name &amp; Address of The Customer</i>   |   | REPORT NO.            | UES/TR/21-22/04181       |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST - MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |   | LAB REF NO.           | UES/21-22/N/07495-07503  |
|   |   | DATE OF REPORT        | 01/12/2021               |
|   |   | DATE OF SAMPLING      | 23/11/2021 to 24/11/2021 |
|   |   | <b>SAMPLE DETAILS</b> |                          |
| MONITORING FOR  | NOISE LEVEL MONITORING                                    |                       |                          |
| CUSTOMER REF. NO. & DATE  | N/PO/SRY/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

| LOCATION                            | UNIT  | RESULT   |            | LIMIT (INDUSTRIAL ZONE)  |            |
|-------------------------------------|-------|----------|------------|--------------------------|------------|
|                                     |       | DAY TIME | NIGHT TIME | DAY TIME                 | NIGHT TIME |
| OFFICE AREA, BANJIKHOL              | dB(A) | 54       | 40         | 75                       | 70         |
| INCLINE AREA, BANJIKHOL             | dB(A) | 44       | 36         |                          |            |
| BUNGER AREA, BANJIKHOL              | dB(A) | 46       | 34         |                          |            |
| DG SET AREA, BANJIKHOL              | dB(A) | 50       | 42         |                          |            |
| NEIGHBRIGH AREA, BANJIKHOL          | dB(A) | 58       | 46         |                          |            |
| TRUCK PARKING AREA, BANJIKHOL       | dB(A) | 52       | 40         |                          |            |
| OFFICE AREA, BANKHETA               | dB(A) | 66       | 46         |                          |            |
| NEIGHBRIGH AREA, BANKHETA           | dB(A) | 54       | 42         |                          |            |
| LOCATION                            | UNIT  | RESULT   |            | LIMIT (RESIDENTIAL ZONE) |            |
|                                     |       | DAY TIME | NIGHT TIME | DAY TIME                 | NIGHT TIME |
| <b>Outside Plant</b>                |       |          |            |                          |            |
| BANJIKHOL VILLAGE (NEAR ANGANDADI)  | dB(A) | 48       | 34         | 55                       | 45         |
| BELJOR VILLAGE (NEAR MANBOIH HOUSE) | dB(A) | 44       | 38         |                          |            |

**REMARKS: RESULTS ARE AS ABOVE**

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

|                                    |  |   |
|------------------------------------|--|---|
| <br>01/12/21<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>01/12/21<br><b>AUTHORIZED SIGNATORY</b> |
|------------------------------------|--|---|

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



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

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|   |   |                       |                          |
|---|---|-----------------------|--------------------------|
| <i>Name &amp; Address of The Customer</i>   |   | REPORT NO.            | UES/TR/21-22/04921       |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST - MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |   | LAB REF NO.           | UES/21-22/N/08760-08769  |
|   |   | DATE OF REPORT        | 01/01/2022               |
|   |   | DATE OF SAMPLING      | 22/12/2021 to 23/12/2021 |
|   |   | <b>SAMPLE DETAILS</b> |                          |
| MONITORING FOR  | NOISE LEVEL MONITORING                                    |                       |                          |
| CUSTOMER REF. NO. & DATE  | N/PO/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

| LOCATION                             | UNIT  | RESULT   |            | LIMIT (INDUSTRIAL ZONE)  |            |
|--------------------------------------|-------|----------|------------|--------------------------|------------|
|                                      |       | DAY TIME | NIGHT TIME | DAY TIME                 | NIGHT TIME |
| OFFICE AREA, BANJINGHOL              | dB(A) | 56       | 42         | 75                       | 70         |
| INCLINE AREA, BANJINGHOL             | dB(A) | 46       | 38         |                          |            |
| BUNKER AREA, BANJINGHOL              | dB(A) | 48       | 36         |                          |            |
| DG SET AREA, BANJINGHOL              | dB(A) | 52       | 44         |                          |            |
| WEIGHBRIDGE AREA, BANJINGHOL         | dB(A) | 60       | 48         |                          |            |
| TRUCK PARKING AREA, BANJINGHOL       | dB(A) | 54       | 42         |                          |            |
| OFFICE AREA, BANKHETA                | dB(A) | 68       | 48         |                          |            |
| WEIGHBRIDGE AREA, BANKHETA           | dB(A) | 56       | 44         |                          |            |
| LOCATION                             | UNIT  | RESULT   |            | LIMIT (RESIDENTIAL ZONE) |            |
|                                      |       | DAY TIME | NIGHT TIME | DAY TIME                 | NIGHT TIME |
| <b>Outside Plant</b>                 |       |          |            |                          |            |
| BANJINGHOL VILLAGE (NEAR ANGANEBAJI) | dB(A) | 50       | 36         | 55                       | 45         |
| BELJOR VILLAGE (NEAR MANBODH HOUSE)  | dB(A) | 46       | 40         |                          |            |

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|                                      |  |   |
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| <br>01/01/2022<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>01/01/2022<br><b>AUTHORIZED SIGNATORY</b> |
|--------------------------------------|--|---|

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





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|  |   |                           |
|--|---|---------------------------|
| <b>Name &amp; Address of The Customer</b><br><b>TO,</b><br><b>HINDALCO INDUSTRIES LIMITED,</b><br><b>GARE PALMA - IV/4, COAL MINE,</b><br><b>VILLAGE - BANKHETA,</b><br><b>POST - MILUPARA,</b><br><b>DISTT. - RAIGARH (C.G.) 496107</b> | REPORT NO.  | UES/TR/21-22/06003        |
|  | LAB REF NO.   | UES/21-22/N/010322-010331 |
|  | DATE OF REPORT  | 02/02/2022                |
|  | DATE OF SAMPLING  | 24/01/2022 to 25/01/2022  |
| <b>SAMPLE DETAILS</b>  |   |                           |
| 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

| LOCATION                            | UNIT  | RESULT   |            | LIMIT (INDUSTRIAL ZONE)  |            |
|-------------------------------------|-------|----------|------------|--------------------------|------------|
|                                     |       | DAY TIME | NIGHT TIME | DAY TIME                 | NIGHT TIME |
| OFFICE AREA, BANJIKHOL              | dB(A) | 50       | 46         | 75                       | 70         |
| INCLINE AREA, BANJIKHOL             | dB(A) | 52       | 42         |                          |            |
| BUNKER AREA, BANJIKHOL              | dB(A) | 40       | 40         |                          |            |
| DG SET AREA, BANJIKHOL              | dB(A) | 54       | 48         |                          |            |
| WEIGHBRIGE AREA, BANJIKHOL          | dB(A) | 66       | 50         |                          |            |
| TRUCK PARKING AREA, BANJIKHOL       | dB(A) | 58       | 46         |                          |            |
| OFFICE AREA, BANKHETA               | dB(A) | 60       | 46         |                          |            |
| WEIGHBRIGE AREA, BANKHETA           | dB(A) | 52       | 40         |                          |            |
| LOCATION                            | UNIT  | RESULT   |            | LIMIT (RESIDENTIAL ZONE) |            |
|                                     |       | DAY TIME | NIGHT TIME | DAY TIME                 | NIGHT TIME |
| <b>Outside Plant</b>                |       |          |            |                          |            |
| BANJIKHOL VILLAGE (NEAR ANGANBADI)  | dB(A) | 48       | 32         | 55                       | 45         |
| BELJOR VILLAGE (NEAR MANBODH HOUSE) | dB(A) | 44       | 36         |                          |            |

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|   |   |                       |                           |
|---|---|-----------------------|---------------------------|
| <i>Name &amp; Address of The Customer</i>   |   | REPORT NO.            | UES/TR/21-22/07931        |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST - MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |   | LAB REF NO.           | UES/21-22/N/013115-013124 |
|   |   | DATE OF REPORT        | 01/03/2022                |
|   |   | DATE OF SAMPLING      | 24/02/2022 to 25/02/2022  |
|   |   | <b>SAMPLE DETAILS</b> |                           |
| MONITORING FOR  | NOISE LEVEL MONITORING                                    |                       |                           |
| CUSTOMER REF. NO. & DATE  | N/PO/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                                |                       |                           |

| <b>TEST REPORT</b>                 |       |          |            |                          |            |
|------------------------------------|-------|----------|------------|--------------------------|------------|
| LOCATION                           | UNIT  | RESULT   |            | LIMIT (INDUSTRIAL ZONE)  |            |
|                                    |       | DAY TIME | NIGHT TIME | DAY TIME                 | NIGHT TIME |
| OFFICE AREA, BANJIKHOL             | dB(A) | 57       | 44         | 75                       | 70         |
| INCLINE AREA, BANJIKHOL            | dB(A) | 49       | 40         |                          |            |
| BUNKER AREA, BANJIKHOL             | dB(A) | 54       | 38         |                          |            |
| DG SET AREA, BANJIKHOL             | dB(A) | 56       | 46         |                          |            |
| NEIGHBORHOOD AREA, BANJIKHOL       | dB(A) | 59       | 52         |                          |            |
| TRUCK PARKING AREA, BANJIKHOL      | dB(A) | 54       | 44         |                          |            |
| OFFICE AREA, BANKHETA              | dB(A) | 55       | 42         |                          |            |
| NEIGHBORHOOD AREA, BANKHETA        | dB(A) | 58       | 44         |                          |            |
| LOCATION                           | UNIT  | RESULT   |            | LIMIT (RESIDENTIAL ZONE) |            |
|                                    |       | DAY TIME | NIGHT TIME | DAY TIME                 | NIGHT TIME |
| <b>Outside Plant</b>               |       |          |            |                          |            |
| BANJIKHOL VILLAGE (NEAR ANGANBADI) | dB(A) | 46       | 36         | 55                       | 45         |
| BELFOR VILLAGE (NEAR MANSOH HOUSE) | dB(A) | 42       | 34         |                          |            |

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|------------------------------------|--|---|
| <br>01/03/22<br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br>01/03/2022<br><b>AUTHORIZED SIGNATORY</b> |
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-----End of the test report-----

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



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|---|---|-----------------------|---------------------------|
| <i>Name &amp; Address of The Customer</i>   |   | REPORT NO.            | UES/TR/21-22/08938        |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA,<br/>POST - MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |   | LAB REF NO.           | UES/21-22/N/014631-014640 |
|   |   | DATE OF REPORT        | 02/04/2022                |
|   |   | DATE OF SAMPLING      | 28/03/2022 to 29/03/2022  |
|   |   | <b>SAMPLE DETAILS</b> |                           |
| MONITORING FOR  | NOISE LEVEL MONITORING                                    |                       |                           |
| CUSTOMER REF. NO. & DATE  | N/PO/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                                |                       |                           |

| <b>TEST REPORT</b>                  |       |          |            |                          |            |
|-------------------------------------|-------|----------|------------|--------------------------|------------|
| LOCATION                            | UNIT  | RESULT   |            | LIMIT (INDUSTRIAL ZONE)  |            |
|                                     |       | DAY TIME | NIGHT TIME | DAY TIME                 | NIGHT TIME |
| OFFICE AREA, BANJIKHOL              | dB(A) | 66       | 50         | 75                       | 70         |
| INCLINE AREA, BANJIKHOL             | dB(A) | 62       | 56         |                          |            |
| BUNKER AREA, BANJIKHOL              | dB(A) | 64       | 52         |                          |            |
| DG SET AREA, BANJIKHOL              | dB(A) | 62       | 54         |                          |            |
| WEIGHBRIDGE AREA, BANJIKHOL         | dB(A) | 68       | 58         |                          |            |
| TRUCK PARKING AREA, BANJIKHOL       | dB(A) | 66       | 56         |                          |            |
| OFFICE AREA, BANKHETA               | dB(A) | 62       | 58         |                          |            |
| WEIGHBRIDGE AREA, BANKHETA          | dB(A) | 65       | 54         |                          |            |
| LOCATION                            | UNIT  | RESULT   |            | LIMIT (RESIDENTIAL ZONE) |            |
|                                     |       | DAY TIME | NIGHT TIME | DAY TIME                 | NIGHT TIME |
| <b>Outside Plant</b>                |       |          |            |                          |            |
| BANJIKHOL VILLAGE (NEAR ANGANEADI)  | dB(A) | 52       | 42         | 55                       | 45         |
| BELFOR VILLAGE (NEAR MANBODH HOUSE) | dB(A) | 50       | 40         |                          |            |

**REMARKS: RESULTS ARE AS ABOVE**

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|---|---|---|
| <br><b>REVIEWED BY</b> |  | For ULTIMATE ENVIROLYTICAL SOLUTIONS<br><br><b>AUTHORIZED SIGNATORY</b> |
|---|---|---|

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

# Annexure-10A

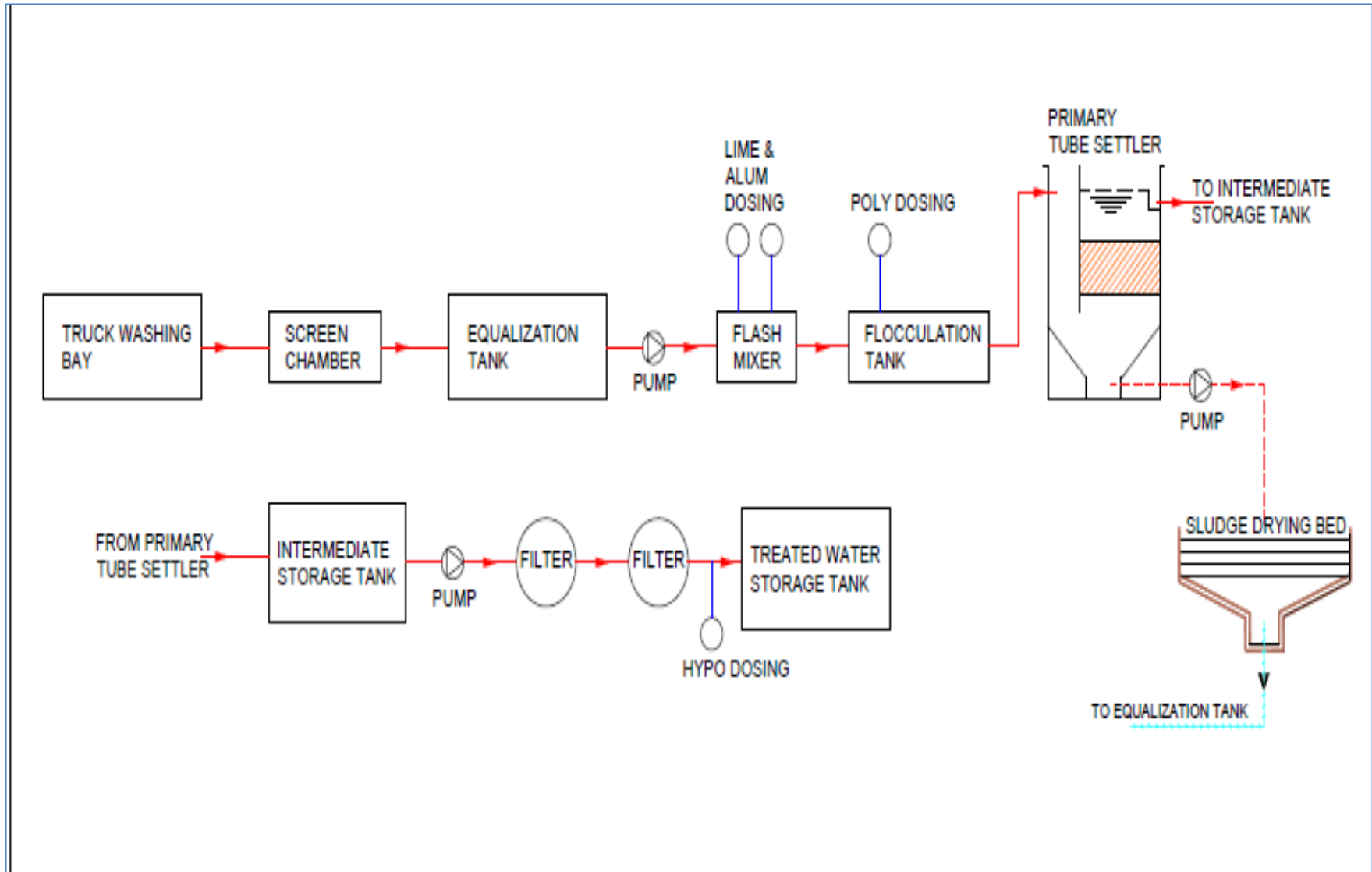


ETP of capacity 50 m<sup>3</sup>/day at Bankheta  
– GP IV/4 Coal Mine



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

# Process Flow Diagram of ETP



# Annexure-10B



HDD-272, Phase III - Near JP Chowk  
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|   |  |                                    |   |                 |
|---|--|------------------------------------|---|-----------------|
| <i>Name &amp; Address Of The Customer</i>   |  | <b>REPORT NO</b>                   | UES/TR/21-22/08934                        |                 |
| <b>TO,<br/>HINDALCO INDUSTRIES LIMITED,<br/>GARE PALMA - IV/4, COAL MINE,<br/>VILLAGE - BANKHETA, POST MILUPARA,<br/>DISTT. - RAIGARH (C.G.) 496107</b> |  | <b>LAB REF NO</b>                  | UES/21-22/W/014627                        |                 |
|   |  | <b>DATE OF SAMPLING</b>            | 28/03/2022                                |                 |
|   |  | <b>DATE OF RECEIPT</b>             | 29/03/2022                                |                 |
|   |  | <b>DATE OF REPORT</b>              | 02/04/2022                                |                 |
|   |  | <b>DATE OF ANALYSIS</b>            | START: 29/03/2022                         | END: 02/04/2022 |
|   |  | <b>SAMPLE DETAILS</b>              |   |                 |
| <b>SAMPLE TYPE</b>  | <b>WASTE WATER</b>   | <b>ORDER /REFERENCE:</b>           | N/PO/SRV/2122/0045, DTD. 24-<br>JULY-2021 |                 |
| <b>CUSTOMER SAMPLE ID</b>   | ETP INLET & OUTLET, BANKHETA   | <b>SAMPLE CONDITION AT RECEIPT</b> | OK  |                 |
| <b>PACKING OF SAMPLE</b>  | 3 L X 1 NO. PVC CAN<br>1 L X 1 NO. PVC CAN<br>1 L X 1 NO. GLASS BOTTLE | <b>SAMPLE COLLECTED BY</b>         | CHEMIST                                   |                 |
| <b>SAMPLING PROCEDURE</b>   | IS:3025(PART I):1987 RA 2003; APHA<br>22ND ED. 2012, 1060-B, 1-39      | <b>QUANTITY RECEIVED</b>           | 5 LTR                                     |                 |

Report No. 08934

### 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 |
|---------|----------------------------|-------|---|--|--------------------|---------------------|
|         |                            |       |   |  |                    |                     |
| 1       | Colour                     | Hazen | APHA 22 <sup>nd</sup> Ed. 2012,2120-B,2-6                 | See 6 of Annexure-I  | 4.5                | <1.0                |
| 2       | Odour                      | -     | APHA 22 <sup>nd</sup> Ed. 2012,2120-B,2-6                 | See 6 of Annexure-I  | Agreeable          | Agreeable           |
| 3       | Temperature                | °C    | APHA 22 <sup>nd</sup> Ed.2012,2130-B,2-13                 | Shall not exceed 5°C above the receiving water temperature                         | 25.8               | 25.2                |
| 4       | pH                         | -     | APHA 22 <sup>nd</sup> Ed.2012,4500-H <sup>+</sup> -B,4-92 | 5.5 to 9.0   | 7.64               | 7.18                |
| 5       | Total Residual Chlorine    | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,4500-Cl-G,4-69              | 1.0  | N.D.               | N.D.                |
| 6       | Total Suspended Solids     | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,2540- D, 2-66               | 100  | 182.0              | 22.0                |
| 7       | Dissolved Phosphate (as P) | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,4500-P-C,4-153              | 5.0  | 0.62               | 0.32                |
| 8       | Fluoride (as F)            | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,4500-F-B &D,4-84 & 87       | 2.0  | 0.8                | 0.4                 |
| 9       | Lead (as Pb)               | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18                | 0.1  | N.D.               | N.D.                |
| 10      | Zinc (as Zn)               | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18                | 5.0  | 0.41               | 0.08                |
| 11      | Copper (as Cu)             | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3111-B, 3-18                | 3.0  | N.D.               | N.D.                |
| 12      | Cadmium (as Cd)            | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3500-Cd, 3-105              | 2.0  | N.D.               | N.D.                |
| 13      | Mercury (as Hg)            | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3112-B, 3-23                | 0.01   | N.D.               | N.D.                |
| 14      | Arsenic (as As)            | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38                | 0.2  | N.D.               | N.D.                |
| 15      | Selenium (as Se)           | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3114-C, 3-38                | 0.05   | N.D.               | N.D.                |
| 16      | Total Chromium (as Cr)     | mg/L  | APHA 22 <sup>nd</sup> Ed.2012,3500-Cr-B,3-69              | 2.0  | N.D.               | N.D.                |





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Report No. 08934

### 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 <sup>nd</sup> Ed.2012, 5520-B, 5-17 | 250  | 86.0               | 24.0                |
| 18      | Biochemical Oxygen Demand (BOD)                          | mg/L | IS 3025 (Part 44):1993, RA 2003             | 30   | 12.8               | 4.6                 |
| 19      | Oil & Grease   | mg/L | IS 3025 (Part 39):1991, RA 2003             | 10   | N.D.               | N.D.                |
| 20      | Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> 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.

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*Phaelf*  
02/04/22

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

*Amrinder*  
02/04/22

AUTHORIZED SIGNATORY

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

# 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 2398/मुख्या./वैज्ञा./छ.ग.प.सं.मं./2021 नवा रायपुर अटल नगर, दिनांक 17/8/2021  
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 क्रमांक UES/2021-22/0042, दिनांक 31/07/2021.
  2. मंडल मुख्यालय का पत्र क्रमांक 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.

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कृपया उपरोक्त विषयांतर्गत संदर्भित पत्रों का अवलोकन करें। लेख है कि मंडल मुख्यालय द्वारा पत्र क्रमांक 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 अनुक्रम में छत्तीसगढ़ पर्यावरण संरक्षण मंडल द्वारा जल (प्रदूषण निवारण तथा नियंत्रण) अधिनियम, 1974 की धारा 17 (2) एवं वायु (प्रदूषण निवारण तथा नियंत्रण) अधिनियम, 1981 की धारा 17 (2) के अंतर्गत प्रदत्त मान्यता की वैधता दिनांक 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।

Head Office  
C.G. Environment Conservation Board  
Parvatas Bhawan, North Block, Sec-19  
Atal Nagar, Dist-Raipur (C.G.) 492002

सदस्य सचिव

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

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

सदस्य सचिव

छत्तीसगढ़ पर्यावरण संरक्षण मंडल,  
नवा रायपुर अटल नगर, 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 21<sup>st</sup> February, 2020

To

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

**Subject: -Recognition of M/s Ultimate Envirollytical 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 61<sup>st</sup> 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 Envirollytical 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 Envirollytical 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 (NO<sub>2</sub>), Sulphur dioxide (SO<sub>2</sub>), Total Suspended particulate matter, Respirable suspended particulate matter (PM<sub>10</sub>), 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:

1. 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.
3. 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](http://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**  
**(October 2021 to March 2022)**

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

| <b>Particulars</b>                 | <b>Amount (Lakh)</b> |
|------------------------------------|----------------------|
| Water Quality Management           | 17.25                |
| Air Quality Management             | 50.51                |
| Plantation, Green Belt Development | 0.09                 |
| Others                             | 1.89                 |
| <b>Total</b>                       | <b>69.74</b>         |