



# ADHUNIK POWER & NATURAL RESOURCES LIMITED

WORKS : Village - Padampur, Behind P.G.C.I.L. Substation,  
Adityapur - Kandra Road, Saraikela - Kharsawan, PIN - 832402 Jharkhand  
Phone : +91 - 657 - 6628400, Fax : +91 - 657 - 6628440  
CIN - U40101WB2005PLC102935

Ref: MOE&F, RNC/HYC/KKJ/261122/02

Dated: 26.11.2022

To,

Regional Office (ECZ),  
Ministry of Environment, Forest and Climate Change,  
Bungalow No. A-2, Shyamali Colony,  
Ranchi - 834002

Sub:- Submission of Half yearly compliance status report (Unit II) for the period - April 2022 to September 2022 -Reg.

Ref:- MoEF EC letter No.J-13012/8/2009-IA.II(T), Dated 09th May 2011.

Sir,

With reference to the above referred Environmental Clearance, we are pleased to submit herewith the half yearly compliance status report (Unit II) for the period of April 2022 to September 2022.

This is for your reference and record, please.

Thanking you,

For Adhunik Power & Natural resources Limited

(Authorized Signatory)

Encl: As Above

Copy to:

1. Central Pollution Control Board, Kolkata
2. Member Secretary, Jharkhand State Pollution Control Board, Jharkhand
3. Regional Officer, JSPCB, Jamshedpur



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# REPORT

**ENVIRONMENTAL COMPLIANCE STATUS REPORT  
FOR  
EXPANSION OF 1X270 MW COAL BASED POWER  
PLANT  
(Unit II)**



**APRIL 2022 – SEPTEMBER 2022**

**Adhunik Power & Natural Resources Limited  
Village: Padampur, Behind PGCIL Substation  
Kandra Chouka Road, Saraikela-Kharsawan  
Jharkhand**



| <b>Adhunik Power &amp; Natural Resources Limited</b><br><b>Vill: Padampur, Behind PGCIL Substation, Kandra Chouka Road, Saraikela-Kharsawan, Jharkhand</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                           |
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| <b>Environmental Clearance Letter No: J13012/8/2009-IA .II (T) dtd 9th May 2011.</b>                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                           |
| <b>Period Of Compliances: April 2022 to September 2022</b>                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                           |
| <b>Sl No</b>                                                                                                                                               | <b>EC Conditions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Status as on 30<sup>st</sup> September 2022</b>                                                                                                                                                                                                                                                                                                        |
| <b>A. Specific Conditions:</b>                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                           |
| i.                                                                                                                                                         | Environmental clearance for the proposed expansion shall be applicable only for addition of 1x270 MW out of proposed addition of 3x270. However at a later stage when firm coal linkage for second and third units of 270 MW are also available, the project proponent may request the Ministry for inclusion of second and third units i.e. 2x270 MW, which the Ministry shall consider appropriately.                                                                                                         | Noted                                                                                                                                                                                                                                                                                                                                                     |
| ii.                                                                                                                                                        | The Ministry had issued a draft Notification on 30 <sup>th</sup> March, 2011 vide S.O. 691(E) under the Environment (Protection ) Act, 1986 notifying the areas upto 5 km from the boundary of the protected area of Dalma Wildlife Sanctuary in the State of Jharkhand as the Eco-sensitive Zone. The necessity of obtaining environmental clearance from the National Board for Wild life would arise only if the proposed project area falls within the boundary of the finally notified eco-sensitive zone. | As per notification date 29 <sup>th</sup> March 2012 project boundary are beyond the stipulated distance from the boundary of the protected area of Dalma Wildlife Sanctuary in the State of Jharkhand as the Eco-sensitive Zone. Notification regarding nearest distance from Dalma wildlife sanctuary enclosed as <b>Annexure I.</b><br><b>Complied</b> |
| iii.                                                                                                                                                       | Wildlife conservation plan shall be implemented during the development of project itself and the status of implementation shall be submitted to the Ministry from time to time.                                                                                                                                                                                                                                                                                                                                 | The Wild Life Management Plan (WLMP) has prepared already been approved by PCCF, Ranchi on May'10.2010. <b>Complied</b>                                                                                                                                                                                                                                   |
| iv.                                                                                                                                                        | Vision document specifying prospective plan for the site shall be formulated and submitted to the Ministry within six months.                                                                                                                                                                                                                                                                                                                                                                                   | Vision document report has submitted at MoEF on 30 <sup>th</sup> Dec 2011. <b>Complied</b>                                                                                                                                                                                                                                                                |
| v.                                                                                                                                                         | Possibility for harnessing solar power within the premises of the plant (particularly at available roof tops) shall be examined and status of implementation shall be submitted.                                                                                                                                                                                                                                                                                                                                | Installation of solar light system in all vulnerable area are completed.                                                                                                                                                                                                                                                                                  |
| vi.                                                                                                                                                        | Transport of coal shall be by rail only. The project proponent shall accordingly take up the matter with the Railways. Status of implementation shall be submitted to the Regional Office of the Ministry from time to time.                                                                                                                                                                                                                                                                                    | As per the Environment (Protection) Amendment Rules, 2020 dated 21 May 2020, Transport of coal by covered trucks, has been permitted.                                                                                                                                                                                                                     |
| vii.                                                                                                                                                       | A study shall be undertaken by an organization of repute such as RIT, Jamshedpur on source sustainability of water, based on the data of the source of water (Subarnarekha River) for the last 50 years and a report submitted within six months.                                                                                                                                                                                                                                                               | Water sustainability report has been prepared by IIT Kharagpur. Report was already submitted to MoEF BBS dated 11.11.11. <b>Complied</b>                                                                                                                                                                                                                  |



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| viii. | Water usage shall be restricted to 30 MCM.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Complied.                                                                                                                                                                                                                                                                                                                                                                     |
| ix.   | The project proponent shall seriously undertake rain water harvesting measures and shall develop water storage capacity for a larger period not less than 30 days storage before commissioning of the plant. Central Groundwater Authority/ Board shall be consulted for finalization of appropriate rainwater harvesting technology/design within a period of three months from the date of this clearance and details shall be furnished. The design of rain water harvesting shall comprise of rain water collection from the built up and open area in the plant premises. Action plan and road map for implementation shall be submitted to the Ministry within six months. | The Rain water harvesting report has already been submitted and approved from CGWA, Ranchi.<br>13 no Rain water harvesting structures has been constructed in accordance with the approved rain water harvesting plan.<br><b>Complied</b>                                                                                                                                     |
| x.    | Existing de-generated water bodies (if any) in the study area shall be regenerated at the project proponents expenses in consultation with the state govt.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Degenerated pond has been renovated as per request from local people/Gram Panchayat .                                                                                                                                                                                                                                                                                         |
| xi.   | Hydrogeology of the area shall be reviewed annually from an institute/ organization of repute to assess impact of surface water and ground regime (especially around ash dyke). In case and deterioration is observed specific mitigation measures shall be undertaken and reports/ data of water quality monitored regularly and maintained shall be submitted to the Regional Office of the Ministry.                                                                                                                                                                                                                                                                          | Hydrogeology study is in process and shall be submitted shortly.<br>Regular monitoring of ground water quality in and around ash pond area including heavy metals is being carried out periodically. <b>Ground water analysis report of upstream &amp; Downstream of Ash pond in compared with baseline data for the month of September 2022 are enclosed as Annexure II.</b> |
| xii.  | Source of water for meeting the requirement during lean season shall be specified and submitted to the Regional Office of the Ministry within three months.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Lean season data has already submitted To MoEF BBS on 19th aug 2011. <b>Complied</b>                                                                                                                                                                                                                                                                                          |
| xiii. | No ground water shall be extracted for use in operation of the power plant even in lean season.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Ground water has not extracted for operation of the Power Plant.                                                                                                                                                                                                                                                                                                              |
| xiv.  | No water bodies (including natural drainage system) in the area shall be disturbed due to activities associated with the setting up / operation of the power plant.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Natural drainage system has not been disturbed.                                                                                                                                                                                                                                                                                                                               |
| xv.   | Minimum required environmental flow suggested by the Competent Authority of the State Govt. shall be maintained in the Channel/ Rivers (as applicable) even in lean season.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | We are regular in touch with State Government ,if any suggestion will received from State Government , we shall adhere as per guidelines and same shall be inform to your good office.                                                                                                                                                                                        |
| xvi.  | COC of 5.0 shall be adopted.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | COC 5.0 has been considered for cooling tower design.                                                                                                                                                                                                                                                                                                                         |
| xvii. | Regular monitoring of ground water level shall be carried out by establishing a network of existing wells and constructing new piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metals (Hg, Cr,As,Pb) and records maintained and submitted to the Regional Office of this Ministry. The data                                                                                                                                                                                                                                                                                                                                         | Regular monitoring of ground water in and around ash pond area including heavy metals is being carried out & report submitted to MoEF. <b>Ground water analysis report of upstream &amp; Downstream of Ash pond compared with baseline data for the month of September 2022 are enclosed as Annexure II.</b><br>Regular monitoring of ground water level are                  |



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|        | so obtained should be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project.                                                                                                                                                                                                                                    | done through Piezometer installed at following locations:<br>1. 22°50'20.9"N 86°03'27.4"E<br>2. 22°50'09.5"N 86°03'48.1"E<br>3. 22°49'50.1"N 86°03'37.9"E<br>Photographs of installed Piezometers are enclosed as <b>Annexure III</b> .                                                                                                                                                                                                    |
| xviii. | Monitoring surface water quality in the area shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken. | <b>Ground water analysis report of upstream &amp; Downstream of Ash pond and Surface Water Analysis report for the month of September 2022 are enclosed as Annexure II &amp; Annexure IV respectively.</b>                                                                                                                                                                                                                                 |
| xix.   | Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved. The leveling in plant area should be minimum with no or minimal disturbance to the natural drainage of the area.                                                                               | Complied.                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| xx.    | Provision for installation of FGD shall be provided for future use                                                                                                                                                                                                                                                                                                                   | FGD space is available on site for future use and installation of FGD are initiated.                                                                                                                                                                                                                                                                                                                                                       |
| xxi.   | The project proponent shall undertake measures and ensure that no fugitive fly ash emissions take place at any point of time.                                                                                                                                                                                                                                                        | Effective provision for dust suppression system has been strictly implemented at all dust prone areas such as road, coal stock yard, Truck tippler, Ash pond & others areas. Fugitive emission could not be occurred due to nature of wet condition of bottom ash. However additional arrangement of water sprinkling has been implemented in case of emission occurs. In addition, 03 No Water tankers are deployed for dust suppression. |
| xxii.  | Stacks of 275 m height shall be installed and provided with continuous online monitoring equipments for SO <sub>x</sub> , NO <sub>x</sub> and PM <sub>2.5</sub> & PM <sub>10</sub> . Exit velocity of flue gases shall not be less than 22 m/sec. Mercury emissions from stack may also monitored on periodic basis.                                                                 | Twin flue chimney of 275m height has constructed for proper dispersion of flue gases. Online monitoring equipment has installed at chimney. Hg concentration is well within prescribed limits.<br><b>Complied</b>                                                                                                                                                                                                                          |
| xxiii. | High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm <sup>3</sup> .                                                                                                                                                                                                                                    | High efficient ESPs of 32 fields have installed to ensure control PM emission in flue gas.<br><b>Stack Monitoring report from For the month of September 2022 are enclosed as Annexure V.</b>                                                                                                                                                                                                                                              |
| xxiv.  | Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.                                                                                                                                                             | Necessary mitigation measures in accordance with EMP and EC conditions has taken to control fugitive emissions from ash storage/transfer and coal handling plant such as installation and operation of bag filters collectors, use of water spray systems and enclosed conveyors with well designed, extraction and filtration equipment on transfer points.<br><b>Complied</b>                                                            |
| xxv.   | Utilization of 100% Fly Ash generated shall be made from 4 <sup>th</sup> year of operation. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.                                                                                                                                                                                     | Fly Ash utilization are adhered in compliance with MoEF&CC notification dated 31.12.2021. Fly Ash generation & Utilization report (April 2022 to September 2022) are enclosed as <b>Annexure VI</b> .                                                                                                                                                                                                                                      |



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| xxvi.   | Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry form. Mercury and other heavy metals (As,Hg, Cr, Pb etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. No ash shall be disposed off in low lying area.                                                                                                              | 02 No Silos has Constructed to storage of fly ash. Monitoring of mercury and other heavy metals (As, Hg, Cr, Pd etc.) in the bottom ash and also in the effluents emanating from the ash pond is being done periodically. <b>Bottom ash analysis report &amp; effluent analysis report of ash pond For the month of September 2022 are attached as Annexure VII &amp; Annexure VIII respectively.</b> |
| xxvii.  | Ash pond shall be lined with HDPE/LDPE lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.                                                                                                                                                                                                                                                 | Complied.                                                                                                                                                                                                                                                                                                                                                                                             |
| xxviii. | For disposal of Bottom Ash in abandoned mines (if proposed to be undertaken) shall be done after obtaining due permission from DGMS and after ensuring that the bottom and sides of the mined out areas are adequately lined with clay before Bottom Ash is filled up. The project proponent shall inform the State Pollution Control Board well in advance before undertaking the activity                                                                                                     | Not Applicable.                                                                                                                                                                                                                                                                                                                                                                                       |
| xxix.   | Sulphur and ash contents in the coal to be used in the project shall not exceed 0.6 % and 34 % respectively at any given time. In case of variation of coal quality at any point of time fresh reference shall be made to MOEF for suitable amendments to environmental clearance condition wherever necessary.                                                                                                                                                                                 | The Sulphur content in used coal conforms the limits. As per the Environment (Protection) Amendment Rules, 2020 dated 21 May 2020, Use of coal by Thermal Power Plants, without stipulations as regards ash content or distance shall be permitted.                                                                                                                                                   |
| xxx.    | Green Belt consisting of 3 tiers of plantations of native species around plant and at least 75 m width shall be raised. The density of tree shall not less than 2500 per ha and survival rate not less than 80 %.                                                                                                                                                                                                                                                                               | A thick green belt of adequate width is being developed.68123 nos. (Area covered-30.9 Hac) of plantation has been completed in and outside along the periphery of the power plant to arrest any dust emissions and help in attenuation of noise. Total Survival rate of Plant are 85.6 %. Name of Plant Species- Neem, Seesam, Mango, Jamun etc.                                                      |
| xxxi.   | Over and above the green belt, as carbon sink, social forestry shall be carried out in close consultation with the Forests Department. The project proponent shall accordingly identify blocks of land / degraded forests and shall undertake regeneration of degraded forests at a large scale. In pursuance to this the project proponent shall formulate time bound action plan along with financial allocation and shall submit status of implementation to the Ministry within six months. | Letter has been submitted to Forest Department for guidance on implementation of social forestry.                                                                                                                                                                                                                                                                                                     |



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| xxxii.  | At least three nearest village shall be adopted and basic amenities like development of roads, drinking water supply, primary health centre, primary school etc shall be developed in co-ordination with the district administration.                                                                                                                                                                                                                                              | <p>APNRL has adopted villages</p> <ol style="list-style-type: none"> <li>Barahariharpur</li> <li>Padampur</li> <li>Srirampur</li> </ol> <p>CSR is also providing the facilities in following villages</p> <ol style="list-style-type: none"> <li>Pindrabera</li> <li>Chotahariharpur</li> <li>Ramjivanpur</li> <li>Bikanipur etc.</li> </ol> <p>Details of CSR activity enclosed as <b>Annexure IX.</b></p> |
| xxxiii. | The project proponent shall also adequately contribute in the development of the neighboring villages. Special package with implementation schedule for providing potable drinking water supply in the nearby villages and schools shall be undertaken in a time bound manner.                                                                                                                                                                                                     | Details of CSR activity enclosed as <b>Annexure IX.</b>                                                                                                                                                                                                                                                                                                                                                     |
| xxxiv.  | A time bound implementation of the CSR shall be formulated within six months and submitted to the Ministry. CSR schemes shall be undertaken based on need assessment in and around the villages within 5 km of the site and in constant consultation with the village Panchayat and the District Administration. As part of CSR, prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. | List of local employed youth enclosed as <b>Annexure X. Complied</b>                                                                                                                                                                                                                                                                                                                                        |
| xxxv.   | For the tribal families (if any) living in the area within 5.0 Km of site, affected directly or indirectly by the proposed project, specific schemes for upliftment of their sustainable livelihood shall be prepared with time bound implementation and in-built monitoring programme. The status of implementation shall be submitted to the Regional Office of the Ministry from time to time.                                                                                  | CSR activities are being carried out in the surrounding villages keeping in mind the upliftment of tribal families. Details of CSR activity enclosed as <b>IX .</b>                                                                                                                                                                                                                                         |
| xxxvi.  | An amount of Rs 23.70 Crores shall be earmarked as one time capital cost for CSR programme as committed by the project proponent. Subsequently a recurring expenditure of Rs 4.74 Crores per annum shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be submitted within six month along with road map for implementation.                                                                                          | <p>We have submitted copy of capital cost &amp; year wise recurring expenditure on CSR activities to MoEF &amp;CC, Ranchi Office on 05.12.2018.</p> <p><b>Complied.</b></p>                                                                                                                                                                                                                                 |
| xxxvii. | It shall be ensured that in-built monitoring mechanism for the schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time                                                                                                                                                                        | <p>All CSR activities are monitored on weekly and monthly basis.</p> <p>We have conducted social audit through renowned organization who are well aware about Social Audit in Jharkhand region.</p> <p>Copy of Social audit shall be submitted shortly.</p>                                                                                                                                                 |

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| <b>B. General Conditions:</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| i.                            | The treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. Arrangements shall be made that effluents and storm water do not do not get mixed.                                                                                                                                                                                                                                                                                                   | <p><b>Complied.</b><br/> <b>Treated effluent analysis report of ETP from For the month of September 2022 are enclosed as Annexure XI.</b></p> <p>Adequate and separate drainage structures has provided to channel storm water generated onsite into rain water harvesting structures constructed in accordance with the approved rain water harvesting plan.</p>                                                                                                                                                                                      |
| ii.                           | A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt/plantation                                                                                                                                                                                                                                                                                                                                                                           | STP 60 KI capacity (03 No) has installed within plant premises to treat sewage waste. Photographs enclosed as <b>Annexure XII.</b>                                                                                                                                                                                                                                                                                                                                                                                                                     |
| iii.                          | Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.                                                                                                                                                                                            | <p>The design of coal yard along with provision of fire safety measures viz. fire hydrants, water sprinklers has installed.</p> <p><b>Complied</b></p>                                                                                                                                                                                                                                                                                                                                                                                                 |
| iv.                           | Storage facilities for auxiliary liquid fuel such as LDO and/ HFO/LSHS shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.                                                                                                                                                       | <p>Approval received on dated 15/12/2011. License No. P/HQ/JH/15/1065 (P257355), valid upto 31.12.2022 for LDO storage installation (under Petroleum Class "C") for operations. Copy of Approval are enclosed as <b>Annexure XIII.</b></p> <p>APNRL is using liquid fuel with sulfur content variation between 0.80 -1.5% which is provided by HPCL. Copy of Test report are enclosed as <b>Annexure XIII(a)</b></p> <p>Emergency Response Plan (ERP) has prepared as part of the project ESMS to cater to potential emergencies/risks identified.</p> |
| v.                            | First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.                                                                                                                                                                                                                                                                                                                                                                                  | <p>Plant is in operational condition however A first aid center comprising with necessary medical facilities is made available onsite to provide emergency medical aid to both contract workers and company staff.</p> <p><b>Complied.</b></p>                                                                                                                                                                                                                                                                                                         |
| vi.                           | Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 85 dBA from source. For people working in the high noise area, requisite personal protective equipment like earplugs/ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non noisy/less noisy areas | <p>Adequate measures has implemented in consistent with the EMP to control turbine noise levels within stipulated limits. This include installing of sufficient engineering control in turbines as per design specifications, provision of ear plugs/ear muffs for workers exposed to high noise, rotation of workers and carrying out periodic audiometric testing of workers and records is being maintained. <b>Noise level monitoring report For the month of September 2022 are enclosed As Annexure XIV.</b></p>                                 |



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| vii.  | Regular monitoring of ambient air ground level concentration of SO <sub>2</sub> , NO <sub>x</sub> , PM <sub>2.5</sub> & PM <sub>10</sub> and Hg shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry. The data shall also be put on the website of the company. | <b>Ambient Air monitoring reports carried out by NABL accredited Laboratory for the month of September 2022 are enclosed As Annexure XV.</b><br>Review of air quality monitoring results revealed compliance to NAAQS.<br>Realtime data of CAAQMS has been uploaded at CPCB & JSPCB website. |
| viii. | Provision shall be made for the housing of construction labor (as applicable) within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.                                                                                                                                                                                                                                     | Plant is in operational condition and local labors are coming from nearby villages. <b>Complied</b>                                                                                                                                                                                          |
| ix.   | The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> .                               | <b>Complied</b>                                                                                                                                                                                                                                                                              |
| x.    | A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad / Municipal Corporation, urban local Body and the Local NGO, if any, from whom suggestions/representations, if any, received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.                                                                                                                                                                                                                                                    | A copy of EC has been submitted in Gram Panchayat & DC office and copy of Environment Clearance has been uploaded on company website.                                                                                                                                                        |
| xi.   | An Environmental Cell comprising of at least one expert in environmental science / engineering, occupational health and social scientist, shall be created at the project site itself and shall be headed by an officer of appropriate superiority and qualification. It shall be ensured that the Head of the Cell shall directly report to the head of the organization and he shall be held responsible for implementation of environmental regulations and social impact improvement/mitigation measures.                                                                                            | A Environmental Management Cell consist high qualified environmental professionals are being operational onsite to ensure effective implementation of specific EMPs. <b>Organization chart of Environmental Management Cell enclosed as Annexure XVI.</b>                                    |



|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| xii.  | The proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM (PM <sub>2.5</sub> & PM <sub>10</sub> ), SO <sub>2</sub> , NO <sub>x</sub> (ambient levels as well as stack emissions) shall be displayed at a convenient location near the main gate of the company in the public domain.                                                               | The updated compliance status of the stipulated EC conditions along with monitored data has been uploaded on the company website. The monitoring data (SPM, RSPM, SO <sub>2</sub> , NO <sub>x</sub> ) for both ambient air quality and chimney emissions is being displayed at the main gate of the company.<br>Compliance status of the stipulated EC conditions has been uploaded on company website and hard copy of same has been submitted for the period of April 2021 to September 2021 in office of MoEF, Ranchi & CPCB office, Kolkata along with monitored data. |
| xiii. | The environment statement for each financial year ending 31 <sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.                                                                                                                                                            | The last environmental statement for financial year (2021-22) in Form V has submitted to JSPCB dated 20 <sup>th</sup> Sep 2022. <b>Acknowledgement copy of same attached as Annexure XVII.</b><br><br>Environment Statement (2021-22) has been uploaded on company website.                                                                                                                                                                                                                                                                                                |
| xiv.  | The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environment of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forests                                                                                                       | Last six monthly reports for the project along with environmental monitoring data submitted to MoEF RO at Ranchi office vide letter No MOE&F,RNC/HYC/KKJ/280522/02 ,dated 28 <sup>TH</sup> May 2022. <b>Acknowledgement copy of same attached as Annexure XVIII.</b>                                                                                                                                                                                                                                                                                                       |
| xv.   | Regional Office of the Ministry of Environment & Forests will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring. Project proponent will up-load the compliance status in their website and up-date the same from time to time at least six monthly basis. Criteria pollutants levels including NO <sub>x</sub> (from stack & ambient air) shall be displayed at the main gate of the power plant. | A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information already submitted to the Board.<br>The updated compliance status of the stipulated EC conditions along with monitored data has been uploaded on the company website. The monitoring data (SPM, RSPM, SO <sub>2</sub> , NO <sub>x</sub> ) for both ambient air quality and chimney emissions is being displayed at the main gate of the company.                                                                         |



|        |                                                                                                                                                                                                                                                                                                                                                       |                                                                                                         |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| xvi.   | Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry. | Adequate budgetary provision has been made by the APNRL for execution of environmental management plan. |
| xvii.  | The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant                                                                                    | <b>Complied</b>                                                                                         |
| xviii. | Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office of the Ministry at Bangalore / CPCB/ SPCB who would be monitoring the compliance of environmental status                                                                                                                                            | We ensure.                                                                                              |

कार्यालय :- प्रधान मुख्य वन संरक्षक झारखण्ड, राँची।

पत्रांक:-19एम01(5)29/2008 2574 दिनांक:-23.7.09

सचिव,

वन एवं पर्यावरण विभाग,

झारखण्ड सरकार, राँची।

मैसर्स आधुनिक थर्मल एनर्जी लिमिटेड के कान्हा पदमपुर, श्री रामपुर, रामचन्द्रपुर मौजा, जिला-सरायकेला-खरसांवा में स्थापित किये जाने वाले थर्मल पावर प्रोजेक्ट के लिए पर्यावरणीय स्वीकृति के संबंध में।

विभागीय पत्रांक-308, दिनांक-04.02.09

उपर्युक्त विषयक संदर्भ में सूचित करना है कि प्रधान मुख्य वन संरक्षक, जैव विविधता संरक्षण एवं मुख्य वन्यप्राणी प्रतिपालक, झारखण्ड, राँची ने अपने पत्रांक 463, दिनांक-02.07.2009 (छायाप्रति संलग्न) द्वारा संबंधित विषय पर प्रतिवेदन/मंतव्य समर्पित किया है। उक्त प्रतिवेदन एवं उपलब्ध अभिलेखों के आधार पर प्रस्तावित परियोजना स्थल के संबंध में स्थिति निम्नवत् है :-

1. विषयक थर्मल पावर प्रोजेक्ट काण्डा पदमपुर, श्रीरामपुर, रामचन्द्रपुर मौजा की गैर-वन भूमि पर स्थापित किये जाने का प्रस्ताव है।
2. उपरोक्त पावर प्रोजेक्ट दलमा वन्यप्राणी आश्रयणी की निकटतम सीमा से लगभग 7.5 कि०मी० दूर स्थापित होगा। प्रस्तावित क्षेत्र की 10 कि०मी० त्रिज्या के अंदर अवस्थित वन भूमि सिंहभूम गज आरक्ष्य का भाग है।
3. वन प्रमण्डल पदाधिकारी, वन्यप्राणी प्रमण्डल, राँची के द्वारा पावर प्रोजेक्ट के लिए प्रस्तावित स्थल को प्रस्तावित इको-सेंसिटिव जोन से सटा हुआ बताया गया है, जबकि दलमा वन्यप्राणी आश्रयणी के लिए प्रस्तावित इको-सेंसिटिव जोन से संबंधित जो प्रस्ताव राज्य सरकार को भेजा गया है उसके अनुसार प्रस्तावित स्थल प्रस्तावित इको-सेंसिटिव जोन की निकटतम सीमा से लगभग 2.5 कि०मी० दूर अवस्थित है। इस क्रम में अनुलग्नक- 1 पर दो प्रतियों में नक्शा संलग्न है।
4. पावर प्रोजेक्ट के लिए प्रस्तावित स्थल से 8 से 10 कि०मी० की दूरी पर दलमा-रूगाई गज-कोरीडोर एवं दलमा-चंडिल गज-कोरीडोर अवस्थित है। इस क्षेत्र के पास एक अन्य गज-कोरीडोर चांडिल-माथा कोरीडोर भी है, जो प्रस्तावित स्थल से 10 कि०मी० से अधिक दूरी पर अवस्थित है। इसके अतिरिक्त कोई अन्य हाथी कोरीडोर प्रस्तावित

*[Handwritten signature]*



क्षेत्र के पास पूर्व चिन्हित नहीं है। उपरोक्त गज-कोरीडोर को दिखाते हुए नक्शा (अनुलग्नक-2) दो प्रतियों में संलग्न है।

5. वन प्रमण्डल पदाधिकारी, वन्यप्राणी प्रमण्डल, रांची के द्वारा अपने प्रतिवेदन में यह उल्लेख किया गया है कि दलमा वन्यप्राणी आश्रयणी की दक्षिणी सीमा पर स्वर्णरेखा नहर की गहरी खोदाई के कारण इस क्षेत्र में हाथियों का आवागमन अनियमित है। उन्होंने यह भी वर्णित किया है कि आश्रयणी से हाथियों का आवागमन रामगढ़, एन0एच0-33, डोभी, कपालन, तमोलिया होते हुए पुनः आश्रयणी की ओर हो रहा है। पूर्व में यह पलना जलाशय तक होता था, जो वर्तमान में नहर की खोदाई के कारण बाधित है। इस संबंध में नक्शे की समीक्षापरांत यह पाया गया है कि यदि हाथियों का आवागमन पूर्ववतः आश्रयणी से पलना जलाशय तक होता भी है तब भी प्रस्तावित स्थल ऐसे किसी आवागमन मार्ग के बीच में नहीं आयेगा। पलना जलाशय की लोकेशन को दर्शाते हुए एक नक्शा भी इस पत्र के साथ संलग्न किया जा रहा है जिससे स्पष्ट होगा कि यह जलाशय प्रस्तावित स्थल से लगभग 17 कि०मी०(उत्तर पूर्व) की दूरी पर अवस्थित है। प्रस्तावित स्थल होकर हाथियों का आवागमन होने की या कोई पूर्व-स्थापित गज-कोरीडोर होने की कोई ठोस सूचना/प्रमाण उपलब्ध नहीं है।
6. झारखंड राज्य में गज-कोरीडोर को चिन्हित करने का कार्य एक स्वयंसेवी संस्था "वाइल्ड लाइफ ट्रस्ट ऑफ इण्डिया, नई दिल्ली" के द्वारा किया गया है। इस कार्य में झारखंड वन विभाग के द्वारा भी सहयोग किया गया था। उपरोक्त स्वयंसेवी संस्था द्वारा प्रकाशित 'Right of Passage- Elephant Corridors of India' नामक पुस्तक में झारखंड राज्य के लिए कुल 14 गज-कोरीडोर वर्णित है तथा इसी सूचना के आधार पर कंडिका चार में वर्णित तीन गज कोरीडोर को नक्शे पर दर्शाया गया है।
7. प्रस्तावित स्थल के आसपास कई अन्य उद्योग, यथा पावर ग्रिड कॉरपोरेशन ऑफ इण्डिया लि०, बी०के० स्टील आई०ओ०सी०एल०, टी०सी०एस०, उषा मार्टिन, नीलांचल स्टील, आदि स्थापित हैं। यह अनुलग्नक-3 पर दो प्रतियों में उपलब्ध नक्शे से स्पष्ट है। इस क्षेत्र में कई उद्योग होने के कारण भी इसे दलमा वन्यप्राणी आश्रयणी के प्रस्तावित इको-सेंसिटिव जोन से बाहर रखा गया था।
8. वन प्रमण्डल पदाधिकारी, वन्यप्राणी प्रमण्डल, रांची ने प्रस्तावित स्थल दलमा आश्रयणी एवं elephant bearing area के समीप होने के कारण हाथियों के आवागमन पर पड़ने वाले प्रतिकूल प्रभाव की संभावना बताते हुए प्रस्तावित परियोजना हेतु अनापत्ति प्रमाण-पत्र निर्गत नहीं करने की अनुशंसा की है। परंतु वन संरक्षक, वन्य प्राणी अंचल, रांची ने वन प्रमण्डल पदाधिकारी द्वारा अपने प्रतिवेदन में उठाए गये विभिन्न विन्दुओं पर

समीक्षात्मक टिप्पणी अंकित करते हुए उनकी अनुशंसा से सहमति व्यक्त नहीं की है, जो उपरोक्त कंडिकाओं में उल्लिखित तथ्यों एवं संलग्नक मन्त्रिचित्रों पर आधारित है। प्रधान मुख्य वन संरक्षक, जैव विविधता संरक्षण एवं मुख्य वन्यप्राणी प्रतिपालक, झारखण्ड, रांची, वन संरक्षक के उपर्युक्त मंतव्य से सहमत हैं।

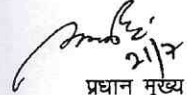
9. प्रधान मुख्य वन संरक्षक, जैव विविधता संरक्षण एवं मुख्य वन्यप्राणी प्रतिपालक, झारखण्ड, रांची द्वारा अग्रलिखित शर्त पर संबंधित परियोजना हेतु एनओसी निर्गत करने की अनुशंसा की गई है कि EIA के ToR की शर्त V के आलोक में प्रयोक्ता अभिकरण को इस आशय की वचनबद्धता देनी होगी कि प्रयोक्ता अभिकरण वन्य प्राणी विशेषज्ञ की मदद से Wildlife Mitigation and Conservation Plan उक्त क्षेत्र विशेष हेतु तैयार करा कर EIA में शामिल करेंगे और उक्त योजना का कार्यान्वयन वन विभाग के माध्यम से प्रयोक्ता अभिकरण की लागत पर किया जायेगा।

प्रधान मुख्य वन संरक्षक, जैव विविधता संरक्षण एवं मुख्य वन्यप्राणी प्रतिपालक, झारखण्ड, रांची के उपर्युक्त मंतव्य से अद्योहस्ताक्षरी सहमत हैं।

अनुरोध है कि विषयगत पर्यावरणीय स्वीकृति पर अग्रतर कार्यवाई करने की कृपा की जाय।

अनु०—यथोक्त।

विश्वासभाजन,

  
21/7  
प्रधान मुख्य वन संरक्षक,  
झारखण्ड, रांची।  
2/7/19





# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - ISO 9001:2015 & ISO 45001:2018



TC-4032



### Test Certificate

|                               |                                                                                                     |                                     |       |                           |                       |                            |            |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------------|-----------------------------------------------------------------------------------------------------|-------------------------------------|-------|---------------------------|-----------------------|----------------------------|------------|--|--|--|--|--|--|--|--|--|--|--|--|
| ULR (Unique Lab Report) No.   |                                                                                                     | T C 4 0 3 2 2 2 0 0 0 0 0 1 6 2 8 F |       |                           |                       |                            |            |  |  |  |  |  |  |  |  |  |  |  |  |
| Discipline                    | Chemical                                                                                            | Group                               | Water | Sample Description        |                       | Ground Water               |            |  |  |  |  |  |  |  |  |  |  |  |  |
| Report Release Date           | 30 <sup>th</sup> September, 2022                                                                    |                                     |       | Report ID                 |                       | YBAEEL-220920-114052- GW01 |            |  |  |  |  |  |  |  |  |  |  |  |  |
| W. Order/ JSPCB App. No.      | 3030005781                                                                                          |                                     |       | Work Order Date           |                       | 18.12.2021                 |            |  |  |  |  |  |  |  |  |  |  |  |  |
| Type of Industry (if any)     | Thermal Power Plant                                                                                 |                                     |       | Job code/ Ref. no.        |                       | YBAEEL/WA/L/C/Sep-22/06    |            |  |  |  |  |  |  |  |  |  |  |  |  |
| Report Issue to               | M/s Adhunik Power & Natural Resources Ltd.<br>VIII. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |                                     |       |                           |                       |                            |            |  |  |  |  |  |  |  |  |  |  |  |  |
| Sampling Date                 | 24/09/2022                                                                                          |                                     |       | Mode of sample collection |                       | By YBAEEL Team             |            |  |  |  |  |  |  |  |  |  |  |  |  |
| Sampling Protocol             | IS : 3025 (Part-1) 1987, R-2003                                                                     |                                     |       | Sample Code               |                       | 220926-GW-E01              |            |  |  |  |  |  |  |  |  |  |  |  |  |
| Sampling Location             | Srirampur Borewell                                                                                  |                                     |       | Sampling Source           |                       | Ground Water               |            |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample pkg. Condition         | Sealed Pack in PP Bottle                                                                            |                                     |       | Sample Quantity           |                       | 3000 ml                    |            |  |  |  |  |  |  |  |  |  |  |  |  |
| Meteorological Cond. of Field | W.C.- Clear                                                                                         |                                     |       | RH % - 66                 |                       | Temp. - 30 °C              |            |  |  |  |  |  |  |  |  |  |  |  |  |
| Sample receipt Date           | 26/09/2022                                                                                          | Analysis Started on                 |       | 26/09/2022                | Analysis completed on |                            | 30/09/2022 |  |  |  |  |  |  |  |  |  |  |  |  |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl  | Parameter                                  | Test Method                                                              | Units | MU %  | Results        | Limits           |
|-----|--------------------------------------------|--------------------------------------------------------------------------|-------|-------|----------------|------------------|
| 1.  | pH value                                   | IS 3025 (P-11):2002                                                      | pH    | 1.77  | 6.76           | 6.5-8.5          |
| 2.  | Colour                                     | IS 3025 (P-04):1983                                                      | Hazen | --    | 10             | 5-15             |
| 3.  | Conductivity                               | IS 3025 (P-14):2013                                                      | µs/cm | 1.90  | 548.0          | --               |
| 4.  | Total Alkalinity (as CaCO <sub>3</sub> )   | IS 3025 (P-23):2003                                                      | mg/l  | 3.68  | 158.0          | 200-600          |
| 5.  | Total Hardness (as CaCO <sub>3</sub> )     | IS 3025 (P-21):2009                                                      | mg/l  | 1.35  | 194.0          | 200-600          |
| 6.  | Total dissolved solids                     | IS 3025 (P-16):2006                                                      | mg/l  | 2.85  | 94.0           | 500-2000         |
| 7.  | Chlorine Residual                          | IS 3025 (P-26):2003                                                      | mg/l  | 30.64 | BDL (MDL 0.07) | 0.2-1            |
| 8.  | Chloride (as Cl <sup>-</sup> )             | IS 3025 (P-32):2003                                                      | mg/l  | 3.41  | 55.0           | 250-1000         |
| 9.  | Fluoride (as F <sup>-</sup> )              | APHA 4500 F-C 23 <sup>rd</sup> edition 2017                              | mg/l  | 12.22 | 0.6            | 1.0-1.5          |
| 10. | Nitrate (as NO <sub>3</sub> <sup>-</sup> ) | APHA 4500 NO <sub>3</sub> <sup>-</sup> (B) 23 <sup>rd</sup> edition 2017 | mg/l  | 11.33 | 1.01           | 45-No relaxation |
| 11. | Calcium (as Ca <sup>2+</sup> )             | IS 3025 (P-40): 2003                                                     | mg/l  | 4.19  | 56.0           | 75-200           |
| 12. | Magnesium (as Mg <sup>2+</sup> )           | APHA 3500 Mg B : 2017                                                    | mg/l  | 1.90  | 13.12          | 30-100           |
| 13. | Sodium (as Na <sup>+</sup> )               | APHA 3111 B 23 <sup>rd</sup> edition 2017                                | mg/l  | 16.98 | 32.0           | --               |
| 14. | Potassium (as K <sup>+</sup> )             | APHA 3111 B 23 <sup>rd</sup> edition 2017                                | mg/l  | 9.21  | 1.0            | --               |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | IS 10500: 2021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Abbreviation               | MDL : Minimum detection limit, BDL : Below detection limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Env. Condition of Lab      | Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise.<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | Sample complies with prescribed limits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

Sample Drawn By : Angad Munda  
Tested By : Akash Khalkho (Lab Analyst)

|                                                             |                                                |
|-------------------------------------------------------------|------------------------------------------------|
| Verified by<br>Shivani Kumari Singh<br>Authorized Signatory | Issued by<br>Umesh Das<br>Authorized Signatory |
|-------------------------------------------------------------|------------------------------------------------|

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory



Branch Office : - Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
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# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - Jharkhand State Pollution Control Board (JSPCB)  
 Certified by: - An ISO 9001:2015 & ISO 45001:2018



### Test Certificate

|                               |                                                                                                     |                     |                           |                       |                            |
|-------------------------------|-----------------------------------------------------------------------------------------------------|---------------------|---------------------------|-----------------------|----------------------------|
| Discipline                    | Chemical                                                                                            | Group               | Water                     | Sample Description    | Ground Water               |
| Report Release Date           | 30 <sup>th</sup> September, 2022                                                                    |                     |                           | Report ID             | YBAEEL-220920-114052- GW01 |
| W. Order/ JSPCB App. No.      | 3030005781                                                                                          |                     |                           | Work Order Date       | 18.12.2021                 |
| Type of Industry (If any)     | Thermal Power Plant                                                                                 |                     |                           | Job code/ Ref. no.    | YBAEEL/WA/L/C/Sep-22/06    |
| Report Issue to               | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |                     |                           |                       |                            |
| Sampling Date                 | 24/09/2022                                                                                          |                     | Mode of sample collection | By YBAEEL Team        |                            |
| Sampling Protocol             | IS : 3025 (Part-1) 1987, R-2003                                                                     |                     | Sample Code               | 220926-GW-E01         |                            |
| Sampling Location             | Srirampur Borewell                                                                                  |                     | Sampling Source           | Ground Water          |                            |
| Sample pkg. Condition         | Sealed Pack in PP Bottle                                                                            |                     | Sample Quantity           | 3000 ml               |                            |
| Meteorological Cond. of Field | W.C.- Clear                                                                                         |                     | RH % - 66                 | Temp. - 30 °C         |                            |
| Sample receipt Date           | 26/09/2022                                                                                          | Analysis Started on | 26/09/2022                | Analysis completed on | 30/09/2022                 |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl | Parameter                     | Test Method         | Units | MU % | Results       | Limits             |
|----|-------------------------------|---------------------|-------|------|---------------|--------------------|
| 1. | Odour                         | IS 3025 (P-05):2002 | --    | --   | Agree.        | Agreeable          |
| 2. | Taste                         | IS 3025 (P-07):2002 | --    | --   | Agree.        | Agreeable          |
| 3. | Cyanide (as CN <sup>-</sup> ) | IS 3025 (P-27)      | mg/l  | --   | BDL (MDL 1.0) | 0.05-No relaxation |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | IS 10500: 2021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Abbreviation               | MDL : Minimum detection limit. BDL : Below detection limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Env. Condition of Lab      | Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise.<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | Sample complies with prescribed limits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

Sample Drawn By : Angad Munda  
 Tested By : Akash Khaikho (Lab Analyst)

|                                                             |                                                |
|-------------------------------------------------------------|------------------------------------------------|
| Verified by<br>Shivani Kumari Singh<br>Authorized Signatory | Issued by<br>Umesh Das<br>Authorized Signatory |
|-------------------------------------------------------------|------------------------------------------------|

Authorized Signatory  
 Chemical Section  
 Yugantar Bharati Analytical &  
 Environmental Engineering Laboratory

Branch Office :- Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
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# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - ISO 9001:2015 & ISO 45001:2018



TC-4032



### Test Certificate

|                               |                                                                                                     |                                     |       |                           |                       |                                 |            |  |  |  |  |  |  |  |  |  |  |
|-------------------------------|-----------------------------------------------------------------------------------------------------|-------------------------------------|-------|---------------------------|-----------------------|---------------------------------|------------|--|--|--|--|--|--|--|--|--|--|
| ULR (Unique Lab Report) No.   |                                                                                                     | T C 4 0 3 2 2 2 0 0 0 0 0 1 6 3 4 F |       |                           |                       |                                 |            |  |  |  |  |  |  |  |  |  |  |
| Discipline                    | Chemical                                                                                            | Group                               | Water | Sample Description        |                       | Residue & Contaminants in Water |            |  |  |  |  |  |  |  |  |  |  |
| Report Release Date           | 30 <sup>th</sup> September, 2022                                                                    |                                     |       | Report ID                 |                       | YBAEEL-220920-114052- GW01      |            |  |  |  |  |  |  |  |  |  |  |
| W. Order/ JSPCB App. No.      | 3030005781                                                                                          |                                     |       | Work Order Date           |                       | 18.12.2021                      |            |  |  |  |  |  |  |  |  |  |  |
| Type of Industry (if any)     | Thermal Power Plant                                                                                 |                                     |       | Job code/ Ref. no.        |                       | YBAEEL/WA/L/R/Sep-22/02         |            |  |  |  |  |  |  |  |  |  |  |
| Report issue to               | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |                                     |       |                           |                       |                                 |            |  |  |  |  |  |  |  |  |  |  |
| Sampling Date                 | 24/09/2022                                                                                          |                                     |       | Mode of sample collection |                       | By YBAEEL Team                  |            |  |  |  |  |  |  |  |  |  |  |
| Sampling Protocol             | IS : 3025 (Part-1) 1987, R-2003                                                                     |                                     |       | Sample Code               |                       | 220926-GW-E01                   |            |  |  |  |  |  |  |  |  |  |  |
| Sampling Location             | Srirampur Borewell                                                                                  |                                     |       | Sampling Source           |                       | Ground Water                    |            |  |  |  |  |  |  |  |  |  |  |
| Sample pkg. Condition         | Sealed Pack in PP Bottle                                                                            |                                     |       | Sample Quantity           |                       | 1000 ml                         |            |  |  |  |  |  |  |  |  |  |  |
| Meteorological Cond. of Field | W.C.- Clear                                                                                         |                                     |       | RH % - 66                 |                       | Temp. - 30 °C                   |            |  |  |  |  |  |  |  |  |  |  |
| Sample receipt Date           | 26/09/2022                                                                                          | Analysis Started on                 |       | 26/09/2022                | Analysis completed on |                                 | 30/09/2022 |  |  |  |  |  |  |  |  |  |  |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl | Parameter        | Test Method                               | Units | MU %  | Results         | Limits              |
|----|------------------|-------------------------------------------|-------|-------|-----------------|---------------------|
| 1. | Arsenic (as As)  | APHA 3114 B 23 <sup>rd</sup> edition 2017 | mg/l  | 10.34 | BDL (MDL 0.003) | 0.01-No relaxation  |
| 2. | Copper (as Cu)   | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 11.11 | BDL (MDL 0.01)  | 0.05-1.5            |
| 3. | Iron (as Fe)     | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 2.34  | 0.18            | 1.0-No relaxation   |
| 4. | Lead (as Pb)     | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 10.64 | BDL (MDL 0.02)  | 0.01-No relaxation  |
| 5. | Cadmium (as Cd)  | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 5.0   | BDL (MDL 0.02)  | 0.003-No relaxation |
| 6. | Mercury (as Hg)  | APHA 3112 B 23 <sup>rd</sup> edition 2017 | mg/l  | 8.47  | BDL (MDL 0.003) | 0.001-No relaxation |
| 7. | Chromium (as Cr) | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 12.53 | BDL (MDL 0.02)  | 0.05-No relaxation  |
| 8. | Nickel (as Ni)   | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 13.72 | 0.02            | 0.02-No relaxation  |
| 9. | Cobalt (Co)      | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 28.33 | BDL (MDL 0.03)  | --                  |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | IS 10500: 2021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Abbreviation               | MDL : Minimum detection limit, BDL : Below detection limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Env. Condition of Lab      | Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | Sample complies with prescribed limits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

Sample Drawn By - Angad Munda

|                                                    |                                                           |
|----------------------------------------------------|-----------------------------------------------------------|
| Tested by<br>Shivani Kumari Singh<br>(Lab Analyst) | Verified & Issued by<br>Umesh Das<br>Authorized Signatory |
|----------------------------------------------------|-----------------------------------------------------------|

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office :- Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in







# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by :- Jharkhand State Pollution Control Board (JSPCB)

Certified by :- An ISO 9001:2015 & ISO 45001:2018



### Test Certificate

| Discipline                    | Chemical | Group                                                                                               | Water               | Sample Description        | Residue & Contaminants in Water  |
|-------------------------------|----------|-----------------------------------------------------------------------------------------------------|---------------------|---------------------------|----------------------------------|
| Report Release Date           |          | 30 <sup>th</sup> September, 2022                                                                    |                     | Report ID                 | YBAEEL-220920-114052- GW01       |
| W. Order/ JSPCB App. No.      |          | 3030005781                                                                                          |                     | Work Order Date           | 18.12.2021                       |
| Type of Industry(if any)      |          | Thermal Power Plant                                                                                 |                     | Job code/ Ref. no.        | YBAEEL/WA/L/R/Sep-22/02          |
| Report issue to               |          | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |                     |                           |                                  |
| Sampling Date                 |          | 24/09/2022                                                                                          |                     | Mode of sample collection | By YBAEEL Team                   |
| Sampling Protocol             |          | IS : 3025 (Part-1) 1987, R-2003                                                                     |                     | Sample Code               | 220926-GW-E01                    |
| Sampling Location             |          | Srirampur Borewell                                                                                  |                     | Sampling Source           | Ground Water                     |
| Sample pkg. Condition         |          | Sealed Pack in PP Bottle                                                                            |                     | Sample Quantity           | 1000 ml                          |
| Meteorological Cond. of Field |          | W.C.- Clear                                                                                         |                     | RH % - 66                 | Temp. - 30 °C                    |
| Sample receipt Date           |          | 26/09/2022                                                                                          | Analysis Started on | 26/09/2022                | Analysis completed on 30/09/2022 |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl | Parameter         | Test Method         | Units | MU % | Results        | Limits   |
|----|-------------------|---------------------|-------|------|----------------|----------|
| 1. | Aluminium (as Al) | IS 3025 (P-55):2003 | mg/l  | -    | BDL (MDL 0.02) | 0.03-0.2 |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | IS 10500: 2021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Abbreviation               | MDL : Minimum detection limit, BDL : Below detection limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Env. Condition of Lab      | Laboratory is maintaining Temperature $27 \pm 2^\circ\text{C}$ and Relative Humidity $65 \pm 5\%$ in all testing areas as per IS 196:1966 (C).                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | Sample complies with prescribed limits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

Sample Drawn By : Angad Munda

|                                                    |                                                           |
|----------------------------------------------------|-----------------------------------------------------------|
| Tested by<br>Shivani Kumari Singh<br>(Lab Analyst) | Verified & Issued by<br>Umesh Das<br>Authorized Signatory |
|----------------------------------------------------|-----------------------------------------------------------|

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

|                  |            |         |           |       |
|------------------|------------|---------|-----------|-------|
| Branch Office :- | Jamshedpur | Dhanbad | Hazaribag | Pakur |
|------------------|------------|---------|-----------|-------|

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in







# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - ISO 9001:2015 & ISO 45001:2018



TC-4032



### Test Certificate

|                               |                                                                                                     |       |       |                           |   |                            |   |   |                       |   |            |   |   |   |   |   |   |   |
|-------------------------------|-----------------------------------------------------------------------------------------------------|-------|-------|---------------------------|---|----------------------------|---|---|-----------------------|---|------------|---|---|---|---|---|---|---|
| ULR (Unique Lab Report) No.   | T                                                                                                   | C     | 4     | 0                         | 3 | 2                          | 2 | 2 | 0                     | 0 | 0          | 0 | 0 | 1 | 6 | 1 | 6 | F |
| Discipline                    | Biological                                                                                          | Group | Water | Sample Description        |   | Ground Water               |   |   |                       |   |            |   |   |   |   |   |   |   |
| Report Release Date           | 29 <sup>th</sup> September, 2022                                                                    |       |       | Report ID                 |   | YBAEEL-220920-114052- GW01 |   |   |                       |   |            |   |   |   |   |   |   |   |
| W. Order/ JSPCB App. No.      | 3030005781                                                                                          |       |       | Work Order Date           |   | 18.12.2021                 |   |   |                       |   |            |   |   |   |   |   |   |   |
| Type of Industry (if any)     | Thermal Power Plant                                                                                 |       |       | Job code/ Ref. no.        |   | YBAEEL/WA/L/M/Sep-22/04    |   |   |                       |   |            |   |   |   |   |   |   |   |
| Report issue to               | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |       |       |                           |   |                            |   |   |                       |   |            |   |   |   |   |   |   |   |
| Sampling Date                 | 24/09/2022                                                                                          |       |       | Mode of sample collection |   | By YBAEEL Team             |   |   |                       |   |            |   |   |   |   |   |   |   |
| Sampling Protocol             | IS : 1622:1982, R - 2019                                                                            |       |       | Sample Code               |   | 220926-GW-E01              |   |   |                       |   |            |   |   |   |   |   |   |   |
| Sampling Location             | Srirampur Bore Well                                                                                 |       |       | Sampling Source           |   | Ground Water               |   |   |                       |   |            |   |   |   |   |   |   |   |
| Sample pkg. Condition         | Sealed Pack in PP Bottle                                                                            |       |       | Sample Quantity           |   | 250 ml                     |   |   |                       |   |            |   |   |   |   |   |   |   |
| Meteorological Cond. of Field | W.C.- Clear                                                                                         |       |       | RH % - 66                 |   | Temp. - 30°C               |   |   |                       |   |            |   |   |   |   |   |   |   |
| Sample receipt Date           | 26/09/2022                                                                                          |       |       | Analysis Started on       |   | 27/09/2022                 |   |   | Analysis completed on |   | 29/09/2022 |   |   |   |   |   |   |   |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl | Parameter      | Test Method                               | Units      | Results | Limits                                       |
|----|----------------|-------------------------------------------|------------|---------|----------------------------------------------|
| 1. | Total coliform | APHA 9222B, 23 <sup>rd</sup> Edition 2017 | cfu/100 ml | Absent  | Shall not be Detectable in any 100 ml sample |
| 2. | Fecal coliform | APHA 9222D, 23 <sup>rd</sup> Edition 2017 | cfu/100 ml | Absent  |                                              |
| 3. | E coli         | APHA 9222H, 23 <sup>rd</sup> Edition 2017 | cfu/100 ml | Absent  |                                              |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | IS 10500: 2012                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Abbreviation               | MDL : Minimum detection limit. BDL : Below detection limit.<br><1.8 / < 1.1 MPN/100 ml denotes that the presence probability of bacteria is absent in the tested sample.                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Env. Condition of Lab      | Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility.<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise.<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction |
| Remarks                    | Sample complies with prescribed limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

Sample Drawn By - Angad Munda

|               |                      |
|---------------|----------------------|
| Madhuri Sinha | Mukesh Kumar         |
| Tested by     | Verified & Issued by |
| Madhuri Sinha | Mukesh Kumar         |
| (Lab Analyst) | Authorized Signatory |

Authorized Signatory  
Microbiological Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office :- Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
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# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY



Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - ISO 9001:2015 & ISO 45001:2018

TC-4032



### Test Certificate

|                               |          |                                                                                                     |       |                     |   |                    |                           |   |   |                       |              |                            |   |   |            |   |   |   |   |   |  |
|-------------------------------|----------|-----------------------------------------------------------------------------------------------------|-------|---------------------|---|--------------------|---------------------------|---|---|-----------------------|--------------|----------------------------|---|---|------------|---|---|---|---|---|--|
| ULR (Unique Lab Report) No.   |          |                                                                                                     | T     | C                   | 4 | 0                  | 3                         | 2 | 2 | 2                     | 0            | 0                          | 0 | 0 | 0          | 1 | 6 | 2 | 9 | F |  |
| Discipline                    | Chemical | Group                                                                                               | Water |                     |   | Sample Description |                           |   |   |                       | Ground Water |                            |   |   |            |   |   |   |   |   |  |
| Report Release Date           |          | 30 <sup>th</sup> September, 2022                                                                    |       |                     |   |                    | Report ID                 |   |   |                       |              | YBAEEL-220920-114052- GW02 |   |   |            |   |   |   |   |   |  |
| W. Order/ JSPCB App. No.      |          | 3030005781                                                                                          |       |                     |   |                    | Work Order Date           |   |   |                       |              | 18.12.2021                 |   |   |            |   |   |   |   |   |  |
| Type of Industry(if any)      |          | Thermal Power Plant                                                                                 |       |                     |   |                    | Job code/ Ref. no.        |   |   |                       |              | YBAEEL/WA/L/C/Sep-22/06    |   |   |            |   |   |   |   |   |  |
| Report Issue to               |          | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra – 832402, Jharkhand. |       |                     |   |                    |                           |   |   |                       |              |                            |   |   |            |   |   |   |   |   |  |
| Sampling Date                 |          | 24/09/2022                                                                                          |       |                     |   |                    | Mode of sample collection |   |   |                       |              | By YBAEEL Team             |   |   |            |   |   |   |   |   |  |
| Sampling Protocol             |          | IS : 3025 (Part-1) 1987, R-2003                                                                     |       |                     |   |                    | Sample Code               |   |   |                       |              | 220926-GW-E02              |   |   |            |   |   |   |   |   |  |
| Sampling Location             |          | Padampur Borewell                                                                                   |       |                     |   |                    | Sampling Source           |   |   |                       |              | Ground Water               |   |   |            |   |   |   |   |   |  |
| Sample pkg. Condition         |          | Sealed Pack in PP Bottle                                                                            |       |                     |   |                    | Sample Quantity           |   |   |                       |              | 3000 ml                    |   |   |            |   |   |   |   |   |  |
| Meteorological Cond. of Field |          | W.C.- Clear                                                                                         |       |                     |   |                    | RH % - 66                 |   |   |                       |              | Temp. - 30 °C              |   |   |            |   |   |   |   |   |  |
| Sample receipt Date           |          | 26/09/2022                                                                                          |       | Analysis Started on |   |                    | 26/09/2022                |   |   | Analysis completed on |              |                            |   |   | 30/09/2022 |   |   |   |   |   |  |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl  | Parameter                                  | Test Method                                                              | Units | MU %  | Results        | Limits           |
|-----|--------------------------------------------|--------------------------------------------------------------------------|-------|-------|----------------|------------------|
| 1.  | pH value                                   | IS 3025 (P-11):2002                                                      | pH    | 1.77  | 6.64           | 6.5-8.5          |
| 2.  | Colour                                     | IS 3025 (P-04):1983                                                      | Hazen | --    | 10             | 5-15             |
| 3.  | Conductivity                               | IS 3025 (P-14):2013                                                      | µs/cm | 1.90  | 464.0          | --               |
| 4.  | Total Alkalinity (as CaCO <sub>3</sub> )   | IS 3025 (P-23):2003                                                      | mg/l  | 3.68  | 86.0           | 200-600          |
| 5.  | Total Hardness (as CaCO <sub>3</sub> )     | IS 3025 (P-21):2009                                                      | mg/l  | 1.35  | 166.0          | 200-600          |
| 6.  | Total dissolved solids                     | IS 3025 (P-16):2006                                                      | mg/l  | 2.85  | 248.0          | 500-2000         |
| 7.  | Chlorine Residual                          | IS 3025 (P-26):2003                                                      | mg/l  | 30.64 | BDL (MDL 0.07) | 0.2-1            |
| 8.  | Fluoride (as F <sup>-</sup> )              | IS 3025 (P-32):2003                                                      | mg/l  | 3.41  | 47.0           | 250-1000         |
| 9.  | Nitrate (as NO <sub>3</sub> <sup>-</sup> ) | APHA 4500 F-C 23 <sup>rd</sup> edition 2017                              | mg/l  | 12.22 | 0.4            | 1.0-1.5          |
| 10. | Calcium (as Ca <sup>2+</sup> )             | APHA 4500 NO <sub>3</sub> <sup>-</sup> (B) 23 <sup>rd</sup> edition 2017 | mg/l  | 11.33 | 9.99           | 45-No relaxation |
| 11. | Magnesium (as Mg <sup>2+</sup> )           | IS 3025 (P-40): 2003                                                     | mg/l  | 4.19  | 44.0           | 75-200           |
| 12. | Sodium (as Na <sup>+</sup> )               | APHA 3500 Mg B : 2017                                                    | mg/l  | 1.90  | 13.60          | 30-100           |
| 13. | Potassium (as K <sup>+</sup> )             | APHA 3111 B 23 <sup>rd</sup> edition 2017                                | mg/l  | 16.98 | 20.0           | --               |
| 14. | Potassium (as K <sup>+</sup> )             | APHA 3111 B 23 <sup>rd</sup> edition 2017                                | mg/l  | 9.21  | 3.0            | --               |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | IS 10500: 2021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Abbreviation               | MDL : Minimum detection limit, BDL : Below detection limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Env. Condition of Lab      | Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise.<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | Sample complies with prescribed limits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

Sample Drawn By - Angad Munda  
Tested By - Akash Khaikho (Lab Analyst)

|                                                             |                                                |
|-------------------------------------------------------------|------------------------------------------------|
| Verified by<br>Shivani Kumari Singh<br>Authorized Signatory | Issued by<br>Umesh Das<br>Authorized Signatory |
|-------------------------------------------------------------|------------------------------------------------|

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in



ISO 9001:2015  
ISO 45001:2018





# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by :- Jharkhand State Pollution Control Board (JSPCB)  
 Certified by :- An ISO 9001:2015 & ISO 45001:2018



### Test Certificate

|                               |                                                                                                     |                     |            |                           |                            |
|-------------------------------|-----------------------------------------------------------------------------------------------------|---------------------|------------|---------------------------|----------------------------|
| Discipline                    | Chemical                                                                                            | Group               | Water      | Sample Description        | Ground Water               |
| Report Release Date           | 30 <sup>th</sup> September, 2022                                                                    |                     |            | Report ID                 | YBAEEL-220920-114052- GW02 |
| W. Order/ JSPCB App. No.      | 3030005781                                                                                          |                     |            | Work Order Date           | 18.12.2021                 |
| Type of Industry (if any)     | Thermal Power Plant                                                                                 |                     |            | Job code/ Ref. no.        | YBAEEL/WA/L/C/Sep-22/06    |
| Report issue to               | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |                     |            |                           |                            |
| Sampling Date                 | 24/09/2022                                                                                          |                     |            | Mode of sample collection | By YBAEEL Team             |
| Sampling Protocol             | IS : 3025 (Part-1) 1987, R-2003                                                                     |                     |            | Sample Code               | 220926-GW-E02              |
| Sampling Location             | Padampur Borewell                                                                                   |                     |            | Sampling Source           | Ground Water               |
| Sample pkg. Condition         | Sealed Pack in PP Bottle                                                                            |                     |            | Sample Quantity           | 3000 ml                    |
| Meteorological Cond. of Field | W.C.- Clear                                                                                         |                     |            | RH % - 66                 | Temp. - 30 °C              |
| Sample receipt Date           | 26/09/2022                                                                                          | Analysis Started on | 26/09/2022 | Analysis completed on     | 30/09/2022                 |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl | Parameter                     | Test Method         | Units | MU % | Results       | Limits             |
|----|-------------------------------|---------------------|-------|------|---------------|--------------------|
| 1. | Odour                         | IS 3025 (P-05):2002 | --    | --   | Agree.        | Agreeable          |
| 2. | Taste                         | IS 3025 (P-07):2002 | --    | --   | Agree.        | Agreeable          |
| 3. | Cyanide (as CN <sup>-</sup> ) | IS 3025 (P-27)      | mg/l  | --   | BDL (MDL 1.0) | 0.05-No relaxation |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | IS 10500: 2021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Abbreviation               | MDL : Minimum detection limit. BDL : Below detection limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Env. Condition of Lab      | Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction |
| Remarks                    | Sample complies with prescribed limits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

Sample Drawn By : Angad Munda  
 Tested By : Akash Khalkho (Lab Analyst)

|                                                             |                                                |
|-------------------------------------------------------------|------------------------------------------------|
| Verified by<br>Shivani Kumari Singh<br>Authorized Signatory | Issued by<br>Umesh Das<br>Authorized Signatory |
|-------------------------------------------------------------|------------------------------------------------|

Authorized Signatory  
 Chemical Section  
 Yugantar Bharati Analytical &  
 Environmental Engineering Laboratory

Branch Office :- Jamshedpur      Dhanbad      Hazanbag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand

Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com; Web - https://ybaeel.in







# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - ISO 9001:2015 & ISO 45001:2018



TC-4032



### Test Certificate

|                               |                                                                                                     |                                   |                     |                           |            |                                 |                       |  |            |  |  |  |  |  |  |  |  |
|-------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------|---------------------|---------------------------|------------|---------------------------------|-----------------------|--|------------|--|--|--|--|--|--|--|--|
| ULR (Unique Lab Report) No.   |                                                                                                     | T C 4 0 3 2 2 2 0 0 0 0 1 6 3 5 F |                     |                           |            |                                 |                       |  |            |  |  |  |  |  |  |  |  |
| Discipline                    | Chemical                                                                                            | Group                             | Water               | Sample Description        |            | Residue & Contaminants in Water |                       |  |            |  |  |  |  |  |  |  |  |
| Report Release Date           | 30 <sup>th</sup> September, 2022                                                                    |                                   |                     | Report ID                 |            | YBAEEL-220920-114052- GW02      |                       |  |            |  |  |  |  |  |  |  |  |
| W. Order/ JSPCB App. No.      | 3030005781                                                                                          |                                   |                     | Work Order Date           |            | 18.12.2021                      |                       |  |            |  |  |  |  |  |  |  |  |
| Type of Industry (If any)     | Thermal Power Plant                                                                                 |                                   |                     | Job code/ Ref. no.        |            | YBAEEL/WA/LR/Sep-22/02          |                       |  |            |  |  |  |  |  |  |  |  |
| Report Issue to               | M/s Adhunik Power & Natural Resources Ltd.<br>VIII. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |                                   |                     |                           |            |                                 |                       |  |            |  |  |  |  |  |  |  |  |
| Sampling Date                 | 24/09/2022                                                                                          |                                   |                     | Mode of sample collection |            | By YBAEEL Team                  |                       |  |            |  |  |  |  |  |  |  |  |
| Sampling Protocol             | IS : 3025 (Part-1) 1987, R-2003                                                                     |                                   |                     | Sample Code               |            | 220926-GW-E02                   |                       |  |            |  |  |  |  |  |  |  |  |
| Sampling Location             | Padampur Borewell                                                                                   |                                   |                     | Sampling Source           |            | Ground Water                    |                       |  |            |  |  |  |  |  |  |  |  |
| Sample pkg. Condition         | Sealed Pack in PP Bottle                                                                            |                                   |                     | Sample Quantity           |            | 1000 ml                         |                       |  |            |  |  |  |  |  |  |  |  |
| Meteorological Cond. of Field | W.C.- Clear                                                                                         |                                   |                     | RH % - 66                 |            | Temp. - 30 °C                   |                       |  |            |  |  |  |  |  |  |  |  |
| Sample receipt Date           | 26/09/2022                                                                                          |                                   | Analysis Started on |                           | 26/09/2022 |                                 | Analysis completed on |  | 30/09/2022 |  |  |  |  |  |  |  |  |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl | Parameter        | Test Method                               | Units | MU %  | Results         | Limits              |
|----|------------------|-------------------------------------------|-------|-------|-----------------|---------------------|
| 1. | Arsenic (as As)  | APHA 3114 B 23 <sup>rd</sup> edition 2017 | mg/l  | 10.34 | BDL (MDL 0.003) | 0.01-No relaxation  |
| 2. | Copper (as Cu)   | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 11.11 | BDL (MDL 0.01)  | 0.05-1.5            |
| 3. | Iron (as Fe)     | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 2.34  | 0.13            | 1.0-No relaxation   |
| 4. | Lead (as Pb)     | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 10.64 | BDL (MDL 0.02)  | 0.01-No relaxation  |
| 5. | Cadmium (as Cd)  | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 5.0   | BDL (MDL 0.02)  | 0.003-No relaxation |
| 6. | Mercury (as Hg)  | APHA 3112 B 23 <sup>rd</sup> edition 2017 | mg/l  | 8.47  | BDL (MDL 0.003) | 0.001-No relaxation |
| 7. | Chromium (as Cr) | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 12.53 | BDL (MDL 0.02)  | 0.05-No relaxation  |
| 8. | Nickel (as Ni)   | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 13.72 | 0.17            | 0.02-No relaxation  |
| 9. | Cobalt (Co)      | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 28.33 | BDL (MDL 0.03)  | --                  |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | IS 10500: 2021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Abbreviation               | MDL : Minimum detection limit, BDL : Below detection limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Env. Condition of Lab      | Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise.<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | Sample complies with prescribed limits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

Sample Drawn By - Angad Munda

|                                                    |                                                           |
|----------------------------------------------------|-----------------------------------------------------------|
| Tested by<br>Shivani Kumari Singh<br>(Lab Analyst) | Verified & Issued by<br>Umesh Das<br>Authorized Signatory |
|----------------------------------------------------|-----------------------------------------------------------|

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office :- Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
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# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY



State Pollution  
Control Board

Accredited by :- Jharkhand State Pollution Control Board (JSPCB)  
Certified by :- An ISO 9001:2015 & ISO 45001:2018

### Test Certificate

| Discipline                    | Chemical | Group                                                                                               | Water               | Sample Description        | Residue & Contaminants in Water  |
|-------------------------------|----------|-----------------------------------------------------------------------------------------------------|---------------------|---------------------------|----------------------------------|
| Report Release Date           |          | 30 <sup>th</sup> September, 2022                                                                    |                     | Report ID                 | YBAEEL-220920-114052- GW02       |
| W. Order/ JSPCB App. No.      |          | 3030005781                                                                                          |                     | Work Order Date           | 18.12.2021                       |
| Type of Industry(if any)      |          | Thermal Power Plant                                                                                 |                     | Job code/ Ref. no.        | YBAEEL/WA/LR/Sep-22/02           |
| Report Issue to               |          | M/s Adhunik Power & Natural Resources Ltd.<br>VIII. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |                     |                           |                                  |
| Sampling Date                 |          | 24/09/2022                                                                                          |                     | Mode of sample collection | By YBAEEL Team                   |
| Sampling Protocol             |          | IS : 3025 (Part-1) 1987, R-2003                                                                     |                     | Sample Code               | 220926-GW-E02                    |
| Sampling Location             |          | Padampur Borewell                                                                                   |                     | Sampling Source           | Ground Water                     |
| Sample pkg. Condition         |          | Sealed Pack in PP Bottle                                                                            |                     | Sample Quantity           | 1000 ml                          |
| Meteorological Cond. of Field |          | W.C.- Clear                                                                                         |                     | RH % - 66                 | Temp. - 30 °C                    |
| Sample receipt Date           |          | 26/09/2022                                                                                          | Analysis Started on | 26/09/2022                | Analysis completed on 30/09/2022 |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl | Parameter         | Test Method         | Units | MU % | Results        | Limits   |
|----|-------------------|---------------------|-------|------|----------------|----------|
| 1. | Aluminium (as Al) | IS 3025 (P-55):2003 | mg/l  | -    | BDL (MDL 0.02) | 0.03-0.2 |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | IS 10500: 2021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Abbreviation               | MDL : Minimum detection limit, BDL : Below detection limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Env. Condition of Lab      | Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise.<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | Sample complies with prescribed limits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

Sample Drawn By - Angad Munda

|                                                    |                                                           |
|----------------------------------------------------|-----------------------------------------------------------|
| Tested by<br>Shivani Kumari Singh<br>(Lab Analyst) | Verified & issued by<br>Umesh Das<br>Authorized Signatory |
|----------------------------------------------------|-----------------------------------------------------------|

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office :- Jamshedpur      Dhanbad      Hazanbag      Pakur

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ISO 45001:2018



ISO 9001:2015





# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by :- NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by :- ISO 9001:2015 & ISO 45001:2018



TC-4032



### Test Certificate

|                               |                                                                                                     |                                   |       |  |                           |  |                            |  |  |  |                     |  |            |  |  |  |  |  |  |
|-------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------|-------|--|---------------------------|--|----------------------------|--|--|--|---------------------|--|------------|--|--|--|--|--|--|
| ULR (Unique Lab Report) No.   |                                                                                                     | T C 4 0 3 2 2 2 0 0 0 0 1 6 1 7 F |       |  |                           |  |                            |  |  |  |                     |  |            |  |  |  |  |  |  |
| Discipline                    | Biological                                                                                          | Group                             | Water |  | Sample Description        |  | Ground Water               |  |  |  |                     |  |            |  |  |  |  |  |  |
| Report Release Date           | 29 <sup>th</sup> September, 2022                                                                    |                                   |       |  | Report ID                 |  | YBAEEL-220920-114052- GW02 |  |  |  |                     |  |            |  |  |  |  |  |  |
| W. Order/ JSPCB App. No.      | 3030005781                                                                                          |                                   |       |  | Work Order Date           |  | 18.12.2021                 |  |  |  |                     |  |            |  |  |  |  |  |  |
| Type of Industry (If any)     | Thermal Power Plant                                                                                 |                                   |       |  | Job code/ Ref. no.        |  | YBAEEL/WA/L/M/Sep-22/04    |  |  |  |                     |  |            |  |  |  |  |  |  |
| Report Issue to               | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |                                   |       |  |                           |  |                            |  |  |  |                     |  |            |  |  |  |  |  |  |
| Sampling Date                 | 24/09/2022                                                                                          |                                   |       |  | Mode of sample collection |  | By YBAEEL Team             |  |  |  |                     |  |            |  |  |  |  |  |  |
| Sampling Protocol             | IS : 1622:1982, R - 2019                                                                            |                                   |       |  | Sample Code               |  | 220926-GW-E02              |  |  |  |                     |  |            |  |  |  |  |  |  |
| Sampling Location             | Padampur Bore Well                                                                                  |                                   |       |  | Sampling Source           |  | Ground Water               |  |  |  |                     |  |            |  |  |  |  |  |  |
| Sample pkg. Condition         | Sealed Pack in PP Bottle                                                                            |                                   |       |  | Sample Quantity           |  | 250 ml                     |  |  |  |                     |  |            |  |  |  |  |  |  |
| Meteorological Cond. of Field | W.C.- Clear                                                                                         |                                   |       |  | RH % - 66                 |  | Temp. - 30°C               |  |  |  |                     |  |            |  |  |  |  |  |  |
| Sample receipt Date           | 26/09/2022                                                                                          |                                   |       |  | Analysis Started on       |  | 27/09/2022                 |  |  |  | Sample receipt Date |  | 29/09/2022 |  |  |  |  |  |  |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl | Parameter      | Test Method                               | Units      | Results | Limits                                          |
|----|----------------|-------------------------------------------|------------|---------|-------------------------------------------------|
| 1. | Total coliform | APHA 9222B, 23 <sup>rd</sup> Edition 2017 | cfu/100 ml | Absent  | Shall not to be Detectable in any 100 ml sample |
| 2. | Fecal coliform | APHA 9222D, 23 <sup>rd</sup> Edition 2017 | cfu/100 ml | Absent  |                                                 |
| 3. | E coli         | APHA 9222H, 23 <sup>rd</sup> Edition 2017 | cfu/100 ml | Absent  |                                                 |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | IS 10500: 2012                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Abbreviation               | MDL : Minimum detection limit, BDL : Below detection limit.<br><1.8 / < 1.1 MPN/100 ml denotes that the presence probability of bacteria is absent in the tested sample.                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Env. Condition of Lab      | Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility.<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise.<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | Sample complies with prescribed limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

Sample Drawn By : Angad Munda

|               |                      |
|---------------|----------------------|
| Madhuri Sinha | Mukesh Kumar         |
| Tested by     | Verified & Issued by |
| Madhuri Sinha | Mukesh Kumar         |
| (Lab Analyst) | Authorized Signatory |

Authorized Signatory  
Microbiological Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

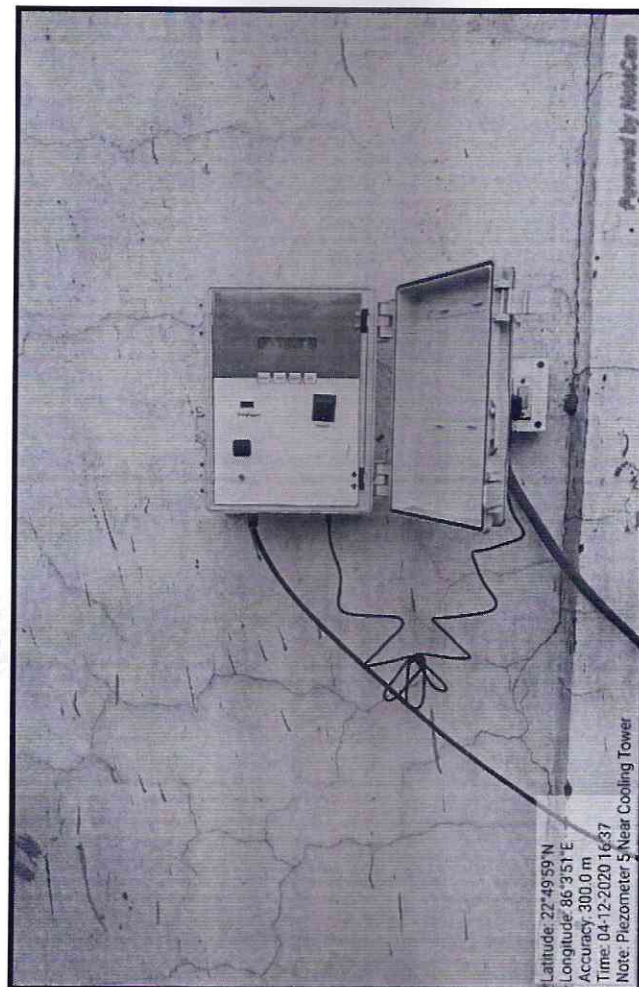
Branch Office :- Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com; Web - https://ybaeel.in





## Piezometer At Plant premises







# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - ISO 9001:2015 & ISO 45001:2018



### Test Certificate

|                               |          |                                                                                                     |       |                     |   |                    |                           |   |   |                       |               |                            |            |   |   |   |   |   |   |   |
|-------------------------------|----------|-----------------------------------------------------------------------------------------------------|-------|---------------------|---|--------------------|---------------------------|---|---|-----------------------|---------------|----------------------------|------------|---|---|---|---|---|---|---|
| ULR (Unique Lab Report) No.   |          |                                                                                                     | T     | C                   | 4 | 0                  | 3                         | 2 | 2 | 2                     | 0             | 0                          | 0          | 0 | 0 | 1 | 6 | 3 | 0 | F |
| Discipline                    | Chemical | Group                                                                                               | Water |                     |   | Sample Description |                           |   |   |                       | Surface Water |                            |            |   |   |   |   |   |   |   |
| Report Release Date           |          | 30 <sup>th</sup> September, 2022                                                                    |       |                     |   |                    | Report ID                 |   |   |                       |               | YBAEEL-220920-114052- SW01 |            |   |   |   |   |   |   |   |
| W. Order/ JSPCB App. No.      |          | 3030005781                                                                                          |       |                     |   |                    | Work Order Date           |   |   |                       |               | 18.12.2021                 |            |   |   |   |   |   |   |   |
| Type of Industry(if any)      |          | Thermal Power Plant                                                                                 |       |                     |   |                    | Job code/ Ref. no.        |   |   |                       |               | YBAEEL/WA/LC/Sep-22/06     |            |   |   |   |   |   |   |   |
| Report Issue to               |          | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra – 832402, Jharkhand. |       |                     |   |                    |                           |   |   |                       |               |                            |            |   |   |   |   |   |   |   |
| Sampling Date                 |          | 24/09/2022                                                                                          |       |                     |   |                    | Mode of sample collection |   |   |                       |               | By YBAEEL Team             |            |   |   |   |   |   |   |   |
| Sampling Protocol             |          | IS : 3025 (Part-1) 1987, R-2003                                                                     |       |                     |   |                    | Sample Code               |   |   |                       |               | 220926-SW-E01              |            |   |   |   |   |   |   |   |
| Sampling Location             |          | Srirampur Pond                                                                                      |       |                     |   |                    | Sampling Source           |   |   |                       |               | Surface Water              |            |   |   |   |   |   |   |   |
| Sample pkg. Condition         |          | Sealed Pack in PP Bottle                                                                            |       |                     |   |                    | Sample Quantity           |   |   |                       |               | 3000 ml                    |            |   |   |   |   |   |   |   |
| Meteorological Cond. of Field |          | W.C.– Clear                                                                                         |       |                     |   |                    | RH % - 66                 |   |   |                       |               | Temp. - 29°C               |            |   |   |   |   |   |   |   |
| Sample receipt Date           |          | 26/09/2022                                                                                          |       | Analysis Started on |   |                    | 26/09/2022                |   |   | Analysis completed on |               |                            | 30/09/2022 |   |   |   |   |   |   |   |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl  | Parameter                                  | Test Method                                                              | Units | MU %  | Results        | Limits  |
|-----|--------------------------------------------|--------------------------------------------------------------------------|-------|-------|----------------|---------|
| 1.  | pH value                                   | IS 3025 (P-11):2002                                                      | pH    | 1.77  | 6.88           | 6.5-8.5 |
| 2.  | Colour                                     | IS 3025 (P-04):1983                                                      | Hazen | --    | 20             | --      |
| 3.  | Conductivity                               | IS 3025 (P-14):2013                                                      | µs/cm | 1.90  | 425.0          | --      |
| 4.  | Total Alkalinity (as CaCO <sub>3</sub> )   | IS 3025 (P-23):2003                                                      | mg/l  | 3.68  | 136.0          | --      |
| 5.  | Total Hardness (as CaCO <sub>3</sub> )     | IS 3025 (P-21):2009                                                      | mg/l  | 1.35  | 190.0          | --      |
| 6.  | Total dissolved solids                     | IS 3025 (P-16):2006                                                      | mg/l  | 2.85  | 234.0          | --      |
| 7.  | Chlorine Residual                          | IS 3025 (P-26):2003                                                      | mg/l  | 30.64 | BDL (MDL 0.07) | --      |
| 8.  | Chloride (as Cl <sup>-</sup> )             | IS 3025 (P-32):2003                                                      | mg/l  | 3.41  | 15.5           | --      |
| 9.  | Fluoride (as F <sup>-</sup> )              | APHA 4500 F-C 23 <sup>rd</sup> edition 2017                              | mg/l  | 12.22 | 0.8            | --      |
| 10. | Nitrate (as NO <sub>3</sub> <sup>-</sup> ) | APHA 4500 NO <sub>3</sub> <sup>-</sup> (B) 23 <sup>rd</sup> edition 2017 | mg/l  | 11.33 | 0.99           | --      |
| 11. | Calcium (as Ca <sup>2+</sup> )             | IS 3025 (P-40): 2003                                                     | mg/l  | 4.19  | 50.5           | --      |
| 12. | Magnesium (as Mg <sup>2+</sup> )           | APHA 3500 Mg B : 2017                                                    | mg/l  | 1.90  | 15.49          | --      |
| 13. | Sodium (as Na <sup>+</sup> )               | APHA 3111 B 23 <sup>rd</sup> edition 2017                                | mg/l  | 16.98 | 16.0           | --      |
| 14. | Potassium (as K <sup>+</sup> )             | APHA 3111 B 23 <sup>rd</sup> edition 2017                                | mg/l  | 9.21  | 3.0            | --      |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | G.S.R. 742 (E) 25 <sup>th</sup> September, 2000.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Abbreviation               | MDL : Minimum detection limit, BDL : Below detection limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Env. Condition of Lab      | Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise.<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | Sample complies with prescribed limits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

Sample Drawn By : Angad Munda  
Tested By : Akash Khalkho (Lab Analyst)

|                                                             |                                                |
|-------------------------------------------------------------|------------------------------------------------|
| Verified by<br>Shivani Kumari Singh<br>Authorized Signatory | Issued by<br>Umesh Das<br>Authorized Signatory |
|-------------------------------------------------------------|------------------------------------------------|

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office : - Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
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# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - An ISO 9001:2015 & ISO 45001:2018



### Test Certificate

|                               |                                                                                                     |                     |            |                           |                           |
|-------------------------------|-----------------------------------------------------------------------------------------------------|---------------------|------------|---------------------------|---------------------------|
| Discipline                    | Chemical                                                                                            | Group               | Water      | Sample Description        | Surface Water             |
| Report Release Date           | 30 <sup>th</sup> September, 2022                                                                    |                     |            | Report ID                 | YBAEEL-220920-114052-SW01 |
| W. Order/ JSPCB App. No.      | 3030005781                                                                                          |                     |            | Work Order Date           | 18.12.2021                |
| Type of Industry (if any)     | Thermal Power Plant                                                                                 |                     |            | Job code/ Ref. no.        | YBAEEL/WA/L/C/Sep-22/06   |
| Report issue to               | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |                     |            |                           |                           |
| Sampling Date                 | 24/09/2022                                                                                          |                     |            | Mode of sample collection | By YBAEEL Team            |
| Sampling Protocol             | IS : 3025 (Part-1) 1987, R-2003                                                                     |                     |            | Sample Code               | 220926-SW-E01             |
| Sampling Location             | Srirampur Pond                                                                                      |                     |            | Sampling Source           | Surface Water             |
| Sample pkg. Condition         | Sealed Pack in PP Bottle                                                                            |                     |            | Sample Quantity           | 3000 ml                   |
| Meteorological Cond. of Field | W.C. - Clear                                                                                        |                     |            | RH % - 66                 | Temp. - 29°C              |
| Sample receipt Date           | 26/09/2022                                                                                          | Analysis Started on | 26/09/2022 | Analysis completed on     | 30/09/2022                |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl | Parameter                     | Test Method         | Units | MU % | Results       | Limits |
|----|-------------------------------|---------------------|-------|------|---------------|--------|
| 1. | Odour                         | IS 3025 (P-05):2002 | --    | --   | Agree.        | --     |
| 2. | Taste                         | IS 3025 (P-07):2002 | --    | --   | Agree.        | --     |
| 3. | Cyanide (as CN <sup>-</sup> ) | IS 3025 (P-27)      | mg/l  | --   | BDL (MDL 1.0) | --     |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Abbreviation               | MDL : Minimum detection limit, BDL : Below detection limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Env. Condition of Lab      | Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise.<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

Sample Drawn By : Angad Munda  
Tested By : Akash Khalkho (Lab Analyst)

|                                                             |                                                |
|-------------------------------------------------------------|------------------------------------------------|
| Verified by<br>Shivani Kumari Singh<br>Authorized Signatory | Issued by<br>Umesh Das<br>Authorized Signatory |
|-------------------------------------------------------------|------------------------------------------------|

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office : - Jamshedpur | Dhanbad | Hazaribag | Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
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# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - ISO 9001:2015 & ISO 45001:2018



TC-4032

### Test Certificate

|                               |                                                                                                     |                                     |       |                           |  |                                 |  |                       |  |            |  |  |  |  |  |  |  |
|-------------------------------|-----------------------------------------------------------------------------------------------------|-------------------------------------|-------|---------------------------|--|---------------------------------|--|-----------------------|--|------------|--|--|--|--|--|--|--|
| ULR (Unique Lab Report) No.   |                                                                                                     | T C 4 0 3 2 2 2 0 0 0 0 0 1 6 3 6 F |       |                           |  |                                 |  |                       |  |            |  |  |  |  |  |  |  |
| Discipline                    | Chemical                                                                                            | Group                               | Water | Sample Description        |  | Residue & Contaminants in Water |  |                       |  |            |  |  |  |  |  |  |  |
| Report Release Date           | 30 <sup>th</sup> September, 2022                                                                    |                                     |       | Report ID                 |  | YBAEEL-220920-114052-SW01       |  |                       |  |            |  |  |  |  |  |  |  |
| W. Order/ JSPCB App. No.      | 3030005781                                                                                          |                                     |       | Work Order Date           |  | 18.12.2021                      |  |                       |  |            |  |  |  |  |  |  |  |
| Type of Industry (if any)     | Thermal Power Plant                                                                                 |                                     |       | Job code/ Ref. no.        |  | YBAEEL/WA/L/R/Sep-22/02         |  |                       |  |            |  |  |  |  |  |  |  |
| Report Issue to               | M/s Adhunik Power & Natural Resources Ltd.<br>VIII. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |                                     |       |                           |  |                                 |  |                       |  |            |  |  |  |  |  |  |  |
| Sampling Date                 | 24/09/2022                                                                                          |                                     |       | Mode of sample collection |  | By YBAEEL Team                  |  |                       |  |            |  |  |  |  |  |  |  |
| Sampling Protocol             | IS : 3025 (Part-1) 1987, R-2003                                                                     |                                     |       | Sample Code               |  | 220926-SW-E01                   |  |                       |  |            |  |  |  |  |  |  |  |
| Sampling Location             | Srirampur Pond                                                                                      |                                     |       | Sampling Source           |  | Surface Water                   |  |                       |  |            |  |  |  |  |  |  |  |
| Sample pkg. Condition         | Sealed Pack in PP Bottle                                                                            |                                     |       | Sample Quantity           |  | 1000 ml                         |  |                       |  |            |  |  |  |  |  |  |  |
| Meteorological Cond. of Field | W.C. - Clear                                                                                        |                                     |       | RH % - 66                 |  | Temp. - 29°C                    |  |                       |  |            |  |  |  |  |  |  |  |
| Sample receipt Date           | 26/09/2022                                                                                          |                                     |       | Analysis Started on       |  | 26/09/2022                      |  | Analysis completed on |  | 30/09/2022 |  |  |  |  |  |  |  |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl | Parameter        | Test Method                               | Units | MU %  | Results         | Limits |
|----|------------------|-------------------------------------------|-------|-------|-----------------|--------|
| 1. | Arsenic (as As)  | APHA 3114 B 23 <sup>rd</sup> edition 2017 | mg/l  | 10.34 | BDL (MDL 0.003) | --     |
| 2. | Copper (as Cu)   | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 11.11 | BDL (MDL 0.01)  | --     |
| 3. | Iron (as Fe)     | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 2.34  | 0.22            | --     |
| 4. | Lead (as Pb)     | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 10.64 | BDL (MDL 0.02)  | --     |
| 5. | Cadmium (as Cd)  | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 5.0   | BDL (MDL 0.02)  | --     |
| 6. | Mercury (as Hg)  | APHA 3112 B 23 <sup>rd</sup> edition 2017 | mg/l  | 8.47  | BDL (MDL 0.003) | --     |
| 7. | Chromium (as Cr) | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 12.53 | BDL (MDL 0.02)  | --     |
| 8. | Nickel (as Ni)   | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 13.72 | 0.04            | --     |
| 9. | Cobalt (Co)      | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 26.33 | BDL (MDL 0.03)  | --     |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | MDL : Minimum detection limit, BDL : Below detection limit.                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Abbreviation               | Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).                                                                                                                                                                                                                                                                                                                                                   |
| Env. Condition of Lab      | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility.                                                                                                                                                                                                                                                                                                                                |
| Specific contractual notes | This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise.<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

Sample Drawn By - Angad Munda

|                                                        |  |                                                               |  |
|--------------------------------------------------------|--|---------------------------------------------------------------|--|
| <br>Tested by<br>Shivani Kumari Singh<br>(Lab Analyst) |  | <br>Verified & Issued by<br>Umesh Das<br>Authorized Signatory |  |
|--------------------------------------------------------|--|---------------------------------------------------------------|--|

Authorized Signatory  
Chemical Section  
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## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - An ISO 9001:2015 & ISO 45001:2018



### Test Certificate

| Discipline                    | Chemical                                                                                            | Group                     | Water                      | Sample Description    | Residue & Contaminants in Water |
|-------------------------------|-----------------------------------------------------------------------------------------------------|---------------------------|----------------------------|-----------------------|---------------------------------|
| Report Release Date           | 30 <sup>th</sup> September, 2022                                                                    | Report ID                 | YBAEEL-220920-114052- SW01 |                       |                                 |
| W. Order/ JSPCB App. No.      | 3030005781                                                                                          | Work Order Date           | 18.12.2021                 |                       |                                 |
| Type of Industry (if any)     | Thermal Power Plant                                                                                 | Job code/ Ref. no.        | YBAEEL/WA/L/R/Sep-22/02    |                       |                                 |
| Report Issue to               | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |                           |                            |                       |                                 |
| Sampling Date                 | 24/09/2022                                                                                          | Mode of sample collection | By YBAEEL Team             |                       |                                 |
| Sampling Protocol             | IS : 3025 (Part-1) 1987, R-2003                                                                     | Sample Code               | 220926-SW-E01              |                       |                                 |
| Sampling Location             | Srirampur Pond                                                                                      | Sampling Source           | Surface Water              |                       |                                 |
| Sample pkg. Condition         | Sealed Pack in PP Bottle                                                                            | Sample Quantity           | 1000 ml                    |                       |                                 |
| Meteorological Cond. of Field | W.C.- Clear                                                                                         | RH % - 66                 | Temp. - 29°C               |                       |                                 |
| Sample receipt Date           | 26/09/2022                                                                                          | Analysis Started on       | 26/09/2022                 | Analysis completed on | 30/09/2022                      |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl | Parameter         | Test Method         | Units | MU % | Results        | Limits |
|----|-------------------|---------------------|-------|------|----------------|--------|
| 1. | Aluminium (as Al) | IS 3025 (P-55):2003 | mg/l  | -    | BDL (MDL 0.02) | -      |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Abbreviation               | MDL : Minimum detection limit, BDL : Below detection limit,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Env. Condition of Lab      | Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | *****                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

Sample Drawn By - Angad Munda

|                                                    |                                                                         |
|----------------------------------------------------|-------------------------------------------------------------------------|
| Tested by<br>Shivani Kumari Singh<br>(Lab Analyst) | 30.09.2022<br>Verified & Issued by<br>Umesh Das<br>Authorized Signatory |
|----------------------------------------------------|-------------------------------------------------------------------------|

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

|                  |            |         |           |       |
|------------------|------------|---------|-----------|-------|
| Branch Office :- | Jamshedpur | Dhanbad | Hazaribag | Pakur |
|------------------|------------|---------|-----------|-------|

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
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Certified by: - ISO 9001:2015 & ISO 45001:2018



TC-4032



### Test Certificate

|                               |                                                                                                     |                                     |                     |  |                           |  |                           |  |            |  |  |  |  |  |  |  |  |
|-------------------------------|-----------------------------------------------------------------------------------------------------|-------------------------------------|---------------------|--|---------------------------|--|---------------------------|--|------------|--|--|--|--|--|--|--|--|
| ULR (Unique Lab Report) No.   |                                                                                                     | T C 4 0 3 2 2 2 0 0 0 0 0 1 6 1 8 F |                     |  |                           |  |                           |  |            |  |  |  |  |  |  |  |  |
| Discipline                    | Biological                                                                                          | Group                               | Water               |  | Sample Description        |  | Surface Water             |  |            |  |  |  |  |  |  |  |  |
| Report Release Date           | 30 <sup>th</sup> September, 2022                                                                    |                                     |                     |  | Report ID                 |  | YBAEEL-220920-114052-SW01 |  |            |  |  |  |  |  |  |  |  |
| W. Order/ JSPCB App. No.      | 3030005781                                                                                          |                                     |                     |  | Work Order Date           |  | 18.12.2021                |  |            |  |  |  |  |  |  |  |  |
| Type of Industry (if any)     | Thermal Power Plant                                                                                 |                                     |                     |  | Job code/ Ref. no.        |  | YBAEEL/WA/L/M/Sep-22/04   |  |            |  |  |  |  |  |  |  |  |
| Report Issue to               | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |                                     |                     |  |                           |  |                           |  |            |  |  |  |  |  |  |  |  |
| Sampling Date                 | 24/09/2022                                                                                          |                                     |                     |  | Mode of sample collection |  | By YBAEEL Team            |  |            |  |  |  |  |  |  |  |  |
| Sampling Protocol             | IS : 1622:1982, R - 2019                                                                            |                                     |                     |  | Sample Code               |  | 220926-SW-E01             |  |            |  |  |  |  |  |  |  |  |
| Sampling Location             | Srirampur Pond                                                                                      |                                     |                     |  | Sampling Source           |  | Surface Water             |  |            |  |  |  |  |  |  |  |  |
| Sample pkg. Condition         | Sealed Pack in PP Bottle                                                                            |                                     |                     |  | Sample Quantity           |  | 250 ml                    |  |            |  |  |  |  |  |  |  |  |
| Meteorological Cond. of Field | W.C. - Clear                                                                                        |                                     |                     |  | RH % - 66                 |  | Temp. - 29°C              |  |            |  |  |  |  |  |  |  |  |
| Sample receipt Date           | 26/09/2022                                                                                          |                                     | Analysis Started on |  | 27/09/2022                |  | Analysis completed on     |  | 30/09/2022 |  |  |  |  |  |  |  |  |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl | Parameter      | Test Method                              | Units      | Results | Limits |
|----|----------------|------------------------------------------|------------|---------|--------|
| 1. | Total coliform | APHA 9221B 23 <sup>rd</sup> Edition 2017 | MPN/100 ml | 2400    | --     |
| 2. | Fecal coliform | APHA 9221E 23 <sup>rd</sup> Edition 2017 | MPN/100 ml | 2400    | 2500   |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | G.S.R. 742 (E) 25 <sup>th</sup> September, 2000.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Abbreviation               | MDL : Minimum detection limit. BDL : Below detection limit.<br><1.8 / <1.1 MPN/100 ml denotes that the presence probability of bacteria is absent in the tested sample.                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Env. Condition of Lab      | Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility.<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO<br>The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | Sample complies with prescribed limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

Sample Drawn By - Angad Munda

|               |                      |
|---------------|----------------------|
| Madhuri Sinha | Mukesh Kumar         |
| Tested by     | 30-9-2022            |
| Madhuri Sinha | Verified & Issued by |
| (Lab Analyst) | Mukesh Kumar         |
|               | Authorized Signatory |

Authorized Signatory  
Microbiological Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office :- Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
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# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - ISO 9001:2015 & ISO 45001:2018



TC-4032



### Test Certificate

|                               |          |                                                                                                     |  |                     |   |                    |                           |   |   |                       |               |                            |   |   |            |   |   |   |   |   |   |
|-------------------------------|----------|-----------------------------------------------------------------------------------------------------|--|---------------------|---|--------------------|---------------------------|---|---|-----------------------|---------------|----------------------------|---|---|------------|---|---|---|---|---|---|
| ULR (Unique Lab Report) No.   |          |                                                                                                     |  | T                   | C | 4                  | 0                         | 3 | 2 | 2                     | 2             | 0                          | 0 | 0 | 0          | 0 | 1 | 6 | 3 | 1 | F |
| Discipline                    | Chemical | Group                                                                                               |  | Water               |   | Sample Description |                           |   |   |                       | Surface Water |                            |   |   |            |   |   |   |   |   |   |
| Report Release Date           |          | 30 <sup>th</sup> September, 2022                                                                    |  |                     |   |                    | Report ID                 |   |   |                       |               | YBAEEL-220920-114052- SW02 |   |   |            |   |   |   |   |   |   |
| W. Order/ JSPCB App. No.      |          | 3030005781                                                                                          |  |                     |   |                    | Work Order Date           |   |   |                       |               | 18.12.2021                 |   |   |            |   |   |   |   |   |   |
| Type of Industry (if any)     |          | Thermal Power Plant                                                                                 |  |                     |   |                    | Job code/ Ref. no.        |   |   |                       |               | YBAEEL/WA/L/C/Sep-22/06    |   |   |            |   |   |   |   |   |   |
| Report Issue to               |          | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra – 832402, Jharkhand. |  |                     |   |                    |                           |   |   |                       |               |                            |   |   |            |   |   |   |   |   |   |
| Sampling Date                 |          | 24/09/2022                                                                                          |  |                     |   |                    | Mode of sample collection |   |   |                       |               | By YBAEEL Team             |   |   |            |   |   |   |   |   |   |
| Sampling Protocol             |          | IS : 3025 (Part-1) 1987, R-2003                                                                     |  |                     |   |                    | Sample Code               |   |   |                       |               | 220926-SW-E02              |   |   |            |   |   |   |   |   |   |
| Sampling Location             |          | Padampur Pond                                                                                       |  |                     |   |                    | Sampling Source           |   |   |                       |               | Surface Water              |   |   |            |   |   |   |   |   |   |
| Sample pkg. Condition         |          | Sealed Pack in PP Bottle                                                                            |  |                     |   |                    | Sample Quantity           |   |   |                       |               | 3000 ml                    |   |   |            |   |   |   |   |   |   |
| Meteorological Cond. of Field |          | W.C.– Clear                                                                                         |  |                     |   |                    | RH % - 66                 |   |   |                       |               | Temp. - 30°C               |   |   |            |   |   |   |   |   |   |
| Sample receipt Date           |          | 26/09/2022                                                                                          |  | Analysis Started on |   |                    | 26/09/2022                |   |   | Analysis completed on |               |                            |   |   | 30/09/2022 |   |   |   |   |   |   |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl  | Parameter                                  | Test Method                                                              | Units | MU %  | Results        | Limits  |
|-----|--------------------------------------------|--------------------------------------------------------------------------|-------|-------|----------------|---------|
| 1.  | pH value                                   | IS 3025 (P-11):2002                                                      | pH    | 1.77  | 7.20           | 6.5-8.5 |
| 2.  | Colour                                     | IS 3025 (P-04):1983                                                      | Hazen | --    | 15.0           | --      |
| 3.  | Conductivity                               | IS 3025 (P-14):2013                                                      | µs/cm | 1.90  | 418.0          | --      |
| 4.  | Total Alkalinity (as CaCO <sub>3</sub> )   | IS 3025 (P-23):2003                                                      | mg/l  | 3.68  | 118.0          | --      |
| 5.  | Total Hardness (as CaCO <sub>3</sub> )     | IS 3025 (P-21):2009                                                      | mg/l  | 1.35  | 126.0          | --      |
| 6.  | Total dissolved solids                     | IS 3025 (P-16):2006                                                      | mg/l  | 2.85  | 228.0          | --      |
| 7.  | Chlorine Residual                          | IS 3025 (P-26):2003                                                      | mg/l  | 30.64 | BDL (MDL 0.07) | --      |
| 8.  | Chloride (as Cl <sup>-</sup> )             | IS 3025 (P-32):2003                                                      | mg/l  | 3.41  | 38.5           | --      |
| 9.  | Fluoride (as F <sup>-</sup> )              | APHA 4500 F-C 23 <sup>rd</sup> edition 2017                              | mg/l  | 12.22 | 0.8            | --      |
| 10. | Nitrate (as NO <sub>3</sub> <sup>-</sup> ) | APHA 4500 NO <sub>3</sub> <sup>-</sup> (B) 23 <sup>rd</sup> edition 2017 | mg/l  | 11.33 | 1.18           | --      |
| 11. | Calcium (as Ca <sup>2+</sup> )             | IS 3025 (P-40): 2003                                                     | mg/l  | 4.19  | 28.0           | --      |
| 12. | Magnesium (as Mg <sup>2+</sup> )           | APHA 3500 Mg B : 2017                                                    | mg/l  | 1.90  | 13.61          | --      |
| 13. | Sodium (as Na <sup>+</sup> )               | APHA 3111 B 23 <sup>rd</sup> edition 2017                                | mg/l  | 16.98 | 30.0           | --      |
| 14. | Potassium (as K <sup>+</sup> )             | APHA 3111 B 23 <sup>rd</sup> edition 2017                                | mg/l  | 9.21  | 3.0            | --      |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | G.S.R. 742 (E) 25 <sup>th</sup> September, 2000.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Abbreviation               | MDL : Minimum detection limit, BDL : Below detection limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Env. Condition of Lab      | Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise.<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | Sample complies with prescribed limits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

Sample Drawn By : Angad Munda  
Tested By : Akash Khalkho (Lab Analyst)

|                                                             |                                                |
|-------------------------------------------------------------|------------------------------------------------|
| Verified by<br>Shivani Kumari Singh<br>Authorized Signatory | Issued by<br>Umesh Das<br>Authorized Signatory |
|-------------------------------------------------------------|------------------------------------------------|

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory



Branch Office : - Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in







# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - An ISO 9001:2015 & ISO 45001:2018



### Test Certificate

|                               |                                                                                                     |                                     |       |  |                           |  |                    |  |                            |  |               |  |                       |  |  |  |            |  |  |  |
|-------------------------------|-----------------------------------------------------------------------------------------------------|-------------------------------------|-------|--|---------------------------|--|--------------------|--|----------------------------|--|---------------|--|-----------------------|--|--|--|------------|--|--|--|
| ULR (Unique Lab Report) No.   |                                                                                                     | T C 4 0 3 2 2 2 0 0 0 0 0 1 6 3 1 F |       |  |                           |  |                    |  |                            |  |               |  |                       |  |  |  |            |  |  |  |
| Discipline                    | Chemical                                                                                            | Group                               | Water |  |                           |  | Sample Description |  |                            |  | Surface Water |  |                       |  |  |  |            |  |  |  |
| Report Release Date           | 30 <sup>th</sup> September, 2022                                                                    |                                     |       |  | Report ID                 |  |                    |  | YBAEEL-220920-114052- SW02 |  |               |  |                       |  |  |  |            |  |  |  |
| W. Order/ JSPCB App. No.      | 3030005781                                                                                          |                                     |       |  | Work Order Date           |  |                    |  | 18.12.2021                 |  |               |  |                       |  |  |  |            |  |  |  |
| Type of Industry (if any)     | Thermal Power Plant                                                                                 |                                     |       |  | Job code/ Ref. no.        |  |                    |  | YBAEEL/WA/LC/Sep-22/06     |  |               |  |                       |  |  |  |            |  |  |  |
| Report Issue to               | M/s Adhunik Power & Natural Resources Ltd.<br>VIII. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |                                     |       |  |                           |  |                    |  |                            |  |               |  |                       |  |  |  |            |  |  |  |
| Sampling Date                 | 24/09/2022                                                                                          |                                     |       |  | Mode of sample collection |  |                    |  | By YBAEEL Team             |  |               |  |                       |  |  |  |            |  |  |  |
| Sampling Protocol             | IS : 3025 (Part-1) 1987, R-2003                                                                     |                                     |       |  | Sample Code               |  |                    |  | 220926-SW-E02              |  |               |  |                       |  |  |  |            |  |  |  |
| Sampling Location             | Padampur Pond                                                                                       |                                     |       |  | Sampling Source           |  |                    |  | Surface Water              |  |               |  |                       |  |  |  |            |  |  |  |
| Sample pkg. Condition         | Sealed Pack in PP Bottle                                                                            |                                     |       |  | Sample Quantity           |  |                    |  | 3000 ml                    |  |               |  |                       |  |  |  |            |  |  |  |
| Meteorological Cond. of Field | W.C.- Clear                                                                                         |                                     |       |  | RH % - 66                 |  |                    |  | Temp. - 30°C               |  |               |  |                       |  |  |  |            |  |  |  |
| Sample receipt Date           | 26/09/2022                                                                                          |                                     |       |  | Analysis Started on       |  |                    |  | 26/09/2022                 |  |               |  | Analysis completed on |  |  |  | 30/09/2022 |  |  |  |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl | Parameter                     | Test Method         | Units | MU % | Results       | Limits |
|----|-------------------------------|---------------------|-------|------|---------------|--------|
| 1. | Odour                         | IS 3025 (P-05):2002 | --    | --   | Agree.        | --     |
| 2. | Taste                         | IS 3025 (P-07):2002 | --    | --   | Agree.        | --     |
| 3. | Cyanide (as CN <sup>-</sup> ) | IS 3025 (P-27)      | mg/l  | --   | BDL (MDL 1.0) | --     |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | -----                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Abbreviation               | MDL : Minimum detection limit, BDL : Below detection limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Env. Condition of Lab      | Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise.<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | -----                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

Sample Drawn By : Angad Munda  
Tested By : Akash Khalkho (Lab Analyst)

|                      |  |                      |  |
|----------------------|--|----------------------|--|
| 30.09.2022           |  | 30/9/22              |  |
| Verified by          |  | Issued by            |  |
| Shivani Kumari Singh |  | Umesh Das            |  |
| Authorized Signatory |  | Authorized Signatory |  |

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office : - Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com; Web - https://ybaeel.in







# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - ISO 9001:2015 & ISO 45001:2018



TC-4032

### Test Certificate

|                               |                                                                                                     |                                     |       |                           |                       |                                 |            |  |  |  |  |  |  |  |  |  |  |
|-------------------------------|-----------------------------------------------------------------------------------------------------|-------------------------------------|-------|---------------------------|-----------------------|---------------------------------|------------|--|--|--|--|--|--|--|--|--|--|
| ULR (Unique Lab Report) No.   |                                                                                                     | T C 4 0 3 2 2 2 0 0 0 0 0 1 6 3 7 F |       |                           |                       |                                 |            |  |  |  |  |  |  |  |  |  |  |
| Discipline                    | Chemical                                                                                            | Group                               | Water | Sample Description        |                       | Residue & Contaminants in Water |            |  |  |  |  |  |  |  |  |  |  |
| Report Release Date           | 30 <sup>th</sup> September, 2022                                                                    |                                     |       | Report ID                 |                       | YBAEEL-220920-114052-SW02       |            |  |  |  |  |  |  |  |  |  |  |
| W. Order/ JSPCB App. No.      | 3030005781                                                                                          |                                     |       | Work Order Date           |                       | 18.12.2021                      |            |  |  |  |  |  |  |  |  |  |  |
| Type of Industry (If any)     | Thermal Power Plant                                                                                 |                                     |       | Job code/ Ref. no.        |                       | YBAEEL/WA/L/R/Sep-22/02         |            |  |  |  |  |  |  |  |  |  |  |
| Report Issue to               | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |                                     |       |                           |                       |                                 |            |  |  |  |  |  |  |  |  |  |  |
| Sampling Date                 | 24/09/2022                                                                                          |                                     |       | Mode of sample collection |                       | By YBAEEL Team                  |            |  |  |  |  |  |  |  |  |  |  |
| Sampling Protocol             | IS : 3025 (Part-1) 1987, R-2003                                                                     |                                     |       | Sample Code               |                       | 220926-SW-E02                   |            |  |  |  |  |  |  |  |  |  |  |
| Sampling Location             | Padampur Pond                                                                                       |                                     |       | Sampling Source           |                       | Surface Water                   |            |  |  |  |  |  |  |  |  |  |  |
| Sample pkg. Condition         | Sealed Pack in PP Bottle                                                                            |                                     |       | Sample Quantity           |                       | 1000 ml                         |            |  |  |  |  |  |  |  |  |  |  |
| Meteorological Cond. of Field | W.C. - Clear                                                                                        |                                     |       | RH % - 66                 |                       | Temp. - 30°C                    |            |  |  |  |  |  |  |  |  |  |  |
| Sample receipt Date           | 26/09/2022                                                                                          | Analysis Started on                 |       | 26/09/2022                | Analysis completed on |                                 | 30/09/2022 |  |  |  |  |  |  |  |  |  |  |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl | Parameter        | Test Method                               | Units | MU %  | Results         | Limits |
|----|------------------|-------------------------------------------|-------|-------|-----------------|--------|
| 1. | Arsenic (as As)  | APHA 3114 B 23 <sup>rd</sup> edition 2017 | mg/l  | 10.34 | BDL (MDL 0.003) | ..     |
| 2. | Copper (as Cu)   | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 11.11 | BDL (MDL 0.01)  | ..     |
| 3. | Iron (as Fe)     | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 2.34  | 0.37            | ..     |
| 4. | Lead (as Pb)     | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 10.64 | BDL (MDL 0.02)  | ..     |
| 5. | Cadmium (as Cd)  | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 5.0   | BDL (MDL 0.02)  | ..     |
| 6. | Mercury (as Hg)  | APHA 3112 B 23 <sup>rd</sup> edition 2017 | mg/l  | 8.47  | BDL (MDL 0.003) | ..     |
| 7. | Chromium (as Cr) | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 12.53 | BDL (MDL 0.02)  | ..     |
| 8. | Nickel (as Ni)   | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 13.72 | 0.10            | ..     |
| 9. | Cobalt (Co)      | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 28.33 | BDL (MDL 0.03)  | ..     |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | MDL : Minimum detection limit, BDL : Below detection limit.                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Abbreviation               | Laboratory is maintaining. Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C)                                                                                                                                                                                                                                                                                                                                                   |
| Env. Condition of Lab      | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility                                                                                                                                                                                                                                                                                                                                 |
| Specific contractual notes | This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise.<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

Sample Drawn By - Angad Munda

|                                                        |  |                                                               |  |
|--------------------------------------------------------|--|---------------------------------------------------------------|--|
| <br>Tested by<br>Shivani Kumari Singh<br>(Lab Analyst) |  | <br>Verified & Issued by<br>Umesh Das<br>Authorized Signatory |  |
|--------------------------------------------------------|--|---------------------------------------------------------------|--|



Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
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# YUGANTAR BHARATI

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Accredited by: - Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - An ISO 9001:2015 & ISO 45001:2018



### Test Certificate

|                               |                                                                                                     |                     |            |                           |                                 |
|-------------------------------|-----------------------------------------------------------------------------------------------------|---------------------|------------|---------------------------|---------------------------------|
| Discipline                    | Chemical                                                                                            | Group               | Water      | Sample Description        | Residue & Contaminants in Water |
| Report Release Date           | 30 <sup>th</sup> September, 2022                                                                    |                     |            | Report ID                 | YBAEEL-220920-114052- SW02      |
| W. Order/ JSPCB App. No.      | 3030005781                                                                                          |                     |            | Work Order Date           | 18.12.2021                      |
| Type of Industry(if any)      | Thermal Power Plant                                                                                 |                     |            | Job code/ Ref. no.        | YBAEEL/WA/L/R/Sep-22/02         |
| Report Issue to               | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra – 832402, Jharkhand. |                     |            |                           |                                 |
| Sampling Date                 | 24/09/2022                                                                                          |                     |            | Mode of sample collection | By YBAEEL Team                  |
| Sampling Protocol             | IS : 3025 (Part-1) 1987, R-2003                                                                     |                     |            | Sample Code               | 220926-SW-E02                   |
| Sampling Location             | Padampur Pond                                                                                       |                     |            | Sampling Source           | Surface Water                   |
| Sample pkg. Condition         | Sealed Pack in PP Bottle                                                                            |                     |            | Sample Quantity           | 1000 ml                         |
| Meteorological Cond. of Field | W.C.– Clear                                                                                         |                     |            | RH % - 66                 | Temp. - 30°C                    |
| Sample receipt Date           | 26/09/2022                                                                                          | Analysis Started on | 26/09/2022 | Analysis completed on     | 30/09/2022                      |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl | Parameter         | Test Method         | Units | MU % | Results        | Limits |
|----|-------------------|---------------------|-------|------|----------------|--------|
| 1. | Aluminium (as Al) | IS 3025 (P-55):2003 | mg/l  | ---  | BDL (MDL 0.02) | ---    |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | -----                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Abbreviation               | MDL : Minimum detection limit. BDL : Below detection limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Env. Condition of Lab      | Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise.<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | -----                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

Sample Drawn By - Angad Munda

|                                                   |                                                           |
|---------------------------------------------------|-----------------------------------------------------------|
| Tested by<br>Shivani Kuman Singh<br>(Lab Analyst) | Verified & Issued by<br>Umesh Das<br>Authorized Signatory |
|---------------------------------------------------|-----------------------------------------------------------|

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

|                  |            |         |           |       |
|------------------|------------|---------|-----------|-------|
| Branch Office :- | Jamshedpur | Dhanbad | Hazaribag | Pakur |
|------------------|------------|---------|-----------|-------|

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com; Web - https://ybaeel.in







# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - ISO 9001:2015 & ISO 45001:2018



TC-4032



### Test Certificate

|                               |                                                                                                     |       |       |                           |   |                            |   |                     |   |            |   |   |   |   |   |   |   |
|-------------------------------|-----------------------------------------------------------------------------------------------------|-------|-------|---------------------------|---|----------------------------|---|---------------------|---|------------|---|---|---|---|---|---|---|
| ULR (Unique Lab Report) No.   | T                                                                                                   | C     | 4     | 0                         | 3 | 2                          | 2 | 2                   | 0 | 0          | 0 | 0 | 1 | 6 | 1 | 9 | F |
| Discipline                    | Biological                                                                                          | Group | Water | Sample Description        |   | Surface Water              |   |                     |   |            |   |   |   |   |   |   |   |
| Report Release Date           | 30 <sup>th</sup> September, 2022                                                                    |       |       | Report ID                 |   | YBAEEL-220920-114052- SW02 |   |                     |   |            |   |   |   |   |   |   |   |
| W. Order/ JSPCB App. No.      | 3030005781                                                                                          |       |       | Work Order Date           |   | 18.12.2021                 |   |                     |   |            |   |   |   |   |   |   |   |
| Type of Industry(if any)      | Thermal Power Plant                                                                                 |       |       | Job code/ Ref. no.        |   | YBAEEL/WA/L/M/Sep-22/04    |   |                     |   |            |   |   |   |   |   |   |   |
| Report Issue to               | M/s Adhunik Power & Natural Resources Ltd.<br>VIII. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |       |       |                           |   |                            |   |                     |   |            |   |   |   |   |   |   |   |
| Sampling Date                 | 24/09/2022                                                                                          |       |       | Mode of sample collection |   | By YBAEEL Team             |   |                     |   |            |   |   |   |   |   |   |   |
| Sampling Protocol             | IS : 1622:1982, R - 2019                                                                            |       |       | Sample Code               |   | 220926-SW-E02              |   |                     |   |            |   |   |   |   |   |   |   |
| Sampling Location             | Padampur Pond                                                                                       |       |       | Sampling Source           |   | Surface Water              |   |                     |   |            |   |   |   |   |   |   |   |
| Sample pkg. Condition         | Sealed Pack in PP Bottle                                                                            |       |       | Sample Quantity           |   | 250 ml                     |   |                     |   |            |   |   |   |   |   |   |   |
| Meteorological Cond. of Field | W.C.- Clear                                                                                         |       |       | RH % - 66                 |   | Temp. - 30°C               |   |                     |   |            |   |   |   |   |   |   |   |
| Sample receipt Date           | 26/09/2022                                                                                          |       |       | Analysis Started on       |   | 27/09/2022                 |   | Sample receipt Date |   | 30/09/2022 |   |   |   |   |   |   |   |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl | Parameter      | Test Method                              | Units      | Results | Limits |
|----|----------------|------------------------------------------|------------|---------|--------|
| 1. | Total coliform | APHA 9221B 23 <sup>rd</sup> Edition 2017 | MPN/100 ml | 1600    | --     |
| 2. | Fecal coliform | APHA 9221E 23 <sup>rd</sup> Edition 2017 | MPN/100 ml | 1600    | 2500   |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | G.S.R. 742 (E) 25 <sup>th</sup> September, 2000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Abbreviation               | MDL : Minimum detection limit. BDL : Below detection limit.<br><1.8 / <1.1 MPN/100 ml denotes that the presence probability of bacteria is absent in the tested sample.                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Env. Condition of Lab      | Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility.<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise.<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | Sample complies with prescribed limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

Sample Drawn By - Angad Munda

|               |                      |
|---------------|----------------------|
| Madhuri Sinha | Mukesh Kumar         |
| Tested by     | Verified & Issued by |
| Madhuri Sinha | Mukesh Kumar         |
| (Lab Analyst) | Authorized Signatory |

Authorized Signatory  
Microbiological Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office :- Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
Ph : 09835-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in







# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by :- NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by :- ISO 9001:2015 & ISO 45001:2018



TC-4032



### Test Certificate

|                               |          |                                                                                                     |                       |  |  |  |  |                           |                    |  |  |  |  |                         |                            |  |  |  |  |  |
|-------------------------------|----------|-----------------------------------------------------------------------------------------------------|-----------------------|--|--|--|--|---------------------------|--------------------|--|--|--|--|-------------------------|----------------------------|--|--|--|--|--|
| ULR (Unique Lab Report) No.   |          | T C 4 0 3 2 2 2 0 0 0 0 0 1 6 2 3 F                                                                 |                       |  |  |  |  |                           |                    |  |  |  |  |                         |                            |  |  |  |  |  |
| Discipline                    | Chemical | Group                                                                                               | Atmospheric Pollution |  |  |  |  |                           | Sample Description |  |  |  |  |                         | Stationary Source Emission |  |  |  |  |  |
| Report Release Date           |          | 30 <sup>th</sup> September, 2022                                                                    |                       |  |  |  |  | Report ID                 |                    |  |  |  |  | YBAEEL-220920-114052-S2 |                            |  |  |  |  |  |
| W. Order/ JSPCB App. No.      |          | 3030005781                                                                                          |                       |  |  |  |  | Work Order Date           |                    |  |  |  |  | 18.12.2021              |                            |  |  |  |  |  |
| Type of Industry (If any)     |          | Thermal Power Plant                                                                                 |                       |  |  |  |  | Job code/ Ref. no.        |                    |  |  |  |  | YBAEELWA/LA/Sep-22/28   |                            |  |  |  |  |  |
| Report Issue to               |          | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |                       |  |  |  |  |                           |                    |  |  |  |  |                         |                            |  |  |  |  |  |
| Sampling Period               |          | 23/09/2022                                                                                          |                       |  |  |  |  | Mode of sample collection |                    |  |  |  |  | By YBAEEL Team          |                            |  |  |  |  |  |
| Sampling Protocol             |          | IS: 11255 & CPCB Guideline (Lats/80/2013-14)                                                        |                       |  |  |  |  |                           |                    |  |  |  |  |                         |                            |  |  |  |  |  |
| Meteorological Cond. of Field |          | W.C. - Clear                                                                                        |                       |  |  |  |  | RH % - 67                 |                    |  |  |  |  | Temp. - 32°C            |                            |  |  |  |  |  |
| Sample receipt Date           |          | 24/09/2022                                                                                          |                       |  |  |  |  | Analysis Started on       |                    |  |  |  |  | 24/09/2022              |                            |  |  |  |  |  |
|                               |          |                                                                                                     |                       |  |  |  |  | Analysis completed on     |                    |  |  |  |  | 30/09/2022              |                            |  |  |  |  |  |

#### General Information

| As observed while sampling            |                    | As reported by customer                 |             |
|---------------------------------------|--------------------|-----------------------------------------|-------------|
| Location                              | Sampling port hole | Type of fuel Used                       | Coal        |
| Platform                              | Permanent          | Quantity of Fuel Used (During Sampling) | 157 Ton/Hr. |
| Stack Description (Shape & Material)  | Circular / RCC     | Total production Capacity               | 263 MW      |
| Sampling port                         | Available          | Height of Stack from ground level       | 275 mtr.    |
| Stack Identification                  | Unit - II          | Inner Diameter of Stack                 | 4.2 mtr.    |
| Height of port hole from Ground level | 90 mtr.            | Pollution Controlling Device (if any)   | ESP         |
| Running Oven during sampling (if any) | N/A                | Total No. of Oven (if any)              | N/A         |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl | Parameters                              | Test Method                   | Units               | MU % | Results       | Limits |
|----|-----------------------------------------|-------------------------------|---------------------|------|---------------|--------|
| 1. | Stack gas Temperature                   | IS 11255 (Part 3)2008         | k                   | --   | 443.0         | -      |
| 2. | Stack gas Velocity                      | IS 11255 (Part 3)2008         | m/s                 | --   | 26.23         | -      |
| 3. | Volumetric Flow Rate                    | IS 11255 (Part 3)2008         | Nm <sup>3</sup> /hr | --   | 855775.8874   | -      |
| 3. | Particulate Matter (PM)                 | IS 11255 (Part 1)2009         | mg/Nm <sup>3</sup>  | 2.12 | 39.3          | 50     |
| 4. | Sulphure Dioxide (SO <sub>2</sub> )     | IS 11255 (Part 2)2009         | mg/Nm <sup>3</sup>  | 3.06 | 930.0         | 600    |
| 5. | Oxide of Nitrogen (as NO <sub>x</sub> ) | IS 11255 (Part 7)2005 RA 2012 | mg/Nm <sup>3</sup>  | 2.70 | 436.0         | 450    |
| 6. | Carbon Monoxide (CO)                    | IS 13270:1992 (RA 2009)       | %                   | --   | BDL (MDL 0.2) | -      |

#### Emission Rate

|    |                                         |                               |        |        |    |
|----|-----------------------------------------|-------------------------------|--------|--------|----|
| 1. | Particulate Matter (PM)                 | IS 11255 (Part 1)2009         | kg/hr. | 33.6   | -  |
| 2. | Sulphure Dioxide (SO <sub>2</sub> )     | IS 11255 (Part 2)2009         | kg/hr. | 796.0  | -- |
| 3. | Oxide of Nitrogen (as NO <sub>x</sub> ) | IS 11255 (Part 7)2005 RA 2012 | kg/hr. | 373.11 | -- |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | Environmental (Protection) Rule - 1986                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Abbreviation               | MDL : Minimum detection limit. BDL : Below detection limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Env. Condition of Lab      | Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196-1966 (C).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise.<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | Sample complies with prescribed limits, except parameter Sulphure Dioxide, Serial No. 4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

Sample Drawn By - Angad Munda  
Tested By - Akash Khalkho (Lab Analyst)

|                                                                                |                                                               |
|--------------------------------------------------------------------------------|---------------------------------------------------------------|
| <br>30-09-22<br>Verified by<br>Sanjeev Kumar Singh<br>Deputy Technical Manager | <br>30/9/22<br>Issued by<br>Umesh Das<br>Authorized Signatory |
|--------------------------------------------------------------------------------|---------------------------------------------------------------|

Authorized Signatory  
Atmospheric Pollution  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office :- Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in







# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - Jharkhand State Pollution Control Board (JSPCB)  
 Certified by: - An ISO 9001:2015 & ISO 45001:2018



### Test Certificate

| Discipline                    | Chemical | Group                                                                                               | Atmospheric Pollution | Sample Description                                              | Stationary Source Emission |
|-------------------------------|----------|-----------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------------------|----------------------------|
| Report Release Date           |          | 30 <sup>th</sup> September, 2022                                                                    |                       | Report ID                                                       | YBAEEL-220920-114052-S2    |
| W. Order/ JSPCB App. No.      |          | 3030005781                                                                                          |                       | Work Order Date                                                 | 18.12.2021                 |
| Type of Industry (If any)     |          | Thermal Power Plant                                                                                 |                       | Job code/ Ref. no.                                              | YBAEEL/WA/L/A/Sep-22/28    |
| Report Issue to               |          | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra – 832402, Jharkhand. |                       |                                                                 |                            |
| Sampling Period               |          | 23/09/2022                                                                                          |                       | Mode of sample collection By YBAEEL Team                        |                            |
| Sampling Protocol             |          | IS: 11255 & CPCB Guideline (Lats/30/2013-14)                                                        |                       |                                                                 |                            |
| Meteorological Cond. of Field |          | W.C.– Clear                                                                                         |                       | RH % - 67 Temp.– 32°C                                           |                            |
| Sample receipt Date           |          | 24/09/2022                                                                                          |                       | Analysis Started on 24/09/2022 Analysis completed on 30/09/2022 |                            |

| As observed while sampling            |                    | As reported by customer                 |             |
|---------------------------------------|--------------------|-----------------------------------------|-------------|
| Location                              | Sampling port hole | Type of fuel Used                       | Coal        |
| Platform                              | Permanent          | Quantity of Fuel Used (During Sampling) | 157 Ton/Hr. |
| Stack Description (Shape & Material)  | Circular / RCC     | Total production Capacity               | 263 MW      |
| Sampling port                         | Available          | Height of Stack from ground level       | 275 mtr.    |
| Stack Identification                  | Unit - II          | Inner Diameter of Stack                 | 4.2 mtr.    |
| Height of port hole from Ground level | 90 mtr.            | Pollution Controlling Device (if any)   | ESP         |
| Running Oven during sampling (if any) | N/A                | Total No. of Oven (if any)              | N/A         |

| Sl | Parameters      | Test Method      | Units              | MU % | Results         | Limits |
|----|-----------------|------------------|--------------------|------|-----------------|--------|
| 1. | Mercury (as Hg) | Lat's/80/2013-14 | mg/Nm <sup>3</sup> | -    | BDL (MDL 0.003) | 0.03   |

\*\*\*\*\*Test Results\*\*\*\*\*

\*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | Environmental (Protection) Rule - 1986.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Abbreviation               | MDL - Minimum detection limit, BDL - Below detection limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Env. Condition of Lab      | Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility.<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise.<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | Sample complies with prescribed limits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

Sample Drawn By - Angad Munda  
 Tested By - Akash Khalkho (Lab Analyst)

|                                                                |                                                |
|----------------------------------------------------------------|------------------------------------------------|
| Verified by<br>Sanjeev Kumar Singh<br>Deputy Technical Manager | Issued by<br>Umesh Das<br>Authorized Signatory |
|----------------------------------------------------------------|------------------------------------------------|

Authorized Signatory  
 Atmospheric Pollution  
 Yugantar Bharati Analytical &  
 Environmental Engineering Laboratory

Branch Office :- Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
 Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in





# Adhunik Power & Natural Resource Limited

## FLY ASH GENERATION & UTILIZATION FOR THE PERIOD OF APRIL 2022 TO September 2022

| Sl. No. | Ash Generation and Utilization |               |                          |                    |                     |                  | Mode of Ash Utilization                              |                                               |                                        |
|---------|--------------------------------|---------------|--------------------------|--------------------|---------------------|------------------|------------------------------------------------------|-----------------------------------------------|----------------------------------------|
|         | Months                         | Coal Consumed | Ash Contents of Coal (%) | Fly Ash Generation | Fly Ash Utilization | %age Utilization | In Making of Fly Ash Based bricks /Blocks /Tiles etc | In manufacturing of Portland Pozzolana Cement | Part replacement of cement in concrete |
| (1)     | (2)                            | (3)           | (4)                      | (5)                | (6)                 | (7)              | (8)                                                  | (9)                                           | (10)                                   |
| 1       | APRIL                          | 212264.1      | 38.61                    | 81957.94           | 66569.94            | 81.2%            | 6493.49                                              | 56528.09                                      | 3548.36                                |
| 2       | MAY                            | 253516        | 46.57                    | 118060.05          | 82846.76            | 70.2%            | 4058.37                                              | 75643.70                                      | 3144.69                                |
| 3       | JUNE                           | 223998.1      | 43.04                    | 96408.52           | 81947.24            | 85.0%            | 3643.77                                              | 73444.90                                      | 4858.57                                |
| 4       | July                           | 177268        | 44.66                    | 79159.77           | 67285.81            | 85.0%            | 1960.79                                              | 61244.83                                      | 4080.19                                |
| 5       | August                         | 236245.5      | 39.44                    | 93167.6            | 77746.45            | 83.4%            | 1802.39                                              | 72883.32                                      | 3060.74                                |
| 6       | Sep                            | 228920.8      | 46.32                    | 106041.3           | 89956.42            | 84.8%            | 3193.78                                              | 82747.03                                      | 4015.61                                |
|         | Total                          | 1332212       | 43.11                    | 574795.2           | 466352.61           | 81.6%            | 21152.574                                            | 422491.87                                     | 22708.16                               |





# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - Jharkhand State Pollution Control Board (JSPCB)  
 Certified by: - An ISO 9001:2015 & ISO 45001:2018



### Test Certificate

|                               |                                                                                                     |                     |                         |                           |                           |
|-------------------------------|-----------------------------------------------------------------------------------------------------|---------------------|-------------------------|---------------------------|---------------------------|
| Discipline                    | Chemical                                                                                            | Group               | Pollution & Environment | Sample Description        | ASH                       |
| Report Release Date           | 30 <sup>th</sup> September, 2022                                                                    |                     |                         | Report ID                 | YBAEEL-220920-114052- S02 |
| W. Order/ JSPCB App. No.      | 3030005781                                                                                          |                     |                         | Work Order Date           | 18.12.2021                |
| Type of Industry(If any)      | Thermal Power Plant                                                                                 |                     |                         | Job code/ Ref. no.        | YBAEEL/WA/L/S/Sep-22/01   |
| Report issue to               | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |                     |                         |                           |                           |
| Sampling Date                 | 24/09/2022                                                                                          |                     |                         | Mode of sample collection | By YBAEEL Team            |
| Sampling Protocol             | IS : 3025 (Part-1) 1987, R-2003                                                                     |                     |                         | Sample Code               | 220926-S-E02              |
| Sampling Location             | Hopper                                                                                              |                     |                         | Sampling Source           | Bottom Ash                |
| Sample pkg. Condition         | Sealed Pack in Zipper Bag                                                                           |                     |                         | Sample Quantity           | 2.5 Kg Approx.            |
| Meteorological Cond. of Field | W.C.- Clear                                                                                         |                     |                         | RH % - 68                 | Temp. - 31°C              |
| Sample receipt Date           | 26/09/2022                                                                                          | Analysis Started on | 26/09/2022              | Analysis completed on     | 30/09/2022                |

\*\*\*\*\*Test Results \*\*\*\*\*

| Sl  | Parameter        | Test Method                    | Units | MU %  | Results        |
|-----|------------------|--------------------------------|-------|-------|----------------|
| 1.  | Iron (as Fe)     | USEPA 3050 B :1996/APHA 3111 B | ppm   | 2.73  | 20.66          |
| 2.  | Zinc (as Zn)     | USEPA 3050 B :1996/APHA 3111 B | ppm   | 4.44  | 0.21           |
| 3.  | Copper (as Cu)   | USEPA 3050 B :1996/APHA 3111 B | ppm   | 10.18 | 0.04           |
| 4.  | Lead (as Pb)     | USEPA 3050 B :1996/APHA 3111 B | ppm   | 2.82  | BDL (MDL 0.02) |
| 5.  | Nickel (as Ni)   | USEPA 3050 B :1996/APHA 3111 B | ppm   | 4.10  | 0.26           |
| 6.  | Cadmium (as Cd)  | USEPA 3050 B :1996/APHA 3111 B | ppm   | 9.57  | 1.0            |
| 7.  | Chromium (as Cr) | USEPA 3050 B :1996/APHA 3111 B | ppm   | 5.44  | 0.34           |
| 8.  | Arsenic (as As)  | USEPA 3050 B :1996/APHA 3114 B | ppm   | --    | 0.098          |
| 9.  | Mercury (Hg)     | USEPA 3050 B :1996/APHA 3112 B | ppm   | --    | 0.04           |
| 10. | Unburn Carbon    | IS 1727:1967                   | %     | --    | 2.1            |
| 11. | Selenium (as Se) | USEPA 3050 B :1996/APHA 3114 B | ppm   | --    | 0.04           |

\*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Abbreviation               | MDL : Minimum detection limit. BDL : Below detection limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Env. Condition of Lab      | Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility.<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise.<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

Sample Drawn By : Angad Munda

|                                                    |                                                           |
|----------------------------------------------------|-----------------------------------------------------------|
| Tested by<br>Shivani Kumari Singh<br>(Lab Analyst) | Verified & Issued by<br>Umesh Das<br>Authorized Signatory |
|----------------------------------------------------|-----------------------------------------------------------|

Authorized Signatory  
Pollution & Environment  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office :- Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
 Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com; Web - https://ybaeel.in







# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - ISO 9001:2015 & ISO 45001:2018



TC-4032

### Test Certificate

|                               |                                                                                                     |                                     |                           |
|-------------------------------|-----------------------------------------------------------------------------------------------------|-------------------------------------|---------------------------|
| ULR (Unique Lab Report) No.   |                                                                                                     | T C 4 0 3 2 2 2 0 0 0 0 0 1 6 4 0 F |                           |
| Discipline                    | Chemical                                                                                            | Group                               | Pollution & Environment   |
| Report Release Date           | 30 <sup>th</sup> September, 2022                                                                    |                                     | Sample Description        |
| W. Order/ JSPCB App. No.      | 3030005781                                                                                          |                                     | Report ID                 |
| Type of Industry (if any)     | Thermal Power Plant                                                                                 |                                     | Work Order Date           |
| Report Issue to               | M/s Adhunik Power & Natural Resources Ltd.<br>VIII. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |                                     | Job code/ Ref. no.        |
| Sampling Date                 | 24/09/2022                                                                                          |                                     | Mode of sample collection |
| Sampling Protocol             | IS : 3025 (Part-1) 1987, R-2003                                                                     |                                     | By YBAEEL Team            |
| Sampling Location             | Ash Pond                                                                                            |                                     | Sample Code               |
| Sample pkg. Condition         | Sealed Pack in PP Bottle                                                                            |                                     | Sampling Source           |
| Meteorological Cond. of Field | W.C. - Clear                                                                                        |                                     | Sample Quantity           |
| Sample receipt Date           | 26/09/2022                                                                                          |                                     | RH % - 66                 |
| Analysis Started on           |                                                                                                     | 26/09/2022                          |                           |
| Analysis completed on         |                                                                                                     | 30/09/2022                          |                           |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl | Parameter              | Test Method                               | Units | MU %  | Results         | Limits    |
|----|------------------------|-------------------------------------------|-------|-------|-----------------|-----------|
| 1. | pH value               | IS 3025 (P-11):2002                       | pH    | 2.53  | 8.36            | 6.5 - 8.5 |
| 2. | Temperature            | IS 3025 (P-09)                            | °C    | 1.55  | 29.0            | --        |
| 3. | Total suspended solids | IS 3025 (P-17):2012                       | mg/l  | 8.26  | 86.0            | 100       |
| 4. | Oil and grease         | IS 3025 (P-39):2003                       | mg/l  | 14.60 | 9.0             | 20.0      |
| 5. | Arsenic (as As)        | APHA 3114 B 23 <sup>rd</sup> edition 2017 | mg/l  | 7.86  | BDL (MDL 0.003) | --        |
| 6. | Chromium (as Cr)       | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 7.14  | BDL (MDL 0.02)  | --        |
| 7. | Lead (as Pb)           | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 6.26  | BDL (MDL 0.02)  | --        |
| 8. | Mercury (as Hg)        | APHA 3112 B 23 <sup>rd</sup> edition 2017 | mg/l  | 25.0  | BDL (MDL 0.003) | --        |
| 9. | Chloride (as Cl-)      | IS 3025 (P-32):2003                       | mg/l  | 3.44  | 18.0            | --        |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | Environmental (Protection) Rule - 1986.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Abbreviation               | MDL : Minimum detection limit, BDL : Below detection limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Env. Condition of Lab      | Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility.<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise.<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | Sample complies with prescribed limits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

Sample Drawn By

|                                                    |                                                           |
|----------------------------------------------------|-----------------------------------------------------------|
| Tested by<br>Shivani Kumari Singh<br>(Lab Analyst) | Verified & Issued by<br>Umash Das<br>Authorized Signatory |
|----------------------------------------------------|-----------------------------------------------------------|

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# Adhunik Power & Natural Resource Limited (APNRL)

(Village-Padampur Block-Gamharia, District-Saraikela-Kharsawan, Jharkhand)

## Social performance report from April'2022 to September'2022

Adhunik Power & Natural Resources Limited has always endeavored to achieve social development in the areas of community health, education, livelihood, infrastructure development and women empowerment. A report on social performance made by Adhunik Power & Natural Resources Limited (APNRL), Padampur, as a part of corporate social responsibility, during the mentioned period is here under. It is worth mentioning that APNRL had executed the community development. The focus area wise developmental activities report is as follows:

### **HEALTH & SANITATION**

1. **Health & Sanitation:** 24 X 7 ambulance facility has been providing to the villagers of peripheral village for better treatment. Nos. of villagers' availed ambulance facilitates following months.

| Status of Referral Patients |    |    |          |   |           |                                                              |
|-----------------------------|----|----|----------|---|-----------|--------------------------------------------------------------|
| Month                       | M  | F  | Children |   | Total No. | Village Covered                                              |
|                             |    |    | M        | F |           |                                                              |
| April'22                    | 16 | 15 | 0        | 0 | 31        | Badahariharpur, Srirampur,Dumra, Padampur , Kandra, Gamharia |
| May'22                      | 14 | 09 | 0        | 0 | 23        |                                                              |
| June'22                     | 8  | 16 | 1        | 0 | 25        |                                                              |
| July'22                     | 7  | 17 | 0        | 0 | 24        |                                                              |
| Aug'22                      | 8  | 11 | 1        | 3 | 23        |                                                              |
| Sept.'22                    | 6  | 11 | 1        | 1 | 19        |                                                              |

2. **Medical Facilities:** Provide free medical treatment at Dispensary, APNRL, Padampur. Nos. of villagers availed the medical facilities following months.

#### **Status of Patients-**

| Month    | M   | F  | Children |    | Total No. | Village Covered                                                                       |
|----------|-----|----|----------|----|-----------|---------------------------------------------------------------------------------------|
|          |     |    | M        | F  |           |                                                                                       |
| April'22 | 83  | 57 | 40       | 20 | 200       | Balidih, Badahariharpur, Srirampur, Dhatkidih, Padampur, Pindrabera, Kandra, Gamharia |
| May'22   | 127 | 65 | 22       | 23 | 237       |                                                                                       |
| June'22  | 86  | 84 | 34       | 16 | 220       |                                                                                       |
| July'22  | 79  | 92 | 33       | 10 | 214       |                                                                                       |
| Aug'22   | 169 | 74 | 42       | 26 | 311       |                                                                                       |
| Sept.'22 | 107 | 94 | 35       | 36 | 272       |                                                                                       |

3. **Drinking Water Supply:** The drinking water provided to villagers through water tanker towards meeting the need of drinking water and other related water use during their social functions. The **objectives** of supply of drinking water to the villagers were as follows:

- To meet the drinking need of villagers



- ii. To meet the needs of water related other use(s) during water scarcity situation in villages.

The detailed status of drinking water supply is as below:

| S. No. | Months   | No. of Drinking Water Supply Services Provided through Water Tanker | Quantity of Supplied Water (in Liter) | Average Population Covered | Purpose                                               |
|--------|----------|---------------------------------------------------------------------|---------------------------------------|----------------------------|-------------------------------------------------------|
| 1      | April'22 | 7                                                                   | 35000                                 | 1750                       | Meeting the need of drinking water for the villagers. |
| 2      | May'22   | 15                                                                  | 75000                                 | 4000                       |                                                       |
| 3      | June'22  | 6                                                                   | 30000                                 | 1500                       |                                                       |
| 4      | July'22  | 3                                                                   | 15000                                 | 750                        |                                                       |
| 5      | Aug'22   | 5                                                                   | 25000                                 | 1250                       |                                                       |
| 6      | Sept.'22 | 3                                                                   | 15000                                 | 750                        |                                                       |

4. **Eye check-up camp:** Eye problem of cataract is an issue in area. CSR, department coordinated with Purnima Netralaya, Jamshedpur and the Eye check-up camp were organized on 13.5.2022 and 29.6.2022 at the OHC, Padampur and Chitrakoot Apartment, Gamharia on the occasion of

20<sup>th</sup> death anniversary of Adhunik Group Founder Late

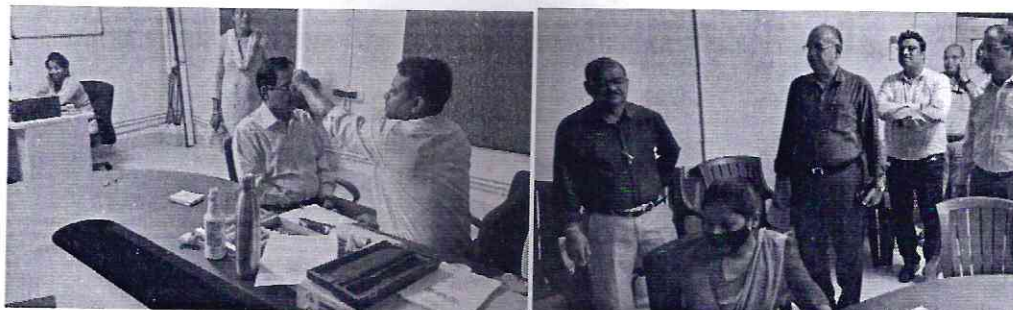


Mahadeo Prasad Agarwal. Total 148 persons from the various villages including APNRL employees

availed the check-up

Our director Sri Nirmal Kumar

Agarwal has



inspected eye check-up camp along with Sri Arun Kumar Mishra-CEO, Sri Anil Kumar Soni-GM, Sri Rajesh Kumar Sharma-VP, Sri. S.K.Parvez-AGM, Sri Amal Baidya-GM etc.



**5. Health Awareness Program:** The Company has always been empowering the village women

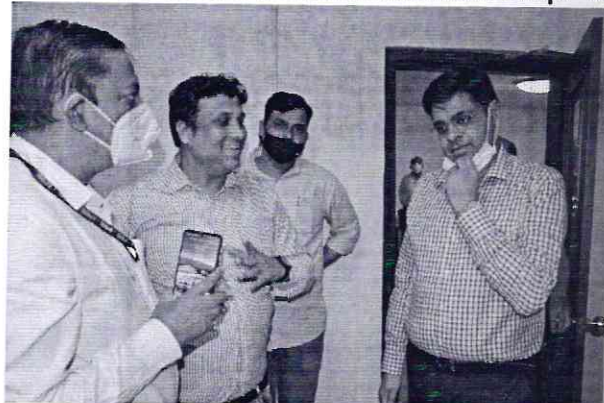


through various training events to lead their life with sustainable social recognition. Every month We organized Health Awareness program in association with Anganwadi worker on nutrition & breast feeding at Anganwadi Center, Badahariharpur, Padampur. Women were participated in it.



Along with this, **Annaprashan program** was also organized for children of six months, in which children were fed complementary food with complete customs, women were given special information about this subject. **Godh bharai program:** The Company has always been empowering the village women through various training events to lead their life with sustainable social recognition. CSR-Department APNRL organized **Godh bharai** celebration at AWC for pregnant women to encourage the good health and healthy living through the nutrition education as the malnutrition is the main obstruction to the National Development. Through this event pregnant women were given information on the subject of diet, hygiene, vaccination, health check-up etc. Also it is prayed for good health and safe delivery of mother and child during pregnancy. A group of women came together to bless the pregnant woman and gave some items like thali, apple, banana, bangle, bindi, etc. to the pregnant woman.

**6. COVID-19 Booster Dose Vaccination Camp:** Vaccination camp for covid-19 booster dose was

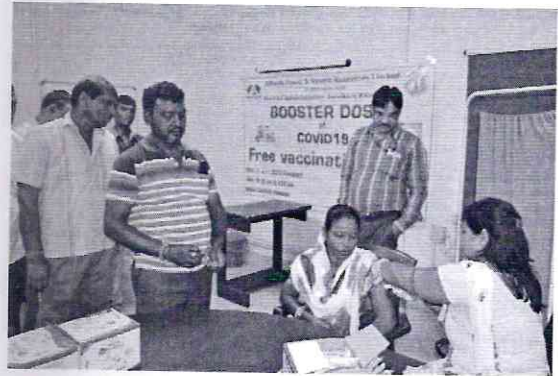


organized on 19.07.2022 and 30.8.2022 at Sankalp Bhawan , APNRL jointly by Adhunik Power and Natural Resources Limited, Padampur and Health Department, Saraikela-Kharsawan.

It is necessary to increase antibodies to fight corona virus, for this we need to take booster dose as well as need to be careful even after getting the vaccine because corona virus has started again, said by Shri Sachin Agarwal, APNRL during camp.



Total 280 employees and villagers were vaccinated. The management of APNRL appreciated the initiative taken by the CSR Department which facilitated the camp. Thanks to the media for covering this camp so that people can be honored about the importance of the vaccine. Our special thanks to Mr. Ranjit Kumar-HR, Mr. S M Khusru-Admin, Mr. Vikash Kumar Singh, Dr. G. P. Murmu and Ms. Shashi Lata Kumari -ANM, Ms. Meena Kumari-ANM and Mr. Dewashish Mahato-Data operator from Health Department, Gamharia who had actively accomplished the camp successfully.



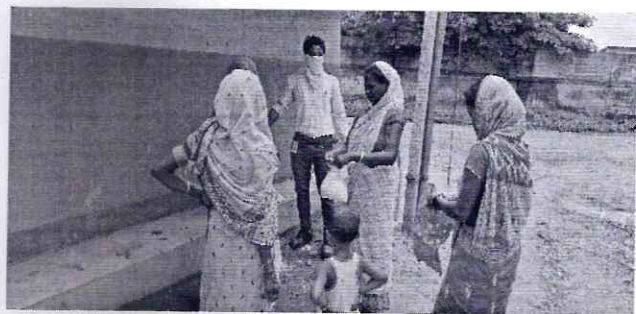
## **7. Spraying and distribution of bleaching powder:**

During rainy session the health of the people in the villages around the plant is a major concern as most of the diarrhea cases were found in the previous year only during the rainy season. The main reason for diarrhea is polluted water and unhygienic conditions around the village as well as lack of information among the people about prevention of diarrhoea.



Keeping this in mind, the CSR department of APNRL showed its solidarity by running a health awareness campaign in Badahariharpur from 02.08.2022, which continued in the villages of Padampur, Srirampur, Chhotahariharpur and Bikanipur.

In continuation, bleaching powder was sprayed in drains, wells and waterlogged areas with the help of village volunteers as well as bleaching powder was also provided to the villagers to avoid various diseases caused by dirt and mosquitoes etc. This program is being run with the aim of controlling diarrhoea, malaria and water borne diseases.



## **8. World Anti-Tobacco day 2022:** World Anti-Tobacco Day was started because millions of people die every year around the world due to tobacco use and abuse. World Health Organization (WHO) member states





introduced World No Tobacco Day (WNTD) in 1987. On the occasion of “**World Anti-Tobacco day 2022**”, Adhunik Power & Natural Resources Limited, Padampur organized a Signature campaign to raise awareness among the people against bad effect of tobacco in human body. **Signature campaign** initiated at company campus by employees with message writing on display board.

## **EDUCATION**

**1. Project CYBER VILLAGE:** In order to make the village youths/students of Barahariharpur and nearby areas computer literate under the Project CYBER VILLAGE.

The **objectives** of the **Project CYBER VILLAGE** were as under:

- To make village youths/students computer literate for their pursuit of better career in future.
- To make villagers aware of the importance of information revolution through internet.



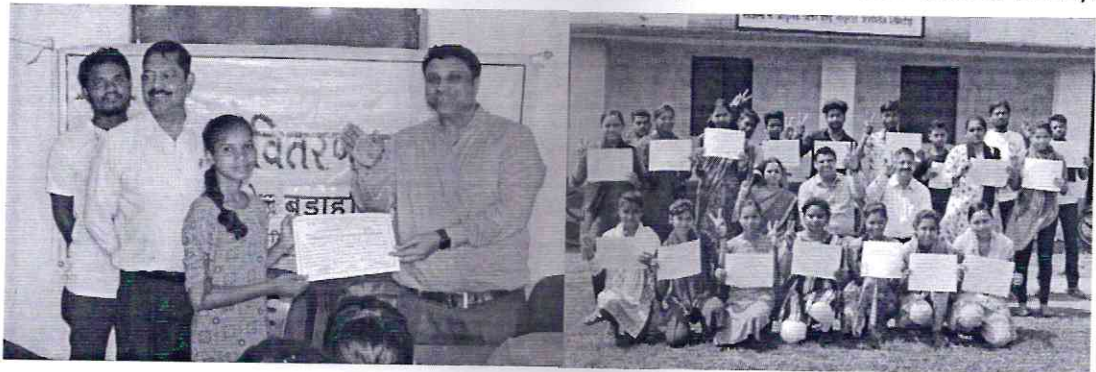
The detailed status of the **Computer Literacy Centre**:

| S. No. | Center         | Center Wise Enrollment Status of Village Youths |        |       | Subjects Taught            |
|--------|----------------|-------------------------------------------------|--------|-------|----------------------------|
|        |                | Male                                            | Female | Total |                            |
| 1      | Badahariharpur | 12                                              | 9      | 21    | MS Office/ Tally/ Internet |
|        | Total          | 12                                              | 9      | 21    |                            |

Youth are taking internet facility; this study will develop youth.

**Certificate distribution:** On 13th May, 2022, Certificate distribution ceremony was organized at Computer center, Badariharpur for passed-out students (session Oct'2021- March'2022).

Shri  
Anil  
Kumar  
Soni -  
HR  
Head-  
APNRL  
was  
the  
Chief



Guest. During his speech he said that computer knowledge is part of our life and youth cannot excel in any field of life without computer knowledge. He also said that internet facility will be started very soon. Vote of thanks given by Mrs. Ambika Mahato, Instructor.



1. **Bus facilities:** Bus facility has been providing to girl students of peripheral village for higher education at Jamshedpur. About 40 villages girl students are availing the bus facilities.

2. **English coaching class:** As you known that CSR department of Adhunik Power and Natural Resources Limited (APNRL) has always been empowering the rural youth to lead a life with lasting social recognition through various training programs. On 2.6.2022 we started English coaching class in the Computer Centre, Badahariharpur for those village youth who have attended computer classes in the center.

20 village youths and instructor were participated. The class began with the welcome note by AGM-CSR Mr. Sanjeet Kumar Sinha. Mr. Sinha gives warm welcome to village youth and explained the benefit & goal of the English class. During the introductory session Mrs. Rina Gupta said that English is a major element of everyone's life today. English has that value which helps to make people valuable and full of knowledge.



Mrs. Reena Gupta is teaching voluntary one hour for rural youth from 9.30 am to 10.30 am every alternative day.

3. **Awareness Program on higher education at GOVT. MIDDLE SCHOOL, PADAMPUR**

The CSR Department of Adhunik Power Natural Resources Limited, Padampur organized an awareness program on Higher Education for the passed out students of class VIII on 3rd sept. 2022 at Campus of GOVT. MIDDLE SCHOOL, PADAMPUR.

The program started with a motivational speech by the Principal of the school, Ms. Joba Mandal. After that Mr. Sanjeet Kumar Sinha and Mr. Anil Sardar gave a speech about the future prospects and shared their experiences that inspired them to pursue higher studies. Shri Sanjeet



Kumar Sinha and Anil Sardar jointly presented a compass to the concerned students as a memorable gift during the program. Ms. Joba Mandal, Principal appreciated the CSR team of Adhunik Power and Natural Resources Limited for facilitating this event. About 30 students including teachers, Sanjeet Kumar Sinha-APNRL and Anil Sardar-APNRL were participated this Program. Teachers and the Students of the school had been a great support to make the event successful.



4. **New Enrollment/ Admission in AWC for pre-school education:** We know that pre-primary studies are given to children from three to five years old in Anganwadi centers. Children studying in pre-school education in Anganwadi centers also get the benefit of MDM i.e. mid-day meal. These children not need to bring bags and books and are taught through many games and sports activities. Child whose age 3yrs was enrolled in the Anganwadi center, all the children welcomed him as well as the education material was given by CSR Head-APNRL.



### **WOMEN EMPOWERMENT & LIVELIHOOD**

1. **Self Help Group (SHG) Meeting:** - Every Month the SHG members meeting were organized in Chotahariharpur; Srirampur; Padampur attended meeting. Members participated and discussed regarding repayment of loan and also discussed in personal hygiene.

The **objectives** of Self Help group meeting were as under:

- i) To explore the functional aspects of SHGs in promoting micro saving and inter loaning activities.
  - ii) To increase social cohesiveness among the members of women Self-Help-Group.
2. **Agarbatti Making by Swarsati Mahila Samiti, Kandra:** The members of Swarsati Mahila Samiti, Chotahariharpur engaged in Agarbatti making as their livelihood. CSR team is facilitating the group in marketing to achieve their aim.
3. **Nil Production by Johar Jaher Ayo Mahila Samiti:** 15 - members of **Johar Jaher Ayo Mahila Samiti** of Padampur engaged in Nil Production & selling. This has helped them in increasing corpus fund for their group. They have made this activity as their livelihood.

### **Sports & Culture:**

1. **Sports & Cultural Programme at Padampurpur:** Every Year Dibu Kishun Memorial Club, Padampur organised three-day event of sports and culture program on the occasion of Independence Day at Padampur Ground. The programme motivates the local youths to gather at a place with team spirit and it promotes the rural sports activity in the area. Similarly, this year the major events were Football





Tournament, Chaw Nitya, Murga Larai, Mena Bazar etc. 32- boy's football team and 4 junior team participated in football tournament from nearby villages of Saraikela Kharsawan District. More than 20000 people came to see it as if the people of the whole city had come here. Sports and Adiwasi kalyam Minister of Jharkhand Sri Champai Soren was present during the

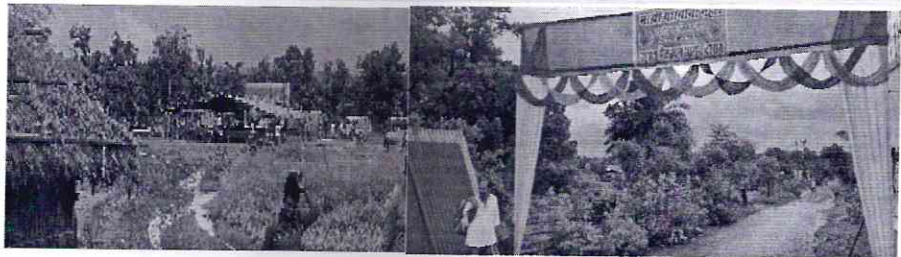


program, which increased the excitement in the sports. He thanked the program's Organizers for a peaceful game. Adhunik Power & Natural Resources Limited, Padampur facilitated with financial support and other required resources like medical team, ambulance service, preparations for making playground ready, cleaning of sites etc. CEO of Adhunik Power Sri Arun Kumar Mishra, Head HR Sri Anil Kumar Soni and Sanjeet Kumar Sinha-CSR also joined this program and motivated to organizers and volunteers.

## **2. World Tribal (Indigenous) Days 2022:**

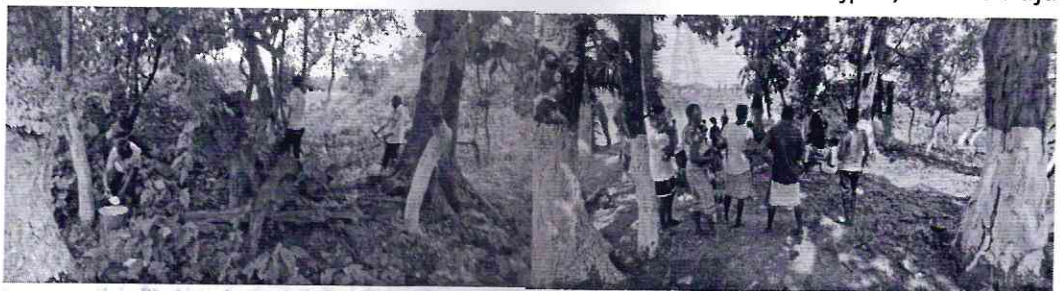
As you know the United Nations declared 1994 the year of World Tribal (Indigenous) Days.

Thus, on 9 August 1995, World Tribal (Indigenous) Day was organized for the first time. Every year on 9th August "World



Tribal (Indigenous) Day" is celebrated to raise awareness and protect the rights of tribal. Population. In this regard, an awareness sammelan was organized by committee Pindrabera . The company had provided necessary resources like preparation of playground, cleaning of sites, drinking water facilities etc. as well as financial assistance to the village committee. About 2000 people from different villages of Gamharia block participated in the program.

## **3. White washing, painting and cleaning work at Sarnaasthal, Vidhwajpur:** White washing, painting and grass cutting works was completed at **Sarnaasthal** of Virdhwajpur, where Puja was



performed on 17<sup>th</sup> July 2022 with traditional method and also wished God for good rain, good

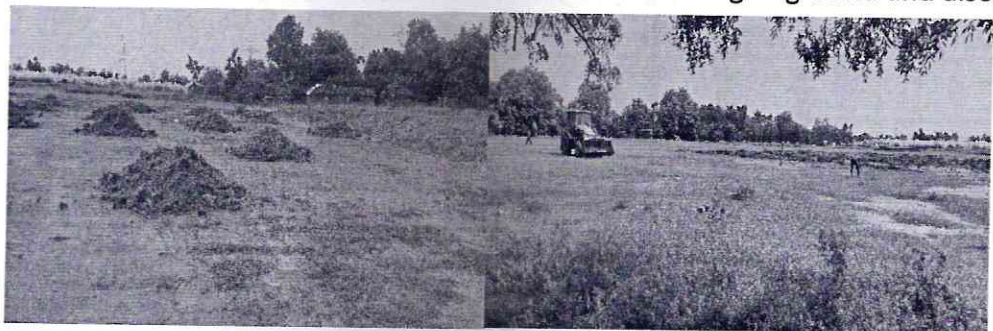
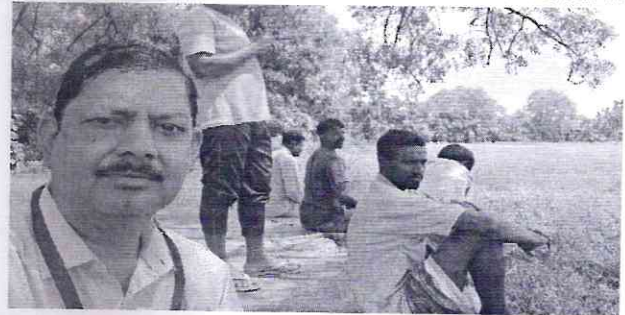


harvest. Along with this, wishes were also made to God for the prosperity and development of the region.

- 4. Ground preparation and grass cutting:** CSR department of Adhunik Power & Natural Resources Limited, Padampur is playing an important role for community development.

A meeting was held on 19.9.2022 with village youths regarding ground preparation and grass cutting where two days' football and cultural program will be held on 8 and 9 October 2022. In 21.9.2022 the CSR team along with the villagers visited the site and found that there is needs of leveling of ground and also requirement

of grass cutting. CSR team provided JCB from 24.9.2022 to 26.9.2022 to level the land.



The villagers are overjoyed when the work is done and they thank the company very much for their cooperation.

#### **OTHER**

#### **1. International Yoga Day, 2022**

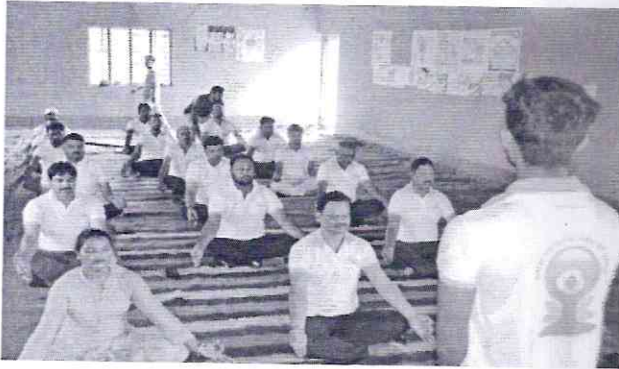


A few minutes of Yoga during the day can be a great way to get rid of stress that accumulates in both the body and mind. Yoga postures, Pranayama and meditation are effective techniques to release stress. Meditation is Relaxation which gives calm mind, good concentration and Rejuvenation of the body and mind etc. In view of this, Adhunik Power & Natural Recourses

Limited, Padampur organized a special yoga session on the occasion of the 8th edition of International Day of Yoga on June 21'2022 with the theme 'Yoga for Humanity' in our plant premises for employees and villagers. Yoga is an ancient ascetic practice originated in India that combines physical, mental and spiritual pursuits to achieve harmony of the body and mind.



The sessions which started at 7.30 am was carried out under the guidance of the yoga instructor Mr. Ashish Ranjan. About 50 employees including contract employees were



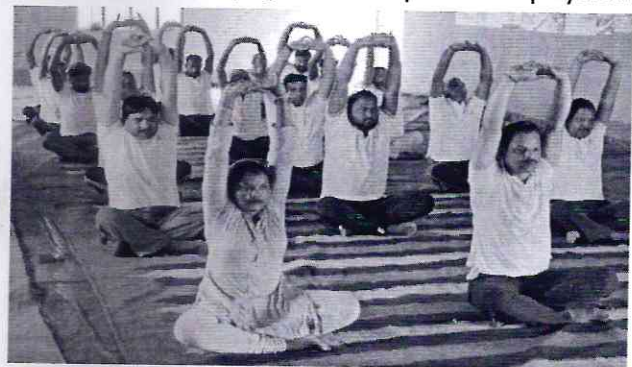
performed yoga. All the participants followed the instructions enthusiastically with the objective of incorporating the goodness of Yoga into their own lives. Asanas in standing, sitting as well as laying postures were performed. Pranayam and other breathing exercises were performed followed by the prayer.

After the conclusion of the Yoga session, Sri

M.N. Singh Head O&M-APNRL said that the importance of yoga and emphasized physical exercise in daily life.

Sri Anil Kumar Soni- Head-HR , APNRL said that every year yoga programs are organized in the company premises for the employees as well as the villagers who are physically fit and mentally strong so that they can carry out their daily activities can and live a happy life.

Vote of thanks given by Sanjeet Kumar Sinha-Head-CSR, APNRL.



2. **World Environment Day 2022:** Adhunik Power & Natural Resources Limited, Padampur observed the World Environment Day on 5.6.2022 at plant premises and created awareness about importance of environment and plantation. Senior Officers of the company planted



APNRL observed the World Environment Day (WED) at plant premises. The programme was initiated through the plantation of tree by CEO Sri Arun Kumar Mishra inside the premises of the company. Rally was flag on by Sri Arun Kumar Mishra and about 200 employees were moving

from plant premises to Pindraberu vs Kandra Bus Stand and loudly say all the slogans which are written in placards. Security and supervisory employee take-care the cycle riding people because it was a busy road.





3. **Virdhwajpur-Bikaner road clear:** Adhunik Power & Natural Resources Limited, Padampur is playing an important role in improving the socio-economics conditions of local communities around which the company is operative. The villagers of Virdhwajpur-Bikaner held several meeting with the CSR team regarding overhead tank and big peepal tree has fallen on the road. Simultaneously, it was decided that a written application in this regard by the villagers should be given to the company.

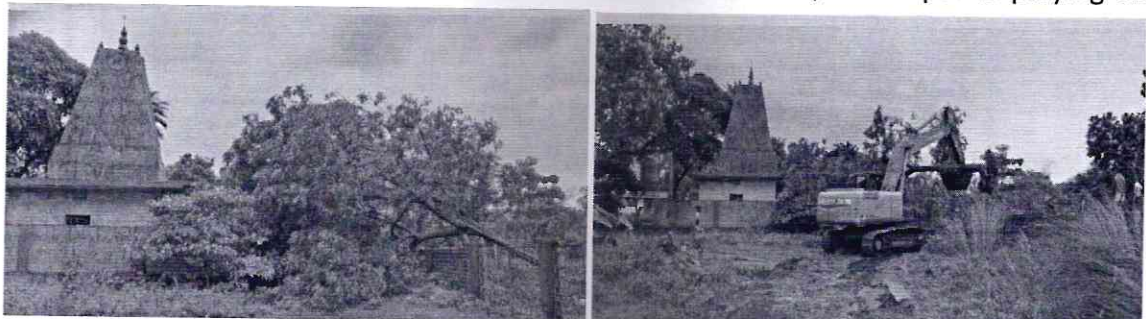
On 1.7.2022 an application has been received from villagers of Virdhwajpur-Bikaner, CSR team paid a visit to the site along with the villagers and found that an overhead tank has damaged and big peepal tree has fallen on the road during the cyclone near Mahadeopuram due to which people are facing a lot of trouble in commuting.

The Overhead tank was installed through the Panchayat (Government), so it can be repair only after talking to the Panchayat-Mukhiya or authorize person.



In view of the above, the company has provided JCB and tree cutter to clear the road on July 6, 2022, due to which the tree was removed from the road with a hard effort of 4 hours. Villagers are very happy with this work and they thanked the company very much for their cooperation.

CSR department of Adhunik Power & Natural Resources Limited, Padampur is playing an



important role for community

development.

The villagers of Bahadariharpur held a meeting regarding big Neem tree has fallen on the village road near Shiv Mandir, Badahariharpur. In 20.8.2022 the CSR team along with the villagers visited the site and found that due to heavy rains the neem tree had fallen on the road, causing lot of inconvenience to the people in commuting.

In view of the above, CSR provided Poclain Machine from the Logistics Department for tree removal, due to which the tree was removed on 21st August, 2022 from the road with a hard



effort of 2 hours. Villagers are very happy with this work and they thanked the company very much for their cooperation. We appreciate them for this noble work.

4. **Azadi ka amrit Mahatsav:** Har Ghar Tiranga' was a campaign under the aegis of Azadi Ka Amrit Mahotsav to encourage people to bring the Tiranga home and to hoist it to mark the 75th year of India's independence, in this regards the CSR team of Adhunik Power & Natural Resources Limited was given 25000 tricolor flags on 6.8.2022 to the Deputy Commissioner of Seraikela-Kharsawan in presence of Superintendent of Police Sri Anand Prakash, Deputy Commissioner, Sri Subodh Kumar, Additional SP Sri Purshotam Kumar etc.



From roadside decorations to people's homes, vehicles and establishments, the tricolor was waving all over the country. Wherever we went, our tricolor was seen waving proudly everywhere. In view of this, Adhunik Power and Natural Resources Limited, Padampur hoisted the flag among the school children and villagers and also

organized rally at Badahariharpur on 13.8.2022.

5. **CELEBRATE TEACHERS DAY 2022:**

CSR department of Adhunik Power Natural Resources Limited, Padampur had celebrated teacher's day on 5<sup>th</sup> sept. 2022 at GOVT. MIDDLE SCHOOL, BADAHARIHARPUR. Sanjeet Kumar Sinha

- CSR said that all the famous people have become



famous due to the path direction of the teachers, we should always respect the teachers, they are the builders of our future. Sri Anil Sardar and Sanjeet Kumar Sinha has jointly given memorable gift to the respective teachers during the function. Shri Harendra Pathak, Principal said that this day is dedicated to the second President of India, Dr. Sarvepalli Radhakrishnan, his birthday is celebrated as Teacher's Day. He was great academician philosopher and one of the most well-known diplomats, scholar president of India. We celebrate Teachers' day every year throughout the country on 5th September. About 150 students including teachers, Sanjeet Kumar Sinha-APNRL and Anil Sardar-APNRL were participated this function.



The program was started by the Garlanded of the second President of India, Dr. Sarvepalli Radhakrishnan, then it was followed by Cultural Programme performed by students. The Teachers Day was celebrated in form of formal get-together, with their students who managed to make the day memorable for



their teachers. The celebration was also marked by songs and dances by students showing their gratitude towards their teachers. During the program all the students were given packets of biscuits. Teachers and the Students from the respective school had been a great support to make the event successful.

## Media

### नेत्र जांच शिविर आयोजित कर आधुनिक पावर ने दी संस्थापक को श्रद्धांजलि

गार्गुलिया, 13 मई (विश्वकर्मा): आधुनिक पावर एंड नेचुरल विज्ञान विभाग, पटना में नेत्र जांच शिविर आयोजित कर आधुनिक पावर ने दी संस्थापक को श्रद्धांजलि दी। 20वीं पुर्णमासी पर आयोजित शिविर में, कोचिंग और डिप्लोमा स्तर के छात्रों के नेत्र जांच के लिए आधुनिक पावर एंड नेचुरल विज्ञान विभाग के विशेषज्ञ डॉक्टरों की टीम ने नेत्र जांच की।



विभाग के डॉक्टरों ने बताया कि नेत्र जांच में नेत्र जांच की गई, इससे मोटापड़ा, रक्तचाप और मधुमेह जैसे रोगों से निवारण किया जा सकता है।

डॉ. कर्मा ने अपने संबोधन में कहा, हमारे पूर्व कर्मियों के कर्मचारियों और अधिकारियों ने कंपनी के संस्थापक गार्गुलिया प्रसाद अग्रवाल को उनकी पुर्णमासी पर अपनी ओर से श्रद्धांजलि दी। हमें यह पता चला कि उनकी मूर्ति पर अग्रवाल जी की कविता, कंपनी के ग्राहकों और कर्मचारियों, विशेषकर प्रशासनिक और तकनीकी स्तर पर, ने मुझे यह जानकारी दी। इस अवसर पर दो फिल्मों का भी प्रदर्शन किया गया।

### नेत्र जांच शिविर आयोजित कर आधुनिक पावर ने दी संस्थापक को श्रद्धांजलि



गार्गुलिया (प्रशासनिक मंत्र संस्थापक): आधुनिक पावर एंड नेचुरल विज्ञान विभाग, पटना में नेत्र जांच शिविर आयोजित कर आधुनिक पावर ने दी संस्थापक को श्रद्धांजलि दी। 20वीं पुर्णमासी पर आयोजित शिविर में, कोचिंग और डिप्लोमा स्तर के छात्रों के नेत्र जांच के लिए आधुनिक पावर एंड नेचुरल विज्ञान विभाग के विशेषज्ञ डॉक्टरों की टीम ने नेत्र जांच की।

## आधुनिक पावर में चला कोविड-19 का बूस्टर डोज टीकाकरण अभियान

प्रभात मंत्र संवाददाता  
काँडा : काँडा के पटना में आधुनिक पावर एंड नेचुरल विज्ञान विभाग ने कोविड-19 का बूस्टर डोज टीकाकरण अभियान का आयोजन कर करीब 280 कर्मचारियों और ग्राहकों को कोविड-19 का बूस्टर डोज टीका दिया। मंगलवार को कंपनी परिसर में आधुनिक पावर द्वारा मिला प्रशासन के सहयोग से आयोजित इस अभियान के दौरान छात्रों को कोविड-19 और कोविड-19 का टीका लगाया गया। कोविड-19 के संक्रमण से खुद को सुरक्षित रखने के लिए कर्मचारियों के अलावा आगंतुकों के गार्डों के

गार्डों ने भी टीका लेने के लिए प्यार दिखाया। इन दोहन कंपनी के अधिकारियों एवं कर्मचारियों के अलावा संचालक के कर्मचारियों भी शामिल थे। मिला उपायुक्त अलावा प्रशासन के सहयोग के लिए आधुनिक पावर के मुख्य कार्यकारी अधिकारी अक्षय कुमार मिश्रा ने सर्वेक्षण प्रशासन व मैनेजल टीम को धन्यवाद दिया। इसके अलावा ने कंपनी के वित्तियक जेपी मुर्मु, संप्रदाय प्रमुख संजीव सिन्हा, वित्तियक प्रशासन के अधिकारी टीम के देवकीश भास्कर, प्रशिक्षण कुमारी, सहायक कुमारी, मीना कुमारी आदि का सहयोग सहयोग रहा।



# विश्व तंबाकू निषेध दिवस पर आधुनिक पावर ने हस्ताक्षर अभियान चला दिया नशामुक्ति का संदेश



**जमशेदपुर 31 मई :** विश्व तंबाकू निषेध दिवस के अवसर पर आधुनिक पावर एंड नेचुरल रिसोर्सेज कंपनी ने मंगलवार को कंपनी परिसर में हस्ताक्षर अभियान चलाया। पंचमसूर स्थित आधुनिक पावर में नशा मुक्ति पर जोर देते हुए जागरूकता हस्ताक्षर अभियान चला पंचावरण को सुदृढ़ रखने की सपना भी थी। इस अवसर पर कर्मचारियों और मजदूरों को भूखान और अन्य नशे से दूर रहने का संकल्प दिलाते हुए नशा सेवन से बचने के उपाय भी बताए गए। इस अवसर पर आधुनिक पावर के मुख्य कार्यकारी अधिकारी अरुण कुमार मिश्रा ने कहा कि आधुनिक पावर ने हस्ताक्षर अभियान के माध्यम से कर्मचारियों को जागरूक करने का काम किया है ताकि वे अपने स्वास्थ्य के साथ-साथ परिवार और पंचावरण का खयाल ठीक से रख सकें। उन्होंने कहा कि इस साल का थीम पंचावरण की रक्षा है और इससे यह साबित होता है कि नशामुक्ति पंचावरण और स्वास्थ्य के लिए कितना आवश्यक है। इस अवसर पर अधिकारियों, कर्मचारियों के अलावा मजदूरों ने भी नशा के खिलाफ हस्ताक्षर जागरूकता अभियान में हिस्सा लिया।

# विश्व तंबाकू निषेध दिवस पर आधुनिक पावर ने हस्ताक्षर अभियान चला दिया नशामुक्ति का संदेश

मंगल मूल, नहरिया

विश्व तंबाकू निषेध दिवस पर आधुनिक पावर एंड नेचुरल रिसोर्सेज कंपनी ने मंगलवार को कंपनी परिसर में हस्ताक्षर अभियान चलाया। इस दौरान नशा मुक्ति पर जोर देते हुए जागरूकता हस्ताक्षर अभियान चला पंचावरण को सुदृढ़ रखने की सपना भी थी। कंपनी के कर्मचारियों और मजदूरों को भूखान और अन्य नशे से दूर रहने का संकल्प दिलाते हुए नशा सेवन से बचने के उपाय भी बताए गए। मुख्य कार्यकारी अधिकारी अरुण कुमार मिश्रा ने कहा कि आधुनिक पावर ने हस्ताक्षर



अभियान के माध्यम से कर्मचारियों को जागरूक करने का काम किया है ताकि वे अपने स्वास्थ्य के साथ-साथ परिवार और पंचावरण का खयाल ठीक से रख सकें। कहा - इस साल का थीम पंचावरण की रक्षा है और इससे यह साबित होता है कि नशामुक्ति पंचावरण और स्वास्थ्य के लिए कितना आवश्यक है। अधिकारियों, कर्मचारियों के अलावा मजदूरों ने भी नशा के खिलाफ हस्ताक्षर जागरूकता अभियान में हिस्सा लिया।

## आधुनिक पावर ने साइकिल रैली निकाल दिया पर्यावरण संरक्षण का संदेश दो माह बाद बीरघाजपुर में आवागमन हुआ शुरू



**गमहरिया, राप्ता पंचायत के बीरघाजपुर गांव में** दो माह बाद बुधवार को प्रयास से जड़नों का परिचालन शुरू हुआ। परिचालन शुरू होने से लोगों ने राहत महसूस किया। समाजसेवी पापा सरदार ने बताया कि पांच मई को तेज आंधी-पानी से गांव का विनाश कुछ सोलर जलमीनार के ऊपर गिर गया था, इससे जलमीनार पूरी तरह से क्षतिग्रस्त हो गया, जबकि कुछ के बीच सड़क पर गिर जाने से गांव में प्रवेश करने के लिए आवागमन पूरी तरह से बाधित हो गया। बुधवार को स्थानीय युवकों द्वारा आधुनिक पावर की सहयोग से उक्त युवकों को बीच सड़क से हटाकर आवागमन सामान्य बनाया गया। इस मौके पर अनिल सरदार, बालीपद सिंह सरदार, पापा सरदार, नरहरि सरदार, राजेश सिंह सरदार आदि बुधा शामिल थे।

**प्रभात खबर** Thu, 07 July 2022  
<https://epaper.prabhatkhabar.com>

अलावा आसपास के गांव के ग्रामीणों ने भी रैली में बढ़-चढ़ कर हिस्सा लिया। काफिले में सभी साइकिल सवारों ने पर्यावरण बचाने के लिए नारे भी लगाए। मुख्य

दैनिक  
भास्कर

जमशेदपुर 07-08-2022

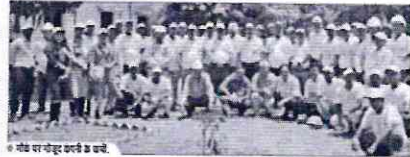
## हर घर तिरंगा अभियान के तहत कांडा की आधुनिक पावर ने डीसी को सौंपे पच्चीस हजार राष्ट्रीय ध्वज

**जमशेदपुर 7 अगस्त** का अमृत महोत्सव पर 13 से 15 अगस्त तक चलने वाले कैड साप्ताहिक के तहत आधुनिक पावर एंड नेचुरल रिसोर्सेज लिमिटेड कंपनी ने तिरंगा प्रशस्ति को पच्चीस हजार तिरंगा राष्ट्रीय ध्वज। रजिस्टार को अटिलना और कस्तर प्रभाग में आधुनिक पावर एंड नेचुरल रिसोर्सेज लिमिटेड कंपनी के महाप्रबन्ध (रजिस्टार) अरुण कुमार और सोपसाभा विभाग के संचालक मिश्रा ने डीसी आर वल्लभ के राष्ट्रीय ध्वज सौंपे।



## रैली में दिया पर्यावरण संरक्षण का संदेश

आधुनिक पावर एंड नेचुरल रिसोर्सेज लिमिटेड, पंचमसूर गांव और नैहड़ अड्डा



रैली में भाग ले रहे लोग

**GAMHARIA (6 June) :** आधुनिक पावर एंड नेचुरल रिसोर्सेज लिमिटेड, पंचमसूर के मुख्य कार्यकारी अधिकारी अरुण कुमार मिश्रा ने यहां पिछले दो दिनों में पंचमसूर प्रभाग को जागरूकता पर रैली में भाग लेने के लिए गांव के लोगों को आमंत्रित किया। रैली में आधुनिक पावर के कर्मचारियों और मजदूरों ने भाग लिया। रैली के दौरान आधुनिक पावर के कर्मचारियों ने लोगों को पर्यावरण संरक्षण के लिए जागरूक करने का काम किया। रैली के दौरान आधुनिक पावर के कर्मचारियों ने लोगों को पर्यावरण संरक्षण के लिए जागरूक करने का काम किया। रैली के दौरान आधुनिक पावर के कर्मचारियों ने लोगों को पर्यावरण संरक्षण के लिए जागरूक करने का काम किया।

**बढ़-चढ़ कर हिस्सा लिया**

इस रैली में आधुनिक पावर के कर्मचारियों ने जागरूकता का संदेश दिया।

को गांव के लोगों ने भी बढ़-चढ़ कर हिस्सा लिया, काफिले में सभी साइकिल सवारों ने पर्यावरण बचाने के लिए नारे भी लगाए। मुख्य कार्यकारी अधिकारी अरुण कुमार मिश्रा ने रैली में भाग लेने वाले लोगों को आमंत्रित किया। रैली के दौरान आधुनिक पावर के कर्मचारियों ने लोगों को पर्यावरण संरक्षण के लिए जागरूक करने का काम किया। रैली के दौरान आधुनिक पावर के कर्मचारियों ने लोगों को पर्यावरण संरक्षण के लिए जागरूक करने का काम किया।

को गांव के लोगों ने भी बढ़-चढ़ कर हिस्सा लिया, काफिले में सभी साइकिल सवारों ने पर्यावरण बचाने के लिए नारे भी लगाए। मुख्य कार्यकारी अधिकारी अरुण कुमार मिश्रा ने रैली में भाग लेने वाले लोगों को आमंत्रित किया। रैली के दौरान आधुनिक पावर के कर्मचारियों ने लोगों को पर्यावरण संरक्षण के लिए जागरूक करने का काम किया। रैली के दौरान आधुनिक पावर के कर्मचारियों ने लोगों को पर्यावरण संरक्षण के लिए जागरूक करने का काम किया।

को गांव के लोगों ने भी बढ़-चढ़ कर हिस्सा लिया, काफिले में सभी साइकिल सवारों ने पर्यावरण बचाने के लिए नारे भी लगाए। मुख्य कार्यकारी अधिकारी अरुण कुमार मिश्रा ने रैली में भाग लेने वाले लोगों को आमंत्रित किया। रैली के दौरान आधुनिक पावर के कर्मचारियों ने लोगों को पर्यावरण संरक्षण के लिए जागरूक करने का काम किया। रैली के दौरान आधुनिक पावर के कर्मचारियों ने लोगों को पर्यावरण संरक्षण के लिए जागरूक करने का काम किया।

## हर घर तिरंगा अभियान के तहत आधुनिक पावर ने पच्चीस हजार राष्ट्रीय ध्वज सौंपे

**जमशेदपुर 7 अगस्त** का अमृत महोत्सव पर 13 से 15 अगस्त तक चलने वाले कैड साप्ताहिक के तहत आधुनिक पावर एंड नेचुरल रिसोर्सेज लिमिटेड कंपनी ने तिरंगा प्रशस्ति को पच्चीस हजार तिरंगा राष्ट्रीय ध्वज। रजिस्टार को अटिलना और कस्तर प्रभाग में आधुनिक पावर एंड नेचुरल रिसोर्सेज लिमिटेड कंपनी के महाप्रबन्ध (रजिस्टार) अरुण कुमार और सोपसाभा विभाग के संचालक मिश्रा ने डीसी आर वल्लभ के राष्ट्रीय ध्वज सौंपे।



**जमशेदपुर 7 अगस्त** का अमृत महोत्सव पर 13 से 15 अगस्त तक चलने वाले कैड साप्ताहिक के तहत आधुनिक पावर एंड नेचुरल रिसोर्सेज लिमिटेड कंपनी ने तिरंगा प्रशस्ति को पच्चीस हजार तिरंगा राष्ट्रीय ध्वज। रजिस्टार को अटिलना और कस्तर प्रभाग में आधुनिक पावर एंड नेचुरल रिसोर्सेज लिमिटेड कंपनी के महाप्रबन्ध (रजिस्टार) अरुण कुमार और सोपसाभा विभाग के संचालक मिश्रा ने डीसी आर वल्लभ के राष्ट्रीय ध्वज सौंपे।

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# LIST OF LOCAL EMPLOYEES OF APNRL

| Sl.No. | Employee_Code | Employee_Name       | Cadre        |
|--------|---------------|---------------------|--------------|
| 1      | 00302223      | Arun Kumar Mahato   | High Skilled |
| 2      | 00302236      | Rajen Kumar Tudu    | High Skilled |
| 3      | 00302386      | Budhram Baskey      | High Skilled |
| 4      | 00302387      | Ajit Mahato         | High Skilled |
| 5      | 00302393      | Bijay Baskey        | High Skilled |
| 6      | 00302436      | Rajaram Baskey      | High Skilled |
| 7      | 00302462      | Rajesh Kumar Mahato | High Skilled |
| 8      | 00302503      | Raju Tudu           | High Skilled |
| 9      | 00302506      | Ruhi Ram Majhi      | High Skilled |
| 10     | 00302510      | Santosh Mardi       | High Skilled |
| 11     | 00302516      | Rajesh Mahato       | High Skilled |
| 12     | 00302517      | Mohan Lal Mahato    | High Skilled |
| 13     | 00302518      | Sumit Kumar Mahato  | High Skilled |
| 14     | 00302519      | Tapan Kumar Mahato  | High Skilled |
| 15     | 00302520      | Bibhishan Mahato    | High Skilled |
| 16     | 00302521      | Suku Murmu          | High Skilled |
| 17     | 00302522      | Bimal Kumar Mandal  | High Skilled |
| 18     | 00302524      | Vikram Baskey       | High Skilled |
| 19     | 00302525      | Mangal Besra        | High Skilled |
| 20     | 00302526      | Bir Singh Hembram   | High Skilled |
| 21     | 00302527      | Gopal Hembrom       | High Skilled |
| 22     | 00302529      | Durga Hembrom       | High Skilled |
| 23     | 00302530      | Suren Baskey        | High Skilled |
| 24     | 00302532      | Budheswar Baskey    | High Skilled |
| 25     | 00302533      | Karan Hembrom       | High Skilled |
| 26     | 00302534      | Umesh Tudu          | High Skilled |
| 27     | 00302550      | Birdhan Baskey      | High Skilled |
| 28     | 00302574      | Anil Sardar         | High Skilled |
| 29     | 00302604      | Sohan Kisku         | High Skilled |
| 30     | 00302605      | Dilip Kisku         | High Skilled |
| 31     | 00302606      | Rabindra Nath Majhi | High Skilled |
| 32     | 00302607      | Mokra Murmu         | High Skilled |
| 33     | 00302608      | Lakhiram Tudu       | High Skilled |
| 34     | 00302384      | Lal Mohan Mahato    | High Skilled |
| 35     | 00302610      | Jiten Hansda        | High Skilled |
| 36     | 00302611      | Jiten Sardar        | High Skilled |
| 37     | 00302612      | Ashok Kumar Mahato  | High Skilled |
| 38     | 00302613      | Mangal Majhi        | High Skilled |
| 39     | 00302614      | Sagram Tudu         | High Skilled |
| 40     | 00302615      | Sunil Kumar Tudu    | High Skilled |
| 41     | 00302616      | Ganesh Mahato       | High Skilled |
| 42     | 00302617      | Sachin Kumar Tudu   | High Skilled |
| 43     | 00302618      | Alok Mahato         | High Skilled |
| 44     | 00302619      | Rakesh Kumar Mahato | High Skilled |
| 45     | 00302620      | Chhotray Majhi      | High Skilled |
| 46     | 00302622      | Govind Majhi        | High Skilled |
| 47     | 00302495      | Anita Mahato        | High Skilled |
| 48     | 00302602      | Sarla Majhi         | High Skilled |
| 49     | 00302237      | Bangal Majhi        | Skilled      |
| 50     | 00302430      | Laxman Baskey       | Skilled      |
| 51     | 00302493      | Surajmani Baskey    | Skilled      |
| 52     | 00302507      | Dilip Kumar Mahato  | Skilled      |



| Sl.No. | Employee_Co de | Employee_Name         | Cadre        |
|--------|----------------|-----------------------|--------------|
| 53     | 00302508       | Dulal Mahato          | Skilled      |
| 54     | 00302509       | Raju Mahato           | Skilled      |
| 55     | 00302528       | Chhatamuni Baskey     | Skilled      |
| 56     | 00302540       | Birendranath Baskey   | Skilled      |
| 57     | 00302541       | Shailendra Tudu       | Skilled      |
| 58     | 00302621       | Devi Lal Majhi        | Skilled      |
| 59     | 00302609       | Durga Baskey          | Skilled      |
| 60     | 00302645       | Manik Singh Sardar    | Skilled      |
| 61     | 00302659       | Krishna Manjhi        | Skilled      |
| 62     | 00302660       | Sakla Hembrom         | Skilled      |
| 63     | 00302661       | Uttam Kumar Mahato    | Skilled      |
| 64     | 00302662       | Shikar Hembrom        | Skilled      |
| 65     | 00302669       | Som Murmu             | Skilled      |
| 66     | 00302670       | Khiron Chandra Mahato | Skilled      |
| 67     | 00302671       | Sona Ram Hembrom      | Skilled      |
| 68     | 00302673       | Rajesh Mahato         | Skilled      |
| 69     | 00302674       | Nimay Mahato          | Skilled      |
| 70     | 00302676       | Peeton Baskey         | Skilled      |
| 71     | 00302679       | Bajinath Mardi        | Skilled      |
| 72     | 00302680       | Nitai Sardar          | Skilled      |
| 73     | 00302681       | Baliram Murmu         | Skilled      |
| 74     | 00302682       | Karu Tilka Majhi      | Skilled      |
| 75     | 00302684       | Jitu Hembrom          | Skilled      |
| 76     | 00302687       | Soken Tudu            | Skilled      |
| 77     | 00302694       | Akash Tudu            | Skilled      |
| 78     | 00302696       | Mahendra Tantubai     | Skilled      |
| 79     | 00302698       | Karu Besra            | Skilled      |
| 80     | 00302700       | Ravindra Nath Tudu    | Skilled      |
| 81     | 00302708       | Jeevan Manjhi         | Skilled      |
| 82     | 00302709       | Birsa Hansda          | Skilled      |
| 83     | 00302711       | Sanjay Mandal         | Skilled      |
| 84     | 00302712       | Budhadev Mahato       | Skilled      |
| 85     | 00302713       | Narayan Mahato        | Skilled      |
| 86     | 00302714       | Jai Chand Mahato      | Skilled      |
| 87     | 00302715       | Mithun Majhi          | Skilled      |
| 88     | 00302716       | Sumit Kumar Mahato    | Skilled      |
| 89     | 00302717       | Mantu Mahato          | Skilled      |
| 90     | 00302719       | Ranjit Singh Sardar   | Skilled      |
| 91     | 00302523       | Bablu Besra           | Skilled      |
| 92     | 00302531       | Dasmath Hembrom       | Skilled      |
| 93     | 00302453       | Paneshwari Kumari     | Semi-Skilled |
| 94     | 00302454       | Sunil Baskey          | Semi-Skilled |
| 95     | 00302458       | Nuna Baskey           | Semi-Skilled |
| 96     | 00302463       | Sonia Baskey          | Semi-Skilled |
| 97     | 00302494       | Saraswati Devi        | Semi-Skilled |
| 98     | 00302501       | Bangi Baskey          | Semi-Skilled |
| 99     | 00302628       | Kalipada Singh Sardar | Semi-Skilled |
| 100    | 00302644       | Vikram Singh Sardar   | Semi-Skilled |
| 101    | 00302646       | Jagnath Singh Sardar  | Semi-Skilled |
| 102    | 00302647       | Budheshwar Mahato     | Semi-Skilled |
| 103    | 00302663       | Ranjit Besra          | Semi-Skilled |
| 104    | 00302664       | Hopna Baskey          | Semi-Skilled |
| 105    | 00302665       | Sona Ram Baskey       | Semi-Skilled |



| Sl.No. | Employee_Co<br>de | Employee_Name         | Cadre        |
|--------|-------------------|-----------------------|--------------|
| 106    | 00302666          | Suku Majhi            | Semi-Skilled |
| 107    | 00302667          | Gopal Majhi           | Semi-Skilled |
| 108    | 00302668          | Ramdas Kisku          | Semi-Skilled |
| 109    | 00302672          | Ram Hembrom           | Semi-Skilled |
| 110    | 00302677          | Raju Baskey           | Semi-Skilled |
| 111    | 00302678          | Bablu Baskey          | Semi-Skilled |
| 112    | 00302683          | Rajendra Hembrom      | Semi-Skilled |
| 113    | 00302688          | Umesh Baskey          | Semi-Skilled |
| 114    | 00302690          | Anil Tudu             | Semi-Skilled |
| 115    | 00302695          | Sushil Kumar Tudu     | Semi-Skilled |
| 116    | 00302697          | Prakash Tudu          | Semi-Skilled |
| 117    | 00302701          | Som Majhi             | Semi-Skilled |
| 118    | 00302702          | Salku Tudu            | Semi-Skilled |
| 119    | 00302707          | Sukram Tudu           | Semi-Skilled |
| 120    | 00302710          | Surja Hansda          | Semi-Skilled |
| 121    | 00302718          | Santosh Sardar        | Semi-Skilled |
| 122    | 00302720          | Lal Mohan Mahato      | Semi-Skilled |
| 123    | 00302721          | Sohan Sardar          | Semi-Skilled |
| 124    | 00302722          | Paga Sardar           | Semi-Skilled |
| 125    | 00302773          | Shibnath Singh Sardar | Semi-Skilled |
| 126    | 00302774          | Basanti Singh Sardar  | Semi-Skilled |
| 127    | 00302775          | Kali Pado Sardar      | Semi-Skilled |
| 128    | 00302956          | Ms. Pano Devi         | Semi-Skilled |





# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - ISO 9001:2015 & ISO 45001:2018



TC-4032



### Test Certificate

|                               |                                                                                                     |                                   |                           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                            |  |                              |  |
|-------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------|---------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----------------------------|--|------------------------------|--|
| ULR (Unique Lab Report) No.   |                                                                                                     | T C 4 0 3 2 2 2 0 0 0 0 1 6 3 8 F |                           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                            |  |                              |  |
| Discipline                    | Chemical                                                                                            | Group                             | Pollution & Environment   |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Sample Description         |  | Waste Water / Effluent Water |  |
| Report Release Date           | 30 <sup>th</sup> September, 2022                                                                    |                                   | Report ID                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | YBAEEL-220920-114052- WW01 |  |                              |  |
| W. Order/ JSPCB App. No.      | 3030005781                                                                                          |                                   | Work Order Date           |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 18.12.2021                 |  |                              |  |
| Type of Industry (if any)     | Thermal Power Plant                                                                                 |                                   | Job code/ Ref. no.        |  |  |  |  |  |  |  |  |  |  |  |  |  |  | YBAEEL/WA/L/W/Sep-22/06    |  |                              |  |
| Report Issue to               | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |                                   |                           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                            |  |                              |  |
| Sampling Date                 | 24/09/2022                                                                                          |                                   | Mode of sample collection |  |  |  |  |  |  |  |  |  |  |  |  |  |  | By YBAEEL Team             |  |                              |  |
| Sampling Protocol             | IS : 3025 (Part-1) 1987, R-2003                                                                     |                                   | Sample Code               |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 220926-WW-E01              |  |                              |  |
| Sampling Location             | Effluent Treatment Plant Outlet                                                                     |                                   | Sampling Source           |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Effluent Water             |  |                              |  |
| Sample pkg. Condition         | Sealed Pack in PP Bottle                                                                            |                                   | Sample Quantity           |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 3000 ml                    |  |                              |  |
| Meteorological Cond. of Field | W.C.- Clear                                                                                         |                                   | RH % - 72                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Temp. - 31°C               |  |                              |  |
| Sample receipt Date           | 26/09/2022                                                                                          |                                   | Analysis Started on       |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 26/09/2022                 |  |                              |  |
|                               |                                                                                                     |                                   | Analysis completed on     |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 30/09/2022                 |  |                              |  |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl  | Parameter                                    | Test Method                               | Units | MU %  | Results        | Limits    |
|-----|----------------------------------------------|-------------------------------------------|-------|-------|----------------|-----------|
| 1.  | pH value                                     | IS 3025 (P-11):2002                       | pH    | 2.53  | 7.75           | 5.5 - 9.0 |
| 2.  | Temperature                                  | IS 3025 (P-09)                            | °C    | 1.55  | 28.8           | --        |
| 3.  | Total suspended solids                       | IS 3025 (P-17):2012                       | mg/l  | 8.26  | 48.0           | 100       |
| 4.  | Chloride (as Cl <sup>-</sup> )               | IS 3025 (P-32):2003                       | mg/l  | 3.44  | 70.5           | --        |
| 5.  | BOD                                          | IS 3025 (P-44):2009                       | mg/l  | 6.85  | 8.8            | 30        |
| 6.  | COD                                          | IS 3025 (P-58):2006                       | mg/l  | 4.02  | 28.0           | 250       |
| 7.  | Chromium (as Cr)                             | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 7.14  | BDL (MDL 0.02) | 2         |
| 8.  | Copper (as Cu)                               | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 16.09 | 0.01           | 3         |
| 9.  | Lead (as Pb)                                 | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 6.26  | BDL (MDL 0.02) | 0.1       |
| 10. | Zinc (as Zn)                                 | APHA 3111 B 23 <sup>rd</sup> edition 2017 | mg/l  | 6.57  | 0.06           | 5         |
| 11. | Sulphate (as SO <sub>4</sub> <sup>2-</sup> ) | IS 3025 (P-24):2003                       | mg/l  | 4.37  | 28.2           | --        |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | Environmental (Protection) Rule - 1986.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Abbreviation               | MDL : Minimum detection limit, BDL : Below detection limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Env. Condition of Lab      | Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility.<br>This report in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise.<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | Sample complies with prescribed limits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

Sample Drawn By : Angad Munda

|                                                    |                                                           |
|----------------------------------------------------|-----------------------------------------------------------|
| Tested by<br>Shivani Kumari Singh<br>(Lab Analyst) | Verified & Issued by<br>Unish Das<br>Authorized Signatory |
|----------------------------------------------------|-----------------------------------------------------------|

Authorized Signatory  
Pollution & Environment  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

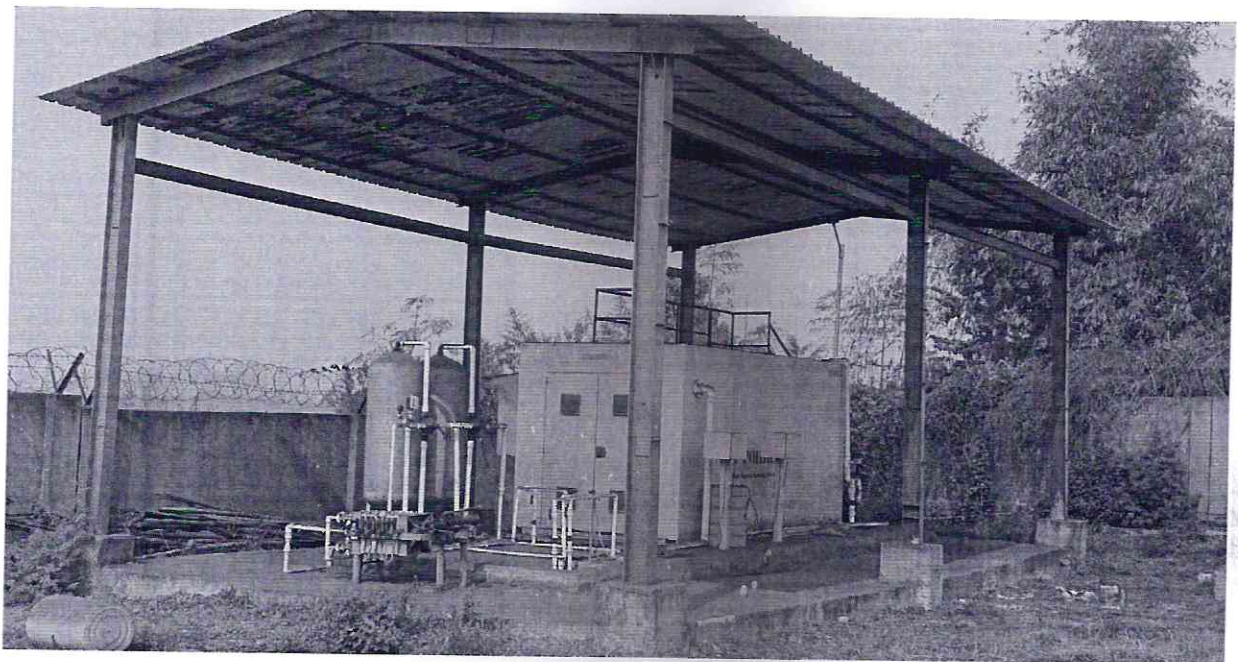
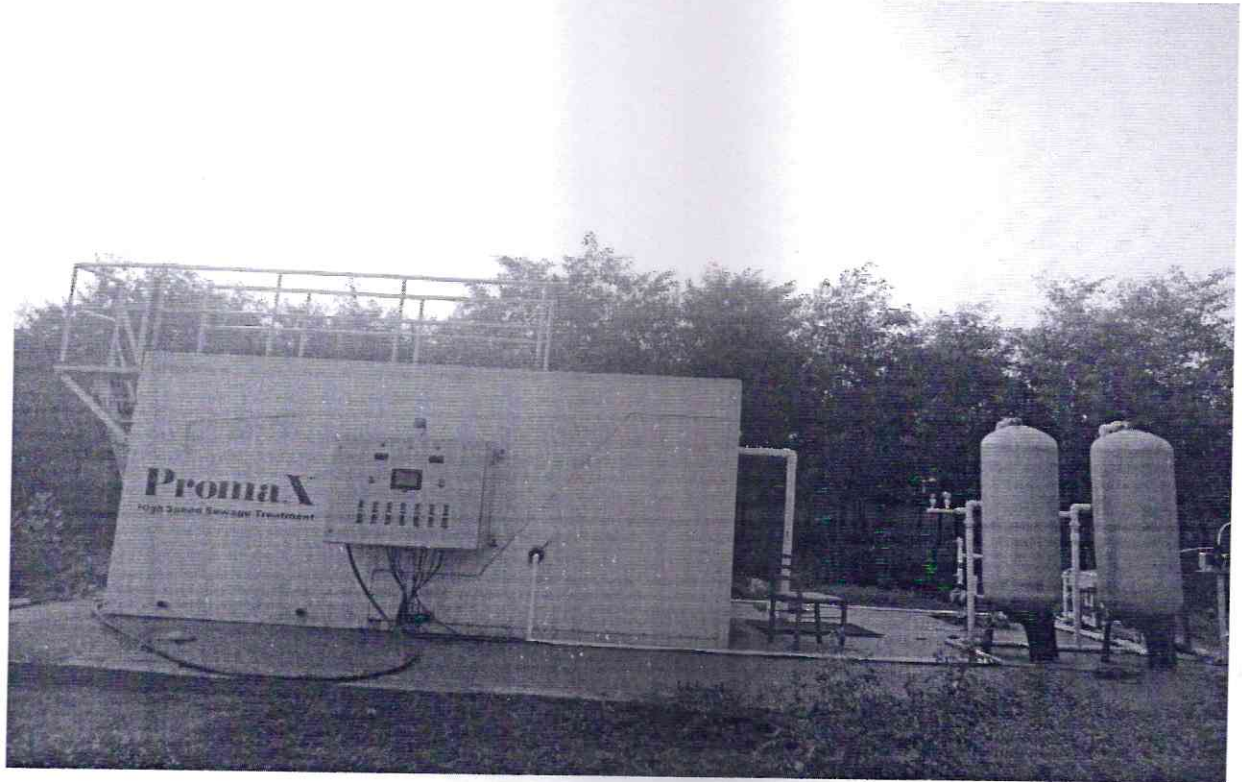
Branch Office : - Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in





# Sewage Treatment Plant





प्रारूप XV  
(प्रथम अनुसूची का अनुच्छेद 6 देखिए)  
FORM XV  
(see Article 6 of the First Schedule)

अपिष्ठापनों में पेट्रोलियम के आयात और भंडारण के लिए अनुज्ञप्ति  
LICENCE TO IMPORT AND STORE PETROLEUM IN AN INSTALLATION

अनुज्ञप्ति सं. (Licence No.): P/HQ/JH/15/1065(P257355)

फीस रूपरेखा (Fee Rs.) 50000/- per year

M/s. Adhunik Power & Natural Resources Ltd., Village-Padampur, Behind PGCIL Substation,, Adityapur-Kandra Road,, Taluka: Adityapur(Gamharia), District: SARAIKELLA KHARSWAN, State: Jharkhand, PIN: 832105 को केवल इसमें यथा विनिर्दिष्ट वर्ग और मात्राओं में पेट्रोलियम 5000.00 KL आयात करने के लिए और उसका, नीचे वर्णित और अनुमोदित नक्शा संख्या P/HQ/JH/15/1065(P257355) तारीख 23/12/2011, जो कि इससे उपाबद्ध है, में दिखाए गए स्थान पर भण्डारण के लिए पेट्रोलियम अधिनियम, 1934 के उपबंधों या उसके अधीन बनाए गए नियमों तथा इस अनुज्ञप्ति की अतिरिक्त शर्तों के अधीन रहते हुए, यह अनुज्ञप्ति अनुदत्त की जाती है।

Licence is hereby granted to M/s. Adhunik Power & Natural Resources Ltd., Village-Padampur, Behind PGCIL Substation,, Adityapur-Kandra Road,, Taluka: Adityapur(Gamharia), District: SARAIKELLA KHARSWAN, State: Jharkhand, PIN: 832105 valid only for the importation and storage of 5000.00 KL Petroleum of the class and quantities as herein specified and storage thereof in the place described below and shown on the approved plan No P/HQ/JH/15/1065 (P257355) dated 23/12/2011 attached hereto subject to the provisions of the Petroleum Act, 1934 and the rule made thereunder and to the further conditions of this Licence.

यह अनुज्ञप्ति 31st day of December 2022 तक प्रवृत्त रहेगी।  
The Licence shall remain in force till the 31st day of December 2022

पेट्रोलियम का विवरण /Description of Petroleum

अनुज्ञप्त मात्रा (किलोलीटरों में) /Quantity  
licenced in KL

|                                                                               |            |
|-------------------------------------------------------------------------------|------------|
| वर्ग क प्रपुंज पेट्रोलियम /Petroleum Class A in bulk                          | NIL        |
| वर्ग क प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class A, otherwise than in bulk | NIL        |
| वर्ग ख प्रपुंज पेट्रोलियम /Petroleum Class B in bulk                          | NIL        |
| वर्ग ख प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class B, otherwise than in bulk | NIL        |
| वर्ग ग प्रपुंज पेट्रोलियम /Petroleum Class C in bulk                          | 5000.00 KL |
| वर्ग ग प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class C, otherwise than in bulk | NIL        |

कुल क्षमता /Total Capacity

5000.00 KL

December 15, 2011

Chief Controller of Explosives

1). Amendment dated - 23/12/2011

अनुज्ञप्त परिसरों का विवरण और अवस्थान  
DESCRIPTION AND LOCATION OF THE LICENSED PREMISES

अनुज्ञप्त परिसर जिसकी विन्यास सीमाएं अन्य विशिष्टताएं संलग्न अनुमोदित नक्शों में दिखाई गई हैं Plot No: Plot No. 161,, Behind PGCIL Substation adityapur, Kandra Road, Village- Padampur, District: SARAIKELLA KHARSWAN, State: Jharkhand, PIN: 999999 स्थान पर अवस्थित है तथा उसमें निम्नलिखित Two Petroleum Class CAboveground storage tanks, together with other connected facilities. सम्मिलित हैं।

The licensed premises, the layout, boundaries and other particulars of which are shown in the attached approved plan are situated at Plot No: Plot No. 161,, Behind PGCIL Substation adityapur, Kandra Road, Village- Padampur, District: SARAIKELLA KHARSWAN, State: Jharkhand, PIN: 999999 and consists of Two Petroleum Class CAboveground storage tanks, together with other connected facilities. together with connected facilities.

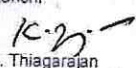


पेज सं. 2

अनुज्ञप्ति संख्या-(Licence No.) P/HQ/JH/15/1065 (P257355)

नवीनीकरण के पृष्ठांकन के लिए स्थान  
SPACE FOR ENDORSEMENT OF RENEWALS

पेट्रोलियम अधिनियम, १९३४ के उपबन्धों या उनके अधीन बनाए गए नियमों या इस अनुज्ञप्ति की शर्तों का उल्लंघन न होने की दशा में यह अनुज्ञप्ति फ़िस में बिना किसी छूट के दस वर्ष तक नवीकृत की जा सकेगी।  
This licence shall be renewable without any concession in fee for ten years in the absence of contravention of any provisions of the Petroleum Act, 1934 or of the rules framed thereunder or of any of the conditions of this licence.

| पेट्रोलियम अधिनियम, १९३४ के उपबन्धों या उनके अधीन बनाए गए नियमों या इस अनुज्ञप्ति की शर्तों का उल्लंघन न होने की दशा में यह अनुज्ञप्ति फ़िस में बिना किसी छूट के दस वर्ष तक नवीकृत की जा सकेगी।<br>This licence shall be renewable without any concession in fee for ten years in the absence of contravention of any provisions of the Petroleum Act, 1934 or of the rules framed thereunder or of any of the conditions of this licence. | नवीनीकरण की तारीख<br>Date of<br>Renewal | समाप्ति की तारीख<br>Date of<br>Expiry of license | अनुज्ञापन प्राधिकारी के हस्ताक्षर और स्टाम्प<br>Signature and office stamp of the licensing<br>authority.                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1).                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                         | 31/12/2013                                       | Sd/-<br>PESO ADMIN                                                                                                                                   |
| 2).                                                                                                                                                                                                                                                                                                                                                                                                                                        | 23/09/2013                              | 31/12/2018                                       | Sd/-<br>R.P.Singh<br>Jt. Chief Controller of Explosives<br>For Dy. Chief Controller of Explosives<br>Ranchi                                          |
| 3).                                                                                                                                                                                                                                                                                                                                                                                                                                        | 18/02/2019                              | 31/12/2022                                       | <br>K. Thiagarajan<br>Dy. Chief Controller of Explosives<br>Ranchi |

उप मुख्य विस्फोटक नियंत्रक, राँची  
Dy. Chief Controller of Explosives, Ranchi

यदि अनुज्ञप्ति परिसर इसमें उपाबद्ध विवरण और शर्तों के अनुरूप नहीं पाए जाते हैं और जिन नियमों और शर्तों के अधीन यह अनुज्ञप्ति मंजूर की गई है उनमें से किसी का उल्लंघन होने की दशा में यह अनुज्ञप्ति रद्द की जा सकती है और अनुज्ञप्तिधारी प्रथम अपराध के लिए साधारण कारावास से, जो एक मास तक हो सकता है, या जुर्माने से, जो एक हजार रुपये तक हो सकता है, या दोनों से, और प्रत्येक पश्चातवर्ती अपराध के लिए साधारण कारावास से जो तीन मास तक हो सकता है, या जुर्माने से, जो पांच हजार रुपये तक हो सकता है, या दोनों से, दण्डनीय होगा।

This licence is liable to be cancelled if the licensed premises are not found conforming to the description given on the approved plan attached hereto and contravention of any of the rules and conditions under which this licence is granted and the holder of this licence is also punishable for the first offence with simple imprisonment which may be extend to one month, or with fine which may extend to one thousand rupees, or with both and for every subsequent offence with simple imprisonment which may extend to three months, or with fine which may extend to five thousand rupees or with both.



# HINDUSTAN PETROLEUM CORPORATION LIMITED

(A Government of India Enterprise)

## QUALITY CONTROL LABORATORY

Visakha New Terminal

CONVENT JN.-SHEELANAGAR ROAD, BEHIND AIRPORT,

VISAKHAPATNAM- 530014

## TEST REPORT

Product : HP INDUSTRIAL DIESEL OIL

Customer / Supplier : NBOT-BONDED TANKS-PSD  
Branch Plant :  
Source of Sample : TK105  
Tank No : TK105  
Qty of Sample/ : 1ltr uml / tk70/868.3 b.no.36/2019

Density/Type of Sample :

Catg / Evnt / Actvty : Aft Receipt thru Dedicated P/L

Receipt/Despatch Mode :

Sample Drawn by : RAMAKRISHNA

Test Report No. : BFT/10835

Date of Sample Drawn : 20/07/19

Date of Sample Receipt : 21/07/19

Date of Sample Testing : 22/07/19

Date of Report : 22/07/19

Date of Printing : 22/07/19

JDE Sample Number : 865213

Batch No :

| Test Line Number | Characteristics            | Units             | Test Method     | Specifications |        | Result Value |
|------------------|----------------------------|-------------------|-----------------|----------------|--------|--------------|
|                  |                            |                   |                 | Min            | Max    |              |
| 5                | DENSITY @ 15°C             | Kg/m <sup>3</sup> | IS 1448 [ P:16] | -              | -      | 867.8        |
| 6                | KINEMATIC VISCOSITY @ 40°C | cSt               | IS 1448 P:25    | 2,500          | 15,000 | 4,880        |
| 7                | FLASH POINT - PMCC         | °C                | IS 1448 P:21    | 66             | -      | 79           |
| 8                | WATER CONTENT              | % Vol             | IS 1448 P:40    | -              | .250   | .100         |
| 9                | TOTAL SULPHUR              | % Mass            | ASTM D 4294     | -              | 1.50   | .47          |
| 10               | FOUR POINT SUMMER          | °C                | IS 1448 P:10    | -              | 21     | 3            |

Remarks:

Sample S.No.BFT/271 meets specification as per IS-15770:2008(Reaffirmed2014) in the above parameters.

Appearance : Light Brown

- Notes :
- 1) The sample is drawn by client and results relate to sample tested.
  - 2) The test report shall not be reproduced except in full without prior written approval of the Lab Incharge
  - 3) This test report shall not be used in any advertising media or as evidence in the Court of Law without prior written consent of Laboratory
  - 4) Test results reported are valid at the time of testing
  - 5) This is a system generated test report and hence does not require signature.

Tested By : 35323320

VELAMURI DATTATREYA

Reviewed and Approved By : 35323320

VELAMURI DATTATREYA

\*\*\* END OF TEST REPORT \*\*\*

Page No. : 1 of 1





# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - ISO 9001:2015 & ISO 45001:2018



TC-4032



### Test Certificate

|                               |          |                                                                                                     |                       |  |  |                           |                    |  |  |                           |               |  |  |                       |  |  |  |            |  |  |  |
|-------------------------------|----------|-----------------------------------------------------------------------------------------------------|-----------------------|--|--|---------------------------|--------------------|--|--|---------------------------|---------------|--|--|-----------------------|--|--|--|------------|--|--|--|
| ULR (Unique Lab Report) No.   |          | T C 4 0 3 2 2 2 0 0 0 0 0 1 6 2 1 F                                                                 |                       |  |  |                           |                    |  |  |                           |               |  |  |                       |  |  |  |            |  |  |  |
| Discipline                    | Chemical | Group                                                                                               | Atmospheric Pollution |  |  |                           | Sample Description |  |  |                           | Ambient Noise |  |  |                       |  |  |  |            |  |  |  |
| Report Release Date           |          | 30 <sup>th</sup> September, 2022                                                                    |                       |  |  | Report ID                 |                    |  |  | YBAEEL-220920-114052- N01 |               |  |  |                       |  |  |  |            |  |  |  |
| W. Order / JSPCB App. No.     |          | 3030005781                                                                                          |                       |  |  | Work Order Date           |                    |  |  | 18.12.2021                |               |  |  |                       |  |  |  |            |  |  |  |
| Type of Industry (If any)     |          | Thermal Power Plant                                                                                 |                       |  |  | Job code/ Ref. no.        |                    |  |  | YBAEEL/WA/L/A/Sep-22/28   |               |  |  |                       |  |  |  |            |  |  |  |
| Report Issue to               |          | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |                       |  |  |                           |                    |  |  |                           |               |  |  |                       |  |  |  |            |  |  |  |
| Sampling Period               |          | 22/09/2022 - 23/09/2022                                                                             |                       |  |  | Mode of sample collection |                    |  |  | By YBAEEL Team            |               |  |  |                       |  |  |  |            |  |  |  |
| Sampling Protocol             |          | IS 9989:1981 (RA 2020) & CPCB Method S.O.50 (E) dated 11/01/2010                                    |                       |  |  |                           |                    |  |  |                           |               |  |  |                       |  |  |  |            |  |  |  |
| Meteorological Cond. of Field |          | W.C.- Clear                                                                                         |                       |  |  | RH % - 67                 |                    |  |  | Temp. - 32°C              |               |  |  |                       |  |  |  |            |  |  |  |
| Sample receipt Date           |          | 26/09/2022                                                                                          |                       |  |  | Analysis Started on       |                    |  |  | 26/09/2022                |               |  |  | Analysis completed on |  |  |  | 30/09/2022 |  |  |  |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl | Locations                  | Parameters | Units  | MU % | Day Time<br>(6.00 a.m. to 10.00 p.m.) | Night Time<br>(10.00 p.m. to 6.00 a.m.) | Limits                 |
|----|----------------------------|------------|--------|------|---------------------------------------|-----------------------------------------|------------------------|
| 1. | Reservoir                  | Leq        | dB (A) | 1.32 | 54.9                                  | 53.2                                    | Day - 75<br>Night - 70 |
| 2. | Near Main Gate             | Leq        | dB (A) | 1.32 | 55.5                                  | 51.1                                    |                        |
| 3. | Sati Steel                 | Leq        | dB (A) | 1.32 | 52.2                                  | 41.2                                    |                        |
| 4. | Occupational Health Centre | Leq        | dB (A) | 1.32 | 46.0                                  | 45.4                                    |                        |

#### \*\*\*\*\*End of Report\*\*\*\*\*

| <ul style="list-style-type: none"> <li>Silence zone is an area comprising not less than 100 meters around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority.</li> <li>Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.</li> <li>dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale(A) which is relatable to human hearing.</li> </ul> | Area |                  | Unit   | Day Time | Night time |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------------|--------|----------|------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | A    | Industrial Area  | dB (A) | 75.0     | 70.0       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | B    | Commercial Area  | dB (A) | 65.0     | 55.0       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | C    | Residential Area | dB (A) | 55.0     | 45.0       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | D    | Silence Zone     | dB (A) | 50.0     | 40.0       |

|                            |                                                                                                                                              |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | Noise pollution (Regulation & Control) Rules, 2000.                                                                                          |
| Abbreviation               | MDL : Minimum detection limit. BDL : Below detection limit.                                                                                  |
| Env. Condition of Lab      | Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).                   |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. |
|                            | This report, in full or in part, shall not be used for advertising or as evidence in any court of law.                                       |
|                            | This report cannot be reproduced, except when in full, without the written permission of the CEO.                                            |
|                            | The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise.                  |
|                            | The liability of the laboratory is limited to the invoiced amount.                                                                           |
| Remarks                    | All disputes are subjected to the Ranchi Jurisdiction.                                                                                       |
|                            | Samples comply with prescribed limit.                                                                                                        |

Sample Drawn By - Angad Munda  
Tested By - Akash Khalkho (Lab Analyst)

|                                                                                |                                                               |
|--------------------------------------------------------------------------------|---------------------------------------------------------------|
| <br>30-09-22<br>Verified by<br>Sanjeev Kumar Singh<br>Deputy Technical Manager | <br>30/9/22<br>Issued by<br>Umesh Das<br>Authorized Signatory |
|--------------------------------------------------------------------------------|---------------------------------------------------------------|

Authorized Signatory  
Atmospheric Pollution  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory



Branch Office :- Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in



ISO 9001:2015  
ISO 45001:2018





# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - ISO 9001:2015 & ISO 45001:2018



TC-4032



### Test Certificate

|                               |          |                                                                                                     |                                     |  |                           |                    |  |                           |                 |  |                       |  |  |            |  |  |  |  |  |  |
|-------------------------------|----------|-----------------------------------------------------------------------------------------------------|-------------------------------------|--|---------------------------|--------------------|--|---------------------------|-----------------|--|-----------------------|--|--|------------|--|--|--|--|--|--|
| ULR (Unique Lab Report) No.   |          |                                                                                                     | T C 4 0 3 2 2 2 0 0 0 0 0 1 6 2 5 F |  |                           |                    |  |                           |                 |  |                       |  |  |            |  |  |  |  |  |  |
| Discipline                    | Chemical | Group                                                                                               | Atmospheric Pollution               |  |                           | Sample Description |  |                           | Work Zone Noise |  |                       |  |  |            |  |  |  |  |  |  |
| Report Release Date           |          | 30 <sup>th</sup> September, 2022                                                                    |                                     |  | Report ID                 |                    |  | YBAEEL-220920-114052- N02 |                 |  |                       |  |  |            |  |  |  |  |  |  |
| W. Order / JSPCB App. No.     |          | 3030005781                                                                                          |                                     |  | Work Order Date           |                    |  | 18.12.2021                |                 |  |                       |  |  |            |  |  |  |  |  |  |
| Type of Industry (if any)     |          | Thermal Power Plant                                                                                 |                                     |  | Job code/ Ref. no.        |                    |  | YBAEEL/WA/L/A/Sep-22/29   |                 |  |                       |  |  |            |  |  |  |  |  |  |
| Report Issue to               |          | M/s Adhunik Power & Natural Resources Ltd.<br>VIII. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |                                     |  |                           |                    |  |                           |                 |  |                       |  |  |            |  |  |  |  |  |  |
| Sampling Period               |          | 23/09/2022 - 24/09/2022                                                                             |                                     |  | Mode of sample collection |                    |  | By YBAEEL Team            |                 |  |                       |  |  |            |  |  |  |  |  |  |
| Sampling Protocol             |          | IS : 9989:1981 (RA 2020), CPCB (Factory Act 1948)                                                   |                                     |  |                           |                    |  |                           |                 |  |                       |  |  |            |  |  |  |  |  |  |
| Meteorological Cond. of Field |          | W.C.- Clear                                                                                         |                                     |  | RH % - 67                 |                    |  | Temp. - 32°C              |                 |  |                       |  |  |            |  |  |  |  |  |  |
| Sample receipt Date           |          | 26/09/2022                                                                                          |                                     |  | Analysis Started on       |                    |  | 26/09/2022                |                 |  | Analysis completed on |  |  | 30/09/2022 |  |  |  |  |  |  |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Sl | Locations        | Parameters | Units  | MU %  | Day Time | Night Time | Limit |
|----|------------------|------------|--------|-------|----------|------------|-------|
| 1. | Boiler Pump Area | Leq        | dB (A) | 1.003 | 77.2     | 71.5       | 85    |
| 2. | Turbine Floor    | Leq        | dB (A) | 1.003 | 80.2     | 77.6       |       |
| 3. | Compressor House | Leq        | dB (A) | 1.003 | 82.1     | 80.3       |       |
| 4. | Cooling Tower    | Leq        | dB (A) | 1.003 | 76.8     | 76.2       |       |
| 5. | CHP Area         | Leq        | dB (A) | 1.003 | 70.5     | 56.3       |       |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | Factory Act. 1948 (8 hrs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Abbreviation               | M.D.L - Minimum detection limit, B.D.L - Below detection limit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Env. Condition of Lab      | Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1956 (C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility<br>This report in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | Samples comply with prescribed limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

Sample Drawn By - Angad Munda  
Tested By - Akash Khalkho (Lab Analyst)

|                                                                                |                                                                |
|--------------------------------------------------------------------------------|----------------------------------------------------------------|
| <br>30-09-22<br>Verified by<br>Sanjeev Kumar Singh<br>Deputy Technical Manager | <br>30/09/22<br>Issued by<br>Umesh Das<br>Authorized Signatory |
|--------------------------------------------------------------------------------|----------------------------------------------------------------|



Branch Office :- Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in



ISO 9001:2015  
ISO 45001:2018





# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by :- NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by :- ISO 9001:2015 & ISO 45001:2018



TC-4032



### Test Certificate

|                               |                                                                                                     |                                     |                       |                           |  |                    |                           |  |                                   |                       |  |  |            |  |  |  |  |  |  |
|-------------------------------|-----------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------|---------------------------|--|--------------------|---------------------------|--|-----------------------------------|-----------------------|--|--|------------|--|--|--|--|--|--|
| ULR (Unique Lab Report) No.   |                                                                                                     | T C 4 0 3 2 2 2 0 0 0 0 0 1 6 2 4 F |                       |                           |  |                    |                           |  |                                   |                       |  |  |            |  |  |  |  |  |  |
| Discipline                    | Chemical                                                                                            | Group                               | Atmospheric Pollution |                           |  | Sample Description |                           |  | Ambient Air Quality (Buffer Zone) |                       |  |  |            |  |  |  |  |  |  |
| Report Release Date           | 30 <sup>th</sup> September, 2022                                                                    |                                     |                       | Report ID                 |  |                    | YBAEEL-220920-114052- A02 |  |                                   |                       |  |  |            |  |  |  |  |  |  |
| W. Order/ JSPCB App. No.      | 3030005781                                                                                          |                                     |                       | Work Order Date           |  |                    | 18.12.2021                |  |                                   |                       |  |  |            |  |  |  |  |  |  |
| Type of Industry (If any)     | Thermal Power Plant                                                                                 |                                     |                       | Job code/ Ref. no.        |  |                    | YBAEEL/WA/L/A/Sep-22/29   |  |                                   |                       |  |  |            |  |  |  |  |  |  |
| Report Issue to               | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |                                     |                       |                           |  |                    |                           |  |                                   |                       |  |  |            |  |  |  |  |  |  |
| Sampling Period               | 23/09/2022 - 24/09/2022                                                                             |                                     |                       | Mode of sample collection |  |                    | By YBAEEL Team            |  |                                   |                       |  |  |            |  |  |  |  |  |  |
| Sampling Protocol             | IS:5182 and CPCB Air Manual Volume-1(NAAQM/36/2012-13)                                              |                                     |                       |                           |  |                    |                           |  |                                   |                       |  |  |            |  |  |  |  |  |  |
| Sampling Locations            | A. Pindrabera Village                                                                               |                                     |                       | B. Srirampur Village      |  |                    | C. Padampur Village       |  |                                   |                       |  |  |            |  |  |  |  |  |  |
| Meteorological Cond. of Field | W.C.- Clear                                                                                         |                                     |                       | RH % - 65                 |  |                    | Temp. - 32 °C             |  |                                   | W.D.- East-West       |  |  |            |  |  |  |  |  |  |
| Sample receipt Date           | 26/09/2022                                                                                          |                                     |                       | Analysis Started on       |  |                    | 26/09/2022                |  |                                   | Analysis completed on |  |  | 30/09/2022 |  |  |  |  |  |  |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Parameters                              | Test Methods                 | Units             | MU %  | Sampling Location |                  |                  | Limits |
|-----------------------------------------|------------------------------|-------------------|-------|-------------------|------------------|------------------|--------|
|                                         |                              |                   |       | Site A            | Site B           | Site C           |        |
| Particulate matter (PM <sub>10</sub> )  | IS:5182 (P-23) 2006, RA 2017 | µg/m <sup>3</sup> | 2.68  | 91.6              | 86.1             | 95.6             | 100    |
| Particulate matter (PM <sub>2.5</sub> ) | IS:5182 (P-24) 2019          | µg/m <sup>3</sup> | 2.60  | 44.6              | 45.7             | 56.0             | 60     |
| Sulphure Dioxide (SO <sub>2</sub> )     | IS:5182 (P-2) 2001 RA 2017   | µg/m <sup>3</sup> | 7.84  | 33.4              | 28.4             | 32.5             | 80     |
| Nitrogen Dioxide (NO <sub>2</sub> )     | IS:5182 (P-6) 2006 RA 2017   | µg/m <sup>3</sup> | 4.17  | 54.0              | 49.2             | 54.0             | 80     |
| Ammonia (NH <sub>3</sub> )              | IS:5182 (P-25) 2018          | µg/m <sup>3</sup> | 3.7   | 24.4              | 20.7             | 23.5             | 400    |
| Ozone (O <sub>3</sub> )                 | IS:5182 (P-09) 2019          | µg/m <sup>3</sup> | 9.09  | 18.4              | 21.7             | 17.1             | 180    |
| Lead (Pb)                               | IS:5182 (P-22) 2004, RA 2019 | µg/m <sup>3</sup> | 7.96  | 0.17              | 0.16             | 0.18             | 1      |
| Nickel (Ni)                             | IS:5182 (P-26) 2020          | ng/m <sup>3</sup> | 14.71 | BDL<br>(MDL- 4)   | BDL<br>(MDL- 4)  | BDL<br>(MDL- 4)  | --     |
| Arsenic (As)                            | USEPA - IO 3.2               | ng/m <sup>3</sup> | 2.05  | BDL<br>(MDL -02)  | BDL<br>(MDL -02) | BDL<br>(MDL -02) | --     |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | Environmental (Protection) Rule - 1986.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Abbreviation               | MDL : Minimum detection limit, BDL : Below detection limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Env. Condition of Lab      | Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility.<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise.<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | Samples comply with prescribed limits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

Sample Drawn By - Angad Munda  
Tested By - Akash Khalkho (Lab Analyst)

|                                                                |                                                |
|----------------------------------------------------------------|------------------------------------------------|
| Verified by<br>Sanjeev Kumar Singh<br>Deputy Technical Manager | Issued by<br>Umesh Das<br>Authorized Signatory |
|----------------------------------------------------------------|------------------------------------------------|



Branch Office :- Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in



ISO 9001:2015  
ISO 45001:2018





# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - Jharkhand State Pollution Control Board (JSPCB)  
 Certified by: - An ISO 9001:2015 & ISO 45001:2018



### Test Certificate

|                               |                                                                                                     |       |                           |                    |                                   |
|-------------------------------|-----------------------------------------------------------------------------------------------------|-------|---------------------------|--------------------|-----------------------------------|
| Discipline                    | Chemical                                                                                            | Group | Atmospheric Pollution     | Sample Description | Ambient Air Quality (Buffer Zone) |
| Report Release Date           | 30 <sup>th</sup> September, 2022                                                                    |       |                           | Report ID          | YBAEEL-220920-114052- A02         |
| W. Order/ JSPCB App. No.      | 3030005781                                                                                          |       |                           | Work Order Date    | 18.12.2021                        |
| Type of Industry(if any)      | Thermal Power Plant                                                                                 |       |                           | Job code/ Ref. no. | YBAEEL/WA/L/A/Sep-22/29           |
| Report Issue to               | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra – 832402, Jharkhand. |       |                           |                    |                                   |
| Sampling Period               | 23/09/2022 – 24/09/2022                                                                             |       | Mode of sample collection |                    | By YBAEEL Team                    |
| Sampling Protocol             | IS:5182 and CPCB Air Manual Volume-1(NAAQM/36/2012-13)                                              |       |                           |                    |                                   |
| Sampling Locations            | A. Pindrabera Village                                                                               |       | B. Srirampur Village      |                    | C. Padampur Village               |
| Meteorological Cond. of Field | W.C.– Clear                                                                                         |       | RH % - 65                 |                    | Temp. - 32 °C                     |
| Sample receipt Date           | 26/09/2022                                                                                          |       | Analysis Started on       |                    | 26/09/2022                        |
|                               |                                                                                                     |       | Analysis completed on     |                    | 30/09/2022                        |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Parameters                                      | Test Methods              | Units             | MU %  | Sampling Location |                   |                   | Limits |
|-------------------------------------------------|---------------------------|-------------------|-------|-------------------|-------------------|-------------------|--------|
|                                                 |                           |                   |       | Site A            | Site B            | Site C            |        |
| Carbon Monoxide (CO)                            | SOP No. YBAEEL/SOP/AIR/01 | mg/m <sup>3</sup> | -     | BDL<br>(MDL 1.8)  | 1.4               | 1.6               | -      |
| Benzene (C <sub>6</sub> H <sub>6</sub> )        | IS:5182 (P-11) 2006       | µg/m <sup>3</sup> | 10.94 | BDL<br>(MDL 0.06) | BDL<br>(MDL 0.06) | BDL<br>(MDL 0.06) | -      |
| Benzo (a)pyrene (BaP)<br>Particulate Phase Only | IS:5182 (P-12) 2004       | ng/m <sup>3</sup> | -     | BDL<br>(MDL 0.2)  | BDL<br>(MDL 0.2)  | BDL<br>(MDL 0.2)  | -      |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                              |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | Environmental (Protection) Rule - 1986.                                                                                                      |
| Abbreviation               | MDL : Minimum detection limit, BDL : Below detection limit.                                                                                  |
| Env. Condition of Lab      | Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).                   |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. |
|                            | This report, in full or in part, shall not be used for advertising or as evidence in any court of law.                                       |
|                            | This report cannot be reproduced, except when in full, without the written permission of the CEO.                                            |
|                            | The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise.                  |
|                            | The liability of the laboratory is limited to the invoiced amount.                                                                           |
| Remarks                    | All disputes are subjected to the Ranchi Jurisdiction.                                                                                       |
|                            | Samples comply with prescribed limits.                                                                                                       |

Sample Drawn By - Angad Munda  
 Tested By - Akash Khalkho (Lab Analyst)

|                                                                |                                                |
|----------------------------------------------------------------|------------------------------------------------|
| Verified by<br>Sanjeev Kumar Singh<br>Deputy Technical Manager | Issued by<br>Umesh Das<br>Authorized Signatory |
|----------------------------------------------------------------|------------------------------------------------|

Authorized Signatory  
 Atmospheric Pollution  
 Yugantar Bharati Analytical &  
 Environmental Engineering Laboratory

Branch Office :- Jamshedpur      Dhanbad      Hazanbag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
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TC-4032



### Test Certificate

|                               |                                                                                                     |                                   |                       |  |                           |                                 |                       |  |                          |  |            |  |             |  |  |  |  |  |  |
|-------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------|--|---------------------------|---------------------------------|-----------------------|--|--------------------------|--|------------|--|-------------|--|--|--|--|--|--|
| ULR (Unique Lab Report) No.   |                                                                                                     | T C 4 0 3 2 2 2 0 0 0 0 1 6 2 0 F |                       |  |                           |                                 |                       |  |                          |  |            |  |             |  |  |  |  |  |  |
| Discipline                    | Chemical                                                                                            | Group                             | Atmospheric Pollution |  | Sample Description        | Ambient Air Quality (Core Zone) |                       |  |                          |  |            |  |             |  |  |  |  |  |  |
| Report Release Date           | 30 <sup>th</sup> September, 2022                                                                    |                                   |                       |  | Report ID                 | YBAEEL-220920-114052- A01       |                       |  |                          |  |            |  |             |  |  |  |  |  |  |
| W. Order/ JSPCB App. No.      | 3030005781                                                                                          |                                   |                       |  | Work Order Date           | 18.12.2021                      |                       |  |                          |  |            |  |             |  |  |  |  |  |  |
| Type of Industry (If any)     | Thermal Power Plant                                                                                 |                                   |                       |  | Job code/ Ref. no.        | YBAEEL/WA/L/A/Sep-22/28         |                       |  |                          |  |            |  |             |  |  |  |  |  |  |
| Report Issue to               | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra - 832402, Jharkhand. |                                   |                       |  |                           |                                 |                       |  |                          |  |            |  |             |  |  |  |  |  |  |
| Sampling Period               | 22/09/2022 - 23/09/2022                                                                             |                                   |                       |  | Mode of sample collection | By YBAEEL Team                  |                       |  |                          |  |            |  |             |  |  |  |  |  |  |
| Sampling Protocol             | IS:5182 and CPCB Air Manual Volume-1(NAAQM/36/2012-13)                                              |                                   |                       |  |                           |                                 |                       |  |                          |  |            |  |             |  |  |  |  |  |  |
| Sampling Locations            | A. Bachelor Hostel                                                                                  |                                   |                       |  | B. Switch Yard            |                                 |                       |  | C. Sati Steel (CHP Area) |  |            |  |             |  |  |  |  |  |  |
| Meteorological Cond. of Field | W.C.- Clear                                                                                         |                                   |                       |  | RH % - 67                 |                                 |                       |  | Temp. - 31°C             |  |            |  | W.D.- NE-SW |  |  |  |  |  |  |
| Sample receipt Date           | 24/09/2022                                                                                          |                                   | Analysis Started on   |  | 24/09/2022                |                                 | Analysis completed on |  |                          |  | 30/09/2022 |  |             |  |  |  |  |  |  |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Parameters                              | Test Methods                 | Units             | MU %  | Sampling Location |                 |                 | Limits |
|-----------------------------------------|------------------------------|-------------------|-------|-------------------|-----------------|-----------------|--------|
|                                         |                              |                   |       | Site A            | Site B          | Site C          |        |
| Particulate matter (PM <sub>10</sub> )  | IS:5182 (P-23) 2006, RA 2017 | µg/m <sup>3</sup> | 2.68  | 78.5              | 86.7            | 85.0            | 100    |
| Particulate matter (PM <sub>2.5</sub> ) | IS:5182 (P-24) 2019          | µg/m <sup>3</sup> | 2.60  | 46.1              | 42.2            | 47.2            | 60     |
| Sulphure Dioxide (SO <sub>2</sub> )     | IS:5182 (P-2) 2001 RA 2017   | µg/m <sup>3</sup> | 7.84  | 24.3              | 27.5            | 29.0            | 80     |
| Nitrogen Dioxide (NO <sub>2</sub> )     | IS:5182 (P-6) 2006 RA 2017   | µg/m <sup>3</sup> | 4.17  | 45.8              | 49.1            | 51.3            | 80     |
| Ammonia (NH <sub>3</sub> )              | IS:5182 (P-25) 2018          | µg/m <sup>3</sup> | 3.7   | 27.9              | 22.9            | 22.2            | 400    |
| Ozone (O <sub>3</sub> )                 | IS:5182 (P-09) 2019          | µg/m <sup>3</sup> | 9.09  | 17.9              | 21.2            | 23.3            | 180    |
| Lead (Pb)                               | IS:5182 (P-22) 2004, RA 2019 | µg/m <sup>3</sup> | 7.95  | 0.08              | 0.15            | 0.16            | 1      |
| Nickel (Ni)                             | IS:5182 (P-26) 2020          | ng/m <sup>3</sup> | 14.71 | BDL<br>(MDL- 4)   | BDL<br>(MDL- 4) | BDL<br>(MDL- 4) | --     |
| Arsenic (As)                            | USEPA - IO 3.2               | ng/m <sup>3</sup> | 2.05  | BDL<br>(MDL-02)   | BDL<br>(MDL-02) | BDL<br>(MDL-02) | --     |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                              |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | Environmental (Protection) Rule - 1986.                                                                                                      |
| Abbreviation               | MDL : Minimum detection limit, BDL : Below detection limit.                                                                                  |
| Env. Condition of Lab      | Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).                   |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. |
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|                            | The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise.                  |
|                            | The liability of the laboratory is limited to the invoiced amount.                                                                           |
| Remarks                    | All disputes are subjected to the Ranchi Jurisdiction.                                                                                       |
|                            | Samples comply with prescribed limits.                                                                                                       |

Sample Drawn By - Angad Munda  
Tested By - Akash Khalkho (Lab Analyst)

|                                                                |                                                |
|----------------------------------------------------------------|------------------------------------------------|
| Verified by<br>Sanjeev Kumar Singh<br>Deputy Technical Manager | Issued by<br>Umesh Das<br>Authorized Signatory |
|----------------------------------------------------------------|------------------------------------------------|



Branch Office :- Jamshedpur      Dhanbad      Hazaribag      Pakur

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ISO 9001:2015  
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### Test Certificate

|                               |                                                                                                     |       |                           |                    |                                 |
|-------------------------------|-----------------------------------------------------------------------------------------------------|-------|---------------------------|--------------------|---------------------------------|
| Discipline                    | Chemical                                                                                            | Group | Atmospheric Pollution     | Sample Description | Ambient Air Quality (Core Zone) |
| Report Release Date           | 30 <sup>th</sup> September, 2022                                                                    |       |                           | Report ID          | YBAEEL-220920-114052- A01       |
| W. Order/ JSPCB App. No.      | 3030005781                                                                                          |       |                           | Work Order Date    | 18.12.2021                      |
| Type of Industry (If any)     | Thermal Power Plant                                                                                 |       |                           | Job code/ Ref. no. | YBAEEL/WA/L/A/Sep-22/28         |
| Report Issue to               | M/s Adhunik Power & Natural Resources Ltd.<br>Vill. - Padampur, PGCILS, Kandra – 832402, Jharkhand. |       |                           |                    |                                 |
| Sampling Period               | 22/09/2022 – 23/09/2022                                                                             |       | Mode of sample collection |                    | By YBAEEL Team                  |
| Sampling Protocol             | IS:5182 and CPCB Air Manual Volume-1(NAAQM/36/2012-13)                                              |       |                           |                    |                                 |
| Sampling Locations            | A. Bachelor Hostel                                                                                  |       | B. Switch Yard            |                    | C. Sati Steel (CHP Area)        |
| Meteorological Cond. of Field | W.C.– Clear                                                                                         |       | RH % - 67                 |                    | Temp. - 31°C                    |
| Sample receipt Date           | 24/09/2022                                                                                          |       | Analysis Started on       |                    | 24/09/2022                      |
|                               |                                                                                                     |       | Analysis completed on     |                    | 30/09/2022                      |

#### \*\*\*\*\*Test Results\*\*\*\*\*

| Parameters                                        | Test Methods              | Units             | MU %  | Sampling Location |                   |                   | Limits |
|---------------------------------------------------|---------------------------|-------------------|-------|-------------------|-------------------|-------------------|--------|
|                                                   |                           |                   |       | Site A            | Site B            | Site C            |        |
| Carbon Monoxide (CO)                              | SOP No. YBAEEL/SOP/AIR/01 | mg/m <sup>3</sup> | -     | BDL<br>(MDL 1.8)  | BDL<br>(MDL 1.8)  | BDL<br>(MDL 1.8)  | -      |
| Benzene (C <sub>6</sub> H <sub>6</sub> )          | IS:5182 (P-11) 2006       | µg/m <sup>3</sup> | 10.94 | BDL<br>(MDL 0.06) | BDL<br>(MDL 0.06) | BDL<br>(MDL 0.06) | -      |
| Benzo (a)pyrene (BaP)<br>(Particulate Phase Only) | IS:5182 (P-12) 2004       | ng/m <sup>3</sup> | -     | BDL<br>(MDL 0.2)  | BDL<br>(MDL 0.2)  | BDL<br>(MDL 0.2)  | -      |

#### \*\*\*\*\*End of Report\*\*\*\*\*

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit is specified as      | Environmental (Protection) Rule - 1986.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Abbreviation               | MDL : Minimum detection limit, BDL : Below detection limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Env. Condition of Lab      | Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196-1966 (C).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Specific contractual notes | All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility.<br>This report, in full or in part, shall not be used for advertising or as evidence in any court of law.<br>This report cannot be reproduced, except when in full, without the written permission of the CEO.<br>The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise.<br>The liability of the laboratory is limited to the invoiced amount.<br>All disputes are subjected to the Ranchi Jurisdiction. |
| Remarks                    | Samples comply with prescribed limits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

Sample Drawn By - Angad Munda  
Tested By - Akash Khalkho (Lab Analyst)

|                                                                |                                                |
|----------------------------------------------------------------|------------------------------------------------|
| Verified by<br>Sanjeev Kumar Singh<br>Deputy Technical Manager | Issued by<br>Umesh Das<br>Authorized Signatory |
|----------------------------------------------------------------|------------------------------------------------|

Authorized Signatory  
Atmospheric Pollution  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office : - Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in







## ADHUNIK POWER & NATURAL RESOURCES LIMITED

WORKS : Village - Padampur, Behind P.G.C.I.L. Substation,  
Adityapur - Kandra Road, Saraikela - Kharsawan, PIN - 832402 Jharkhand  
Phone : +91 - 657 - 6628400, Fax : +91 - 657 - 6628440  
CIN - U40101WB2005PLC102935

APNRL/HR/Office Order/10  
5<sup>th</sup> August 2016

### Office Order

As per the directions of the Ministry of Environment & Forest, Government of India while granting the Environment Clearances vide letter no J-13011/8/2009-IA.II(T), dated 29th Aug 2009 (Unit-I) & Letter No :J13012/8/2009-IA .II (T) dtd 9th May 2011 to our 2x270 MW Power Plant, the Management considering the importance of Environmental concerns and set up the Environment Cell under the chair of Plant In charge who is directly reporting the Managing Director of Organization. The Cell is functional since 2009 and is equipped with qualified professionals of the fields.

### **Roles & Responsibility of Environment Cell**

Following the broad scope of the Cell

- Understanding Environment issues in Adhunik power & Natural Resources Ltd during Construction & Operation and Maintenance Phase.
- Framing appropriate scope of work for requisite environment management, EIA & various other complex issues to address those with tailor made solutions,
- Awarding the consultancy tasks for environmental management & EIAs, Modeling, Monitoring etc & other complex studies to the appropriate agency and also sometimes In-house work of Monitoring,
- Dealing with JSPCB/CPCB/MoEF & CC for various aspects including obtaining clearances for Plant and Plant led development and policy makings at State and National level,
- The meeting of the management of M/s APNRL shall be conducted in which the budgetary allocation for the EMP shall be discussed and finalized and comprehensive EMP shall be prepared as per the guidelines of CPCB.
- Preparation of Environmental Management Plans- Basically Assisting Engineering Section for preparation Master Plan for existing plant to address policy regulations issued by MOEF & CC from time to time,
- Operating and upgrading the existing Hazardous Waste Management Facilities for Plant Area as per latest regulations.- (Development and Operation of TSDF at APNRL),
- Initiating dialogs, meeting & developing participatory approach with the key stakeholders for solving any typical pollution related problems.
- Review of EMP for various sections of plant and suggest modifications if any for better Env Management,
- Representing APNRL at the State and National level platform for Environment Management.
- Comments & advice on draft amendment, notifications on Environmental Laws.
- Imparting knowledge and raising awareness for Environment Protections among APNRL key officers and other related stakeholders,
- The Plant Incharge will be responsible for environmental issues at plant.

The responsibilities of the various members of the environment management cell are enclosed as

Annexure I:

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**REGD. OFFICE**

: 14, N. S. Road, 2nd Floor, Kolkata - 700 001, Phone No. +91 - 33 - 22428551, 22428553

**Website**

: [www.adhunikgroup.com](http://www.adhunikgroup.com)





# ADHUNIK POWER & NATURAL RESOURCES LIMITED

WORKS : Village - Padampur, Behind P.G.C.I.L. Substation,  
Adityapur - Kandra Road, Saraikela - Kharsawan, PIN - 832402 Jharkhand  
Phone : +91 - 657 - 6628400, Fax : +91 - 657 - 6628440  
CIN - U40101WB2005PLC102935

05.08.2016

Annexure I

## Responsibilities of the members of the environment management cell

| S. No. | Designation          | Responsibility                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Reporting to        |
|--------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 01     | Managing Director    | Environmental policy and directions                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                     |
| 02     | Plant Incharge       | Overall responsibility for environmental management and decision making for all environmental issues                                                                                                                                                                                                                                                                                                                                                                                                | Managing Director   |
| 03     | Environment Manager  | Overall in-charge of operation of environmental management facilities of respective sections.<br>Ensure environmental monitoring as per appropriate procedures,<br>Ensure correct records of generation, handling, storage, transportation and disposal of solid hazardous wastes.<br>Ensuring legal compliance by properly undertaking activities as laid down by various regulatory agencies from time to time and interacting with the same and arranging awareness programme among the workers. | Plant Incharge      |
| 04     | CSR Manager          | Responsibility to implement social impact improvement/mitigation measures.                                                                                                                                                                                                                                                                                                                                                                                                                          | Plant Incharge      |
| 05     | Safety Manager       | Participating in workplace safety and health planning meetings.<br>Ensuring managers and supervisors have the appropriate safety and health;<br>Accident prevention; and investigation & training.<br>Ensure safety and health hazards are corrected, eliminated or guarded.                                                                                                                                                                                                                        | Plant Incharge      |
| 06     | Medical Officer      | Attend all types of OPD and Emergency Patients.<br>First Aid Treatment to all Cases.<br>Routine Medical Examination of Company Employees.<br>Performing & Conducting various training & awareness programs in company.                                                                                                                                                                                                                                                                              | Plant Incharge      |
| 06     | Chemist              | To initiate environmental monitoring as per approved schedule.<br>Prepare & Submit the monitored results and corrective measures in case monitored results are above the specified limit.                                                                                                                                                                                                                                                                                                           | Environment Manager |
| 07     | Horticulture officer | Responsible for development of Green belt & Land Scape on vacant land of Plant premises.                                                                                                                                                                                                                                                                                                                                                                                                            | Environment Manager |

Sr. Manager (HR)

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CIN - U40101WB2005PLC102935

Ref No APNRL/JSPCB/ES/2021-22/02

Date: 20th Sep 2022

Member Secretary  
Jharkhand State Pollution Control Board,  
HEC Campus, Dhurva,  
Ranchi, Jharkhand.

Sub- Submission of Environmental Statement (Form V) for Unit II (1 x 270 MW) of M/s  
Adhunik Power & Natural Resources Limited, Village- Padampur, Dist- Saraikela-  
Kharswan, Jharkhand.

Ref: Environmental Clearance letter No J-13012/8/2009-IA.II(T), Dated 09<sup>th</sup> May 2011.

Dear Sir,

In line with compliance of above referred EC letter point No XIII of general condition, Please  
find attached herewith Environmental statement (Form V) for the financial year 2021-22.

This is for your kind information & record please.

Thanking You

Your's faithfully

Kamlesh Kumar

Manager (Environment)

Encl: As mentioned above

CC: 1. Regional Office (ECZ),

Ministry of Environment, Forest and Climate Change,  
Bungalow No. A-2, Shyamali Colony, Ranchi - 834002

2. Regional Officer

Jharkhand Pollution Control Board  
Jamshedpur, Jharkhand



21-9-2022

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CIN - U40101WB2005PLC102935

Ref: MOE&F, RNC/HYC/KKJ/280522/02

Dated: 28.05.2022

To,

Regional Office (ECZ),  
Ministry of Environment, Forest and Climate Change,  
Bungalow No. A-2, Shyamali Colony,  
Ranchi - 834002

Sub:- Submission of Half yearly compliance status report (Unit II) for the period - October 2021 to March 2022 -Reg.

Ref:- MoEF EC letter No.J-13012/8/2009-IA.II(T), Dated 09th May 2011.

Sir,

With reference to the above referred Environmental Clearance, we are pleased to submit herewith the half yearly compliance status report (Unit II) for the period of October 2021 to March 2022.

This is for your reference and record, please.

Thanking you,

For Adhunik Power & Natural resources Limited

  
(Authorized Signatory)

Encl: As Above

Copy to:

1. Central Pollution Control Board, Kolkata
- ✓ 2. Member Secretary, Jharkhand State Pollution Control Board, Jharkhand
3. Regional Officer, JSPCB, Jamshedpur

Rf

Bastri N



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