



# 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/281123/02

Dated: 28.11.2023

To,

Regional Office (ECZ),  
Ministry of Environment, Forest and Climate Change,  
2nd Floor, Jharkhand State Housing Board (HQ)  
Harmu Chowk, Ranchi, Jharkhand-834002

Sub:- Submission of Half yearly compliance status report (Unit II) for the period – April 2023 to September 2023 -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 2023 to September 2023.

This is for your reference and record, please.

Thanking you,

For Adhunik Power & Natural resources Limited

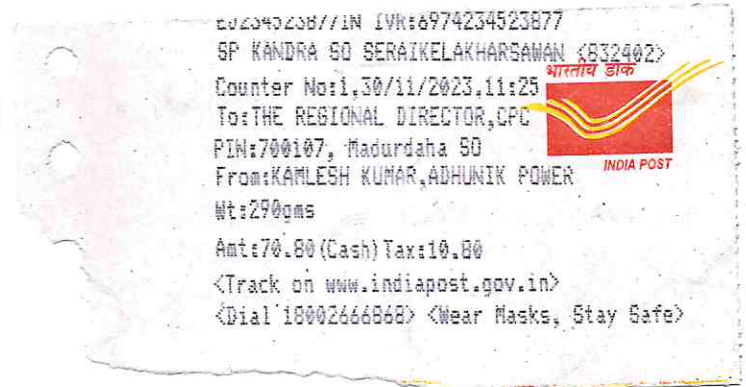
*Dishu*

(Authorized Signatory)

Encl: As Above

Copy to:

1. Central Pollution Control Board, Kolkata
2. Member Secretary, Jharkhand State Pollution Control Board, Jharkhand



CORPORATE OFFICE : "LANDSDOWNE TOWER", 2/1A, Sarat Bose Road, Kolkata - 700 020

Ph : +91 - 33 - 30517100 / 7200 / 7300 • Fax : +91 - 33 - 22890285

REGD. OFFICE

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

Website

: www.adhunikpower.com

# **REPORT**

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



**APRIL 2023 – SEPTEMBER 2023**

**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> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Environmental Clearance Letter No: J13012/8/2009-IA .II (T) dtd 9th May 2011.</b>                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                               |
| <b>Period Of Compliances: April 2023 to September 2023</b>                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                               |
| <b>Sl No</b>                                                                                                                                               | <b>EC Conditions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Status as on 30<sup>th</sup> September 2023</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> September, 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> September 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>                                                                                                                                                                                                                      |

|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                               |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 2023 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 2023 are enclosed as Annexure II.</b><br>Regular monitoring of ground water level are                  |



|         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 2023 are enclosed 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.                                                                                                                                                                                                                                                                                                     |

|         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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>                                                                                                                                                 |



|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <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 2023 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 24/02/2022. License No. P/HQ/JH/15/1065 (P257355), valid upto 31.12.2026 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 2023 are enclosed As Annexure XIV.</b></p>                                 |

|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                              |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 2023 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>                                    |



|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 2022 to September 2022 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> September 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 (2022-23) in Form V has submitted to JSPCB dated 20 <sup>th</sup> Sep 2023. <b>Acknowledgement copy of same attached as Annexure XVII.</b><br><br>Environment Statement (2022-23) 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/29523/02 ,dated 29 <sup>TH</sup> May 2023. <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-खरसावा 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

*[Signature]*

समीक्षात्मक टिप्पणी अंकित करते हुए उनकी अनुशंसा से सहमति व्यक्त नहीं की है, जो उपरोक्त कंडिकाओं में उल्लिखित तथ्यों एवं संलग्नक मानचित्रों 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  
17/7





# Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB  
National Accreditation Board for Testing Laboratory (NABL) vide TC-11515  
Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



## Test Report

|                                                                                                           |   |   |   |   |                             |   |   |   |                                      |                           |   |   |   |   |   |   |   |
|-----------------------------------------------------------------------------------------------------------|---|---|---|---|-----------------------------|---|---|---|--------------------------------------|---------------------------|---|---|---|---|---|---|---|
| ULR No.:                                                                                                  | T | C | 1 | 1 | 5                           | 1 | 5 | 2 | 3                                    | 0                         | 0 | 0 | 0 | 1 | 3 | 2 | 9 |
| Discipline: Chemical                                                                                      |   |   |   |   | Group: Water                |   |   |   |                                      | Sub-Group: Ground Water   |   |   |   |   |   |   |   |
| Report Issue Date: 30-09-2023                                                                             |   |   |   |   |                             |   |   |   | Test Report No.: RN-230320001GW1     |                           |   |   |   |   |   |   |   |
| Sample ID: 230923WA02001                                                                                  |   |   |   |   |                             |   |   |   | Sample Description: GW (Bore well)   |                           |   |   |   |   |   |   |   |
| Challan No./P.O. No.: 3030006457                                                                          |   |   |   |   |                             |   |   |   | Challan Date/P.O. Date.: 06-12-2022  |                           |   |   |   |   |   |   |   |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |   |   |   |   |                             |   |   |   |                                      |                           |   |   |   |   |   |   |   |
| Type of Industry: Power Plant                                                                             |   |   |   |   |                             |   |   |   | Customer Representative: Kamlesh Jha |                           |   |   |   |   |   |   |   |
| Sample Drawn by: IEM Team                                                                                 |   |   |   |   |                             |   |   |   | Sampling Date: 23-09-2023            |                           |   |   |   |   |   |   |   |
| Protocol: CPCB Guideline & IS Method 3025 Part-01                                                         |   |   |   |   |                             |   |   |   |                                      |                           |   |   |   |   |   |   |   |
| Sampling Location: SHRIRAMPUR VILLAGE                                                                     |   |   |   |   |                             |   |   |   |                                      |                           |   |   |   |   |   |   |   |
| Field Meteorological Information A. Temp.(°C): 27 R.H. (%): 68 W.C.: Partly Sunny W.D.: North to South    |   |   |   |   |                             |   |   |   |                                      |                           |   |   |   |   |   |   |   |
| Sample Receiving Date: 23-09-2023                                                                         |   |   |   |   | Testing Started: 23-09-2023 |   |   |   |                                      | Testing Ended: 27-09-2023 |   |   |   |   |   |   |   |

### ---Test Result---

| Sl. No. | Tested Parameter                         | Unit  | Method No.        | Limit      |               | Results         |
|---------|------------------------------------------|-------|-------------------|------------|---------------|-----------------|
|         |                                          |       |                   | Acceptable | Permissible   |                 |
| 1.      | pH value at 25°C                         | ----  | IS 3025 (Part-11) | 6.5 – 8.5  | No Relaxation | 7.08            |
| 2.      | Turbidity                                | NTU   | IS:3025 (Part-10) | 1          | 5             | 4.1             |
| 3.      | Colour                                   | Hazen | IS 3025 (Part-04) | 5          | 15            | 5.0             |
| 4.      | Odour                                    | ----  | IS:3025 (Part-05) | Agreeable  | Agreeable     | Unobjectionable |
| 5.      | Total Dissolved Solids (TDS)             | mg/l  | IS 3025 (Part-16) | 500        | 2000          | 402.0           |
| 6.      | Calcium (as Ca <sup>2+</sup> )           | mg/l  | IS 3025 (Part-40) | 75         | 200           | 56.89           |
| 7.      | Total Alkalinity (as CaCO <sub>3</sub> ) | mg/l  | IS 3025 (Part-23) | 200        | 600           | 198.0           |
| 8.      | Total Hardness (as CaCO <sub>3</sub> )   | mg/l  | IS 3025 (Part-21) | 200        | 600           | 146.0           |
| 9.      | Ammonical Nitrogen (as N)                | mg/l  | IS 3025 (Part-34) | 0.5        | No Relaxation | BDL(MDL-0.1)    |
| 10.     | Chloride (as Cl <sup>-</sup> )           | mg/l  | IS:3025 (Part-32) | 250        | 1000          | 61.48           |
| 11.     | Free Residual Chlorine                   | mg/l  | IS:3025 (Part-26) | 0.2        | 1.0           | BDL(MDL-0.03)   |
| 12.     | Sulphate (as SO <sub>4</sub> )           | mg/l  | IS:3025 (Part-24) | 200        | 400           | 25.67           |
| 13.     | Magnesium (as Mg)                        | mg/l  | APHA 3500         | 30         | 100           | BDL(MDL-1.0)    |
| 14.     | Sodium (as Na)                           | mg/l  | IS 3025 (Part-45) | -----      | -----         | 24.21           |
| 15.     | Potassium (as K)                         | mg/l  | IS 3025 (Part-45) | -----      | -----         | 5.36            |

### ---END Report---

|                        |                                                                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation           | MDL: Minimum Detection Limit, BDL: Below Detection Limit                                                              |
| Limit is Specified     | IS 10500 :2021                                                                                                        |
| Remark                 | Sample Comply with prescribed specification.                                                                          |

Tested By: Amisha Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

#### Specific Contractual Notes:-

- The laboratory accepts responsibility for content of this report.
- This report shall not be reproduced except in full, without written approval of the MD.
- This report is intended for only guidance and not for legal purpose or for advertisement.
- Any complaint about this report should be communicated in writing within 7 days of its issue.
- Total liability of Institute for Environmental Management will be limited to invoiced amount only.
- In case of feedback/ complaints, please send an email at [gm.iemeco@gmail.com](mailto:gm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

| Quality Checked by  | Authorized Signatory |
|---------------------|----------------------|
|                     |                      |
| (Shreya Sonal)      | (Dr. S. C. Jain)     |
| Dy. Quality Manager | Director             |

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)





# Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB  
National Accreditation Board for Testing Laboratory (NABL) vide TC-11515  
Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



## Test Report

|                                                                                                           |                                           |   |   |   |   |                             |   |   |              |                                      |                                  |                           |   |   |                      |   |   |
|-----------------------------------------------------------------------------------------------------------|-------------------------------------------|---|---|---|---|-----------------------------|---|---|--------------|--------------------------------------|----------------------------------|---------------------------|---|---|----------------------|---|---|
| ULR No.:                                                                                                  | T                                         | C | 1 | 1 | 5 | 1                           | 5 | 2 | 3            | 0                                    | 0                                | 0                         | 0 | 1 | 3                    | 3 | 1 |
| Discipline: Chemical                                                                                      | Group: Residues and Contaminants in Water |   |   |   |   |                             |   |   |              |                                      | Sub-Group: Trace Metals elements |                           |   |   |                      |   |   |
| Report Issue Date: 30-09-2023                                                                             |                                           |   |   |   |   |                             |   |   |              | Test Report No.: RN-230320001GW1     |                                  |                           |   |   |                      |   |   |
| Sample ID: 230923RC02001                                                                                  |                                           |   |   |   |   |                             |   |   |              | Sample Description: Ground Water     |                                  |                           |   |   |                      |   |   |
| Challan No./P.O. No.: 3030006457                                                                          |                                           |   |   |   |   |                             |   |   |              | Challan Date/P.O. Date.: 06-12-2022  |                                  |                           |   |   |                      |   |   |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |                                           |   |   |   |   |                             |   |   |              |                                      |                                  |                           |   |   |                      |   |   |
| Type of Industry: Power Plant                                                                             |                                           |   |   |   |   |                             |   |   |              | Customer Representative: Kamlesh Jha |                                  |                           |   |   |                      |   |   |
| Sample Drawn by: IEM Team                                                                                 |                                           |   |   |   |   |                             |   |   |              | Sampling Date: 23-09-2023            |                                  |                           |   |   |                      |   |   |
| Protocol: IS Method & CPCB Guideline                                                                      |                                           |   |   |   |   |                             |   |   |              |                                      |                                  |                           |   |   |                      |   |   |
| Sampling Location: SHRIRAMPUR VILLAGE                                                                     |                                           |   |   |   |   |                             |   |   |              |                                      |                                  |                           |   |   |                      |   |   |
| Field Meteorological Information                                                                          |                                           |   |   |   |   | A. Temp.(°C): 27            |   |   | R.H. (%): 68 |                                      |                                  | W.C.: Partly Sunny        |   |   | W.D.: North to South |   |   |
| Sample Receiving Date: 23-09-2023                                                                         |                                           |   |   |   |   | Testing Started: 23-09-2023 |   |   |              |                                      |                                  | Testing Ended: 27-09-2023 |   |   |                      |   |   |

### ---Test Result---

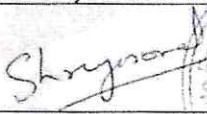
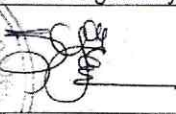
| Sl.No. | Tested Parameter | Unit | Method No.       | Limits                | Results           |
|--------|------------------|------|------------------|-----------------------|-------------------|
| 1.     | Copper           | mg/l | APHA 3111 B.2017 | 0.05 - 1.5            | <0.01             |
| 2.     | Chromium         | mg/l | APHA 3111 B.2017 | 0.05 - No Relaxation  | BDL (MDL- 0.005)  |
| 3.     | Lead             | mg/l | APHA 3111 B.2017 | 0.01 - No Relaxation  | <0.01             |
| 4.     | Zinc             | mg/l | APHA 3111 B.2017 | 05 - 15               | 0.32              |
| 5.     | Nickel           | mg/l | APHA 3111 B.2017 | 0.3 - No Relaxation   | BDL (MDL- 0.03)   |
| 6.     | Mercury          | mg/l | APHA 3111 C.2017 | 0.001 - No Relaxation | BDL (MDL - 0.008) |
| 7.     | Total Arsenic    | mg/l | APHA 3111 C.2017 | 0.01 - No Relaxation  | BDL (MDL - 0.002) |
| 8.     | Manganese        | mg/l | APHA 3111 B.2017 | 0.1 - 0.3             | BDL (MDL - 0.08)  |

### ---End Report---

|                        |                                                                                                                     |
|------------------------|---------------------------------------------------------------------------------------------------------------------|
| Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966@. |
| Abbreviation           | MDL: Minimum Detection Limit, BDL: Below Detection Limit                                                            |
| Limit is Specified     | As Per IS 10500:2021                                                                                                |
| Remark                 | Sample Comply with prescribed specification.                                                                        |

Tested By: Amisha Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                        |                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Specific Contractual Notes:-<br>1. The laboratory accepts responsibility for content of this report.<br>2. This report shall not be reproduced except in full, without written approval of the MD.<br>3. This report is intended for only guidance and not for legal purpose or for advertisement.<br>4. Any complaint about this report should be communicated in writing within 7 days of its issue.<br>5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.<br>6. In case of feedback/ complaints, please send an email at <a href="mailto:gm.iemeco@gmail.com">gm.iemeco@gmail.com</a> | Quality Checked by                                                                                     | Authorized Signatory                                                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <br>(Shreya Sonal) | <br>(Dr. S. C. Jain) |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Dy. Quality Manager                                                                                    | Director                                                                                                  |

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)





# Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB  
National Accreditation Board for Testing Laboratory (NABL) vide TC-11515  
Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



## Test Report

|                                                                                                           |                                     |   |                  |   |   |                             |   |   |                                      |                         |   |                           |   |   |   |   |   |   |
|-----------------------------------------------------------------------------------------------------------|-------------------------------------|---|------------------|---|---|-----------------------------|---|---|--------------------------------------|-------------------------|---|---------------------------|---|---|---|---|---|---|
| ULR No.:                                                                                                  | T                                   | C | 1                | 1 | 5 | 1                           | 5 | 2 | 3                                    | 0                       | 0 | 0                         | 0 | 0 | 1 | 3 | 3 | 0 |
| Discipline: Chemical                                                                                      | Group: Water                        |   |                  |   |   |                             |   |   |                                      | Sub-Group: Ground Water |   |                           |   |   |   |   |   |   |
| Report Issue Date: 30-09-2023                                                                             | Test Report No.: RN-230320001GW2    |   |                  |   |   |                             |   |   |                                      |                         |   |                           |   |   |   |   |   |   |
| Sample ID: 230923WA02002                                                                                  | Sample Description: GW (Bore well)  |   |                  |   |   |                             |   |   |                                      |                         |   |                           |   |   |   |   |   |   |
| Challan No./P.O. No.: 3030006457                                                                          | Challan Date/P.O. Date.: 06-12-2022 |   |                  |   |   |                             |   |   |                                      |                         |   |                           |   |   |   |   |   |   |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |                                     |   |                  |   |   |                             |   |   |                                      |                         |   |                           |   |   |   |   |   |   |
| Type of Industry: Power Plant                                                                             |                                     |   |                  |   |   |                             |   |   | Customer Representative: Kamlesh Jha |                         |   |                           |   |   |   |   |   |   |
| Sample Drawn by: IEM Team                                                                                 |                                     |   |                  |   |   |                             |   |   | Sampling Date: 23-09-2023            |                         |   |                           |   |   |   |   |   |   |
| Protocol: CPCB Guideline & IS Method 3025 Part-01                                                         |                                     |   |                  |   |   |                             |   |   |                                      |                         |   |                           |   |   |   |   |   |   |
| Sampling Location: PADAMPUR VILLAGE                                                                       |                                     |   |                  |   |   |                             |   |   |                                      |                         |   |                           |   |   |   |   |   |   |
| Field Meteorological Information                                                                          |                                     |   | A. Temp.(°C): 27 |   |   | R.H. (%): 68                |   |   | W.C.: Partly Sunny                   |                         |   | W.D.: North to South      |   |   |   |   |   |   |
| Sample Receiving Date: 23-09-2023                                                                         |                                     |   |                  |   |   | Testing Started: 23-09-2023 |   |   |                                      |                         |   | Testing Ended: 27-09-2023 |   |   |   |   |   |   |

### ---Test Result---

| Sl. No. | Tested Parameter                         | Unit  | Method No.        | Limit      |               | Results         |
|---------|------------------------------------------|-------|-------------------|------------|---------------|-----------------|
|         |                                          |       |                   | Acceptable | Permissible   |                 |
| 1.      | pH value at 25°C                         | ----  | IS 3025 (Part-11) | 6.5 – 8.5  | No Relaxation | 7.11            |
| 2.      | Turbidity                                | NTU   | IS:3025 (Part-10) | 1          | 5             | 430             |
| 3.      | Colour                                   | Hazen | IS 3025 (Part-04) | 5          | 15            | 5.0             |
| 4.      | Odour                                    | ----  | IS:3025 (Part-05) | Agreeable  | Agreeable     | Unobjectionable |
| 5.      | Total Dissolved Solids (TDS)             | mg/l  | IS 3025 (Part-16) | 500        | 2000          | 326.0           |
| 6.      | Calcium (as Ca <sup>2+</sup> )           | mg/l  | IS 3025 (Part-40) | 75         | 200           | 67.33           |
| 7.      | Total Alkalinity (as CaCO <sub>3</sub> ) | mg/l  | IS 3025 (Part-23) | 200        | 600           | 216.0           |
| 8.      | Total Hardness (as CaCO <sub>3</sub> )   | mg/l  | IS 3025 (Part-21) | 200        | 600           | 224.0           |
| 9.      | Ammonical Nitrogen (as N)                | mg/l  | IS 3025 (Part-34) | 0.5        | No Relaxation | BDL(MDL-0.1)    |
| 10.     | Chloride (as Cl <sup>-</sup> )           | mg/l  | IS:3025 (Part-32) | 250        | 1000          | 66.48           |
| 11.     | Free Residual Chlorine                   | mg/l  | IS:3025 (Part-26) | 0.2        | 1.0           | BDL(MDL-0.03)   |
| 12.     | Sulphate (as SO <sub>4</sub> )           | mg/l  | IS:3025 (Part-24) | 200        | 400           | 27.89           |
| 13.     | Magnesium (as Mg)                        | mg/l  | APHA 3500         | 30         | 100           | 13.61           |
| 14.     | Sodium (as Na)                           | mg/l  | IS 3025 (Part-45) | -----      | -----         | 24.21           |
| 15.     | Potassium (as K)                         | mg/l  | IS 3025 (Part-45) | -----      | -----         | 5.36            |

### ---END Report---

|                        |                                                                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation           | MDL: Minimum Detection Limit, BDL: Below Detection Limit                                                              |
| Limit is Specified     | IS 10500 :2021                                                                                                        |
| Remark                 | Sample Comply with prescribed specification.                                                                          |

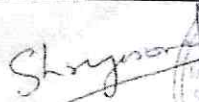
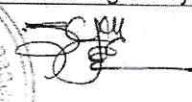
Tested By: Amisha Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

#### Specific Contractual Notes: -

- The laboratory accepts responsibility for content of this report.
- This report shall not be reproduced except in full, without written approval of the MD.
- This report is intended for only guidance and not for legal purpose or for advertisement.
- Any complaint about this report should be communicated in writing within 7 days of its issue
- Total liability of Institute for Environmental Management will be limited to invoiced amount only.
- In case of feedback/ complaints, please send an email at [gm.lemeco@gmail.com](mailto:gm.lemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

| Quality Checked by                                                                                                            | Authorized Signatory                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <br>(Shreya Sonal)<br>Dy. Quality Manager | <br>(Dr. S. C. Jain)<br>Director |

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)





# Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB  
National Accreditation Board for Testing Laboratory (NABL) vide TC-11515  
Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



## Test Report

|                                                                                                           |                                           |   |   |   |                             |   |   |   |   |                                      |                                  |   |              |   |   |                    |   |   |                      |  |
|-----------------------------------------------------------------------------------------------------------|-------------------------------------------|---|---|---|-----------------------------|---|---|---|---|--------------------------------------|----------------------------------|---|--------------|---|---|--------------------|---|---|----------------------|--|
| ULR No.:                                                                                                  | T                                         | C | 1 | 1 | 5                           | 1 | 5 | 2 | 3 | 0                                    | 0                                | 0 | 0            | 0 | 1 | 3                  | 3 | 2 |                      |  |
| Discipline: Chemical                                                                                      | Group: Residues and Contaminants in Water |   |   |   |                             |   |   |   |   |                                      | Sub-Group: Trace Metals elements |   |              |   |   |                    |   |   |                      |  |
| Report Issue Date: 30-09-2023                                                                             |                                           |   |   |   |                             |   |   |   |   | Test Report No.: RN-230320001GW2     |                                  |   |              |   |   |                    |   |   |                      |  |
| Sample ID: 230923RC02002                                                                                  |                                           |   |   |   |                             |   |   |   |   | Sample Description: Ground Water     |                                  |   |              |   |   |                    |   |   |                      |  |
| Challan No./P.O. No.: 3030006457                                                                          |                                           |   |   |   |                             |   |   |   |   | Challan Date/P.O. Date.: 06-12-2022  |                                  |   |              |   |   |                    |   |   |                      |  |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |                                           |   |   |   |                             |   |   |   |   |                                      |                                  |   |              |   |   |                    |   |   |                      |  |
| Type of Industry: Power Plant                                                                             |                                           |   |   |   |                             |   |   |   |   | Customer Representative: Kamlesh Jha |                                  |   |              |   |   |                    |   |   |                      |  |
| Sample Drawn by: IEM Team                                                                                 |                                           |   |   |   |                             |   |   |   |   | Sampling Date: 23-09-2023            |                                  |   |              |   |   |                    |   |   |                      |  |
| Protocol: IS Method & CPCB Guideline                                                                      |                                           |   |   |   |                             |   |   |   |   |                                      |                                  |   |              |   |   |                    |   |   |                      |  |
| Sampling Location: PADAMPUR VILLAGE                                                                       |                                           |   |   |   |                             |   |   |   |   |                                      |                                  |   |              |   |   |                    |   |   |                      |  |
| Field Meteorological Information                                                                          |                                           |   |   |   |                             |   |   |   |   | A. Temp.(°C): 27                     |                                  |   | R.H. (%): 68 |   |   | W.C.: Partly Sunny |   |   | W.D.: North to South |  |
| Sample Receiving Date: 23-09-2023                                                                         |                                           |   |   |   | Testing Started: 23-09-2023 |   |   |   |   | Testing Ended: 27-09-2023            |                                  |   |              |   |   |                    |   |   |                      |  |

### ----Test Result----

| Sl.No. | Tested Parameter | Unit | Method No.       | Limits                | Results           |
|--------|------------------|------|------------------|-----------------------|-------------------|
| 1.     | Copper           | mg/l | APHA 3111 B.2017 | 0.05 – 1.5            | <0.01             |
| 2.     | Chromium         | mg/l | APHA 3111 B.2017 | 0.05 – No Relaxation  | BDL (MDL- 0.005)  |
| 3.     | Lead             | mg/l | APHA 3111 B.2017 | 0.01 – No Relaxation  | <0.01             |
| 4.     | Zinc             | mg/l | APHA 3111 B.2017 | 05 – 15               | 0.37              |
| 5.     | Nickel           | mg/l | APHA 3111 B.2017 | 0.3 – No Relaxation   | BDL (MDL- 0.03)   |
| 6.     | Mercury          | mg/l | APHA 3111 C.2017 | 0.001 – No Relaxation | BDL (MDL – 0.008) |
| 7.     | Total Arsenic    | mg/l | APHA 3111 C.2017 | 0.01 – No Relaxation  | BDL (MDL – 0.002) |
| 8.     | Manganese        | mg/l | APHA 3111 B.2017 | 0.1 – 0.3             | BDL (MDL – 0.08)  |

### ----End Report----

|                        |                                                                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation           | MDL: Minimum Detection Limit, BDL: Below Detection Limit                                                              |
| Limit is Specified     | As Per IS 10500:2021                                                                                                  |
| Remark                 | Sample Comply with prescribed specification.                                                                          |

Tested By: Amisha Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

### Specific Contractual Notes:-

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue.
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [gm.iemeco@gmail.com](mailto:gm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Quality Checked by \_\_\_\_\_ Authorized Signatory

*Shreyas*

(Shreyas Sonal)

Dy. Quality Manager

*S. C. Jain*

(Dr. S. C. Jain)

Director

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)

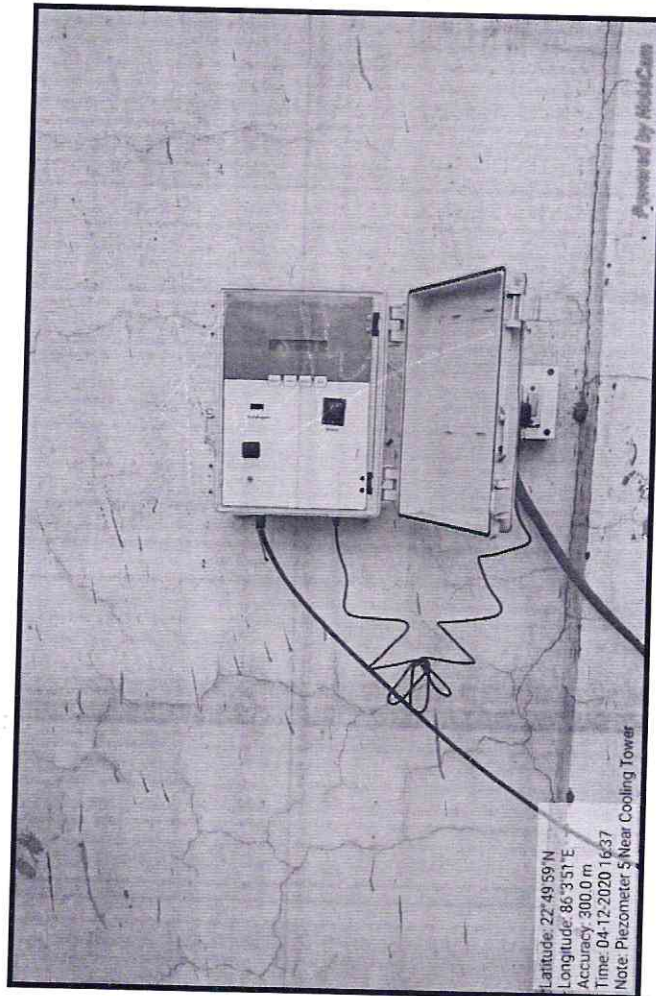
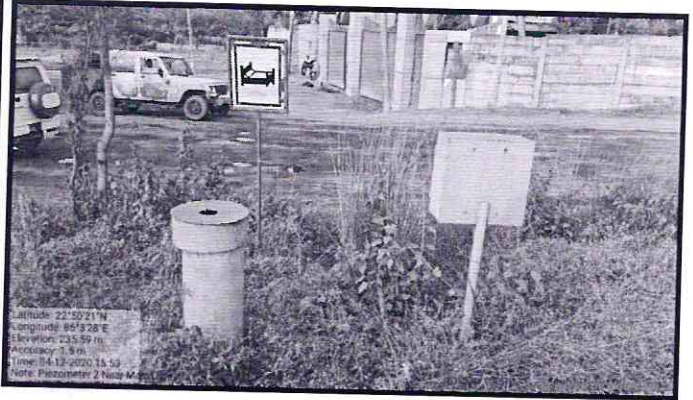


## Piezometer of Adhunik Power

Coordinates: 22°49'50.1" 86°03'37.1" Coordinates: 22°50'21.0" 86°03'27.5" Coordinates: 22°50'09.4" 86°03'48.1"E

| DATE       | TIME     | WATER<br>LEVEL<br>(m) | DATE       | TIME     | WATER<br>LEVEL (m) | DATE       | TIME     | WATER<br>LEVEL (m) |
|------------|----------|-----------------------|------------|----------|--------------------|------------|----------|--------------------|
| 30-09-2023 | 23:00:00 | 3.65                  | 30-09-2023 | 23:00:00 | 1.88               | 30-09-2023 | 23:00:00 | 0.37               |
| 15-09-2023 | 01:00:00 | 3.37                  | 15-09-2023 | 01:00:00 | 1.92               | 15-09-2023 | 01:00:00 | 0.37               |
| 01-09-2023 | 00:00:00 | 3.42                  | 01-09-2023 | 00:00:00 | 2.04               | 01-09-2023 | 00:00:00 | 0.37               |
| 31-08-2023 | 23:00:00 | 3.44                  | 31-08-2023 | 23:00:00 | 1.91               | 31-08-2023 | 23:00:00 | 0.38               |
| 15-08-2023 | 22:00:00 | 3.44                  | 15-08-2023 | 22:00:00 | 1.96               | 15-08-2023 | 22:00:00 | 0.38               |
| 01-08-2023 | 21:00:00 | 3.42                  | 01-08-2023 | 21:00:00 | 2.14               | 01-08-2023 | 21:00:00 | 0.4                |
| 31-07-2023 | 20:00:00 | 3.41                  | 31-07-2023 | 20:00:00 | 2.03               | 31-07-2023 | 20:00:00 | 0.43               |
| 15-07-2023 | 19:00:00 | 3.37                  | 15-07-2023 | 19:00:00 | 2.07               | 15-07-2023 | 19:00:00 | 0.44               |
| 01-07-2023 | 18:00:00 | 3.49                  | 01-07-2023 | 18:00:00 | 2.07               | 01-07-2023 | 18:00:00 | 0.44               |
| 30-06-2023 | 17:00:00 | 3.31                  | 30-06-2023 | 17:00:00 | 2.2                | 30-06-2023 | 17:00:00 | 0.44               |
| 15-06-2023 | 16:00:00 | 3.32                  | 15-06-2023 | 16:00:00 | 4.97               | 15-06-2023 | 16:00:00 | 0.43               |
| 01-06-2023 | 15:00:00 | 3.38                  | 01-06-2023 | 15:00:00 | 2.07               | 01-06-2023 | 15:00:00 | 0.42               |
| 31-05-2023 | 14:00:00 | 3.42                  | 31-05-2023 | 14:00:00 | 2                  | 31-05-2023 | 14:00:00 | 0.4                |
| 15-05-2023 | 13:00:00 | 3.4                   | 15-05-2023 | 13:00:00 | 2                  | 15-05-2023 | 13:00:00 | 0.38               |
| 01-05-2023 | 12:00:00 | 3.42                  | 01-05-2023 | 12:00:00 | 2.01               | 01-05-2023 | 12:00:00 | 0.37               |
| 30-04-2023 | 11:00:00 | 3.34                  | 30-04-2023 | 11:00:00 | 2.02               | 30-04-2023 | 11:00:00 | 0.36               |
| 15-04-2023 | 10:00:00 | 3.42                  | 15-04-2023 | 10:00:00 | 2.24               | 15-04-2023 | 10:00:00 | 0.35               |
| 01-04-2023 | 09:00:00 | 3.42                  | 01-04-2023 | 09:00:00 | 1.82               | 01-04-2023 | 09:00:00 | 0.35               |

## Piezometer At Plant premises







# Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB  
National Accreditation Board for Testing Laboratory (NABL) vide TC-11515  
Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



## Test Report

|                                                                                                           |   |   |   |   |                             |   |   |   |              |                                           |   |   |                    |   |   |   |                      |   |
|-----------------------------------------------------------------------------------------------------------|---|---|---|---|-----------------------------|---|---|---|--------------|-------------------------------------------|---|---|--------------------|---|---|---|----------------------|---|
| ULR No.:                                                                                                  | T | C | 1 | 1 | 5                           | 1 | 5 | 2 | 3            | 0                                         | 0 | 0 | 0                  | 0 | 1 | 3 | 2                    | 3 |
| Discipline: Chemical                                                                                      |   |   |   |   | Group: Water                |   |   |   |              | Sub-Group: Surface Water                  |   |   |                    |   |   |   |                      |   |
| Report Issue Date: 30-09-2023                                                                             |   |   |   |   |                             |   |   |   |              | Test Report No.: 230923WA03001            |   |   |                    |   |   |   |                      |   |
| Sample ID: 230923WA03001                                                                                  |   |   |   |   |                             |   |   |   |              | Sample Description: Surface Water (River) |   |   |                    |   |   |   |                      |   |
| Challan No./P.O. No.: 3030006457                                                                          |   |   |   |   |                             |   |   |   |              | Challan Date/P.O. Date.: 06-12-2022       |   |   |                    |   |   |   |                      |   |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |   |   |   |   |                             |   |   |   |              |                                           |   |   |                    |   |   |   |                      |   |
| Type of Industry: Power Plant                                                                             |   |   |   |   |                             |   |   |   |              | Customer Representative: Kamlesh Jha      |   |   |                    |   |   |   |                      |   |
| Sample Drawn by: IEM Team                                                                                 |   |   |   |   |                             |   |   |   |              | Sampling Date: 23-09-2023                 |   |   |                    |   |   |   |                      |   |
| Protocol: CPCB Guideline & IS Method 3025 Part-01                                                         |   |   |   |   |                             |   |   |   |              |                                           |   |   |                    |   |   |   |                      |   |
| Sampling Location: SHRIRAMPUR VILLAGE                                                                     |   |   |   |   |                             |   |   |   |              |                                           |   |   |                    |   |   |   |                      |   |
| Field Meteorological Information                                                                          |   |   |   |   | A. Temp.(°C): 27            |   |   |   | R.H. (%): 68 |                                           |   |   | W.C.: Partly Sunny |   |   |   | W.D.: North to South |   |
| Sample Receiving Date: 23-09-2023                                                                         |   |   |   |   | Testing Started: 23-09-2023 |   |   |   |              | Testing Ended: 27-09-2023                 |   |   |                    |   |   |   |                      |   |

### ----Test Result----

| Sl. No. | Tested Parameter                         | Unit  | Method No.        | Limit     | Results       |
|---------|------------------------------------------|-------|-------------------|-----------|---------------|
| 1.      | pH value at 25°C                         | ----  | IS 3025 (Part-11) | 6.5 - 8.5 | 7.01          |
| 2.      | Turbidity                                | NTU   | IS:3025 (Part-10) | --        | 12.3          |
| 3.      | Colour                                   | Hazen | IS 3025 (Part-04) | --        | 10.0          |
| 4.      | Odour                                    | ----  | IS:3025 (Part-05) | --        | Agreeable     |
| 5.      | Total Dissolved Solid (TDS)              | mg/l  | IS 3025 (Part-16) | --        | 255.0         |
| 6.      | Calcium (as Ca <sup>2+</sup> )           | mg/l  | IS 3025 (Part-40) | --        | 39.28         |
| 7.      | Total Alkalinity (as CaCO <sub>3</sub> ) | mg/l  | IS 3025 (Part-23) | --        | 110.0         |
| 8.      | Total Hardness (as CaCO <sub>3</sub> )   | mg/l  | IS 3025 (Part-21) | --        | 144.0         |
| 9.      | Ammonical Nitrogen (as N)                | mg/l  | IS 3025 (Part-34) | --        | BDL(MDL-0.1)  |
| 10.     | Chloride                                 | mg/l  | IS 3025 (Part-32) | --        | 14.0          |
| 11.     | Free Residual Chlorine                   | mg/l  | IS:3025 (Part-26) | --        | BDL(MDL-0.03) |
| 12.     | Sulphate (as SO <sub>4</sub> )           | mg/l  | IS 3025 (Part-24) | --        | 53.38         |
| 13.     | Magnesium (as Mg)                        | mg/l  | APHA 3500         | --        | 11.18         |

### ----END Report----

|                        |                                                                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation           | MDL: Minimum Detection Limit, BDL: Below Detection Limit                                                              |
| Limit is Specified     | As per the Environmental (Protection) Rule - 1986.                                                                    |
| Remark                 | N/A                                                                                                                   |

Tested By: Amisha Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

#### Specific Contractual Notes: -

- The laboratory accepts responsibility for content of this report.
- This report shall not be reproduced except in full, without written approval of the MD.
- This report is intended for only guidance and not for legal purpose or for advertisement.
- Any complaint about this report should be communicated in writing within 7 days of its issue.
- Total liability of Institute for Environmental Management will be limited to invoiced amount only.
- In case of feedback/ complaints, please send an email at [gm.iemeco@gmail.com](mailto:gm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

| Quality Checked by  | Authorized Signatory |
|---------------------|----------------------|
|                     |                      |
| (Shreya Sonal)      | (Dr. S. C. Jain)     |
| Dy. Quality Manager | Director             |

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)





# Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB  
National Accreditation Board for Testing Laboratory (NABL) vide TC-11515  
Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



## Test Report

|                                                                                                           |                                           |   |   |   |                             |   |   |   |   |                                      |                                  |              |   |                    |   |                      |   |   |
|-----------------------------------------------------------------------------------------------------------|-------------------------------------------|---|---|---|-----------------------------|---|---|---|---|--------------------------------------|----------------------------------|--------------|---|--------------------|---|----------------------|---|---|
| ULR No.:                                                                                                  | T                                         | C | 1 | 1 | 5                           | 1 | 5 | 2 | 3 | 0                                    | 0                                | 0            | 0 | 0                  | 1 | 3                    | 2 | 5 |
| Discipline: Chemical                                                                                      | Group: Residues and Contaminants in Water |   |   |   |                             |   |   |   |   |                                      | Sub-Group: Trace Metals elements |              |   |                    |   |                      |   |   |
| Report Issue Date: 30-09-2023                                                                             |                                           |   |   |   |                             |   |   |   |   | Test Report No.: RN-230320001SW1     |                                  |              |   |                    |   |                      |   |   |
| Sample ID: 230923RC03001                                                                                  |                                           |   |   |   |                             |   |   |   |   | Sample Description: Surface Water    |                                  |              |   |                    |   |                      |   |   |
| Challan No./P.O. No.: 3030006457                                                                          |                                           |   |   |   |                             |   |   |   |   | Challan Date/P.O. Date.: 06-12-2022  |                                  |              |   |                    |   |                      |   |   |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |                                           |   |   |   |                             |   |   |   |   |                                      |                                  |              |   |                    |   |                      |   |   |
| Type of Industry: Power Plant                                                                             |                                           |   |   |   |                             |   |   |   |   | Customer Representative: Kamlesh Jha |                                  |              |   |                    |   |                      |   |   |
| Sample Drawn by: IEM Team                                                                                 |                                           |   |   |   |                             |   |   |   |   | Sampling Date: 23-09-2023            |                                  |              |   |                    |   |                      |   |   |
| Protocol: IS Method & CPCB Guideline                                                                      |                                           |   |   |   |                             |   |   |   |   |                                      |                                  |              |   |                    |   |                      |   |   |
| Sampling Location: SHRIRAMPUR VILLAGE                                                                     |                                           |   |   |   |                             |   |   |   |   |                                      |                                  |              |   |                    |   |                      |   |   |
| Field Meteorological Information                                                                          |                                           |   |   |   |                             |   |   |   |   | A. Temp.(°C): 27                     |                                  | R.H. (%): 68 |   | W.C.: Partly Sunny |   | W.D.: North to South |   |   |
| Sample Receiving Date: 23-09-2023                                                                         |                                           |   |   |   | Testing Started: 23-09-2023 |   |   |   |   | Testing Ended: 27-09-2023            |                                  |              |   |                    |   |                      |   |   |

### ---Test Result---

| Sl.No. | Tested Parameter | Unit | Method No.       | Limits | Results            |
|--------|------------------|------|------------------|--------|--------------------|
| 1.     | Copper           | mg/l | APHA 3111 B.2017 | ----   | BDL (MDL- 0.02)    |
| 2.     | Chromium         | mg/l | APHA 3111 B.2017 | ----   | BDL (MDL- 0.005)   |
| 3.     | Lead             | mg/l | APHA 3111 B.2017 | ----   | BDL (MDL- 0.07)    |
| 4.     | Zinc             | mg/l | APHA 3111 B.2017 | ----   | BDL (MDL- 0.04)    |
| 5.     | Nickel           | mg/l | APHA 3111 B.2017 | ----   | BDL (MDL- 0.03)    |
| 6.     | Mercury          | mg/l | APHA 3111 C.2017 | ----   | BDL (MDL - 0.0008) |
| 7.     | Total Arsenic    | mg/l | APHA 3111 C.2017 | ----   | BDL (MDL - 0.002)  |
| 8.     | Manganese        | mg/l | APHA 3111 B.2017 | ----   | BDL (MDL - 0.08)   |

### ---End Report---

|                        |                                                                                                                                                |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Env. Condition of Lab. | Laboratory is maintaining Temperature $27 \pm 2^{\circ}\text{C}$ and Relative Humidity $65 \pm 5\%$ in all testing area as per IS 196:1966(C). |
| Abbreviation           | MDL: Minimum Detection Limit, BDL: Below Detection Limit                                                                                       |
| Limit is Specified     | -----                                                                                                                                          |
| Remark                 | -----                                                                                                                                          |

Tested By: Amisha Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

#### Specific Contractual Notes:-

- The laboratory accepts responsibility for content of this report.
- This report shall not be reproduced except in full, without written approval of the MD.
- This report is intended for only guidance and not for legal purpose or for advertisement.
- Any complaint about this report should be communicated in writing within 7 days of its issue
- Total liability of Institute for Environmental Management will be limited to Invoiced amount only.
- In case of feedback/ complaints, please send an email at [gm.iemeco@gmail.com](mailto:gm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Quality Checked by

Authorized Signatory

*Shreyas*

*[Signature]*

(Shreyas Sonal)

(Dr. S. C. Jain)

Dy. Quality Manager

Director

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)





# Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB  
Certified by ISO 9001:2015 (Quality Management System)  
ISO 45001:2018 (Occupational Health & Safety Management System)

## Test Report

|                                                                                                           |                                      |                           |
|-----------------------------------------------------------------------------------------------------------|--------------------------------------|---------------------------|
| Discipline: Biological                                                                                    | Group: Water                         | Sub-Group: Surface Water  |
| Report Issue Date: 30-09-2023                                                                             | Test Report No.: RN-230320001SW1     |                           |
| Sample ID: 230923MB02001                                                                                  | Sample Description: Surface Water    |                           |
| Challan No./P.O. No.: 3030006457                                                                          | Challan Date/P.O. Date.: 06-12-2022  |                           |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |                                      |                           |
| Type of Industry: Power Plant                                                                             | Customer Representative: Kamlesh Jha |                           |
| Sample Drawn by: IEM Team                                                                                 | Sampling Date: 23-09-2023            |                           |
| Protocol: CPCB Guideline & IS Method 3025 Part-01                                                         |                                      |                           |
| Sampling Location: Shrirampur Village                                                                     |                                      |                           |
| Field Meteorological Information                                                                          | A. Temp.(°C): 27                     | R.H. (%): 68              |
|                                                                                                           | W.C.: Partly Sunny                   | W.D.: North to South      |
| Sample Receiving Date: 23-09-2023                                                                         | Testing Started: 23-09-2023          | Testing Ended: 27-09-2023 |

### ----Test Result----

| Sl. No. | Tested Parameter | Unit      | Method No.    | Limit | Results |
|---------|------------------|-----------|---------------|-------|---------|
| 1.      | Total Coliform   | MPN/100ml | IS 1622: 1981 | --    | 1015    |
| 2.      | Fecal Coliform   | MPN/100ml | IS 1622: 1981 | --    | 715     |
| 3.      | E. Coli          | MPN/100ml | IS 1622: 1981 | --    | 705     |

### ----END Report----

|                        |                                                                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation           | MDL: Minimum Detection Limit, BDL: Below Detection Limit                                                              |
| Limit is Specified     | IS 10500 :2022                                                                                                        |
| Remark                 | --                                                                                                                    |

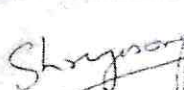
Tested By: Khushi

Sample Drawn By: Rajiv Kumar Singh & Team

#### Specific Contractual Notes:-

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue.
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [qm.iemeco@gmail.com](mailto:qm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

| Quality Checked by                                                                                                            | Authorized Signatory                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <br>(Shreya Sonal)<br>Dy. Quality Manager | <br>(Dr. S. C. Jain)<br>Director |



Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804254, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)







# Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB  
Certified by ISO 9001:2015 (Quality Management System)  
ISO 45001:2018 (Occupational Health & Safety Management System)

## Test Report

|                                                                                                           |                                           |                                                      |
|-----------------------------------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------------------|
| Discipline: Chemical                                                                                      | Group: Water                              | Sub-Group: Surface Water                             |
| Report Issue Date: 30-09-2023                                                                             | Test Report No.: RN-230320001SW2          |                                                      |
| Sample ID: 230923WA03002                                                                                  | Sample Description: Surface Water (River) |                                                      |
| Challan No./P.O. No.: 3030006457                                                                          | Challan Date/P.O. Date.: 06-12-2022       |                                                      |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |                                           |                                                      |
| Type of Industry: Power Plant                                                                             | Customer Representative: Kamlesh Jha      |                                                      |
| Sample Drawn by: IEM Team                                                                                 | Sampling Date: 23-09-2023                 |                                                      |
| Protocol: CPCB Guideline & IS Method 3025 Part-01                                                         |                                           |                                                      |
| Sampling Location: PADAMPUR VILLAGE                                                                       |                                           |                                                      |
| Field Meteorological Information                                                                          | A. Temp.(°C): 27                          | R.H. (%): 68 W.C.: Partly Sunny W.D.: North to South |
| Sample Receiving Date: 23-09-2023                                                                         | Testing Started: 23-09-2023               | Testing Ended: 27-09-2023                            |

### ---Test Result---

| Sl. No. | Tested Parameter              | Unit | Method No.        | Limit | Results      |
|---------|-------------------------------|------|-------------------|-------|--------------|
| 1.      | Nitrate (as NO <sub>3</sub> ) | mg/l | IS:3025 (Part-34) | --    | 4.17         |
| 2.      | Fluoride (as F <sup>-</sup> ) | mg/l | APHA 4500         | --    | 1.32         |
| 3.      | Sulfide                       | mg/l | IS:3025 (Part-29) | --    | BDL(MDL-1.0) |

### ---END Report---

|                        |                                                                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation           | MDL: Minimum Detection Limit, BDL: Below Detection Limit                                                              |
| Limit is Specified     | As per the Environmental (Protection) Rule - 1986.                                                                    |
| Remark                 | N/A                                                                                                                   |

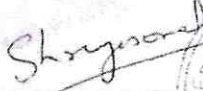
Tested By: Amisha Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

### Specific Contractual Notes :-

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue.
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [qm.iemeco@gmail.com](mailto:qm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

| Quality Checked by                                                                                                            | Authorized Signatory                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <br>(Shreya Sonal)<br>Dy. Quality Manager | <br>(Dr. S. C. Jain)<br>Director |



Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804254, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)







# Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB  
National Accreditation Board for Testing Laboratory (NABL) vide TC-11515  
Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



## Test Report

|                                                                                                           |                                           |   |   |   |   |   |   |   |   |                                      |                                  |   |   |   |                           |   |                    |   |                      |  |
|-----------------------------------------------------------------------------------------------------------|-------------------------------------------|---|---|---|---|---|---|---|---|--------------------------------------|----------------------------------|---|---|---|---------------------------|---|--------------------|---|----------------------|--|
| ULR No.:                                                                                                  | T                                         | C | 1 | 1 | 5 | 1 | 5 | 2 | 3 | 0                                    | 0                                | 0 | 0 | 0 | 1                         | 3 | 2                  | 6 |                      |  |
| Discipline: Chemical                                                                                      | Group: Residues and Contaminants in Water |   |   |   |   |   |   |   |   |                                      | Sub-Group: Trace Metals elements |   |   |   |                           |   |                    |   |                      |  |
| Report Issue Date: 30-09-2023                                                                             |                                           |   |   |   |   |   |   |   |   | Test Report No.: RN-230320001SW2     |                                  |   |   |   |                           |   |                    |   |                      |  |
| Sample ID: 230923RC03002                                                                                  |                                           |   |   |   |   |   |   |   |   | Sample Description: Surface Water    |                                  |   |   |   |                           |   |                    |   |                      |  |
| Challan No./P.O. No.: 3030006457                                                                          |                                           |   |   |   |   |   |   |   |   | Challan Date/P.O. Date.: 06-12-2022  |                                  |   |   |   |                           |   |                    |   |                      |  |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |                                           |   |   |   |   |   |   |   |   |                                      |                                  |   |   |   |                           |   |                    |   |                      |  |
| Type of Industry: Power Plant                                                                             |                                           |   |   |   |   |   |   |   |   | Customer Representative: Kamlesh Jha |                                  |   |   |   |                           |   |                    |   |                      |  |
| Sample Drawn by: IEM Team                                                                                 |                                           |   |   |   |   |   |   |   |   | Sampling Date: 23-09-2023            |                                  |   |   |   |                           |   |                    |   |                      |  |
| Protocol: IS Method & CPCB Guideline                                                                      |                                           |   |   |   |   |   |   |   |   |                                      |                                  |   |   |   |                           |   |                    |   |                      |  |
| Sampling Location: PADAMPUR VILLAGE                                                                       |                                           |   |   |   |   |   |   |   |   |                                      |                                  |   |   |   |                           |   |                    |   |                      |  |
| Field Meteorological Information                                                                          |                                           |   |   |   |   |   |   |   |   | A. Temp.(°C): 27                     |                                  |   |   |   | R.H. (%): 68              |   | W.C.: Partly Sunny |   | W.D.: North to South |  |
| Sample Receiving Date: 23-09-2023                                                                         |                                           |   |   |   |   |   |   |   |   | Testing Started: 23-09-2023          |                                  |   |   |   | Testing Ended: 27-09-2023 |   |                    |   |                      |  |

### ---Test Result---

| Sl.No. | Tested Parameter | Unit | Method No.       | Limits | Results            |
|--------|------------------|------|------------------|--------|--------------------|
| 1.     | Copper           | mg/l | APHA 3111 B.2017 | ----   | BDL (MDL- 0.02)    |
| 2.     | Chromium         | mg/l | APHA 3111 B.2017 | ----   | BDL (MDL- 0.005)   |
| 3.     | Lead             | mg/l | APHA 3111 B.2017 | ----   | BDL (MDL- 0.07)    |
| 4.     | Zinc             | mg/l | APHA 3111 B.2017 | ----   | BDL (MDL- 0.04)    |
| 5.     | Nickel           | mg/l | APHA 3111 B.2017 | ----   | BDL (MDL- 0.03)    |
| 6.     | Mercury          | mg/l | APHA 3111 C.2017 | ----   | BDL (MDL - 0.0008) |
| 7.     | Total Arsenic    | mg/l | APHA 3111 C.2017 | ----   | BDL (MDL - 0.002)  |
| 8.     | Manganese        | mg/l | APHA 3111 B.2017 | ----   | BDL (MDL - 0.08)   |

### ---End Report---

|                        |                                                                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation           | MDL: Minimum Detection Limit, BDL: Below Detection Limit                                                              |
| Limit is Specified     | -----                                                                                                                 |
| Remark                 | -----                                                                                                                 |

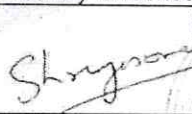
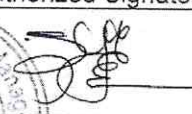
Tested By: Amisha Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

#### Specific Contractual Notes: -

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue.
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [gm.iemeco@gmail.com](mailto:gm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

| Quality Checked by                                                                                                            | Authorized Signatory                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <br>(Shreya Sonal)<br>Dy. Quality Manager | <br>(Dr. S. C. Jain)<br>Director |

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)





# Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB  
Certified by ISO 9001:2015 (Quality Management System)  
ISO 45001:2018 (Occupational Health & Safety Management System)

## Test Report

|                                                                                                           |                                           |                                  |
|-----------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------|
| Discipline: Chemical                                                                                      | Group: Residues and Contaminants in Water | Sub-Group: Trace Metals elements |
| Report Issue Date: 30-09-2023                                                                             | Test Report No.: RN-230320001SW2          |                                  |
| Sample ID: 230923RC03002                                                                                  | Sample Description: Surface Water         |                                  |
| Challan No./P.O. No.: 3030006457                                                                          | Challan Date/P.O. Date.: 06-12-2022       |                                  |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |                                           |                                  |
| Type of Industry: Power Plant                                                                             | Customer Representative: Kamlesh Jha      |                                  |
| Sample Drawn by: IEM Team                                                                                 | Sampling Date: 28-03-2023                 |                                  |
| Protocol: IS Method & CPCB Guideline                                                                      |                                           |                                  |
| Sampling Location: PADAMPUR VILLAGE                                                                       |                                           |                                  |
| Field Meteorological Information                                                                          | A. Temp.(°C): 27                          | R.H. (%): 68                     |
|                                                                                                           | W.C.: Partly Sunny                        | W.D.: North to South             |
| Sample Receiving Date: 23-09-2023                                                                         | Testing Started: 23-09-2023               | Testing Ended: 27-09-2023        |

### ---Test Result---

| Sl.No. | Tested Parameter | Unit | Method No.       | Limits | Results |
|--------|------------------|------|------------------|--------|---------|
| 1.     | Iron             | mg/l | APHA 3111 B.2017 | ---    | 0.08    |

### ---End Report---

|                        |                                                                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation           | MDL: Minimum Detection Limit, BDL: Below Detection Limit                                                              |
| Limit is Specified     | -----                                                                                                                 |
| Remark                 | -----                                                                                                                 |

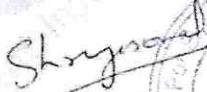
Tested By: Amisha Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

### Specific Contractual Notes: -

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue.
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [qm.iemeco@gmail.com](mailto:qm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

|                                                                                                        |                                                                                                           |
|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Quality Checked by                                                                                     | Authorized Signatory                                                                                      |
| <br>(Shreya Sonal) | <br>(Dr. S. C. Jain) |
| Dy. Quality Manager                                                                                    | Director                                                                                                  |





# Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB  
National Accreditation Board for Testing Laboratory (NABL) vide TC-11515  
Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



## Test Report

|                                                                                                           |   |   |   |   |   |                              |   |   |              |                                      |   |                           |   |   |                |   |   |   |
|-----------------------------------------------------------------------------------------------------------|---|---|---|---|---|------------------------------|---|---|--------------|--------------------------------------|---|---------------------------|---|---|----------------|---|---|---|
| ULR No.:                                                                                                  | T | C | 1 | 1 | 5 | 1                            | 5 | 2 | 3            | 0                                    | 0 | 0                         | 0 | 0 | 1              | 3 | 1 | 8 |
| Discipline: Chemical                                                                                      |   |   |   |   |   | Group: Atmospheric Pollution |   |   |              |                                      |   | Sub-Group: Stack Emission |   |   |                |   |   |   |
| Report Issue Date: 30-09-2023                                                                             |   |   |   |   |   |                              |   |   |              | Test Report No.: RN-230320001S2      |   |                           |   |   |                |   |   |   |
| Sample ID: 230923AP06002                                                                                  |   |   |   |   |   |                              |   |   |              | Sample Description: Stack Emission   |   |                           |   |   |                |   |   |   |
| Challan No./P.O. No.: 3030006457                                                                          |   |   |   |   |   |                              |   |   |              | Challan Date/P.O. Date.: 06-12-2022  |   |                           |   |   |                |   |   |   |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |   |   |   |   |   |                              |   |   |              |                                      |   |                           |   |   |                |   |   |   |
| Type of Industry: Power Plant                                                                             |   |   |   |   |   |                              |   |   |              | Customer Representative: Kamlesh Jha |   |                           |   |   |                |   |   |   |
| Sample Drawn by: IEM Team                                                                                 |   |   |   |   |   |                              |   |   |              | Sampling Date: 22-09-2023            |   |                           |   |   |                |   |   |   |
| Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series                                       |   |   |   |   |   |                              |   |   |              |                                      |   |                           |   |   |                |   |   |   |
| Field Meteorological Information                                                                          |   |   |   |   |   | A. Temp.(°C): 27             |   |   | R.H. (%): 61 |                                      |   | W.C.: Partly Sunny        |   |   | W.D.: NW to SE |   |   |   |
| Sample Receiving Date: 23-09-2023                                                                         |   |   |   |   |   | Testing Started: 23-09-2023  |   |   |              |                                      |   | Testing Ended: 27-09-2023 |   |   |                |   |   |   |

### General Physical Information

|                       |                |                                        |      |
|-----------------------|----------------|----------------------------------------|------|
| Stack Identification  | Single         | Stack Height from Ground Level (m)     | 275  |
| Emission Due to       | Boiler         | Port Hole Height from Ground Level (m) | 90   |
| Plat Form             | Permanent      | Inner Dimension of Stack (m)           | 4.2  |
| Stack Description     | Stack Unit - 2 | Type of Fuel Used                      | Coal |
| Shape of Stack        | Circular       | Quantity of Fuel                       | ---- |
| Construction Material | Metal          | Production Capacity                    | ---- |
| Sampling Port         | Available      | Pollution Control Device (if any)      | ESP  |

### Test Result

| Sl. No. | Parameters                            | Test Methods      | Unit                 | Result       | Limits |
|---------|---------------------------------------|-------------------|----------------------|--------------|--------|
| 1.      | Flue Gas Temperature                  | IS 11255 (Part-3) | °K                   | 404          | ---    |
| 2.      | Flue Gas Velocity                     | IS 11255 (Part-3) | m/s                  | 34.8         | ---    |
| 3.      | Flue Gas Volumetric Flow Rate         | IS 11255 (Part-3) | Nm <sup>3</sup> /hr. | 1122865.1    | ---    |
| 4.      | Particulates Matter (PM)              | IS 11255 (Part-1) | mg/Nm <sup>3</sup>   | 42.1         | 50     |
| 5.      | Sulphur Dioxide (SO <sub>2</sub> )    | IS 11255 (Part-2) | mg/Nm <sup>3</sup>   | 1054.9       | 600    |
| 6.      | Oxides of Nitrogen (NO <sub>2</sub> ) | IS 11255 (Part-7) | mg/Nm <sup>3</sup>   | 412.3        | 450    |
| 7.      | Carbon Monoxide (CO)                  | IS 13270:1992     | % v/v                | BDL(MDL-0.2) | ---    |

### ---End of Report---

|                        |                                                                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation           | MDL: Minimum Detection Limit, BDL: Below Detection Limit                                                              |
| Limit is Specified     | ---                                                                                                                   |
| Remark                 | ---                                                                                                                   |

Tested By: Neema Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

### Specific Contractual Notes:-

- The laboratory accepts responsibility for content of this report.
- This report shall not be reproduced except in full, without written approval of the MD.
- This report is intended for only guidance and not for legal purpose or for advertisement.
- Any complaint about this report should be communicated in writing within 7 days of its issue.
- Total liability of Institute for Environmental Management will be limited to invoiced amount only.
- In case of feedback/ complaints, please send an email at [gm.iemeco@gmail.com](mailto:gm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

| Quality Checked by  | Authorized Signatory |
|---------------------|----------------------|
|                     |                      |
| (Shreya Sonal)      | (Dr. S. C. Jain)     |
| Dy. Quality Manager | Director             |

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)

# Adhunik Power & Natural Resource Limited

## FLY ASH GENERATION & UTILIZATION REPORT (2023-24)

| 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 | RMC             | Export of ash to other countries; |
| (1)     | (2)                            | (3)              | (4)                      | (5)                | (6)                 | (7)              | (8)                                                  | (9)                                           |                 | (10)                              |
| 1       | APRIL                          | 124286           | 42.29                    | 52557.94           | 44268.79            | 84.2%            | 188.72                                               | 37168.00                                      | 6868.00         | 43.86                             |
| 2       | MAY                            | 129117           | 40.71                    | 52569.24           | 44766.41            | 85.2%            | 1180.23                                              | 36464.00                                      | 7123.00         |                                   |
| 3       | JUNE                           | 168814.6         | 40.37                    | 68155.20           | 58078.6             | 85.2%            | 3103.80                                              | 47415.00                                      | 7560.00         |                                   |
| 4       | JULY                           | 260175           | 40.84                    | 106258.4           | 74880.2             | 70.5%            | 8255.17                                              | 59174.71                                      | 7450.30         |                                   |
| 5       | AUG                            | 276754.5         | 39.56                    | 109489.66          | 68455.3             | 62.5%            | 8126.80                                              | 52085.04                                      | 8243.50         |                                   |
| 6       | SEP                            | 282140.7         | 42.54                    | 120023.49          | 76073.7             | 63.4%            | 12362.58                                             | 57284.82                                      | 6426.27         |                                   |
|         | <b>Total</b>                   | <b>1241287.6</b> | <b>41</b>                | <b>509053.92</b>   | <b>366522.95</b>    | <b>75.2%</b>     | <b>33217.30</b>                                      | <b>289591.57</b>                              | <b>43671.07</b> | <b>43.86</b>                      |







# Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB  
 Certified by ISO 9001:2015 (Quality Management System)  
 ISO 45001:2018 (Occupational Health & Safety Management System)

## Test Report

|                                                                                                                 |                                       |                             |
|-----------------------------------------------------------------------------------------------------------------|---------------------------------------|-----------------------------|
| Discipline: Chemical                                                                                            | Group: Pollution & Environment        | Sub-Group: Soil & Sediments |
| Report Issue Date: 30-09-2023                                                                                   | Test Report No.: RN-230320001S02      |                             |
| Sample ID: 230923PE04002                                                                                        | Sample Description: Soil and Sediment |                             |
| Challan No./P.O. No.: 3030006457                                                                                | Challan Date/P.O. Date.: 06-12-2022   |                             |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.</b><br><b>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |                                       |                             |
| Type of Industry: Power Plant                                                                                   | Customer Representative: Kamlesh Jha  |                             |
| Sample Drawn by: IEM Team                                                                                       | Sampling Date: 23-09-2023             |                             |
| Protocol: CPCB Guideline& IS Method 3025 Part-01                                                                |                                       |                             |
| Sampling Location: Bottom Ash                                                                                   |                                       |                             |
| Field Meteorological Information                                                                                | A. Temp.(°C): 27                      | R.H. (%): 68                |
|                                                                                                                 | W.C.: Partly Sunny                    | W.D.: North to South        |
| Sample Receiving date: 23-09-2023                                                                               | Testing Started: 23-09-2023           | Testing Ended: 27-09-2023   |

### ---Test Result---

| Sl. No. | Tested Parameters | Unit | Method No.                      | Limits | Results       |
|---------|-------------------|------|---------------------------------|--------|---------------|
| 1.      | Zinc              | ppm  | USEPA 3050 B, APHA: 3111 B.2017 | --     | 0.07          |
| 2.      | Copper            | ppm  | USEPA 3050 B, APHA: 3111 B.2017 | --     | BDL(MDL-0.02) |
| 3.      | Lead              | ppm  | USEPA 3050 B, APHA: 3111 B.2017 | --     | BDL(MDL-0.07) |
| 4.      | Arsenic           | ppm  | USEPA 3050 B, APHA: 3111 B.2017 | 0.2    | 0.09          |
| 5.      | Cadmium           | ppm  | USEPA 3050 B, APHA: 3111 B.2017 | --     | 0.13          |
| 6.      | Mercury           | ppm  | USEPA 3050 B, APHA: 3111 B.2017 | --     | 0.08          |
| 7.      | Chromium          | ppm  | USEPA 3050 B, APHA: 3111 B.2017 | --     | 0.24          |
| 8.      | Nickel            | ppm  | APHA 3111 B. 2017               | --     | BDL(MDL-0.03) |
| 9.      | Selenium          | ppm  | APHA 3111 B. 2017               | --     | 0.07          |
| 10.     | Unborn Carb       | ppm  | APHA 3111 B. 2017               | --     | 2.5           |
| 11.     | Iron              | ppm  | APHA 3111 B. 2017               | 3.0    | 9.88          |

### ---End of Report---

|                        |                                                                                                                                              |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Env. Condition of Lab. | Laboratory is maintaining Temperature $27 \pm 2^\circ\text{C}$ and Relative Humidity $65 \pm 5\%$ in all testing area as per IS 196:1966(C). |
| Abbreviation           | MDL: Minimum Detection Limit, BDL: Below Detection Limit                                                                                     |
| Limit is Specified     | --                                                                                                                                           |
| Remark                 | --                                                                                                                                           |

Tested By: T. Ahmed

Sample Drawn By: Rajiv Kumar Singh & Team

### Specific Contractual Notes:-

- The laboratory accepts responsibility for content of this report.
- This report shall not be reproduced except in full, without written approval of the MD.
- This report is intended for only guidance and not for legal purpose or for advertisement.
- Any complaint about this report should be communicated in writing within 7 days of its issue.
- Total liability of Institute for Environmental Management will be limited to invoiced amount only.
- In case of feedback/ complaints, please send an email at [qm.iemeco@gmail.com](mailto:qm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

| Quality Checked by  | Authorized Signatory |
|---------------------|----------------------|
|                     |                      |
| (Shreya Sonal)      | (Dr. S. C. Jain)     |
| Dy. Quality Manager | Director             |





# Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB  
National Accreditation Board for Testing Laboratory (NABL) vide TC-11515  
Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



## Test Report

|                                                                                                           |                                |   |                  |   |   |                             |   |   |                                            |   |                        |                           |   |   |   |   |   |
|-----------------------------------------------------------------------------------------------------------|--------------------------------|---|------------------|---|---|-----------------------------|---|---|--------------------------------------------|---|------------------------|---------------------------|---|---|---|---|---|
| ULR No.:                                                                                                  | T                              | C | 1                | 1 | 5 | 1                           | 5 | 2 | 3                                          | 0 | 0                      | 0                         | 0 | 1 | 3 | 2 | 0 |
| Discipline: Chemical                                                                                      | Group: Pollution & Environment |   |                  |   |   |                             |   |   |                                            |   | Sub-Group: Waste Water |                           |   |   |   |   |   |
| Report Issue Date: 30-09-2023                                                                             |                                |   |                  |   |   |                             |   |   | Test Report No.: RN-230320001WW03          |   |                        |                           |   |   |   |   |   |
| Sample ID: 230923PE03001                                                                                  |                                |   |                  |   |   |                             |   |   | Sample Description: Waste Water (Ash Pond) |   |                        |                           |   |   |   |   |   |
| Challan No./P.O. No.: 3030006457                                                                          |                                |   |                  |   |   |                             |   |   | Challan Date/P.O. Date.: 06-12-2022        |   |                        |                           |   |   |   |   |   |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |                                |   |                  |   |   |                             |   |   |                                            |   |                        |                           |   |   |   |   |   |
| Type of Industry: Power Plant                                                                             |                                |   |                  |   |   |                             |   |   | Customer Representative: Kamlesh Jha       |   |                        |                           |   |   |   |   |   |
| Sample Drawn by: IEM Team                                                                                 |                                |   |                  |   |   |                             |   |   | Sampling Date: 23-09-2023                  |   |                        |                           |   |   |   |   |   |
| Protocol: CPCB Guideline & IS Method 3025 Part-01                                                         |                                |   |                  |   |   |                             |   |   |                                            |   |                        |                           |   |   |   |   |   |
| Sampling Location: Ash Pond Outlet                                                                        |                                |   |                  |   |   |                             |   |   |                                            |   |                        |                           |   |   |   |   |   |
| Field Meteorological Information                                                                          |                                |   | A. Temp.(°C): 27 |   |   | R.H. (%): 68                |   |   | W.C.: Partly Sunny                         |   |                        | W.D.: North to South      |   |   |   |   |   |
| Sample Receiving date: 23-09-2023                                                                         |                                |   |                  |   |   | Testing Started: 23-09-2023 |   |   |                                            |   |                        | Testing Ended: 27-09-2023 |   |   |   |   |   |

### ---Test Result---

| Sl. No. | Tested Parameters            | Unit | Method No.        | Limits     | Results            |
|---------|------------------------------|------|-------------------|------------|--------------------|
| 1.      | pH value at 25°C             | ---- | IS 3025 (Part-11) | 5.5 to 9.0 | 7.65               |
| 2.      | Total Suspended Solids (TSS) | mg/l | IS 3025 (Part-17) | 100        | 65.0               |
| 3.      | Chromium                     | mg/l | APHA 3111 B.2017  | 2.0        | BDL (MDL - 0.005)  |
| 4.      | Lead                         | mg/l | APHA 3111 B.2017  | 0.1        | BDL (MDL - 0.07)   |
| 5.      | Mercury                      | mg/l | APHA 3112 C.2017  | 0.01       | BDL (MDL - 0.0008) |
| 6.      | Arsenic                      | mg/l | APHA 3114 C.2017  | 0.2        | BDL (MDL - 0.002)  |

### ---End of Report---

|                        |                                                                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation           | MDL: Minimum Detection Limit, BDL: Below Detection Limit                                                              |
| Limit is Specified     | As per the Environmental (Protection) Rule - 1986                                                                     |
| Remark                 | Sample Comply with prescribed specification.                                                                          |

Tested By: Amisha Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

### Specific Contractual Notes:-

- The laboratory accepts responsibility for content of this report.
- This report shall not be reproduced except in full, without written approval of the MD.
- This report is intended for only guidance and not for legal purpose or for advertisement.
- Any complaint about this report should be communicated in writing within 7 days of its issue.
- Total liability of Institute for Environmental Management will be limited to invoiced amount only.
- In case of feedback/ complaints, please send an email at [gm.iemeco@gmail.com](mailto:gm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

| Quality Checked by  | Authorized Signatory |
|---------------------|----------------------|
|                     |                      |
| (Shreya Sonal)      | (Dr. S. C. Jain)     |
| Dy. Quality Manager | Director             |

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harnu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)





---

# HELF YEARLY CSR REPORT

---

April '2023-September'2023



**ADHUNIK POWER AND NATURAL RESOURCES LIMITED**

Padampur, Kandra, saraikele-Kharsawan

# Adhunik Power & Natural Resource Limited (APNRL)

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

## Social performance report from April'2023 to September'2023

Adhunik Power & Natural Resources Limited (APNRL), Padampur has always been at forefront of CSR. The provisions of the Companies Act, 2013 have made it imperative to institutionalize the CSR activities. The objective of your Company's CSR policy is to lay down the guiding principles for proper functioning of CSR activities to attain sustainable development of the society around the area of operations of the Company. The Company undertook various activities during the year under review in line with its CSR Policy and as prescribed in Schedule VII to the Companies Act, 2013. Apart from long term ongoing projects, the Company has supported and implemented projects under its CSR Policy in the field of Healthcare (including Preventive, Promotive & Curative), Promoting Education, Skill training, Animal Welfare, Environment & Rural development amongst others.

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'23                    | 6  | 12 | 1        | 2 | 21        | Badahariharpur, Srirampur, Dumra, Padampur, Kandra, Gamharia |
| May'23                      | 7  | 22 | 1        | 4 | 34        |                                                              |
| June'23                     | 10 | 11 | 1        | 3 | 25        |                                                              |
| July'23                     | 8  | 19 | 1        | 5 | 33        |                                                              |
| Aug'23                      | 9  | 18 | 2        | 3 | 32        |                                                              |
| Sept.'23                    | 11 | 23 | 1        | 6 | 40        |                                                              |

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'23 | 103 | 86  | 20       | 27 | 236       |                 |
| May'23   | 96  | 73  | 18       | 17 | 204       |                 |
| June'23  | 90  | 58  | 29       | 29 | 206       |                 |
| July'23  | 123 | 117 | 56       | 36 | 332       |                 |



|                 |            |            |           |           |            |                                                                                       |
|-----------------|------------|------------|-----------|-----------|------------|---------------------------------------------------------------------------------------|
| <b>Aug'23</b>   | <b>167</b> | <b>116</b> | <b>47</b> | <b>38</b> | <b>368</b> | Balidih, Badahariharpur, Srirampur, Dhatkidih, Padampur, Pindrabera, Kandra, Gamharia |
| <b>Sept.'23</b> | <b>122</b> | <b>90</b>  | <b>28</b> | <b>31</b> | <b>271</b> |                                                                                       |

- 3. Village health camp:** A health check-up camp was organized at village Badahariharpur on 12.4.2023 and 26.4.2023 under the CSR department of Adhunik Power. A total of 14 villagers including children were examined in the camp as well as medicines were distributed among the patients as per the requirement. Medical Officer Dr. GP Murmu gave health related information to the people during the camp. These camps ensure that people get timely health care and see a doctor even before a minor health problem becomes serious.



- 4. 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
  - 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   | Villages Covered | Gram Panchayat/Block | No. of Drinking Water Supply Services Provided through Water Tanker | Quantity of Supplied Water (in Liter) | Average Population Covered | Purpose                                                      |
|--------|----------|------------------|----------------------|---------------------------------------------------------------------|---------------------------------------|----------------------------|--------------------------------------------------------------|
| 1      | April'23 | 7                | 4                    | 8                                                                   | 40000                                 | 2000                       | Meeting the need of drinking water during for the villagers. |
| 2      | May'23   | 7                | 4                    | 12                                                                  | 60000                                 | 3000                       |                                                              |
| 3      | June'23  | 5                | 2                    | 6                                                                   | 30000                                 | 1500                       |                                                              |
| 4      | July'23  | 2                | 1                    | 4                                                                   | 20000                                 | 1000                       |                                                              |
| 5      | Aug'23   | 2                | 1                    | 4                                                                   | 20000                                 | 1000                       |                                                              |
| 6      | Sept.'23 | 3                | 3                    | 4                                                                   | 20000                                 | 1000                       |                                                              |

- 5. Planning and convergence meeting for TB free panchayat:** A planning and convergence meeting has been conducted on 27.4.2023 at Adhunik Power and Natural Resources Limited premises with various stakeholder's officers of The Union, Ranchi, MOIC & officers of Health dept., CDPO-ICDS, RRI members, Village Leaders towards TB Free Panchayat. The APNRL has taken the initiative to facilitate and support this Government of



India initiate, which has been recently quoted by Hon PM of India on World TB Day at One world summit.

**6. Food distribution program:** Adhunik Power is providing nutritious food basket is being given



every month to the deprived and poor residents of Gamharia block suffering from TB, due to which their diet is improving with support of Community Health Center (CHC), Gamharia, through which patients were given Moong, Jaggery, Chana, Arhar Dal, Soybean, Oatmeal, Oats, Oil, Chura. In this program, Nirmal Das-DPM, Dr. B. K. Chaudhary-DTO and Dr. Pratima Kumari, MOIC, Potel Hansda-STS, CHC, Gamaharia were facilitated and distributed food pack. CEO Mr. Arun Kumar Mishra, Mr. Rajesh Sharma-VP-Finance Head, Mr. Amal Baidya, GM (Operation), Mr. Biraj Kumar -GM-Finance, Mr. Sanjeet Sinha-AGM-CSR provided nutritious food to the patients on behalf of Adhunik Power.



**7. Training cum awareness program on TB:** On 15.06.2023, a training cum awareness program on prevention and treatment of tuberculosis was organized at Srirampur of Dugdha Gram Panchayat. About 50 women participated. During training Ms. Bimola Tirkey-Ex.-LEO/BWO, Gamharia said that the chances of tuberculosis increase when one's body is weak as well as does heavy/hard physical work, takes drugs/alcohol, lives in an unhygienic environment. If we pay a little attention to ourselves, then we can eliminate the possibility of getting TB disease.



Mr. Sanjeet Kumar Sinha said that APNRL is working closely with the TB eradication program to reduce the cases in our catchment area. He appealed that the person who has cough and fever for more than two weeks should get himself examined in the nearest CHC/hospital. If the case is confirmed, then get yourself registered online immediately so that you can get the benefits given by the government like



financial support, medicines etc. If it is not treated in the early stages, it proves fatal. Vote of thanks was given by Ms. Baruna Nayak.

8. **First AID Box:** When someone has a physical accident, then it is most important to give first aid to the victim so that the damage caused by the physical accident can be reduced. A first aid box is a kit that contains medicines, equipment, and self-defense items to use in an emergency. With the help of this kit, first aid can be given to the injured person. Keeping this in mind, first aid box has been provided to Anganwadi center Badhriharpur, Govt. School-Padampur & badahariharpur in the presence of Panchayat Samiti members Ms. Lakshmi Murmu, Mr. Anil Sardar and Mr. Sanjeet Sinha under CSR.



9. **World Anti-Tobacco Day 2023:** World Anti-Tobacco Day is observed every year on 31 May across the world. The day aims to draw global attention to the wide spread and negative health effects of tobacco, which currently leads to deaths worldwide. The theme of the world No Tobacco day 2023 is '**We need food, not tobacco**'.

Various activities like signature campaign, essay competition, speech competition were organized by APNRL. Signature campaign at plant level as well as speech and essay competition at village level was organized.

**Signature campaign** organized in plant premises on 31<sup>st</sup> May 2023 at 8.30AM to raise awareness amongst the workers/employees against bad effect of tobacco in human body. More than 100



Workers/employees/Senior Officers participated in the signature campaign with great enthusiasm, this exercise will help in reducing the use of tobacco.



1. **Eye check-up camp:** Eye problem is an issue in area. CSR, department coordinated with Purnima Netralaya, Jamshedpur and the Eye check-up camp were organized on 24.5.2023



and 5.9.2023 at the OHC, Padampur and APNRL colony . Total 148 persons from the various villages including APNRL employees availed the check-up Our CEO Sri Arun Kumar Mishra has inspected eye check-up camp along with Sri Rajesh Sharma-VP, Sri. S.K.Parvez-DGM, Sri Amal Baidya-GM etc.

**2. 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. Seminar, Godbharai and Baby show:** Malnutrition is a global problem & our area is also suffering from this problem due to unbalanced diet and lack of knowledge Form 13 - 28 Sept'2023 different activities



like a Seminar, Godbharai and Baby show organized in different villages Srirampur, Bikanipur, Padampur villages on the occasion of “**Poshan Maha**” Approximately 200 women including pregnant, lactating women with their child and CSR team-APNRL were participated in the programme.

Anganwadi workers related items on the importance of mixed well before and essential for the unborn child. She and lactating extra/



displayed nutrition floor and told about the food. She said that eating during pregnancy is safety and health of the said that pregnant women mothers should take supplementary food for

their unborn child and infant every day. After that we organized a **Godh bharai** function for pregnant women to encourage the good health and healthy living through the nutrition education as the malnutrition

**7. International Yoga Day 2023:** International Yoga Day is observed every year on June 21 to raise awareness about ancient practice and to celebrate the physical and spiritual prowess that yoga has brought to the world. Yoga is a practice which plays an important role in relaxing the mind and body and boosting people's immune system. The 9th edition of International Day of Yoga was celebrated on 21st June 2023 with the employees and villagers at Sankalp Bhawan, APNRL.



The Yoga Class inaugurated by Mr. M. N. Singh Head O & M with lighting of candles who emphasized the importance of Yoga and physical exercises in daily life. About 70 employees including contract employees participated in Yoga Class. Mr. Rajesh Sharma, Mr. Sanjiv Chaudhary, Mr. NSP Rao, Mr. Amit Singh, Mr. Shrish Waghmare, Mr. Arjun Singh,

Mr. D. K. Ghoshal and others senior officers also participated with great enthusiasm. The sessions started at 7.00 am and carried out under the guidance of the yoga instructor Mr. Ashish Ranjan. Employees got the chance to know how yoga embodies unity of mind and body. This event had a very positive impact on creating awareness about the benefits of yoga

in human life. Ranjit Singh, Anil Sardar & Diwakar Upadhyay gave their important support to make this event a success. The class ended with a vote of thanks by Sanjeet Kumar Sinha-CSR.

## 8. **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 02.08.2023, 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.

## **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          | 8  | 10 | 18 |                            |

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

- 2. Teaching learning materials to AWCs:** Under CSR, APNRL provided teaching learning materials like Carpet, Alpha Word Chat, Flower Chat, Animal Chat, Fruit Chat etc. to Anganwadi Centers near the plant area for preschool children



to improve education during the month of Sept,23.

- 3. 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.

- 4. Drawing Competition 1<sup>st</sup> to 3<sup>rd</sup> June 2023:** Skill development among the local children is the



prime objective of our CSR programme. To implement this objective, we had organized drawing competition in Srirampur, Padampur, Badahariharpur and Dhatkidih on the occasion of World Environment day 2023. More than 25 children from the mentined village participated and were awarded. The children were very happy. A total of 95 children participated.

### **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. **Volley ball and net to UM School, Padampur**: Sports play great role in improving and



maintaining the health and fitness, improving mental skills and concentration level. We provided volleyball & net to the Principal, UM School, Padampur for the students on 29.7.2023. The students were very happy. We also provided volleyball & net to youth club, Pindrabera, Badahariharpur, Bikanipur for the Youths on 5.8.2023. The Youths were very happy.

2. **Inter Village Chess Competition**: We organized an Inter village chess competition on 20.7.2023 at Community Centre, Bikanipur with the youth of peripheral villages - Hariharpur, Shrirampur, Bikanipur



& Padampur on the occasion of World Chess Day 2023. Around 30 youth from different villages participated including girls out of which 3 boys and 3 girls selected for awards. Two youths were identified for consolation prizes. The winners of this match were Mr. Singrai Mardi in the boy category and Sangeeta Sardar in the girl category. Mr.



Paga Sardar gave the welcome speech. Mr. Sanjeet Kumar Sinha- APNRL said that chess is a game which helps us to improve cognitive skills like memory, planning and problem-solving and also helps the youth to become better problem solvers in their everyday life. A lot of enthusiasm was seen in the youth, the game started with great enthusiasm. At the end of the match, the youth said that this type of competition should continue in the future as well. Vote of thanks was given to Mr. Anil Sardar.

## ENVIRONMENT

- 1. Earth day 2023:** Earth Day is an important reminder of the interconnectedness of all living things and the urgent need to take action to protect our planet. Earth Day, observed every April 22, is a worldwide annual event that serves to increase environmental awareness and inspire individuals to take action in protecting our planet. the global organizer of Earth Day and the largest recruiter of environmental movements worldwide, announced today the theme for Earth Day 2023 – “Invest in Our Planet.” Adhunik Power & Natural Resources Limited is always concerned about the nature, environment and earth. Showing its deep concern about the earth APNRL have celebrated Earth Day by plantation of saplings.

The CEO of the company Mr. Arun Kumar Mishra with other senior officials namely Mr. M N Singh, Mr. Rajesh Kumar Sharma, Mr. Ajay Manohar Bangde, Mr. Amal Baidya, Mr. Biraj Kumar, Mr. Sanjeet Sinha and Mr. Kam-lesh Kumar planted saplings to show their nature caring gesture.

- 2. World Environment Day 2023:** Our Plant Celebrated World Environment Day on 5th June, 2023. First a cycle rally was flagged off by CEO sir, Shri Arun Kumar Mishra in which around



300 employees including villagers participated, they were moving from plant premises to Pindrabeda Vs Kandra bus stand and raising loud slogans during rally. Being a busy road, security and supervision personnel took care of the cyclists. Then he also initiated the plantation of tree inside the premises of the company. Officers and village children also participated in plantation of tree. He addressed the audience with an enlightening speech mentioning how small endeavors could make a big difference. He urged everyone to save the environment as well as spread awareness among the people. He also said that "Each one can do his bit by stopping the use of plastic bags; stop wasting food, start using public conveyance to save fuel. For a greener tomorrow, each one needs to do his or her bit". About 300 sapling distributed among the villagers also. The vote of thanks was given by Sr. Manager-Kamlesh Kumar-Environment Department.

**3. Tree plantation programme:** Trees give us fresh air to breathe by taking in carbon dioxide and releasing



oxygen. It provides home and food to many animals, insects and birds. Trees help keep the



climate cool and prevent global warming. It helps prevent soil erosion by attaching itself to the soil with its roots. In view of this,

we organized a tree plantation program on the occasion of Teacher's Day at UM School, Padampur on 5.9.2023. All the students and teachers participated in this program. Also, some officers of APNRL including CEO have participated in program. They guided to children on how to plant a sapling properly. We planted saplings near boundary wall of the school. The CEO of APNRL gave a speech on importance of tree plantation. He said that Tree plantation is important because it provides fresh fruits, vegetables, nuts, and other foods for the survival of life on Earth. The program ended with the vote of thanks given by school principal Ms. Joba Mandal.

#### OTHER

**25-Plastic chair:** During the public meeting in the Kandra police station, people used to find it difficult to sit, keeping this in mind, 25 new chairs were provided by the company to the Kandra police station under CSR. This chair will be of great help to the Kandra police station.



**Repairing of Village Road:** Adhunik Power & Natural Resources Limited, Padampur has been instrumental in improving socio-eco conditions of local communities around which the company is operative.

Due to the rain, there were potholes on the road of Viridhwajpur village, due to which the villagers



were facing a lot of trouble in the movement. We took note and provided soil, slag (plant waste material) and JCB on 6.7.2023 for fill the potholes/trenches and repairing the road. Now the road has been repaired and the villagers are happy with the work.



**Village road repairing from Choto hariharpur to saraikela road:** During our meeting with the



residents of Chhotahariharpur, the villagers appealed to us to provide JCB from company for laying slag on the road so that the road can be repaired. The villagers told that the condition of village road is so bad that an accident may occur any time due to the ditches it has i.e. there is a high risk of accident. They said that our children, elders and others are getting hurt every day, the road has been almost impassable. We are continuously facing that oppression. The villagers said that they would themselves arrange for slag for road repairs.

In view of the above, under CSR, JCB was made available to the villagers through the company (APNRL) on 6.9.2023 and 15.9.2023. The villagers got the road repaired under their supervision. Now the road has been repaired and the villagers are happy with the work.

**Awards/ letter of appreciation:** On 12.7.2023 Adhunik Power received a letter of appreciation from the Government of Jharkhand, which was jointly given by Jharkhand's



Health Minister Mr. Banna Gupta and Labor Minister Mr. Satyanand Bhokta under the Nikshay-Mitra Yojana in the presence of state level officers in Ranchi.

**Financial Assistance to Old age home Ashram "Aashirwad Bhawna" New Baradwari, Jamshedpur:**



We visited Old Age Home, Baradwari on 14.7.2023 which is maintained by Brahma Kumaris and observed that all basic amenities like accommodation, foods, cloths, medicines and other facilities are provided free of cost to the old peoples of above 60 years till their death.







## LIST OF LOCAL EMPLOYEES OF APNRL

| Sl.No. | Employee_Co de | 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       | Khirod 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_Code | 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 |

# Sewage Treatment Plant







भारत सरकार  
भारत सरकार

Government of India

वाणिज्य और उद्योग मंत्रालय

Ministry of Commerce & Industry

पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पेसो)

Petroleum & Explosives Safety Organisation (PESO)

श्री मोहन, तीसरा माला, सीता कंपाउंड, मेन रोड, सुशीला ऑटोमोबाइल के पीछे

रांची- 834001

Sri Mohan, 3rd Floor, Sita Compound, 5 Main Road, Behind Sushila Automobiles,  
Ranchi - 834001

E-mail : dycceranchi@explosives.gov.in

Phone/Fax No : 651 - 2332689, 2332690, 2332688

संख्या /No. : P/HQ/JH/15/1065 (P257355)

दिनांक /Dated : 24/02/2023

सेवा में /To,

M/s. Adhunik Power & Natural Resources Ltd.,  
Village-Padampur, Behind PGIL Substation,,  
Adityapur-Kandra Road,,  
Taluka: Adityapur(Gamharia),  
District: SARAIKELLA KHARSWAN,  
State: Jharkhand  
PIN: 832105

24 FEB 2023

विषय /Sub : Plot No, Plot No. 161,, Behind PGIL.Substation adityapur, Kandra Road, Village- Padampur, Adityapur(Gamharia), Taluka: Adityapur (Gamharia), District: SARAIKELLA KHARSWAN, State: Jharkhand, PIN: 832402 में स्थित विद्यमान पेट्रोलियम वर्ग C अचिह्नित में अनुमति सं P/HQ/JH/15/1065 (P257355) के नवीकरण के संदर्भ में।  
Existing Petroleum Class C Installation at Plot No, Plot No. 161,, Behind PGIL.Substation adityapur, Kandra Road, Village- Padampur, Adityapur(Gamharia), Taluka: Adityapur(Gamharia), District: SARAIKELLA KHARSWAN, State: Jharkhand, PIN: 832402 - Licence No. P/HQ/JH/15/1065 (P257355) - Renewal regarding.

महोदय /Sir  
(s),

कृपया आपके पत्र क्रमांक OIN1307334 दिनांक 23/02/2023 का आकलन करें।

Please refer to your letter No.: OIN1307334, dated 23/02/2023

अनुमति संख्या P/HQ/JH/15/1065 (P257355) दिनांक 23/12/2011 को दिनांक 31/12/2026 तक नवीनीकृत कर इस पत्र के साथ अग्रपत्र की जा रही है।

Licence No. P/HQ/JH/15/1065 (P257355) dated 23/12/2011 is forwarded herewith duly renewed upto 31/12/2026.

कृपया पेट्रोलियम नियम 2002 के अधीन बनाए गए नियम 148 में दी गई प्रक्रिया का कड़ाई से पालन करें। अनुमति के नवीकरण हेतु समस्त दस्तावेजों को अनुमति की वैधता समाप्त होने की तिथि से कम से कम 30 दिन पूर्व कार्यालय को प्रेषित करें।

Please follow the procedure strictly as laid down in rule 148 of the Petroleum Rules, 2002 and submit complete documents for the Renewal of the licence so as to reach this office on or before the date on which Licence expires.

कृपया पावली दें।

Please acknowledge the receipt.

भवदीय /Yours faithfully,

((आशेंद्र सिंह))  
(Ashendra Singh)

उप मुख्य विस्फोटक नियंत्रक

Dy. Chief Controller of Explosives  
रांची/Ranchi

**Note:-This is system generated document does not require signature.**

(अधिक जानकारी के लिए आवेदन की स्थिति, शुल्क तथा अन्य विवरण के लिए हमारी वेबसाइट : <http://peso.gov.in> देखें)

(For more information regarding status, fees and other details please visit our website: <http://peso.gov.in>)

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

नवीनीकरण के प्रमाण के लिए स्थान  
SPACE FOR ENDORSEMENT OF RENEWALS

पेट्रोलियम अधिनियम, १९३४ के उपबन्धों या उनके अधीन बनाए गए नियमों या इस अनुमति की शर्तों का उल्लंघन न होने की दशा में यह अनुमति 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.

| नवीकरण की तारीख<br>Date of<br>Renewal | समाप्ति की तारीख<br>Date of<br>Expiry of license | अनुमति प्राप्तिकारी 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                            | Sd/-<br>K. Thiagarajan<br>Jt. Chief Controller of Explosives<br>For Dy. Chief Controller of Explosives<br>Ranchi |
| 4).                                   | 24/02/2023 31/12/2026                            | Ashendra Singh<br>Dy. Chief Controller of Explosives<br>Ranchi                                                   |

यदि अनुमति परिसर इसमें उपाबद्ध विवरण और शर्तों के अनुरूप नहीं पाए जाते हैं और जिन नियमों और शर्तों के अधीन यह अनुमति मंजूर की गई है उनसे किसी का उल्लंघन होने की दशा में यह अनुमति रद्द की जा सकती है और अनुमतिधारी 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 पश्चात्तवर्ती 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.

**Note:-This is system generated document does not require signature.**





भारत सरकार  
भारत सरकार

Government of India

वाणिज्य और उद्योग मंत्रालय

Ministry of Commerce & Industry

पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पेसो)

Petroleum & Explosives Safety Organisation (PESO)

श्री मोहन, तीसरा माला, सीता कंपाउंड, मेन रोड, सुशीला ऑटोमोबाइल के पीछे

रांची- 834001

Sri Mohan, 3rd Floor, Sita Compound, 5 Main Road, Behind Sushila Automobiles,  
Ranchi - 834001

E-mail : dycceranchi@explosives.gov.in

Phone/Fax No : 651 - 2332689, 2332690, 2332688

संख्या /No. : P/HQ/JH/15/1065 (P257355)

दिनांक /Dated : 24/02/2023

सेवा में /To,

M/s. Adhunik Power & Natural Resources Ltd.,  
Village-Padampur, Behind PGIL Substation,,  
Adityapur-Kandra Road,,  
Taluka: Adityapur(Gamharia),  
District: SARAIKELLA KHARSWAN,  
State: Jharkhand  
PIN: 832105

24 FEB 2023

विषय /Sub : Plot No, Plot No. 161,, Behind PGIL.Substation adityapur, Kandra Road, Village- Padampur, Adityapur(Gamharia), Taluka: Adityapur (Gamharia), District: SARAIKELLA KHARSWAN, State: Jharkhand, PIN: 832402 में स्थित विद्यमान पेट्रोलियम वर्ग C अचिह्नित में अनुमति सं P/HQ/JH/15/1065 (P257355) के नवीकरण के संदर्भ में।  
Existing Petroleum Class C Installation at Plot No, Plot No. 161,, Behind PGIL.Substation adityapur, Kandra Road, Village- Padampur, Adityapur(Gamharia), Taluka: Adityapur(Gamharia), District: SARAIKELLA KHARSWAN, State: Jharkhand, PIN: 832402 - Licence No. P/HQ/JH/15/1065 (P257355) - Renewal regarding.

महोदय /Sir  
(s),

कृपया आपके पत्र क्रमांक OIN1307334 दिनांक 23/02/2023 का आकलन करें।

Please refer to your letter No.: OIN1307334, dated 23/02/2023

अनुमति संख्या P/HQ/JH/15/1065 (P257355) दिनांक 23/12/2011 को दिनांक 31/12/2026 तक नवीनीकृत कर इस पत्र के साथ अग्रपत्र की जा रही है।

Licence No. P/HQ/JH/15/1065 (P257355) dated 23/12/2011 is forwarded herewith duly renewed upto 31/12/2026.

कृपया पेट्रोलियम नियम 2002 के अधीन बनाए गए नियम 148 में दी गई प्रक्रिया का कड़ाई से पालन करें। अनुमति के नवीकरण हेतु समस्त दस्तावेजों को अनुमति की वैधता समाप्त होने की तिथि से कम से कम 30 दिन पूर्व कार्यालय को प्रेषित करें।

Please follow the procedure strictly as laid down in rule 148 of the Petroleum Rules, 2002 and submit complete documents for the Renewal of the licence so as to reach this office on or before the date on which Licence expires.

कृपया पावती दें।

Please acknowledge the receipt.

भवदीय /Yours faithfully,

((आशेंद्र सिंह))

(Ashendra Singh)

उप मुख्य विस्फोटक नियंत्रक

Dy. Chief Controller of Explosives

रांची/Ranchi

**Note:-This is system generated document does not require signature.**

(अधिक जानकारी के लिए आवेदन की स्थिति, शुल्क तथा अन्य विवरण के लिए हमारी वेबसाइट : <http://peso.gov.in> देखें)

(For more information regarding status, fees and other details please visit our website: <http://peso.gov.in>)

# 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/m3  | IS 1448 [ P:16] | -              | -      | 867.8        |
| 6                | KINEMATIC VISCOSITY @ 40° C | cSt    | IS 1448 P:25    | 2.500          | 15.000 | 4.860        |
| 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               | POUR 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





# Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB  
National Accreditation Board for Testing Laboratory (NABL) vide TC-11515  
Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



## Test Report

|                                                                                                               |   |   |                              |                  |                             |   |              |   |                                                       |                           |   |   |   |                |   |   |   |   |  |
|---------------------------------------------------------------------------------------------------------------|---|---|------------------------------|------------------|-----------------------------|---|--------------|---|-------------------------------------------------------|---------------------------|---|---|---|----------------|---|---|---|---|--|
| ULR No.:                                                                                                      | T | C | 1                            | 1                | 5                           | 1 | 5            | 2 | 3                                                     | 0                         | 0 | 0 | 0 | 0              | 1 | 3 | 0 | 8 |  |
| Discipline: Chemical                                                                                          |   |   | Group: Atmospheric Pollution |                  |                             |   |              |   | Sub-Group: Ambient Noise Levels (Excluding Vibration) |                           |   |   |   |                |   |   |   |   |  |
| Report Issue Date: 30-09-2023                                                                                 |   |   |                              |                  |                             |   |              |   | Test Report No.: RN-230320001N1                       |                           |   |   |   |                |   |   |   |   |  |
| Sample ID: 230923AP03001                                                                                      |   |   |                              |                  |                             |   |              |   | Sample Description: Ambient Noise                     |                           |   |   |   |                |   |   |   |   |  |
| Challan No./P.O. No.: 3030006457                                                                              |   |   |                              |                  |                             |   |              |   | Challan Date/P.O. Date.: 06-12-2022                   |                           |   |   |   |                |   |   |   |   |  |
| Issued to:<br><div>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</div> |   |   |                              |                  |                             |   |              |   |                                                       |                           |   |   |   |                |   |   |   |   |  |
| Type of Industry: Power Plant                                                                                 |   |   |                              |                  |                             |   |              |   | Customer Representative: Kamlesh Jha                  |                           |   |   |   |                |   |   |   |   |  |
| Sample Drawn by: IEM Team                                                                                     |   |   |                              |                  |                             |   |              |   | Sampling Date: 22-09-2023 to 23-09-2023               |                           |   |   |   |                |   |   |   |   |  |
| Protocol: CPCB Guideline & IS Method 9989:1981                                                                |   |   |                              |                  |                             |   |              |   |                                                       |                           |   |   |   |                |   |   |   |   |  |
| Sampling Location: Near Sati steel                                                                            |   |   |                              |                  |                             |   |              |   |                                                       |                           |   |   |   |                |   |   |   |   |  |
| Field Meteorological Information                                                                              |   |   |                              | A. Temp.(°C): 27 |                             |   | R.H. (%): 61 |   |                                                       | W.C.: Partly Sunny        |   |   |   | W.D.: NW to SE |   |   |   |   |  |
| Sample Receiving Date: 23-09-2023                                                                             |   |   |                              |                  | Testing Started: 23-09-2023 |   |              |   |                                                       | Testing Ended: 27-09-2023 |   |   |   |                |   |   |   |   |  |

----Test Result----

| Sl. No | Parameter                    | Method       | Unit  | Day Time |      | Night Time |      | Limits       |
|--------|------------------------------|--------------|-------|----------|------|------------|------|--------------|
|        |                              |              |       | 1 m      | 10 m | 1 m        | 10 m |              |
| 1.     | Equivalent Sound Level (Leq) | IS 9989:1981 | dB(A) | 55.2     | 54.6 | 52.5       | 52.1 | D-75<br>N-70 |

----End of Reports----

### Note: -

1. Day time shall mean from 6.00 a.m. to 10.00 p.m.
2. Night time shall mean from 10.00 p.m. to 6.00 a.m.
3. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
4. dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
5. A "decibel" is a unit in which noise is measured. "A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
6. Leq: It is an energy mean of the noise level, over a specified period.

|                        |                                                                                                                                              |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Env. Condition of Lab. | Laboratory is maintaining Temperature $27 \pm 2^\circ\text{C}$ and Relative Humidity $65 \pm 5\%$ in all testing area as per IS 196:1966(C). |
| Abbreviation           | MDL: Minimum Detection Limit                                                                                                                 |
| Limit is Specified     | As per Noise Pollution (Regulation and Control) Rules - 2000                                                                                 |
| Remark                 | Sample Comply with prescribed specification.                                                                                                 |

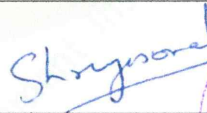
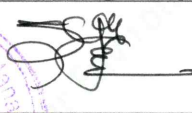
Tested By: Neema Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

### Specific Contractual Notes: -

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue.
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [gm.iemeco@gmail.com](mailto:gm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

| Quality Checked by                                                                                     | Authorized Signatory                                                                                      |
|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <br>(Shreya Sonal) | <br>(Dr. S. C. Jain) |
| Dy. Quality Manager                                                                                    | Director                                                                                                  |

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)





# Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB  
National Accreditation Board for Testing Laboratory (NABL) vide TC-11515  
Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



## Test Report

|                                                                                                               |   |   |                              |   |                             |              |   |   |                                                       |                           |   |   |                |   |   |   |   |   |  |
|---------------------------------------------------------------------------------------------------------------|---|---|------------------------------|---|-----------------------------|--------------|---|---|-------------------------------------------------------|---------------------------|---|---|----------------|---|---|---|---|---|--|
| ULR No.:                                                                                                      | T | C | 1                            | 1 | 5                           | 1            | 5 | 2 | 3                                                     | 0                         | 0 | 0 | 0              | 0 | 1 | 3 | 0 | 9 |  |
| Discipline: Chemical                                                                                          |   |   | Group: Atmospheric Pollution |   |                             |              |   |   | Sub-Group: Ambient Noise Levels (Excluding Vibration) |                           |   |   |                |   |   |   |   |   |  |
| Report Issue Date: 30-09-2023                                                                                 |   |   |                              |   |                             |              |   |   | Test Report No.: RN-230320001N2                       |                           |   |   |                |   |   |   |   |   |  |
| Sample ID: 230923AP03002                                                                                      |   |   |                              |   |                             |              |   |   | Sample Description: Ambient Noise                     |                           |   |   |                |   |   |   |   |   |  |
| Challan No./P.O. No.: 3030006457                                                                              |   |   |                              |   |                             |              |   |   | Challan Date/P.O. Date.: 06-12-2022                   |                           |   |   |                |   |   |   |   |   |  |
| Issued to:<br><div>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</div> |   |   |                              |   |                             |              |   |   |                                                       |                           |   |   |                |   |   |   |   |   |  |
| Type of Industry: Power Plant                                                                                 |   |   |                              |   |                             |              |   |   | Customer Representative: Kamlesh Jha                  |                           |   |   |                |   |   |   |   |   |  |
| Sample Drawn by: IEM Team                                                                                     |   |   |                              |   |                             |              |   |   | Sampling Date: 22-09-2023 to 23-09-2023               |                           |   |   |                |   |   |   |   |   |  |
| Protocol: CPCB Guideline & IS Method 9989:1981                                                                |   |   |                              |   |                             |              |   |   |                                                       |                           |   |   |                |   |   |   |   |   |  |
| Sampling Location: Near Reservoir                                                                             |   |   |                              |   |                             |              |   |   |                                                       |                           |   |   |                |   |   |   |   |   |  |
| Field Meteorological Information                                                                              |   |   | A. Temp.(°C): 27             |   |                             | R.H. (%): 61 |   |   | W.C.: Partly Sunny                                    |                           |   |   | W.D.: NW to SE |   |   |   |   |   |  |
| Sample Receiving Date: 23-09-2023                                                                             |   |   |                              |   | Testing Started: 23-09-2023 |              |   |   |                                                       | Testing Ended: 27-09-2023 |   |   |                |   |   |   |   |   |  |

----Test Result----

| Sl. No | Parameter                    | Method       | Unit  | Day Time |      | Night Time |      | Limits       |
|--------|------------------------------|--------------|-------|----------|------|------------|------|--------------|
|        |                              |              |       | 1 m      | 10 m | 1 m        | 10 m |              |
| 1.     | Equivalent Sound Level (Leq) | IS 9989:1981 | dB(A) | 57.2     | 56.8 | 49.3       | 48.6 | D-75<br>N-70 |

----End of Reports----

### Note: -

1. Day time shall mean from 6.00 a.m. to 10.00 p.m.
2. Night time shall mean from 10.00 p.m. to 6.00 a.m.
3. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
4. dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
5. A "decibel" is a unit in which noise is measured. "A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
6. Leq: It is an energy mean of the noise level, over a specified period.

|                        |                                                                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation           | MDL: Minimum Detection Limit                                                                                          |
| Limit is Specified     | As per Noise Pollution (Regulation and Control) Rules - 2000                                                          |
| Remark                 | Sample Comply with prescribed specification.                                                                          |

Tested By: Neema Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

### Specific Contractual Notes: -

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue.
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [gm.iemeco@gmail.com](mailto:gm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Quality Checked by

Authorized Signatory

*Shreyas*

*(Signature)*

(Shreyas Sonal)

(Dr. S. C. Jain)

Dy. Quality Manager

Director

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)





# Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB  
National Accreditation Board for Testing Laboratory (NABL) vide TC-11515  
Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



## Test Report

|                                                                                                               |   |   |                              |                  |                             |   |              |   |                                                       |                           |   |   |   |                |   |   |   |   |  |
|---------------------------------------------------------------------------------------------------------------|---|---|------------------------------|------------------|-----------------------------|---|--------------|---|-------------------------------------------------------|---------------------------|---|---|---|----------------|---|---|---|---|--|
| ULR No.:                                                                                                      | T | C | 1                            | 1                | 5                           | 1 | 5            | 2 | 3                                                     | 0                         | 0 | 0 | 0 | 0              | 1 | 3 | 1 | 0 |  |
| Discipline: Chemical                                                                                          |   |   | Group: Atmospheric Pollution |                  |                             |   |              |   | Sub-Group: Ambient Noise Levels (Excluding Vibration) |                           |   |   |   |                |   |   |   |   |  |
| Report Issue Date: 30-09-2023                                                                                 |   |   |                              |                  |                             |   |              |   | Test Report No.: RN-230320001N3                       |                           |   |   |   |                |   |   |   |   |  |
| Sample ID: 230923AP03003                                                                                      |   |   |                              |                  |                             |   |              |   | Sample Description: Ambient Noise                     |                           |   |   |   |                |   |   |   |   |  |
| Challan No./P.O. No.: 3030006457                                                                              |   |   |                              |                  |                             |   |              |   | Challan Date/P.O. Date.: 06-12-2022                   |                           |   |   |   |                |   |   |   |   |  |
| Issued to:<br><div>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</div> |   |   |                              |                  |                             |   |              |   |                                                       |                           |   |   |   |                |   |   |   |   |  |
| Type of Industry: Power Plant                                                                                 |   |   |                              |                  |                             |   |              |   | Customer Representative: Kamlesh Jha                  |                           |   |   |   |                |   |   |   |   |  |
| Sample Drawn by: IEM Team                                                                                     |   |   |                              |                  |                             |   |              |   | Sampling Date: 22-09-2023 to 23-09-2023               |                           |   |   |   |                |   |   |   |   |  |
| Protocol: CPCB Guideline & IS Method 9989:1981                                                                |   |   |                              |                  |                             |   |              |   |                                                       |                           |   |   |   |                |   |   |   |   |  |
| Sampling Location: Near OHC                                                                                   |   |   |                              |                  |                             |   |              |   |                                                       |                           |   |   |   |                |   |   |   |   |  |
| Field Meteorological Information                                                                              |   |   |                              | A. Temp.(°C): 27 |                             |   | R.H. (%): 61 |   |                                                       | W.C.: Partly Sunny        |   |   |   | W.D.: NW to SE |   |   |   |   |  |
| Sample Receiving Date: 23-09-2023                                                                             |   |   |                              |                  | Testing Started: 23-09-2023 |   |              |   |                                                       | Testing Ended: 27-09-2023 |   |   |   |                |   |   |   |   |  |

----Test Result----

| Sl. No | Parameter                    | Method       | Unit  | Day Time |      | Night Time |      | Limits       |
|--------|------------------------------|--------------|-------|----------|------|------------|------|--------------|
|        |                              |              |       | 1 m      | 10 m | 1 m        | 10 m |              |
| 1.     | Equivalent Sound Level (Leq) | IS 9989:1981 | dB(A) | 54.7     | 54.1 | 52.9       | 52.2 | D-75<br>N-70 |

----End of Reports----

### Note: -

1. Day time shall mean from 6.00 a.m. to 10.00 p.m.
2. Night time shall mean from 10.00 p.m. to 6.00 a.m.
3. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
4. dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
5. A "decibel" is a unit in which noise is measured. "A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
6. Leq: It is an energy mean of the noise level, over a specified period.

|                        |                                                                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation           | MDL: Minimum Detection Limit                                                                                          |
| Limit is Specified     | As per Noise Pollution (Regulation and Control) Rules - 2000                                                          |
| Remark                 | Sample Comply with prescribed specification.                                                                          |

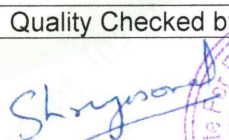
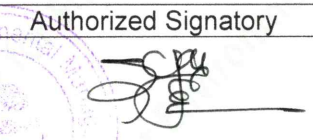
Tested By: Neema Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

### Specific Contractual Notes: -

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue.
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [gm.iemeco@gmail.com](mailto:gm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

|                                                                                      |                                                                                       |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Quality Checked by                                                                   | Authorized Signatory                                                                  |
|  |  |
| (Shreya Sonal)                                                                       | (Dr. S. C. Jain)                                                                      |
| Dy. Quality Manager                                                                  | Director                                                                              |

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)





# Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB  
National Accreditation Board for Testing Laboratory (NABL) vide TC-11515  
Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



## Test Report

|                                                                                                               |   |   |                              |   |                             |              |   |   |                                                       |                           |   |   |                |   |   |   |   |   |  |
|---------------------------------------------------------------------------------------------------------------|---|---|------------------------------|---|-----------------------------|--------------|---|---|-------------------------------------------------------|---------------------------|---|---|----------------|---|---|---|---|---|--|
| ULR No.:                                                                                                      | T | C | 1                            | 1 | 5                           | 1            | 5 | 2 | 3                                                     | 0                         | 0 | 0 | 0              | 0 | 1 | 3 | 1 | 1 |  |
| Discipline: Chemical                                                                                          |   |   | Group: Atmospheric Pollution |   |                             |              |   |   | Sub-Group: Ambient Noise Levels (Excluding Vibration) |                           |   |   |                |   |   |   |   |   |  |
| Report Issue Date: 30-09-2023                                                                                 |   |   |                              |   |                             |              |   |   | Test Report No.: RN-230320001N4                       |                           |   |   |                |   |   |   |   |   |  |
| Sample ID: 230923AP03004                                                                                      |   |   |                              |   |                             |              |   |   | Sample Description: Ambient Noise                     |                           |   |   |                |   |   |   |   |   |  |
| Challan No./P.O. No.: 3030006457                                                                              |   |   |                              |   |                             |              |   |   | Challan Date/P.O. Date.: 06-12-2022                   |                           |   |   |                |   |   |   |   |   |  |
| Issued to:<br><div>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</div> |   |   |                              |   |                             |              |   |   |                                                       |                           |   |   |                |   |   |   |   |   |  |
| Type of Industry: Power Plant                                                                                 |   |   |                              |   |                             |              |   |   | Customer Representative: Kamlesh Jha                  |                           |   |   |                |   |   |   |   |   |  |
| Sample Drawn by: IEM Team                                                                                     |   |   |                              |   |                             |              |   |   | Sampling Date: 22-09-2023 to 23-09-2023               |                           |   |   |                |   |   |   |   |   |  |
| Protocol: CPCB Guideline & IS Method 9989:1981                                                                |   |   |                              |   |                             |              |   |   |                                                       |                           |   |   |                |   |   |   |   |   |  |
| Sampling Location: Near Main Gate                                                                             |   |   |                              |   |                             |              |   |   |                                                       |                           |   |   |                |   |   |   |   |   |  |
| Field Meteorological Information                                                                              |   |   | A. Temp.(°C): 27             |   |                             | R.H. (%): 61 |   |   | W.C.: Partly Sunny                                    |                           |   |   | W.D.: NW to SE |   |   |   |   |   |  |
| Sample Receiving Date: 23-09-2023                                                                             |   |   |                              |   | Testing Started: 23-09-2023 |              |   |   |                                                       | Testing Ended: 27-09-2023 |   |   |                |   |   |   |   |   |  |

----Test Result----

| Sl. No | Parameter                    | Method       | Unit  | Day Time |      | Night Time |      | Limits       |
|--------|------------------------------|--------------|-------|----------|------|------------|------|--------------|
|        |                              |              |       | 1 m      | 10 m | 1 m        | 10 m |              |
| 1.     | Equivalent Sound Level (Leq) | IS 9989:1981 | dB(A) | 60.1     | 59.4 | 59.4       | 58.8 | D-75<br>N-70 |

----End of Reports----

### Note: -

1. Day time shall mean from 6.00 a.m. to 10.00 p.m.
2. Night time shall mean from 10.00 p.m. to 6.00 a.m.
3. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
4. dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
5. A "decibel" is a unit in which noise is measured. "A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
6. Leq: It is an energy mean of the noise level, over a specified period.

|                        |                                                                                                                                              |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Env. Condition of Lab. | Laboratory is maintaining Temperature $27 \pm 2^\circ\text{C}$ and Relative Humidity $65 \pm 5\%$ in all testing area as per IS 196:1966(C). |
| Abbreviation           | MDL: Minimum Detection Limit                                                                                                                 |
| Limit is Specified     | As per Noise Pollution (Regulation and Control) Rules - 2000                                                                                 |
| Remark                 | Sample Comply with prescribed specification.                                                                                                 |

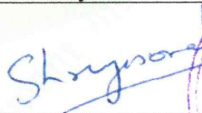
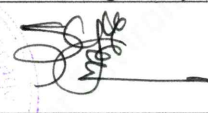
Tested By: Neema Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

### Specific Contractual Notes: -

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue.
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [qm.iemeco@gmail.com](mailto:qm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

| Quality Checked by                                                                                     | Authorized Signatory                                                                                      |
|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <br>(Shreya Sonal) | <br>(Dr. S. C. Jain) |
| Dy. Quality Manager                                                                                    | Director                                                                                                  |

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)





# Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB  
National Accreditation Board for Testing Laboratory (NABL) vide TC-11515  
Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



## Test Report

|                                                                                                               |   |   |   |                  |                              |   |   |              |                                         |                           |                    |                        |   |   |                |   |   |
|---------------------------------------------------------------------------------------------------------------|---|---|---|------------------|------------------------------|---|---|--------------|-----------------------------------------|---------------------------|--------------------|------------------------|---|---|----------------|---|---|
| ULR No.:                                                                                                      | T | C | 1 | 1                | 5                            | 1 | 5 | 2            | 3                                       | 0                         | 0                  | 0                      | 0 | 1 | 3              | 0 | 2 |
| Discipline: Chemical                                                                                          |   |   |   |                  | Group: Atmospheric Pollution |   |   |              |                                         |                           |                    | Sub-Group: Ambient Air |   |   |                |   |   |
| Report Issue Date: 30-09-2023                                                                                 |   |   |   |                  |                              |   |   |              | Test Report No.: RN-230320001A1         |                           |                    |                        |   |   |                |   |   |
| Sample ID: 230923AP01001                                                                                      |   |   |   |                  |                              |   |   |              | Sample Description: Ambient Air         |                           |                    |                        |   |   |                |   |   |
| Challan No./P.O. No.: 3030006457                                                                              |   |   |   |                  |                              |   |   |              | Challan Date/P.O. Date.: 06-12-2022     |                           |                    |                        |   |   |                |   |   |
| Issued to:<br><div>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</div> |   |   |   |                  |                              |   |   |              |                                         |                           |                    |                        |   |   |                |   |   |
| Type of Industry: Power Plant                                                                                 |   |   |   |                  |                              |   |   |              | Customer Representative: Kamlesh Jha    |                           |                    |                        |   |   |                |   |   |
| Sample Drawn by: IEM Team                                                                                     |   |   |   |                  |                              |   |   |              | Sampling Date: 21-09-2023 to 22-09-2023 |                           |                    |                        |   |   |                |   |   |
| Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series                                           |   |   |   |                  |                              |   |   |              |                                         |                           |                    |                        |   |   |                |   |   |
| Sampling Location: Village Padampur (Buffer Zone)                                                             |   |   |   |                  |                              |   |   |              |                                         |                           |                    |                        |   |   |                |   |   |
| Field Meteorological Information                                                                              |   |   |   | A. Temp.(°C): 28 |                              |   |   | R.H. (%): 65 |                                         |                           | W.C.: Partly Sunny |                        |   |   | W.D.: NW to SE |   |   |
| Sample Receiving Date: 23-09-2023                                                                             |   |   |   |                  | Testing Started: 23-09-2023  |   |   |              |                                         | Testing Ended: 27-09-2023 |                    |                        |   |   |                |   |   |

### ----Test Results----

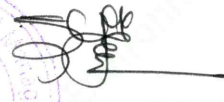
| Sl. No. | Parameters                              | Test Method No.      | Unit              | Norms as per NAAQS - 2009 | Results      |
|---------|-----------------------------------------|----------------------|-------------------|---------------------------|--------------|
| 1.      | Particulate Matter (PM <sub>10</sub> )  | IS 5182 Part 23:2006 | µg/m <sup>3</sup> | 100                       | 94.2         |
| 2.      | Particulate Matter (PM <sub>2.5</sub> ) | IS 5182 Part 24:2019 | µg/m <sup>3</sup> | 60                        | 39.5         |
| 3.      | Sulphur Dioxide (SO <sub>2</sub> )      | IS 5182 Part-02      | µg/m <sup>3</sup> | 80                        | 18.7         |
| 4.      | Nitrogen Dioxide (NO <sub>2</sub> )     | IS 5182 Part-06      | µg/m <sup>3</sup> | 80                        | 31.0         |
| 5.      | Ammonia (NH <sub>3</sub> )              | IS 5182 Part 25      | µg/m <sup>3</sup> | 400                       | 28.8         |
| 6.      | OZONE (O <sub>3</sub> )                 | IS 5182 Part 09      | µg/m <sup>3</sup> | 100                       | 5.4          |
| 7.      | ARSENIC (as As)                         | USEPA I.O. 3.2       | ng/m <sup>3</sup> | ----                      | BDL (MDL-02) |
| 8.      | LEAD (as Pb)                            | IS 5182 Part 22      | µg/m <sup>3</sup> | 1.0                       | 0.17         |
| 9.      | NICKEL (Ni)                             | IS 5182 Part 26      | ng/m <sup>3</sup> | ----                      | BDL (MDL-4)  |

### ----End of Report----

|                       |                                                                                                                       |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env.Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation          | MDL: Minimum Detection Limit, BDL:Below Detection Limit                                                               |
| Limit is Specified    | As per the Environmental (Protection) Rule - 1986                                                                     |
| Remark                | Sample Comply with prescribed specification.                                                                          |

Tested By: Neema Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                        |                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Specific Contractual Notes: -<br>1. The laboratory accepts responsibility for content of this report.<br>2. This report shall not be reproduced except in full, without written approval of the MD.<br>3. This report is intended for only guidance and not for legal purpose or for advertisement.<br>4. Any complaint about this report should be communicated in writing within 7 days of its issue.<br>5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.<br>6. In case of feedback/ complaints, please send an email at <a href="mailto:gm.iemeco@gmail.com">gm.iemeco@gmail.com</a> | Quality Checked by                                                                                     | Authorized Signatory                                                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <br>(Shreya Sonal) | <br>(Dr. S. C. Jain) |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Dy. Quality Manager                                                                                    | Director                                                                                                  |

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)





# Institute for Environmental Management



|               |                                                                                                                |
|---------------|----------------------------------------------------------------------------------------------------------------|
| Accredited by | Jharkhand State Pollution Control Board, JSPCB                                                                 |
| Certified by  | ISO 9001:2015 (Quality Management System )<br>ISO 45001:2018 (Occupational Health & Safety Management System ) |

## Test Report

|                                                                                                                 |  |                              |                                         |                           |                |
|-----------------------------------------------------------------------------------------------------------------|--|------------------------------|-----------------------------------------|---------------------------|----------------|
| Discipline: Chemical                                                                                            |  | Group: Atmospheric Pollution |                                         | Sub-Group: Ambient Air    |                |
| Report Issue Date: 30-09-2023                                                                                   |  |                              | Test Report No.: RN-230320001A1         |                           |                |
| Sample ID: 230923AP01001                                                                                        |  |                              | Sample Description: Ambient Air         |                           |                |
| Challan No./P.O. No.: 3030006457                                                                                |  |                              | Challan Date/P.O. Date.: 06-12-2022     |                           |                |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.</b><br><b>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |  |                              |                                         |                           |                |
| Type of Industry: Power Plant                                                                                   |  |                              | Customer Representative: Kamlesh Jha    |                           |                |
| Sample Drawn by: IEM Team                                                                                       |  |                              | Sampling Date: 21-09-2023 to 22-09-2023 |                           |                |
| Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series                                             |  |                              |                                         |                           |                |
| Sampling Location: Village Padampur (Buffer Zone)                                                               |  |                              |                                         |                           |                |
| Field Meteorological Information                                                                                |  | A. Temp.(°C): 28             | R.H. (%): 65                            | W.C.: Partly Sunny        | W.D.: NW to SE |
| Sample Receiving Date: 23-09-2023                                                                               |  | Testing Started: 23-09-2023  |                                         | Testing Ended: 27-09-2023 |                |

### ----Test Results----

| Sl. No. | Parameters                                       | Test Method No.     | Unit              | Norms as per NAAQS - 2009 | Results         |
|---------|--------------------------------------------------|---------------------|-------------------|---------------------------|-----------------|
| 1.      | Benzo (a) Pyrene (BaP)<br>Particulate phase only | IS 5182 Part 12     | ng/m <sup>3</sup> | ----                      | BDL (MDL-0.18)  |
| 2.      | Carbon Monoxide (CO)                             | IEM/SOP/Air-01:2022 | mg/m <sup>3</sup> | ----                      | BDL(MDL-1.8)    |
| 3.      | BENZENE (C <sub>6</sub> H <sub>6</sub> )         | IS 5182 Part 11     | µg/m <sup>3</sup> | ----                      | BDL (MDL- 0.06) |

### ----End of Report----

|                       |                                                                                                                       |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env.Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation          | MDL: Minimum Detection Limit, BDL:Below Detection Limit                                                               |
| Limit is Specified    | As per the Environmental (Protection) Rule - 1986                                                                     |
| Remark                | Sample Comply with prescribed specification.                                                                          |

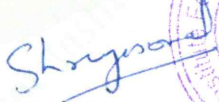
Tested By: Neema Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

#### Specific Contractual Notes: -

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [qm.iemeco@gmail.com](mailto:qm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

| Quality Checked by                                                                                     | Authorized Signatory                                                                                      |
|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <br>(Shreya Sonal) | <br>(Dr. S. C. Jain) |
| Dy. Quality Manager                                                                                    | Director                                                                                                  |





# Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB  
National Accreditation Board for Testing Laboratory (NABL) vide TC-11515  
Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



## Test Report

|                                                                                                           |   |   |   |   |                              |   |   |   |              |                                         |   |   |                    |   |   |   |                |   |
|-----------------------------------------------------------------------------------------------------------|---|---|---|---|------------------------------|---|---|---|--------------|-----------------------------------------|---|---|--------------------|---|---|---|----------------|---|
| ULR No.:                                                                                                  | T | C | 1 | 1 | 5                            | 1 | 5 | 2 | 3            | 0                                       | 0 | 0 | 0                  | 0 | 1 | 3 | 0              | 3 |
| Discipline: Chemical                                                                                      |   |   |   |   | Group: Atmospheric Pollution |   |   |   |              | Sub-Group: Ambient Air                  |   |   |                    |   |   |   |                |   |
| Report Issue Date: 30-09-2023                                                                             |   |   |   |   |                              |   |   |   |              | Test Report No.: RN-230320001A2         |   |   |                    |   |   |   |                |   |
| Sample ID: 230923AP01002                                                                                  |   |   |   |   |                              |   |   |   |              | Sample Description: Ambient Air         |   |   |                    |   |   |   |                |   |
| Challan No./P.O. No.: 3030006457                                                                          |   |   |   |   |                              |   |   |   |              | Challan Date/P.O. Date.: 06-12-2022     |   |   |                    |   |   |   |                |   |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |   |   |   |   |                              |   |   |   |              |                                         |   |   |                    |   |   |   |                |   |
| Type of Industry: Power Plant                                                                             |   |   |   |   |                              |   |   |   |              | Customer Representative: Kamlesh Jha    |   |   |                    |   |   |   |                |   |
| Sample Drawn by: IEM Team                                                                                 |   |   |   |   |                              |   |   |   |              | Sampling Date: 21-09-2023 to 22-09-2023 |   |   |                    |   |   |   |                |   |
| Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series                                       |   |   |   |   |                              |   |   |   |              |                                         |   |   |                    |   |   |   |                |   |
| Sampling Location: Village Srirampur(BZ)                                                                  |   |   |   |   |                              |   |   |   |              |                                         |   |   |                    |   |   |   |                |   |
| Field Meteorological Information                                                                          |   |   |   |   | A. Temp.(°C): 28             |   |   |   | R.H. (%): 65 |                                         |   |   | W.C.: Partly Sunny |   |   |   | W.D.: NW to SE |   |
| Sample Receiving Date: 23-09-2023                                                                         |   |   |   |   | Testing Started: 23-09-2023  |   |   |   |              | Testing Ended: 27-09-2023               |   |   |                    |   |   |   |                |   |

### ----Test Results----

| Sl. No. | Parameters                              | Test Method No.      | Unit              | Norms as per NAAQS - 2009 | Results      |
|---------|-----------------------------------------|----------------------|-------------------|---------------------------|--------------|
| 1.      | Particulate Matter (PM <sub>10</sub> )  | IS 5182 Part 23:2006 | µg/m <sup>3</sup> | 100                       | 80.4         |
| 2.      | Particulate Matter (PM <sub>2.5</sub> ) | IS 5182 Part 24:2019 | µg/m <sup>3</sup> | 60                        | 29.7         |
| 3.      | Sulphur Dioxide (SO <sub>2</sub> )      | IS 5182 Part-02      | µg/m <sup>3</sup> | 80                        | 10.6         |
| 4.      | Nitrogen Dioxide (NO <sub>2</sub> )     | IS 5182 Part-06      | µg/m <sup>3</sup> | 80                        | 22.9         |
| 5.      | Ammonia (NH <sub>3</sub> )              | IS 5182 Part 25      | µg/m <sup>3</sup> | 400                       | 22.5         |
| 6.      | OZONE (O <sub>3</sub> )                 | IS 5182 Part 09      | µg/m <sup>3</sup> | 100                       | 7.2          |
| 7.      | ARSENIC (as As)                         | USEPA I.O. 3.2       | ng/m <sup>3</sup> | ----                      | BDL (MDL-02) |
| 8.      | LEAD (as Pb)                            | IS 5182 Part 22      | µg/m <sup>3</sup> | 1.0                       | 0.2          |
| 9.      | NICKEL (Ni)                             | IS 5182 Part 26      | ng/m <sup>3</sup> | ----                      | BDL (MDL-4)  |

### ----End of Report----

|                       |                                                                                                                       |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env.Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation          | MDL: Minimum Detection Limit, BDL:Below Detection Limit                                                               |
| Limit is Specified    | As per the Environmental (Protection) Rule - 1986                                                                     |
| Remark                | Sample Comply with prescribed specification.                                                                          |

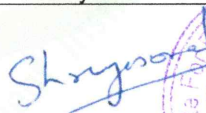
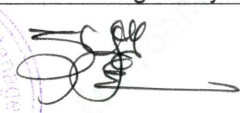
Tested By: Neema Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

#### Specific Contractual Notes: -

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [gm.iemeco@gmail.com](mailto:gm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

| Quality Checked by                                                                                     | Authorized Signatory                                                                                      |
|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <br>(Shreya Sonal) | <br>(Dr. S. C. Jain) |
| Dy. Quality Manager                                                                                    | Director                                                                                                  |

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)





# Institute for Environmental Management



|               |                                                                                                                |
|---------------|----------------------------------------------------------------------------------------------------------------|
| Accredited by | Jharkhand State Pollution Control Board, JSPCB                                                                 |
| Certified by  | ISO 9001:2015 (Quality Management System )<br>ISO 45001:2018 (Occupational Health & Safety Management System ) |

## Test Report

|                                                                                                                 |  |                              |                                         |                           |                |
|-----------------------------------------------------------------------------------------------------------------|--|------------------------------|-----------------------------------------|---------------------------|----------------|
| Discipline: Chemical                                                                                            |  | Group: Atmospheric Pollution |                                         | Sub-Group: Ambient Air    |                |
| Report Issue Date: 30-09-2023                                                                                   |  |                              | Test Report No.: RN-230320001A2         |                           |                |
| Sample ID: 230923AP01002                                                                                        |  |                              | Sample Description: Ambient Air         |                           |                |
| Challan No./P.O. No.: 3030006457                                                                                |  |                              | Challan Date/P.O. Date.: 06-12-2022     |                           |                |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.</b><br><b>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |  |                              |                                         |                           |                |
| Type of Industry: Power Plant                                                                                   |  |                              | Customer Representative: Kamlesh Jha    |                           |                |
| Sample Drawn by: IEM Team                                                                                       |  |                              | Sampling Date: 21-09-2023 to 22-09-2023 |                           |                |
| Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series                                             |  |                              |                                         |                           |                |
| Sampling Location: Village Srirampur(BZ)                                                                        |  |                              |                                         |                           |                |
| Field Meteorological Information                                                                                |  | A. Temp.(°C): 28             | R.H. (%): 65                            | W.C.: Partly Sunny        | W.D.: NW to SE |
| Sample Receiving Date: 23-09-2023                                                                               |  | Testing Started: 23-09-2023  |                                         | Testing Ended: 27-09-2023 |                |

### ---Test Results---

| Sl. No. | Parameters                                       | Test Method No.     | Unit              | Norms as per NAAQS - 2009 | Results         |
|---------|--------------------------------------------------|---------------------|-------------------|---------------------------|-----------------|
| 1.      | Benzo (a) Pyrene (BaP)<br>Particulate phase only | IS 5182 Part 12     | ng/m <sup>3</sup> | ----                      | BDL (MDL-0.18)  |
| 2.      | Carbon Monoxide (CO)                             | IEM/SOP/Air-01:2022 | mg/m <sup>3</sup> | ----                      | BDL(MDL-1.8)    |
| 3.      | BENZENE (C <sub>6</sub> H <sub>6</sub> )         | IS 5182 Part 11     | µg/m <sup>3</sup> | ----                      | BDL (MDL- 0.06) |

### ---End of Report---

|                       |                                                                                                                       |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env.Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation          | MDL: Minimum Detection Limit, BDL:Below Detection Limit                                                               |
| Limit is Specified    | As per the Environmental (Protection) Rule - 1986                                                                     |
| Remark                | Sample Comply with prescribed specification.                                                                          |

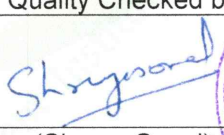
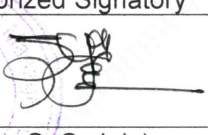
Tested By: Neema Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

#### Specific Contractual Notes:-

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [qm.iemeco@gmail.com](mailto:qm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

|                                                                                      |                                                                                       |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Quality Checked by                                                                   | Authorized Signatory                                                                  |
|  |  |
| (Shreya Sonal)                                                                       | (Dr. S. C. Jain)                                                                      |
| Dy. Quality Manager                                                                  | Director                                                                              |





# Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB  
National Accreditation Board for Testing Laboratory (NABL) vide TC-11515  
Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



## Test Report

|                                                                                                               |   |   |   |   |                              |   |   |              |                                         |                           |                    |                        |   |   |                |   |   |
|---------------------------------------------------------------------------------------------------------------|---|---|---|---|------------------------------|---|---|--------------|-----------------------------------------|---------------------------|--------------------|------------------------|---|---|----------------|---|---|
| ULR No.:                                                                                                      | T | C | 1 | 1 | 5                            | 1 | 5 | 2            | 3                                       | 0                         | 0                  | 0                      | 0 | 1 | 3              | 0 | 4 |
| Discipline: Chemical                                                                                          |   |   |   |   | Group: Atmospheric Pollution |   |   |              |                                         |                           |                    | Sub-Group: Ambient Air |   |   |                |   |   |
| Report Issue Date: 30-09-2023                                                                                 |   |   |   |   |                              |   |   |              | Test Report No.: RN-230320001A3         |                           |                    |                        |   |   |                |   |   |
| Sample ID: 230923AP01003                                                                                      |   |   |   |   |                              |   |   |              | Sample Description: Ambient Air         |                           |                    |                        |   |   |                |   |   |
| Challan No./P.O. No.: 3030006457                                                                              |   |   |   |   |                              |   |   |              | Challan Date/P.O. Date.: 06-12-2022     |                           |                    |                        |   |   |                |   |   |
| Issued to:<br><div>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</div> |   |   |   |   |                              |   |   |              |                                         |                           |                    |                        |   |   |                |   |   |
| Type of Industry: Power Plant                                                                                 |   |   |   |   |                              |   |   |              | Customer Representative: Kamlesh Jha    |                           |                    |                        |   |   |                |   |   |
| Sample Drawn by: IEM Team                                                                                     |   |   |   |   |                              |   |   |              | Sampling Date: 21-09-2023 to 22-09-2023 |                           |                    |                        |   |   |                |   |   |
| Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series                                           |   |   |   |   |                              |   |   |              |                                         |                           |                    |                        |   |   |                |   |   |
| Sampling Location: ADMIN BUILDING (CZ)                                                                        |   |   |   |   |                              |   |   |              |                                         |                           |                    |                        |   |   |                |   |   |
| Field Meteorological Information                                                                              |   |   |   |   | A. Temp.(°C): 28             |   |   | R.H. (%): 65 |                                         |                           | W.C.: Partly Sunny |                        |   |   | W.D.: NW to SE |   |   |
| Sample Receiving Date: 23-09-2023                                                                             |   |   |   |   | Testing Started: 23-09-2023  |   |   |              |                                         | Testing Ended: 27-09-2023 |                    |                        |   |   |                |   |   |

### ----Test Results----

| Sl. No. | Parameters                              | Test Method No.      | Unit              | Norms as per NAAQS - 2009 | Results      |
|---------|-----------------------------------------|----------------------|-------------------|---------------------------|--------------|
| 1.      | Particulate Matter (PM <sub>10</sub> )  | IS 5182 Part 23:2006 | µg/m <sup>3</sup> | 100                       | 86.2         |
| 2.      | Particulate Matter (PM <sub>2.5</sub> ) | IS 5182 Part 24:2019 | µg/m <sup>3</sup> | 60                        | 34.6         |
| 3.      | Sulphur Dioxide (SO <sub>2</sub> )      | IS 5182 Part-02      | µg/m <sup>3</sup> | 80                        | 14.6         |
| 4.      | Nitrogen Dioxide (NO <sub>2</sub> )     | IS 5182 Part-06      | µg/m <sup>3</sup> | 80                        | 28.4         |
| 5.      | Ammonia (NH <sub>3</sub> )              | IS 5182 Part 25      | µg/m <sup>3</sup> | 400                       | 25.3         |
| 6.      | OZONE (O <sub>3</sub> )                 | IS 5182 Part 09      | µg/m <sup>3</sup> | 100                       | 7.7          |
| 7.      | ARSENIC (as As)                         | USEPA I.O. 3.2       | ng/m <sup>3</sup> | ----                      | BDL (MDL-02) |
| 8.      | LEAD (as Pb)                            | IS 5182 Part 22      | µg/m <sup>3</sup> | 1.0                       | 0.21         |
| 9.      | NICKEL (Ni)                             | IS 5182 Part 26      | ng/m <sup>3</sup> | ----                      | BDL (MDL-4)  |

### ----End of Report----

|                       |                                                                                                                       |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env.Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation          | MDL: Minimum Detection Limit, BDL:Below Detection Limit                                                               |
| Limit is Specified    | As per the Environmental (Protection) Rule - 1986                                                                     |
| Remark                | Sample Comply with prescribed specification.                                                                          |

Tested By: Neema Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                     |                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------------|
| <b>Specific Contractual Notes:-</b><br>1. The laboratory accepts responsibility for content of this report.<br>2. This report shall not be reproduced except in full, without written approval of the MD.<br>3. This report is intended for only guidance and not for legal purpose or for advertisement.<br>4. Any complaint about this report should be communicated in writing within 7 days of its issue<br>5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.<br>6. In case of feedback/ complaints, please send an email at <a href="mailto:qm.iemeco@gmail.com">qm.iemeco@gmail.com</a><br><br>On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization. | Quality Checked by  | Authorized Signatory |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                     |                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | (Shreya Sonal)      | (Dr. S. C. Jain)     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Dy. Quality Manager | Director             |

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harma Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)





# Institute for Environmental Management



Accredited by

Jharkhand State Pollution Control Board, JSPCB

Certified by

ISO 9001:2015 (Quality Management System)

ISO 45001:2018 (Occupational Health & Safety Management System)

## Test Report

|                                                                                                                 |  |                              |                                         |                           |                |
|-----------------------------------------------------------------------------------------------------------------|--|------------------------------|-----------------------------------------|---------------------------|----------------|
| Discipline: Chemical                                                                                            |  | Group: Atmospheric Pollution |                                         | Sub-Group: Ambient Air    |                |
| Report Issue Date: 30-09-2023                                                                                   |  |                              | Test Report No.: RN-230320001A3         |                           |                |
| Sample ID: 230923AP01003                                                                                        |  |                              | Sample Description: Ambient Air         |                           |                |
| Challan No./P.O. No.: 3030006457                                                                                |  |                              | Challan Date/P.O. Date.: 06-12-2022     |                           |                |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.</b><br><b>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |  |                              |                                         |                           |                |
| Type of Industry: Power Plant                                                                                   |  |                              | Customer Representative: Kamlesh Jha    |                           |                |
| Sample Drawn by: IEM Team                                                                                       |  |                              | Sampling Date: 21-09-2023 to 22-09-2023 |                           |                |
| Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series                                             |  |                              |                                         |                           |                |
| Sampling Location: ADMIN BUILDING (CZ)                                                                          |  |                              |                                         |                           |                |
| Field Meteorological Information                                                                                |  | A. Temp.(°C): 28             | R.H. (%): 65                            | W.C.: Partly Sunny        | W.D.: NW to SE |
| Sample Receiving Date: 23-09-2023                                                                               |  | Testing Started: 23-09-2023  |                                         | Testing Ended: 27-09-2023 |                |

### ---Test Results---

| Sl. No. | Parameters                                       | Test Method No.     | Unit              | Norms as per NAAQS - 2009 | Results         |
|---------|--------------------------------------------------|---------------------|-------------------|---------------------------|-----------------|
| 1.      | Benzo (a) Pyrene (BaP)<br>Particulate phase only | IS 5182 Part 12     | ng/m <sup>3</sup> | ----                      | BDL (MDL-0.18)  |
| 2.      | Carbon Monoxide (CO)                             | IEM/SOP/Air-01:2022 | mg/m <sup>3</sup> | ----                      | BDL(MDL-1.8)    |
| 3.      | BENZENE (C <sub>6</sub> H <sub>6</sub> )         | IS 5182 Part 11     | µg/m <sup>3</sup> | ----                      | BDL (MDL- 0.06) |

### ---End of Report---

|                              |                                                                                                                       |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <b>Env.Condition of Lab.</b> | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| <b>Abbreviation</b>          | MDL: Minimum Detection Limit, BDL:Below Detection Limit                                                               |
| <b>Limit is Specified</b>    | As per the Environmental (Protection) Rule - 1986                                                                     |
| <b>Remark</b>                | Sample Comply with prescribed specification.                                                                          |

**Tested By:** Neema Kumari

**Sample Drawn By:** Rajiv Kumar Singh & Team

#### Specific Contractual Notes: -

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [gm.iemeco@gmail.com](mailto:gm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Quality Checked by

Authorized Signatory

(Shreya Sonal)

(Dr. S. C. Jain)

Dy. Quality Manager

Director





# Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB  
National Accreditation Board for Testing Laboratory (NABL) vide TC-11515  
Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



## Test Report

|                                                                                                                 |   |   |   |   |                             |                              |   |              |                                         |                           |                    |                        |   |   |                |   |   |
|-----------------------------------------------------------------------------------------------------------------|---|---|---|---|-----------------------------|------------------------------|---|--------------|-----------------------------------------|---------------------------|--------------------|------------------------|---|---|----------------|---|---|
| ULR No.:                                                                                                        | T | C | 1 | 1 | 5                           | 1                            | 5 | 2            | 3                                       | 0                         | 0                  | 0                      | 0 | 1 | 3              | 0 | 5 |
| Discipline: Chemical                                                                                            |   |   |   |   |                             | Group: Atmospheric Pollution |   |              |                                         |                           |                    | Sub-Group: Ambient Air |   |   |                |   |   |
| Report Issue Date: 30-09-2023                                                                                   |   |   |   |   |                             |                              |   |              | Test Report No.: RN-230320001A4         |                           |                    |                        |   |   |                |   |   |
| Sample ID: 230923AP02001                                                                                        |   |   |   |   |                             |                              |   |              | Sample Description: Ambient Air         |                           |                    |                        |   |   |                |   |   |
| Challan No./P.O. No.: 3030006457                                                                                |   |   |   |   |                             |                              |   |              | Challan Date/P.O. Date.: 06-12-2022     |                           |                    |                        |   |   |                |   |   |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.</b><br><b>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |   |   |   |   |                             |                              |   |              |                                         |                           |                    |                        |   |   |                |   |   |
| Type of Industry: Power Plant                                                                                   |   |   |   |   |                             |                              |   |              | Customer Representative: Kamlesh Jha    |                           |                    |                        |   |   |                |   |   |
| Sample Drawn by: IEM Team                                                                                       |   |   |   |   |                             |                              |   |              | Sampling Date: 22-09-2023 to 23-09-2023 |                           |                    |                        |   |   |                |   |   |
| Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series                                             |   |   |   |   |                             |                              |   |              |                                         |                           |                    |                        |   |   |                |   |   |
| Sampling Location: VILLAGE PINDRABARA GATE (BZ)                                                                 |   |   |   |   |                             |                              |   |              |                                         |                           |                    |                        |   |   |                |   |   |
| Field Meteorological Information                                                                                |   |   |   |   | A. Temp.(°C): 27            |                              |   | R.H. (%): 61 |                                         |                           | W.C.: Partly Sunny |                        |   |   | W.D.: NW to SE |   |   |
| Sample Receiving Date: 23-09-2023                                                                               |   |   |   |   | Testing Started: 23-09-2023 |                              |   |              |                                         | Testing Ended: 27-09-2023 |                    |                        |   |   |                |   |   |

### ---Test Results---

| Sl. No. | Parameters                              | Test Method No.      | Unit              | Norms as per NAAQS - 2009 | Results      |
|---------|-----------------------------------------|----------------------|-------------------|---------------------------|--------------|
| 1.      | Particulate Matter (PM <sub>10</sub> )  | IS 5182 Part 23:2006 | µg/m <sup>3</sup> | 100                       | 92.5         |
| 2.      | Particulate Matter (PM <sub>2.5</sub> ) | IS 5182 Part 24:2019 | µg/m <sup>3</sup> | 60                        | 38.4         |
| 3.      | Sulphur Dioxide (SO <sub>2</sub> )      | IS 5182 Part-02      | µg/m <sup>3</sup> | 80                        | 16.2         |
| 4.      | Nitrogen Dioxide (NO <sub>2</sub> )     | IS 5182 Part-06      | µg/m <sup>3</sup> | 80                        | 29.7         |
| 5.      | Ammonia (NH <sub>3</sub> )              | IS 5182 Part 25      | µg/m <sup>3</sup> | 400                       | 26.5         |
| 6.      | OZONE (O <sub>3</sub> )                 | IS 5182 Part 09      | µg/m <sup>3</sup> | 100                       | 6.3          |
| 7.      | ARSENIC (as As)                         | USEPA I.O. 3.2       | ng/m <sup>3</sup> | ----                      | BDL (MDL-02) |
| 8.      | LEAD (as Pb)                            | IS 5182 Part 22      | µg/m <sup>3</sup> | 1.0                       | 0.23         |
| 9.      | NICKEL (Ni)                             | IS 5182 Part 26      | ng/m <sup>3</sup> | ----                      | BDL (MDL-4)  |

### ---End of Report---

|                       |                                                                                                                       |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env.Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation          | MDL: Minimum Detection Limit, BDL:Below Detection Limit                                                               |
| Limit is Specified    | As per the Environmental (Protection) Rule - 1986                                                                     |
| Remark                | Sample Comply with prescribed specification.                                                                          |

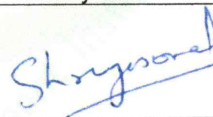
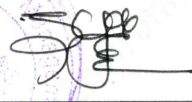
Tested By: Neema Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

#### Specific Contractual Notes: -

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [gm.iemeco@gmail.com](mailto:gm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

| Quality Checked by                                                                                     | Authorized Signatory                                                                                      |
|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <br>(Shreya Sonal) | <br>(Dr. S. C. Jain) |
| Dy. Quality Manager                                                                                    | Director                                                                                                  |

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)





# Institute for Environmental Management



|               |                                                                                                                |
|---------------|----------------------------------------------------------------------------------------------------------------|
| Accredited by | Jharkhand State Pollution Control Board, JSPCB                                                                 |
| Certified by  | ISO 9001:2015 (Quality Management System )<br>ISO 45001:2018 (Occupational Health & Safety Management System ) |

## Test Report

|                                                                                                               |  |                              |                                         |                           |                |
|---------------------------------------------------------------------------------------------------------------|--|------------------------------|-----------------------------------------|---------------------------|----------------|
| Discipline: Chemical                                                                                          |  | Group: Atmospheric Pollution |                                         | Sub-Group: Ambient Air    |                |
| Report Issue Date: 30-09-2023                                                                                 |  |                              | Test Report No.: RN-230320001A4         |                           |                |
| Sample ID: 230923AP02001                                                                                      |  |                              | Sample Description: Ambient Air         |                           |                |
| Challan No./P.O. No.: 3030006457                                                                              |  |                              | Challan Date/P.O. Date.: 06-12-2022     |                           |                |
| Issued to:<br><div>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</div> |  |                              |                                         |                           |                |
| Type of Industry: Power Plant                                                                                 |  |                              | Customer Representative: Kamlesh Jha    |                           |                |
| Sample Drawn by: IEM Team                                                                                     |  |                              | Sampling Date: 22-09-2023 to 23-09-2023 |                           |                |
| Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series                                           |  |                              |                                         |                           |                |
| Sampling Location: VILLAGE PINDRABARA GATE (BZ)                                                               |  |                              |                                         |                           |                |
| Field Meteorological Information                                                                              |  | A. Temp.(°C): 27             | R.H. (%): 61                            | W.C.: Partly Sunny        | W.D.: NW to SE |
| Sample Receiving Date: 23-09-2023                                                                             |  | Testing Started: 23-09-2023  |                                         | Testing Ended: 27-09-2023 |                |

### ----Test Results----

| Sl. No. | Parameters                                    | Test Method No.     | Unit              | Norms as per NAAQS - 2009 | Results         |
|---------|-----------------------------------------------|---------------------|-------------------|---------------------------|-----------------|
| 1.      | Benzo (a) Pyrene (BaP) Particulate phase only | IS 5182 Part 12     | ng/m <sup>3</sup> | ----                      | BDL (MDL-0.18)  |
| 2.      | Carbon Monoxide (CO)                          | IEM/SOP/Air-01:2022 | mg/m <sup>3</sup> | ----                      | BDL(MDL-1.8)    |
| 3.      | BENZENE (C <sub>6</sub> H <sub>6</sub> )      | IS 5182 Part 11     | µg/m <sup>3</sup> | ----                      | BDL (MDL- 0.06) |

### ----End of Report----

|                       |                                                                                                                       |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env.Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation          | MDL: Minimum Detection Limit, BDL:Below Detection Limit                                                               |
| Limit is Specified    | As per the Environmental (Protection) Rule - 1986                                                                     |
| Remark                | Sample Comply with prescribed specification.                                                                          |

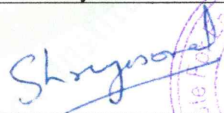
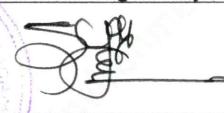
Tested By: Neema Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

#### Specific Contractual Notes: -

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [gm.iemeco@gmail.com](mailto:gm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

|                                                                                                        |                                                                                                           |
|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Quality Checked by                                                                                     | Authorized Signatory                                                                                      |
| <br>(Shreya Sonal) | <br>(Dr. S. C. Jain) |
| Dy. Quality Manager                                                                                    | Director                                                                                                  |





# Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB  
National Accreditation Board for Testing Laboratory (NABL) vide TC-11515  
Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



## Test Report

|                                                                                                               |   |   |   |                  |                              |   |   |              |                                         |                           |                    |                        |   |   |                |   |   |
|---------------------------------------------------------------------------------------------------------------|---|---|---|------------------|------------------------------|---|---|--------------|-----------------------------------------|---------------------------|--------------------|------------------------|---|---|----------------|---|---|
| ULR No.:                                                                                                      | T | C | 1 | 1                | 5                            | 1 | 5 | 2            | 3                                       | 0                         | 0                  | 0                      | 0 | 1 | 3              | 0 | 6 |
| Discipline: Chemical                                                                                          |   |   |   |                  | Group: Atmospheric Pollution |   |   |              |                                         |                           |                    | Sub-Group: Ambient Air |   |   |                |   |   |
| Report Issue Date: 30-09-2023                                                                                 |   |   |   |                  |                              |   |   |              | Test Report No.: RN-230320001A5         |                           |                    |                        |   |   |                |   |   |
| Sample ID: 230923AP02002                                                                                      |   |   |   |                  |                              |   |   |              | Sample Description: Ambient Air         |                           |                    |                        |   |   |                |   |   |
| Challan No./P.O. No.: 3030006457                                                                              |   |   |   |                  |                              |   |   |              | Challan Date/P.O. Date.: 06-12-2022     |                           |                    |                        |   |   |                |   |   |
| Issued to:<br><div>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</div> |   |   |   |                  |                              |   |   |              |                                         |                           |                    |                        |   |   |                |   |   |
| Type of Industry: Power Plant                                                                                 |   |   |   |                  |                              |   |   |              | Customer Representative: Kamlesh Jha    |                           |                    |                        |   |   |                |   |   |
| Sample Drawn by: IEM Team                                                                                     |   |   |   |                  |                              |   |   |              | Sampling Date: 22-09-2023 to 23-09-2023 |                           |                    |                        |   |   |                |   |   |
| Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series                                           |   |   |   |                  |                              |   |   |              |                                         |                           |                    |                        |   |   |                |   |   |
| Sampling Location: CHP Area (Core Zone)                                                                       |   |   |   |                  |                              |   |   |              |                                         |                           |                    |                        |   |   |                |   |   |
| Field Meteorological Information                                                                              |   |   |   | A. Temp.(°C): 27 |                              |   |   | R.H. (%): 61 |                                         |                           | W.C.: Partly Sunny |                        |   |   | W.D.: NW to SE |   |   |
| Sample Receiving Date: 23-09-2023                                                                             |   |   |   |                  | Testing Started: 23-09-2023  |   |   |              |                                         | Testing Ended: 27-09-2023 |                    |                        |   |   |                |   |   |

### ---Test Results---

| Sl. No. | Parameters                              | Test Method No.      | Unit              | Norms as per NAAQS - 2009 | Results      |
|---------|-----------------------------------------|----------------------|-------------------|---------------------------|--------------|
| 1.      | Particulate Matter (PM <sub>10</sub> )  | IS 5182 Part 23:2006 | µg/m <sup>3</sup> | 100                       | 78.1         |
| 2.      | Particulate Matter (PM <sub>2.5</sub> ) | IS 5182 Part 24:2019 | µg/m <sup>3</sup> | 60                        | 28.0         |
| 3.      | Sulphur Dioxide (SO <sub>2</sub> )      | IS 5182 Part-02      | µg/m <sup>3</sup> | 80                        | 8.9          |
| 4.      | Nitrogen Dioxide (NO <sub>2</sub> )     | IS 5182 Part-06      | µg/m <sup>3</sup> | 80                        | 24.2         |
| 5.      | Ammonia (NH <sub>3</sub> )              | IS 5182 Part 25      | µg/m <sup>3</sup> | 400                       | 22.2         |
| 6.      | OZONE (O <sub>3</sub> )                 | IS 5182 Part 09      | µg/m <sup>3</sup> | 100                       | 6.6          |
| 7.      | ARSENIC (as As)                         | USEPA I.O. 3.2       | ng/m <sup>3</sup> | ----                      | BDL (MDL-02) |
| 8.      | LEAD (as Pb)                            | IS 5182 Part 22      | µg/m <sup>3</sup> | 1.0                       | 0.26         |
| 9.      | NICKEL (Ni)                             | IS 5182 Part 26      | ng/m <sup>3</sup> | ----                      | BDL (MDL-4)  |

### ---End of Report---

|                       |                                                                                                                       |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env.Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation          | MDL: Minimum Detection Limit, BDL:Below Detection Limit                                                               |
| Limit is Specified    | As per the Environmental (Protection) Rule - 1986                                                                     |
| Remark                | Sample Comply with prescribed specification.                                                                          |

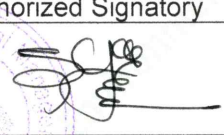
Tested By: Neema Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

#### Specific Contractual Notes: -

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [gm.iemeco@gmail.com](mailto:gm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

|                                                                                      |                                                                                       |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Quality Checked by                                                                   | Authorized Signatory                                                                  |
|  |  |
| (Shreya Sonal)                                                                       | (Dr. S. C. Jain)                                                                      |
| Dy. Quality Manager                                                                  | Director                                                                              |

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)





# Institute for Environmental Management



|               |                                                                                                                |
|---------------|----------------------------------------------------------------------------------------------------------------|
| Accredited by | Jharkhand State Pollution Control Board, JSPCB                                                                 |
| Certified by  | ISO 9001:2015 (Quality Management System )<br>ISO 45001:2018 (Occupational Health & Safety Management System ) |

## Test Report

|                                                                                                                 |  |                              |                                         |                           |                |
|-----------------------------------------------------------------------------------------------------------------|--|------------------------------|-----------------------------------------|---------------------------|----------------|
| Discipline: Chemical                                                                                            |  | Group: Atmospheric Pollution |                                         | Sub-Group: Ambient Air    |                |
| Report Issue Date: 30-09-2023                                                                                   |  |                              | Test Report No.: RN-230320001A5         |                           |                |
| Sample ID: 230923AP02002                                                                                        |  |                              | Sample Description: Ambient Air         |                           |                |
| Challan No./P.O. No.: 3030006457                                                                                |  |                              | Challan Date/P.O. Date.: 06-12-2022     |                           |                |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.</b><br><b>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |  |                              |                                         |                           |                |
| Type of Industry: Power Plant                                                                                   |  |                              | Customer Representative: Kamlesh Jha    |                           |                |
| Sample Drawn by: IEM Team                                                                                       |  |                              | Sampling Date: 22-09-2023 to 23-09-2023 |                           |                |
| Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series                                             |  |                              |                                         |                           |                |
| Sampling Location: CHP Area (Core Zone)                                                                         |  |                              |                                         |                           |                |
| Field Meteorological Information                                                                                |  | A. Temp.(°C): 27             | R.H. (%): 61                            | W.C.: Partly Sunny        | W.D.: NW to SE |
| Sample Receiving Date: 23-09-2023                                                                               |  | Testing Started: 23-09-2023  |                                         | Testing Ended: 27-09-2023 |                |

### ----Test Results----

| Sl. No. | Parameters                                       | Test Method No.     | Unit              | Norms as per NAAQS - 2009 | Results         |
|---------|--------------------------------------------------|---------------------|-------------------|---------------------------|-----------------|
| 1.      | Benzo (a) Pyrene (BaP)<br>Particulate phase only | IS 5182 Part 12     | ng/m <sup>3</sup> | ----                      | BDL (MDL-0.18)  |
| 2.      | Carbon Monoxide (CO)                             | IEM/SOP/Air-01:2022 | mg/m <sup>3</sup> | ----                      | BDL(MDL-1.8)    |
| 3.      | BENZENE (C <sub>6</sub> H <sub>6</sub> )         | IS 5182 Part 11     | µg/m <sup>3</sup> | ----                      | BDL (MDL- 0.06) |

### ----End of Report----

|                       |                                                                                                                       |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env.Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation          | MDL: Minimum Detection Limit, BDL:Below Detection Limit                                                               |
| Limit is Specified    | As per the Environmental (Protection) Rule - 1986                                                                     |
| Remark                | Sample Comply with prescribed specification.                                                                          |

Tested By: Neema Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

#### Specific Contractual Notes: -

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [gm.iemeco@gmail.com](mailto:gm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Quality Checked by

Authorized Signatory

(Shreya Sonal)

(Dr. S. C. Jain)

Dy. Quality Manager

Director





# Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB  
National Accreditation Board for Testing Laboratory (NABL) vide TC-11515  
Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



## Test Report

|                                                                                                               |   |   |   |                  |                              |   |              |   |                                         |                           |   |                        |   |                |   |   |   |
|---------------------------------------------------------------------------------------------------------------|---|---|---|------------------|------------------------------|---|--------------|---|-----------------------------------------|---------------------------|---|------------------------|---|----------------|---|---|---|
| ULR No.:                                                                                                      | T | C | 1 | 1                | 5                            | 1 | 5            | 2 | 3                                       | 0                         | 0 | 0                      | 0 | 1              | 3 | 0 | 7 |
| Discipline: Chemical                                                                                          |   |   |   |                  | Group: Atmospheric Pollution |   |              |   |                                         |                           |   | Sub-Group: Ambient Air |   |                |   |   |   |
| Report Issue Date: 30-09-2023                                                                                 |   |   |   |                  |                              |   |              |   | Test Report No.: RN-230320001A6         |                           |   |                        |   |                |   |   |   |
| Sample ID: 230923AP02003                                                                                      |   |   |   |                  |                              |   |              |   | Sample Description: Ambient Air         |                           |   |                        |   |                |   |   |   |
| Challan No./P.O. No.: 3030006457                                                                              |   |   |   |                  |                              |   |              |   | Challan Date/P.O. Date.: 06-12-2022     |                           |   |                        |   |                |   |   |   |
| Issued to:<br><div>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</div> |   |   |   |                  |                              |   |              |   |                                         |                           |   |                        |   |                |   |   |   |
| Type of Industry: Power Plant                                                                                 |   |   |   |                  |                              |   |              |   | Customer Representative: Kamlesh Jha    |                           |   |                        |   |                |   |   |   |
| Sample Drawn by: IEM Team                                                                                     |   |   |   |                  |                              |   |              |   | Sampling Date: 22-09-2023 to 23-09-2023 |                           |   |                        |   |                |   |   |   |
| Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series                                           |   |   |   |                  |                              |   |              |   |                                         |                           |   |                        |   |                |   |   |   |
| Sampling Location: Near DM PLANT (CZ)                                                                         |   |   |   |                  |                              |   |              |   |                                         |                           |   |                        |   |                |   |   |   |
| Field Meteorological Information                                                                              |   |   |   | A. Temp.(°C): 27 |                              |   | R.H. (%): 61 |   |                                         | W.C.: Partly Sunny        |   |                        |   | W.D.: NW to SE |   |   |   |
| Sample Receiving Date: 23-09-2023                                                                             |   |   |   |                  | Testing Started: 23-09-2023  |   |              |   |                                         | Testing Ended: 27-09-2023 |   |                        |   |                |   |   |   |

### ---Test Results---

| Sl. No. | Parameters                              | Test Method No.      | Unit              | Norms as per NAAQS - 2009 | Results      |
|---------|-----------------------------------------|----------------------|-------------------|---------------------------|--------------|
| 1.      | Particulate Matter (PM <sub>10</sub> )  | IS 5182 Part 23:2006 | µg/m <sup>3</sup> | 100                       | 82.3         |
| 2.      | Particulate Matter (PM <sub>2.5</sub> ) | IS 5182 Part 24:2019 | µg/m <sup>3</sup> | 60                        | 31.8         |
| 3.      | Sulphur Dioxide (SO <sub>2</sub> )      | IS 5182 Part-02      | µg/m <sup>3</sup> | 80                        | 13.0         |
| 4.      | Nitrogen Dioxide (NO <sub>2</sub> )     | IS 5182 Part-06      | µg/m <sup>3</sup> | 80                        | 25.9         |
| 5.      | Ammonia (NH <sub>3</sub> )              | IS 5182 Part 25      | µg/m <sup>3</sup> | 400                       | 23.2         |
| 6.      | OZONE (O <sub>3</sub> )                 | IS 5182 Part 09      | µg/m <sup>3</sup> | 100                       | 6.9          |
| 7.      | ARSENIC (as As)                         | USEPA I.O. 3.2       | ng/m <sup>3</sup> | ----                      | BDL (MDL-02) |
| 8.      | LEAD (as Pb)                            | IS 5182 Part 22      | µg/m <sup>3</sup> | 1.0                       | 0.27         |
| 9.      | NICKEL (Ni)                             | IS 5182 Part 26      | ng/m <sup>3</sup> | ----                      | BDL (MDL-4)  |

### ---End of Report---

|                       |                                                                                                                       |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env.Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation          | MDL: Minimum Detection Limit, BDL:Below Detection Limit                                                               |
| Limit is Specified    | As per the Environmental (Protection) Rule - 1986                                                                     |
| Remark                | Sample Comply with prescribed specification.                                                                          |

Tested By: Neema Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

#### Specific Contractual Notes: -

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [gm.iemeco@gmail.com](mailto:gm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Quality Checked by Authorized Signatory

(Shreya Sonal)

Dy. Quality Manager

(Dr. S. C. Jain)

Director

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)





# Institute for Environmental Management



|               |                                                                                                                |
|---------------|----------------------------------------------------------------------------------------------------------------|
| Accredited by | Jharkhand State Pollution Control Board, JSPCB                                                                 |
| Certified by  | ISO 9001:2015 (Quality Management System )<br>ISO 45001:2018 (Occupational Health & Safety Management System ) |

## Test Report

|                                                                                                               |  |                              |                                         |                           |                |
|---------------------------------------------------------------------------------------------------------------|--|------------------------------|-----------------------------------------|---------------------------|----------------|
| Discipline: Chemical                                                                                          |  | Group: Atmospheric Pollution |                                         | Sub-Group: Ambient Air    |                |
| Report Issue Date: 30-09-2023                                                                                 |  |                              | Test Report No.: RN-230320001A6         |                           |                |
| Sample ID: 230923AP02003                                                                                      |  |                              | Sample Description: Ambient Air         |                           |                |
| Challan No./P.O. No.: 3030006457                                                                              |  |                              | Challan Date/P.O. Date.: 06-12-2022     |                           |                |
| Issued to:<br><div>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</div> |  |                              |                                         |                           |                |
| Type of Industry: Power Plant                                                                                 |  |                              | Customer Representative: Kamlesh Jha    |                           |                |
| Sample Drawn by: IEM Team                                                                                     |  |                              | Sampling Date: 22-09-2023 to 23-09-2023 |                           |                |
| Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series                                           |  |                              |                                         |                           |                |
| Sampling Location: Near DM PLANT (CZ)                                                                         |  |                              |                                         |                           |                |
| Field Meteorological Information                                                                              |  | A. Temp.(°C): 27             | R.H. (%): 61                            | W.C.: Partly Sunny        | W.D.: NW to SE |
| Sample Receiving Date: 23-09-2023                                                                             |  | Testing Started: 23-09-2023  |                                         | Testing Ended: 27-09-2023 |                |

### ----Test Results----

| Sl. No. | Parameters                                       | Test Method No.     | Unit              | Norms as per NAAQS - 2009 | Results         |
|---------|--------------------------------------------------|---------------------|-------------------|---------------------------|-----------------|
| 1.      | Benzo (a) Pyrene (BaP)<br>Particulate phase only | IS 5182 Part 12     | ng/m <sup>3</sup> | ----                      | BDL (MDL-0.18)  |
| 2.      | Carbon Monoxide (CO)                             | IEM/SOP/Air-01:2022 | mg/m <sup>3</sup> | ----                      | BDL(MDL-1.8)    |
| 3.      | BENZENE (C <sub>6</sub> H <sub>6</sub> )         | IS 5182 Part 11     | µg/m <sup>3</sup> | ----                      | BDL (MDL- 0.06) |

### ----End of Report----

|                       |                                                                                                                       |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env.Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation          | MDL: Minimum Detection Limit, BDL:Below Detection Limit                                                               |
| Limit is Specified    | As per the Environmental (Protection) Rule - 1986                                                                     |
| Remark                | Sample Comply with prescribed specification.                                                                          |

Tested By: Neema Kumari

Sample Drawn By: Rajiv Kumar Singh & Team

#### Specific Contractual Notes: -

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [gm.iemeco@gmail.com](mailto:gm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Quality Checked by

Authorized Signatory

*Shreyas*

*[Signature]*

(Shreya Sonal)

(Dr. S. C. Jain)

Dy. Quality Manager

Director



Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804254, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)



ISO 45001:2018

ISO 9001:2015





# 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

01.12.2022

## 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:**

**CORPORATE OFFICE :** "LANSLOWNE TOWER", 2/1A, Sarat Bose Road, Kolkata - 700 020

Ph : +91 - 33 - 30517100 / 7200 / 7300 • Fax : +91 - 33 - 22890285

**REGD. OFFICE**

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

**Website**

: 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

01.12.2022

## 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 Head                                                                           | Overall responsibility for environmental management and decision making for all environmental issues                                                                                                                                                                                                                                                                                                                                                                                                | Managing Director   |
| 03     | Environment Manager<br>Kamlesh Kumar<br>(M.Sc.- Environmental Science)               | 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 Head          |
| 04     | CSR Manager<br>Sanjeet Sinha<br>(M.Sc – Maths)                                       | Responsibility to implement social impact improvement /mitigation measures.                                                                                                                                                                                                                                                                                                                                                                                                                         | Plant Head          |
| 05     | Safety Manager<br>Bidesh Bid<br>B.Sc in Chemistry(H)<br>Diploma in Industrial Safety | 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 Head          |
| 06     | Medical Officer<br>Dr. Ganesh Prasad Murmu, MBBS                                     | 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 Head          |
| 06     | Chemist<br>Tapas Kumar<br>Mahato<br>B.Sc/ M.Sc                                       | 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<br>Ravi Prakash<br>Sharma<br>Graduate                           | Responsible for development of Green belt & Land Scape on vacant land of Plant premises.                                                                                                                                                                                                                                                                                                                                                                                                            | Environment Manager |

*[Signature]*  
DGM(HR)

**CORPORATE OFFICE** : "LANSDOWNE TOWER", 2/1A, Sarat Bose Road, Kolkata - 700 020

Ph : +91 - 33 - 30517100 / 7200 / 7300 • Fax : +91 - 33 - 22890285

**REGD. OFFICE**

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

**Website**

: 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

Ref No APNRL/JSPCB/ES/2022-23/02

Date: 20th Sep 2023

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 2022-23.

This is for your kind information & record please.

Thanking You

Your's faithfully

Kamlesh Kumar

Manager (Environment)

Encl: As mentioned above

CC: 1. Integrated Regional Office -Ranchi,

Ministry of Environment, Forest and Climate Change,

2<sup>nd</sup> Floor, Jharkhand State Housing Board(HQ)

Harmu Chaouk, Ranchi, Jharkhand-834002



**CORPORATE OFFICE :** "LANSLOWNE TOWER", 2/1A, Sarat Bose Road, Kolkata - 700 020

Ph : +91 - 33 - 30517100 / 7200 / 7300 • Fax : +91 - 33 - 22890285

**REGD. OFFICE**

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

**Website**

: www.adhunikpower.com

# **ENVIRONMENTAL STATEMENT**

**For**

**1 X 270 MW COAL BASED THERMAL POWER PLANT**

**(UNIT II)**

**FINANCIAL YEAR 2022-23**



**September 2023**



**Adhunik Power & Natural Resources Ltd**  
**Village-Padampur, District-Saraikela-Kharsawan**  
**Jharkhand-832402**



## **FORM-V**

**From:**

**Adhunik Power & Natural Resources Limited**

**Village: Padampur**

**Dist: Saraikela-Kharsawan – 832 402**

**Jharkhand.**

**To,**

**Member Secretary**

**Jharkhand State Pollution Control Board,**

**HEC Campus, Dhurva,**

**Ranchi , Jharkhand.**

**Environmental Audit Statement for the financial year ending on the 31st March-2023 for  
Unit-II (1 x 270 MW)**

### **PART – A**

- |       |                                                                           |   |                                                                                                                                         |
|-------|---------------------------------------------------------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------|
| (i)   | Name & Address of the owner/occupier of the Industry operation or process | : | Sh. G.D. Agarwal<br>Adhunik Power & Natural Resources Ltd, Vill- Padampur, Adityapur- Kandra Road, Dist- Sariekela- Kharswan, Jharkhand |
| (ii)  | Industry Category                                                         | : | Red Category                                                                                                                            |
| (iii) | Production Capacity – (Units-MW)                                          | : | Power<br>270 MW Per Hour                                                                                                                |
| (iv)  | Year of Establishment<br>(COMMERCIAL PRODUCTION DECLARED)                 | : | 19 <sup>th</sup> May 2013                                                                                                               |
| (v)   | Date of Last Environmental Statement Submitted                            | : | 20th September 2022                                                                                                                     |

**PART-B**

**Water and Raw Material Consumption**

**(i) Water Consumption KL/Day**

Process : 1234.6

Cooling : 10768.3

Domestic : 97.08

| Name of product                | Process water consumption per unit of product output |                                   |
|--------------------------------|------------------------------------------------------|-----------------------------------|
|                                | During the previous financial year                   | During the current financial year |
|                                | 2021-22                                              | 2022-23                           |
| Electricity<br>270 MW Per Hour | 0.210 KI                                             | 0.223 KI                          |

**(ii) Raw Material Consumption**

| Name of Raw Materials | Name of product | Consumption of raw material per unit of output (Total Production) |                                              |
|-----------------------|-----------------|-------------------------------------------------------------------|----------------------------------------------|
|                       |                 | During the previous financial year<br>2021-22                     | During the current financial year<br>2022-23 |
| Coal                  | Power           | 0.693 MT                                                          | 0.690 MT                                     |
| LDO                   |                 | 0.00018 KL                                                        | 0.00027 KL                                   |



**PART – C**

**Pollution Discharged to environment / unit of output.**

**(Parameter as specified in the consent issued)**

| <b>Pollutants</b>                                                                                                                               | <b>Qty. Of pollutants discharged<br/>(Mass / Day)</b>                                                                                                                                                                                                                                | <b>Concentration of<br/>Pollutants in discharges<br/>(Mass / Day)</b>             | <b>Percentage of<br/>variation from<br/>prescribed standards<br/>with reasons</b>                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| (i) Water<br><br><b>Unit Limit</b><br>pH 5.5. to 9.0<br>SS < 100 mg/l<br>Oil & Grease < 10 mg/l<br>BOD <sub>5</sub> < 30 mg/l<br>COD < 250 mg/l | 1) Effluent generated from Cooling tower, DM plant, IBD tank, CPI separator is being utilized in HCD system.<br><br>2) Effluent generated from CBD is being reutilized in quenching & dust suppression system.<br><br>3) Effluent generated from STP is being utilized for gardening |                                                                                   | Concentration are below the prescribed limits.<br><br>ETP & STP analysis report are enclosed as <b>Annexure I</b> |
| (ii) Air(Stack)<br><br>PM<br>SO <sub>2</sub><br>NO <sub>x</sub>                                                                                 | 805.2 Kg/Day<br>28107.0 Kg/Day<br>8739 Kg/Day                                                                                                                                                                                                                                        | 36.55 mg/Nm <sup>3</sup><br>1275.9 mg/Nm <sup>3</sup><br>396.7 mg/Nm <sup>3</sup> | Concentration are below the prescribed limits.<br><br>Stack monitoring report are enclosed as <b>Annexure II</b>  |

**Refer to MoEF notification dated 07.12.2015 and amendment to, FGD system installation are in progress to reduce the concentration of SO<sub>2</sub> in Flue gases.**

**\* The Effluent Treatment facility for Unit I and Unit II is common.**

**PART - D**  
**HAZARDOUS WASTES**

(As specified under Hazardous Wastes Management and Handling  
& Transboundary Movement Rules, 2008)

| Hazardous Wastes                       | Total Quantity (KL).                            |                                                |
|----------------------------------------|-------------------------------------------------|------------------------------------------------|
|                                        | During the previous financial Year<br>2021-2022 | During the current financial Year<br>2022-2023 |
| 1 From Process                         | Used Oil- 3.135 Kl<br>Waste Oil- 1.672 Kl       | Used Oil- 5.016 Kl<br>Waste Oil- 1.671 Kl      |
| 2 From Pollution<br>Control Facilities | 0 KL                                            | 0 KL                                           |

- The APNRL has obtained Hazardous Waste Authorization from JSPCB for Collection & Storage of Hazardous waste.
- Waste / Spent Oil is collected at centrally located point in isolated stores area meant for them in sealed M.S. Drums which is further sent to authorized recycler for disposal as per norms of MoEF.

**PART -E**

**Solid Wastes**

|                                                                                                 | Total Quantity (MT)                                |                                                   |
|-------------------------------------------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------|
|                                                                                                 | During the previous<br>financial Year<br>2021-2022 | During the current<br>financial Year<br>2022-2023 |
| (a) From Process <ul style="list-style-type: none"> <li>• Bottom Ash</li> </ul>                 | 95261 MT                                           | 72964 MT                                          |
| (b) From Pollution Control Facility <ul style="list-style-type: none"> <li>• Fly ash</li> </ul> | 539810 MT                                          | 413461MT                                          |
| (c) (1) Quantity recycled or<br>re-utilized within the unit                                     |                                                    |                                                   |
| (2) Sold                                                                                        |                                                    |                                                   |
| (3) Disposed <ul style="list-style-type: none"> <li>• Fly Ash</li> <li>• Bottom Ash</li> </ul>  | 539810 MT<br>50182.8 MT                            | 406473.78 MT<br>0 MT                              |



## **PART – F**

**Please specify the characterization (In terms of composition and quantum) of hazardous as well as solid and indicate disposal practice adopted for both these categories of wastes.**

### **Hazardous Waste:**

#### **1) Solid Hazardous Waste:**

- Bio medical Waste is generated from OHC is being disposed as per CPCB Guidelines.
- Waste generated from Canteen is used from preparing bio-compost & it is used for plantation.
- For the collection of dry fly ash, silos have been provided with pneumatic system & Bottom ash is led to the Ash dyke through pipeline in wet slurry mode.
- 1.865 Ton E Waste has been disposed through CPCB/JSPCB authorized recyclers.

#### **2) Liquid Hazardous waste:**

- In this financial year, 5.016 KL (Used Oil) & 1.671 KL Waste Oil have been generated from process and disposed to authorized recycler as per norms of MoEF.

## **PART - G**

**Impact of the pollution abatement measures taken on conservation of natural resources and on the production.**

**The following practices are adopted for the pollution control & conservation of natural resources:**

- We are using effluent water generated from Cooling tower, DM plant, IBD tank for Ash handling system instead of fresh water from River Subarnarekha.
- Extensive tree plantation is under progress as a part of green belt development, which will control the impact of Air pollution and optimize the ambient temperature of surrounding areas.
- Twin flue stack with height of 275 m are provided as per the CPCB guidelines for better dispersion of emissions and keep the concentrations within JSPCB/CPCB specified standards.
- High efficiency Electrostatic precipitators (ESPs) are provided for control of dust emissions into flue gases.
- Dust suppression system is installed at Truck tipping area.
- Dust Extraction system along with bag Filters have been installed at Coal Silo, Coal bunker, Intermediate Silo & Ash Silo to arrest the fugitive emissions.
- Roof sheeting and side cladding in conveyor galleries and TPs are installed to control fugitive dust

- The plant is designed on COC of more than 5 which is helpful in water conservation which further lead to reduction in overall fresh water intake.
- Garland drain connected with coal settling pit are installed in the Coal Stockyards for the reutilize of coal containing water.
- Mist canyons are installed around the coal stock yard for the control of fugitive dust.
- Belt washing system, coal settling pits and waste water recovery system are installed at transfer house for the dust suppression and water recovery.
- Water spraying system is installed in ash pond area for controlling the ash fugitive emissions, if any.
- Effluent Treatment Plant (ETP) and Sewage Treatment Plants (STP) are installed to control water pollution.
- Rain Water harvesting is being practiced in the plant premises, which helps in ground water recharging.
- Good housekeeping is maintained within the plant premises.  
Because of the adaptation of aforementioned methods, the quality of emissions and discharges are maintained below the permissible limits prescribed by the MoEF&CC / CPCB / JSPCB.

#### **PART - H**

##### **Additional measures / investment proposals for environmental protection including abatement of prevention of pollution.**

- APNRL is regularly monitoring ambient air, stack, noise level, water quality and soil quality in and around the plant premises. All the emissions and discharges are meeting the permissible limits prescribed by MoEF / CPCB / JSPCB. It is proposed to further strengthen the monitoring and reporting process.
- Ash Water Recovery System is installed for further reuse of ash water. Green belt development within plant premises is proposed to be accelerated.
- As per New Environment Norms, we are in process to install FGD system & DeNOx system for reducing level of SO<sub>2</sub> and Oxide of Nitrogen in Flue gases.

#### **PART – I**

##### **Any other particulars for improving the quality of the environment:**

The part – I of any Environmental Statement report is perhaps the best scale to measure various parameters of the plans, target, achievements and ultimate impact. APNRL has made sincere efforts to visualize the general environmental scenario and implemented plan for the associated improvements. Some highlights are mentioned below:

1. Received certification for ISO 9001:2008, ISO 14001: 2004 & ISO 18001:2007 from BSI.
2. Training on EMS to all employees and contract labors to create Environment awareness.

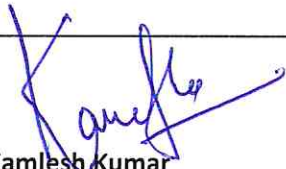


3. Green Belt development is under progress.
4. Only PUC certified vehicles are engaged.
5. Monitoring of Ambient air quality, Surface and ground water quality, stack monitoring, soil, Noise level is being done through MoEF & NABL accredited laboratory.
6. Full-fledged Environmental laboratory has been installed.
7. Installation of Online Effluent monitoring system has been completed.
8. Webhosting of online environment data on CPCB/SPCB website have been completed.
9. Electronics Display board is provided at the main gate for public data display.
10. Audit by recognized organization i.e. ERM has been conducted to improve Environmental & Social Management system (EMS).
11. Celebration of Environmental promotional activities (Environment day, Earth Day, Water day, Ozone day).
12. Remote calibration facility of CEMS has been completed.
13. 200 no Solar light system has been installed in plant premises.

---

Date: 19/09/2023



Signature :   
Name : Kamlesh Kumar  
Designation : Sr. Manager- Environment  
Address : Adhunik Power & Natural Resources  
Limited, Village : Padampur  
Dist: Saraikela-Kharsawan –  
832 402. Jharkhand



# Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB  
National Accreditation Board for Testing Laboratory (NABL) vide TC-11515  
Certified by ISO 9001:2015 (QMS) & ISO 45001:2018



## Test Report

|                                  |                                                                                 |   |   |                                |   |                             |   |   |   |   |                                       |   |   |                        |   |               |   |   |  |
|----------------------------------|---------------------------------------------------------------------------------|---|---|--------------------------------|---|-----------------------------|---|---|---|---|---------------------------------------|---|---|------------------------|---|---------------|---|---|--|
| ULR No.:                         | T                                                                               | C | 1 | 1                              | 5 | 1                           | 5 | 2 | 3 | 0 | 0                                     | 0 | 0 | 0                      | 0 | 0             | 4 | 6 |  |
| Discipline:                      | Chemical                                                                        |   |   | Group: Pollution & Environment |   |                             |   |   |   |   |                                       |   |   | Sub-Group: Waste Water |   |               |   |   |  |
| Report Issue Date:               | 31-03-2023                                                                      |   |   |                                |   |                             |   |   |   |   | Test Report No.: RN-230320001WW01     |   |   |                        |   |               |   |   |  |
| Sample ID:                       | 230330PE01001                                                                   |   |   |                                |   |                             |   |   |   |   | Sample Description: Waste Water (STP) |   |   |                        |   |               |   |   |  |
| Challan No./P.O. No.:            | 3030006457                                                                      |   |   |                                |   |                             |   |   |   |   | Challan Date/P.O. Date.: 06-12-2022   |   |   |                        |   |               |   |   |  |
| Issued to:                       | ADHUNIK POWER & NATURAL RESOURCES LTD.<br>VILL PADMPUR, PGCILS/S, KANDRA-832402 |   |   |                                |   |                             |   |   |   |   |                                       |   |   |                        |   |               |   |   |  |
| Type of Industry:                | Power Plant                                                                     |   |   |                                |   |                             |   |   |   |   | Customer Representative: Kamlesh Jha  |   |   |                        |   |               |   |   |  |
| Sample Drawn by:                 | IEM Team                                                                        |   |   |                                |   |                             |   |   |   |   | Sampling Date: 28-03-2023             |   |   |                        |   |               |   |   |  |
| Protocol:                        | CPCB Guideline & IS Method 3025 Part-01                                         |   |   |                                |   |                             |   |   |   |   |                                       |   |   |                        |   |               |   |   |  |
| Sampling Location:               | STP Outlet                                                                      |   |   |                                |   |                             |   |   |   |   |                                       |   |   |                        |   |               |   |   |  |
| Field Meteorological Information | A. Temp. (°C): 28                                                               |   |   |                                |   | R.H. (%): 61                |   |   |   |   | W.C.: Clear                           |   |   |                        |   | W.D.: NE - SW |   |   |  |
| Sample Receiving date:           | 29-03-2023                                                                      |   |   |                                |   | Testing Started: 29-03-2023 |   |   |   |   | Testing Ended: 31-03-2023             |   |   |                        |   |               |   |   |  |

### ---Test Result---

| Sl. No. | Tested Parameters               | Unit | Method No.        | Limits     | Results |
|---------|---------------------------------|------|-------------------|------------|---------|
| 1.      | pH value at 25°C                | ---- | IS 3025 (Part-11) | 5.5 to 9.0 | 6.96    |
| 2.      | Total Suspended Solids (TSS)    | mg/l | IS 3025 (Part-17) | 100        | 11.0    |
| 3.      | Biochemical Oxygen Demand (BOD) | mg/l | IS 3025 (Part-44) | 30         | 5.4     |
| 4.      | Chemical Oxygen Demand (COD)    | mg/l | IS 3025 (Part-58) | 250        | 8.0     |

### ---End of Report---

|                        |                                                                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation           | MDL: Minimum Detection Limit, BDL: Below Detection Limit                                                              |
| Limit is Specified     | As per the Environmental (Protection) Rule - 1986                                                                     |
| Remark                 | Sample Comply with prescribed specification.                                                                          |

Tested By: Punya Harsit Dadel

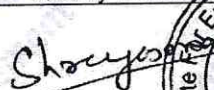
Sample Drawn By: Rahul Kumar Singh & Team

#### Specific Contractual Notes: -

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue.
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [gm.iemeco@gmail.com](mailto:gm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Quality Checked Environmental Authorized Signatory

  
(Shreya Saha)  
Dy. Quality Manager

  
Dr. S. C. Jain  
Director

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - [icm2012@rediffmail.com](mailto:icm2012@rediffmail.com)





# Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB  
National Accreditation Board for Testing Laboratory (NABL) vide TC-11515  
Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



## Test Report

|                                                                                                           |                                |   |   |   |   |                             |   |   |   |                                       |                        |                           |              |   |   |             |   |   |               |  |
|-----------------------------------------------------------------------------------------------------------|--------------------------------|---|---|---|---|-----------------------------|---|---|---|---------------------------------------|------------------------|---------------------------|--------------|---|---|-------------|---|---|---------------|--|
| ULR No.:                                                                                                  | T                              | C | 1 | 1 | 5 | 1                           | 5 | 2 | 3 | 0                                     | 0                      | 0                         | 0            | 0 | 0 | 0           | 4 | 7 |               |  |
| Discipline: Chemical                                                                                      | Group: Pollution & Environment |   |   |   |   |                             |   |   |   |                                       | Sub-Group: Waste Water |                           |              |   |   |             |   |   |               |  |
| Report Issue Date: 31-03-2023                                                                             |                                |   |   |   |   |                             |   |   |   | Test Report No.: RN-230320001WW02     |                        |                           |              |   |   |             |   |   |               |  |
| Sample ID: 230330PE02001                                                                                  |                                |   |   |   |   |                             |   |   |   | Sample Description: Waste Water (ETP) |                        |                           |              |   |   |             |   |   |               |  |
| Challan No./P.O. No.: 3030006457                                                                          |                                |   |   |   |   |                             |   |   |   | Challan Date/P.O. Date.: 06-12-2022   |                        |                           |              |   |   |             |   |   |               |  |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |                                |   |   |   |   |                             |   |   |   |                                       |                        |                           |              |   |   |             |   |   |               |  |
| Type of Industry: Power Plant                                                                             |                                |   |   |   |   |                             |   |   |   | Customer Representative: Kamlesh Jha  |                        |                           |              |   |   |             |   |   |               |  |
| Sample Drawn by: IEM Team                                                                                 |                                |   |   |   |   |                             |   |   |   | Sampling Date: 28-03-2023             |                        |                           |              |   |   |             |   |   |               |  |
| Protocol: CPCB Guideline & IS Method 3025 Part-01                                                         |                                |   |   |   |   |                             |   |   |   |                                       |                        |                           |              |   |   |             |   |   |               |  |
| Sampling Location: ETP Outlet                                                                             |                                |   |   |   |   |                             |   |   |   |                                       |                        |                           |              |   |   |             |   |   |               |  |
| Field Meteorological Information                                                                          |                                |   |   |   |   |                             |   |   |   | A. Temp.(°C): 28                      |                        |                           | R.H. (%): 61 |   |   | W.C.: Clear |   |   | W.D.: NE - SW |  |
| Sample Receiving date: 29-03-2023                                                                         |                                |   |   |   |   | Testing Started: 29-03-2023 |   |   |   |                                       |                        | Testing Ended: 31-03-2023 |              |   |   |             |   |   |               |  |

### ---Test Result---

| Sl. No. | Tested Parameters               | Unit | Method No.        | Limits     | Results          |
|---------|---------------------------------|------|-------------------|------------|------------------|
| 1.      | pH value at 25°C                | ---- | IS 3025 (Part-11) | 5.5 to 9.0 | 7.69             |
| 2.      | Total Suspended Solids (TSS)    | mg/l | IS 3025 (Part-17) | 100        | 26.0             |
| 3.      | Chemical Oxygen Demand (COD)    | mg/l | IS 3025 (Part-58) | 250        | 12.0             |
| 4.      | Phosphate (as PO <sub>4</sub> ) | mg/l | IS: 3025(Part-31) | --         | 0.58             |
| 5.      | Copper                          | mg/l | APHA 3111 B.2017  | --         | BDL (MDL - 0.2)  |
| 6.      | Chromium                        | mg/l | APHA 3111 B.2017  | --         | BDL (MDL - 0.04) |
| 7.      | Zinc                            | mg/l | APHA 3111 B.2017  | --         | BDL (MDL - 0.04) |

### ---End of Report---

|                        |                                                                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation           | MDL: Minimum Detection Limit, BDL: Below Detection Limit                                                              |
| Limit is Specified     | As per the Environmental (Protection) Rule - 1986                                                                     |
| Remark                 | Sample Comply with prescribed specification.                                                                          |

Tested By: Punya Harsit Dadel

Sample Drawn By: Rahul Kumar Singh & Team

#### Specific Contractual Notes:-

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue.
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [qm.lemeco@gmail.com](mailto:qm.lemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Quality Checked by Authorized Signatory

*Shreyasora*  
(Shreya Sonar)  
Dy. Quality Manager  
S. C. Jain  
Director

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)





# Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB  
Certified by ISO 9001:2015 (Quality Management System)  
ISO 45001:2018 (Occupational Health & Safety Management System)

## Test Report

|                                                                                                           |                                       |                           |
|-----------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------|
| Discipline: Chemical                                                                                      | Group: Pollution & Environment        | Sub-Group: Waste Water    |
| Report Issue Date: 31-03-2023                                                                             | Test Report No.: RN-230320001WW02     |                           |
| Sample ID: 230330PE02001                                                                                  | Sample Description: Waste Water (ETP) |                           |
| Challan No./P.O. No.: 3030006457                                                                          | Challan Date/P.O. Date.: 06-12-2022   |                           |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |                                       |                           |
| Type of Industry: Power Plant                                                                             | Customer Representative: Kamlesh Jha  |                           |
| Sample Drawn by: IEM Team                                                                                 | Sampling Date: 28-03-2023             |                           |
| Protocol: CPCB Guideline & IS Method 3025 Part-01                                                         |                                       |                           |
| Sampling Location: ETP Outlet                                                                             |                                       |                           |
| Field Meteorological Information                                                                          | A. Temp.(°C): 28                      | R.H. (%): 61              |
|                                                                                                           | W.C.: Clear                           | W.D.: NE - SW             |
| Sample Receiving date: 29-03-2023                                                                         | Testing Started: 29-03-2023           | Testing Ended: 31-03-2023 |

### ---Test Result---

| Sl. No. | Tested Parameters | Unit | Method No.        | Limits | Results         |
|---------|-------------------|------|-------------------|--------|-----------------|
| 1.      | Oil & Grease      | mg/l | IS 3025 (Part-39) | 10     | BDL (MDL - 4.0) |
| 2.      | Iron              | mg/l | APHA 3111 B.2017  | 3.0    | 0.96            |
| 3.      | Temperature       | mg/l | IS 3025 (Part-29) | --     | 28              |

### ---End of Report---

|                        |                                                                                                                                              |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Env. Condition of Lab. | Laboratory is maintaining Temperature $27 \pm 2^\circ\text{C}$ and Relative Humidity $65 \pm 5\%$ in all testing area as per IS 196:1966(C). |
| Abbreviation           | MDL: Minimum Detection Limit, BDL: Below Detection Limit                                                                                     |
| Limit is Specified     | As per the Environmental (Protection) Rule - 1986                                                                                            |
| Remark                 | Sample Comply with prescribed specification.                                                                                                 |

Tested By: Punya Harsit Dadel

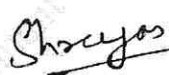
Sample Drawn By: Rahul Kumar Singh & Team

#### Specific Contractual Notes:-

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue.
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [qm.iemeco@gmail.com](mailto:qm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Quality Checked by \_\_\_\_\_ Authorized Signatory

  
(Shreya Soni)  
Dy. Quality Manager

  
S. C. Jain  
Director



Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804254, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)







# Institute for Environmental Management

Accredited by Jharkhand State Pollution Control Board, JSPCB  
National Accreditation Board for Testing Laboratory (NABL) vide TC-11515  
Certified By ISO 9001:2015 (QMS) & ISO 45001:2018



## Test Report

|                                                                                                           |               |   |   |   |                             |                              |   |              |   |                                      |                                     |   |   |               |   |   |   |  |
|-----------------------------------------------------------------------------------------------------------|---------------|---|---|---|-----------------------------|------------------------------|---|--------------|---|--------------------------------------|-------------------------------------|---|---|---------------|---|---|---|--|
| ULR No.:                                                                                                  | T             | C | 1 | 1 | 5                           | 1                            | 5 | 2            | 3 | 0                                    | 0                                   | 0 | 0 | 0             | 0 | 4 | 3 |  |
| Discipline:                                                                                               | Chemical      |   |   |   |                             | Group: Atmospheric Pollution |   |              |   |                                      | Sub-Group: Stack Emission           |   |   |               |   |   |   |  |
| Report Issue Date:                                                                                        | 31-03-2023    |   |   |   |                             |                              |   |              |   |                                      | Test Report No.: RN-230320001S2     |   |   |               |   |   |   |  |
| Sample ID:                                                                                                | 230330AP05002 |   |   |   |                             |                              |   |              |   |                                      | Sample Description: Stack Emission  |   |   |               |   |   |   |  |
| Challan No./P.O. No.:                                                                                     | 3030006457    |   |   |   |                             |                              |   |              |   |                                      | Challan Date/P.O. Date.: 06-12-2022 |   |   |               |   |   |   |  |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |               |   |   |   |                             |                              |   |              |   |                                      |                                     |   |   |               |   |   |   |  |
| Type of Industry: Power Plant                                                                             |               |   |   |   |                             |                              |   |              |   | Customer Representative: Kamlesh Jha |                                     |   |   |               |   |   |   |  |
| Sample Drawn by: IEM Team                                                                                 |               |   |   |   |                             |                              |   |              |   | Sampling Date: 12-03-2023            |                                     |   |   |               |   |   |   |  |
| Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series                                       |               |   |   |   |                             |                              |   |              |   |                                      |                                     |   |   |               |   |   |   |  |
| Field Meteorological Information                                                                          |               |   |   |   | A. Temp.(°C): 27            |                              |   | R.H. (%): 64 |   |                                      | W.C.: Clear                         |   |   | W.D.: NE - SW |   |   |   |  |
| Sample Receiving Date: 29-03-2023                                                                         |               |   |   |   | Testing Started: 29-03-2023 |                              |   |              |   | Testing Ended: 31-03-2023            |                                     |   |   |               |   |   |   |  |

### General Physical Information

|                       |                |                                        |       |
|-----------------------|----------------|----------------------------------------|-------|
| Stack Identification  | Single         | Stack Height from Ground Level (m)     | 275   |
| Emission Due to       | Boiler         | Port Hole Height from Ground Level (m) | 90    |
| Plat Form             | Permanent      | Inner Dimension of Stack (m)           | 4.2   |
| Stack Description     | Stack Unit - 2 | Type of Fuel Used                      | Coal  |
| Shape of Stack        | Circular       | Quantity of Fuel                       | ----- |
| Construction Material | Metal          | Production Capacity                    | ----- |
| Sampling Port         | Available      | Pollution Control Device (if any)      | ESP   |

### Test Result

| Sl. No. | Parameters                            | Test Methods      | Unit                 | Result       | Limits |
|---------|---------------------------------------|-------------------|----------------------|--------------|--------|
| 1.      | Flue Gas Temperature                  | IS 11255 (Part-3) | °K                   | 387          | ---    |
| 2.      | Flue Gas Velocity                     | IS 11255 (Part-3) | m/s                  | 24.2         | ---    |
| 3.      | Flue Gas Volumetric Flow Rate         | IS 11255 (Part-3) | Nm <sup>3</sup> /hr. | 917882.8     | ---    |
| 4.      | Particulates Matter (PM)              | IS 11255 (Part-1) | mg/Nm <sup>3</sup>   | 36.55        | 50     |
| 5.      | Sulphur Dioxide (SO <sub>2</sub> )    | IS 11255 (Part-2) | mg/Nm <sup>3</sup>   | 1275.1       | 600    |
| 6.      | Oxides of Nitrogen (NO <sub>2</sub> ) | IS 11255 (Part-7) | mg/Nm <sup>3</sup>   | 697.59       | 450    |
| 7.      | Carbon Monoxide (CO)                  | IS 13270:1992     | %                    | BDL(MDL-0.2) | ---    |

|                   |       |         |
|-------------------|-------|---------|
| Dust              | Kg/hr | 33.55   |
| Sulphur Dioxide   | Kg/hr | 1170.39 |
| Oxide of Nitrogen | Kg/hr | 640.31  |

### ---End of Report---

|                        |                                                                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation           | MDL: Minimum Detection Limit, BDL: Below Detection Limit                                                              |
| Limit is Specified     | ---                                                                                                                   |
| Remark                 | ---                                                                                                                   |

Tested By: Akanksha Sourabh  
Sample Drawn By: Rahul Kr. Singh & team

### Specific Contractual Notes:-

- The laboratory accepts responsibility for content of this report.
- This report shall not be reproduced except in full, without written approval of the MD.
- This report is intended for only guidance and not for legal purpose or for advertisement.
- Any complaint about this report should be communicated in writing within 7 days of its issue.
- Total liability of Institute for Environmental Management will be limited to invoiced amount only.
- In case of feedback/ complaints, please send an email at [qm.iemeco@gmail.com](mailto:qm.iemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Quality Checked by \_\_\_\_\_ Authorized Signatory

*Shreyas*  
(Shreyas Sonar)  
Dy. Quality Manager  
Ranchi

*S. C. Jain*  
(S. C. Jain)  
Director

Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)





# Institute for Environmental Management



Accredited by Jharkhand State Pollution Control Board, JSPCB  
Certified by ISO 9001:2015 (Quality Management System)  
ISO 45001:2018 (Occupational Health & Safety Management System)

## Test Report

|                                                                                                           |  |                              |                                      |                           |               |
|-----------------------------------------------------------------------------------------------------------|--|------------------------------|--------------------------------------|---------------------------|---------------|
| Discipline: Chemical                                                                                      |  | Group: Atmospheric Pollution |                                      | Sub-Group: Stack Emission |               |
| Report Issue Date: 31-03-2023                                                                             |  |                              | Test Report No.: RN-230320001S2      |                           |               |
| Sample ID: 230330AP05002                                                                                  |  |                              | Sample Description: Stack Emission   |                           |               |
| Challan No./P.O. No.: 3030006457                                                                          |  |                              | Challan Date/P.O. Date.: 06-12-2022  |                           |               |
| Issued to:<br><b>ADHUNIK POWER &amp; NATURAL RESOURCES LTD.<br/>VILL PADMPUR, PGCILS/S, KANDRA-832402</b> |  |                              |                                      |                           |               |
| Type of Industry: Power Plant                                                                             |  |                              | Customer Representative: Kamlesh Jha |                           |               |
| Sample Drawn by: IEM Team                                                                                 |  |                              | Sampling Date: 12-03-2023            |                           |               |
| Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series                                       |  |                              |                                      |                           |               |
| Field Meteorological Information                                                                          |  | A. Temp.(°C): 27             | R.H. (%): 64                         | W.C.: Clear               | W.D.: NE - SW |
| Sample Receiving Date: 29-03-2023                                                                         |  | Testing Started: 29-03-2023  |                                      | Testing Ended: 31-03-2023 |               |

### General Physical Information

|                       |                |                                        |      |
|-----------------------|----------------|----------------------------------------|------|
| Stack Identification  | Single         | Stack Height from Ground Level (m)     | 275  |
| Emission Due to       | Boiler         | Port Hole Height from Ground Level (m) | 90   |
| Plat Form             | Permanent      | Inner Dimension of Stack (m)           | 4.2  |
| Stack Description     | Stack Unit - 2 | Type of Fuel Used                      | Coal |
| Shape of Stack        | Circular       | Quantity of Fuel                       | ---- |
| Construction Material | Metal          | Production Capacity                    | ---- |
| Sampling Port         | Available      | Pollution Control Device (if any)      | ESP  |

### Test Result

| Sl. No. | Parameters                    | Test Methods        | Unit                 | Result        | Limits |
|---------|-------------------------------|---------------------|----------------------|---------------|--------|
| 1.      | Flue Gas Temperature          | IS 11255 (Part-3)   | °K                   | 387           | ---    |
| 2.      | Flue Gas Velocity             | IS 11255 (Part-3)   | m/s                  | 24.2          | ---    |
| 3.      | Flue Gas Volumetric Flow Rate | IS 11255 (Part-3)   | Nm <sup>3</sup> /hr. | 917882.8      | ---    |
| 4.      | Mercury (Hg)                  | (LATS/80/2013-2014) | mg/Nm <sup>3</sup>   | BDL(MDL-0.03) | 0.03   |

### ---End of Report---

|                        |                                                                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Env. Condition of Lab. | Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C). |
| Abbreviation           | MDL: Minimum Detection Limit, BDL: Below Detection Limit                                                              |
| Limit is Specified     | ---                                                                                                                   |
| Remark                 | ---                                                                                                                   |

Tested By: Akanksha Sourabh

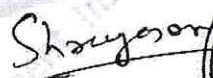
Sample Drawn By: Rahul Kr. Singh & team

### Specific Contractual Notes:-

1. The laboratory accepts responsibility for content of this report.
2. This report shall not be reproduced except in full, without written approval of the MD.
3. This report is intended for only guidance and not for legal purpose or for advertisement.
4. Any complaint about this report should be communicated in writing within 7 days of its issue
5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at [qm.lemeco@gmail.com](mailto:qm.lemeco@gmail.com)

On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Quality Checked by \_\_\_\_\_ Authorized Signatory

  
(Shreya Sonal)  
Dy. Quality Manager  
S. C. Jain  
Director



Corporate office - A-8, Modi Heights, Opp.-All India Radio Station, Ratu Road, Ranchi, Jharkhand - 834001

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,  
Ranchi-834002, Jharkhand, India

Ph - 8407804254, 8407804251, Email - [iem2012@rediffmail.com](mailto:iem2012@rediffmail.com)



ISO 45001:2018





# 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/29523/02

Dated: 29.05.2023

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 2022 to March 2023 -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 2022 to March 2023.

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



Recd  
Shankar  
31/05/23



CORPORATE OFFICE : "LANDSOWNE TOWER", 2/1A, Sarat Bose Road, Kolkata - 700 020

Ph : +91 - 33 - 30517100 / 7200 / 7300 • Fax : +91 - 33 - 22690285

REGD. OFFICE

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