



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/280522/02

Dated: 28.05.2022

To,

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

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

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

Sir,

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

This is for your reference and record, please.

Thanking you,

For Adhunik Power & Natural resources Limited

(Authorized Signatory)

Encl: As Above

Copy to:

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

Rf

Bachsi N



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

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Website

: www.adhunikpower.com



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REPORT

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



OCTOBER 2021 – MARCH 2022

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

Adhunik Power & Natural Resources Limited Vill: Padampur, Behind PGCIL Substation, Kandra Chouka Road, Saraikela-Kharsawan, Jharkhand		
Environmental Clearance Letter No: J13012/8/2009-IA .II (T) dtd 9th May 2011.		
Period Of Compliances: October 2021 to March 2022		
Sl No	EC Conditions	Status as on 31st March 2022
A. Specific Conditions:		
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 th March, 2011 vide S.O. 691(E) under the Environment (Protection) Act, 1986 notifying the areas upto 5 km from the boundary of the protected area of Dalma Wildlife Sanctuary in the State of Jharkhand as the Eco-sensitive Zone. The necessity of obtaining environmental clearance from the National Board for Wild life would arise only if the proposed project area falls within the boundary of the finally notified eco-sensitive zone.	As per notification date 29 th March 2012 project boundary are beyond the stipulated distance from the boundary of the protected area of Dalma Wildlife Sanctuary in the State of Jharkhand as the Eco-sensitive Zone. Notification regarding nearest distance from Dalma wildlife sanctuary enclosed as Annexure I. Complied
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. Complied
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 th Dec 2011. Complied
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. Complied

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. 13 no Rain water harvesting structures has been constructed in accordance with the approved rain water harvesting plan. Complied
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. Regular monitoring of ground water quality in and around ash pond area including heavy metals is being carried out periodically. Ground water analysis report of upstream & Downstream of Ash pond in compared with baseline data for the month of March 2022 are enclosed as Annexure II.
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. Complied
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. Ground water analysis report of upstream & Downstream of Ash pond compared with baseline data for the month of March 2022 are enclosed as Annexure II. Regular monitoring of ground water level are done through Piezometer installed at following

	so obtained should be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project.	locations: 1. 22°50'20.9"N 86°03'27.4"E 2. 22°50'23.1"N 86°03'39.7"E 3. 22°50'09.5"N 86°03'48.1"E 4. 22°49'50.0"N 86°03'37.9"E Photographs of installed Piezometers are enclosed as Annexure III .
xviii.	Monitoring surface water quality in the area shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.	Ground water analysis report of upstream & Downstream of Ash pond and Surface Water Analysis report for the month of March 2022 are enclosed as Annexure II & Annexure IV respectively.
xix.	Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved. The leveling in plant area should be minimum with no or minimal disturbance to the natural drainage of the area.	Complied.
xx.	Provision for installation of FGD shall be provided for future use	FGD space is available on site for future use.
xxi.	The project proponent shall undertake measures and ensure that no fugitive fly ash emissions take place at any point of time.	Effective provision for dust suppression system has been strictly implemented at all dust prone areas such as road, coal stock yard, Truck tippler, Ash pond & others areas. Fugitive emission could not be occurred due to nature of wet condition of bottom ash. However additional arrangement of water sprinkling has been implemented in case of emission occurs. In addition, 03 No Water tankers are deployed for dust suppression.
xxii.	Stacks of 275 m height shall be installed and provided with continuous online monitoring equipments for SO _x , NO _x and PM _{2.5} & PM ₁₀ . Exit velocity of flue gases shall not be less than 22 m/sec. Mercury emissions from stack may also monitored on periodic basis.	Twin flue chimney of 275m height has constructed for proper dispersion of flue gases. Online monitoring equipment has installed at chimney. Hg concentration is well within prescribed limits. Complied
xxiii.	High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm ³ .	High efficient ESPs of 32 fields have installed to ensure control PM emission in flue gas. Stack Monitoring report from For the month of March 2022 are enclosed as Annexure V.
xxiv.	Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	Necessary mitigation measures in accordance with EMP and EC conditions has taken to control fugitive emissions from ash storage/transfer and coal handling plant such as installation and operation of bag filters collectors, use of water spray systems and enclosed conveyors with well designed, extraction and filtration equipment on transfer points. Complied
xxv.	Utilization of 100% Fly Ash generated shall be made from 4 th year of operation. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.	Fly Ash utilization are adhered in compliance with MoEF&CC notification dated 31.12.2021. Fly Ash generation & Utilization report (April 2021 to March 2022) are enclosed as Annexure VI .

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. Bottom ash analysis report & effluent analysis report of ash pond For the month of March 2022 are attached as Annexure VII & Annexure VIII respectively.
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.	APNRL has adopted villages - Barahariharpur - Padampur - Srirampur CSR is also providing the facilities in following villages - Pindrabera - Chotahariharpur - Ramjivanpur - Bikanipur etc. Details of CSR activity enclosed as Annexure IX.
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 Annexure IX.
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 Annexure X. Complied
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 IX .
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.	We have submitted copy of capital cost & year wise recurring expenditure on CSR activities to MoEF &CC, Ranchi Office on 05.12.2018. Complied.
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	All CSR activities are monitored on weekly and monthly basis. We have conducted social audit through renowned organization who are well aware about Social Audit in Jharkhand region. Copy of Social audit shall be submitted shortly.

B. General Conditions:		
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.	Complied. Treated effluent analysis report of ETP from For the month of March 2022 are enclosed as Annexure XI. 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.
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 Annexure XII.
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.	The design of coal yard along with provision of fire safety measures viz. fire hydrants, water sprinklers has installed. Complied
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.	Approval received on dated 15/12/2011. License No. P/HQ/JH/15/1065 (P257355), valid upto 31.12.2022 for LDO storage installation (under Petroleum Class "C") for operations. Copy of Approval are enclosed as Annexure XIII. 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 Annexure XIII(a) Emergency Response Plan (ERP) has prepared as part of the project ESMS to cater to potential emergencies/risks identified.
v.	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	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. Complied.
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	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. Noise level monitoring report For the month of March 2022 are enclosed As Annexure XIV.

vii.	Regular monitoring of ambient air ground level concentration of SO ₂ , NO _x , PM _{2.5} & PM ₁₀ 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.	Ambient Air monitoring reports carried out by NABL accredited Laboratory for the month of March 2022 are enclosed As Annexure XV. Review of air quality monitoring results revealed compliance to NAAQS. 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. Complied
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 http://envfor.nic.in .	Complied
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. Organization chart of Environmental Management Cell enclosed as Annexure XVI.

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 _{2.5} & PM ₁₀), SO ₂ , NO _x (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 ₂ , NO _x) for both ambient air quality and chimney emissions is being displayed at the main gate of the company. Compliance status of the stipulated EC conditions has been uploaded on company website and hard copy of same has been submitted for the period of April 2021 to September 2021 in office of MoEF, Ranchi & CPCB office, Kolkata along with monitored data.
xiii.	The environment statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.	The last environmental statement for financial year (2020-21) in Form V has submitted to JSPCB dated 20 th Sep 2021. Acknowledgement copy of same attached as Annexure XVII. Environment Statement (2019-20) 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/271121/02 ,dated 27 TH Nov 2021. Acknowledgement copy of same attached as Annexure XVIII.
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 _x (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. 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 ₂ , NO _x) 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	Complied
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 कान्हा 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)

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

5. वन प्रमण्डल पदाधिकारी, वन्यप्राणी प्रमण्डल, रांची के द्वारा अपने प्रतिवेदन में यह उल्लेख किया गया है कि दलमा वन्यप्राणी आश्रयणी की दक्षिणी सीमा पर स्वर्णरेखा नहर की गहरी खोदाई के कारण इस क्षेत्र में हाथियों का आवागमन अनियमित है। उन्होंने यह भी वर्णित किया है कि आश्रयणी से हाथियों का आवागमन रामगढ़, एन0एच0-33, डोभी, कपालन, तमोलिया होते हुए पुनः आश्रयणी की ओर हो रहा है। पूर्व में यह पलना जलाशय तक होता था, जो वर्तमान में नहर की खोदाई के कारण बाधित है। इस संबंध में नक्शे की समीक्षोपरांत यह पाया गया है कि यदि हाथियों का आवागमन पूर्ववतः आश्रयणी से पलना जलाशय तक होता भी है तब भी प्रस्तावित स्थल ऐसे किसी आवागमन मार्ग के बीच में नहीं आयेगा। पलना जलाशय की लोकेशन को दर्शाते हुए एक नक्शा भी इस पत्र के साथ संलग्न किया जा रहा है जिससे स्पष्ट होगा कि यह जलाशय प्रस्तावित स्थल से लगभग 17 कि0मी0(उत्तर पूर्व) की दूरी पर अवस्थित है। प्रस्तावित स्थल होकर हाथियों का आवागमन होने की या कोई पूर्व-स्थापित गज-कोरीडोर होने की कोई ठोस सूचना/प्रमाण उपलब्ध नहीं है।
6. झारखंड राज्य में गज-कोरीडोर को चिह्नित करने का कार्य एक स्वयंसेवी संस्था 'वाइल्ड लाइफ ट्रस्ट ऑफ इण्डिया, नई दिल्ली' के द्वारा किया गया है। इस कार्य में झारखंड वन विभाग के द्वारा भी सहयोग किया गया था। उपरोक्त स्वयंसेवी संस्था द्वारा प्रकाशित 'Right of Passage- Elephant Corridors of India' नामक पुस्तक में झारखंड राज्य के लिए कुल 14 गज-कोरीडोर वर्णित है तथा इसी सूचना के आधार पर कंडिका चार में वर्णित तीन गज कोरीडोर को नक्शे पर दर्शाया गया है।
7. प्रस्तावित स्थल के आसपास कई अन्य उद्योग, यथा पावर ग्रिड कॉरपोरेशन ऑफ इण्डिया लि0, बी0के0 स्टील आई0ओ0सी0एल0, टी0सी0एस0, उषा मार्टिन, नीलांचल स्टील, आदि स्थापित हैं। यह अनुलग्नक-3 पर दो प्रतियों में उपलब्ध नक्शे से स्पष्ट है। इस क्षेत्र में कई उद्योग होने के कारण भी इसे दलमा वन्यप्राणी आश्रयणी के प्रस्तावित इको-सेंसिटिव जोन से बाहर रखा गया था।
8. वन प्रमण्डल पदाधिकारी, वन्यप्राणी प्रमण्डल, रांची ने प्रस्तावित स्थल दलमा आश्रयणी एवं elephant bearing area के समीप होने के कारण हाथियों के आवागमन पर पड़ने वाले प्रतिकूल प्रभाव की संभावना बताते हुए प्रस्तावित परियोजना हेतु अनापत्ति प्रमाण-पत्र निर्गत नहीं करने की अनुशंसा की है। परंतु वन संरक्षक, वन्य प्राणी अंचल, रांची ने वन प्रमण्डल पदाधिकारी द्वारा अपने प्रतिवेदन में उठाए गये विभिन्न विन्दुओं पर

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

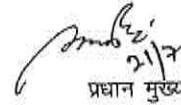
9. प्रधान मुख्य वन संरक्षक, जैव विविधता संरक्षण एवं मुख्य वन्यप्राणी प्रतिपालक, झारखण्ड, रांची द्वारा अग्रलिखित शर्त पर संबंधित परियोजना हेतु एन0ओ0सी0 निर्गत करने की अनुशंसा की गई है कि EIA के ToR की शर्त V के आलोक में प्रयोक्ता अभिकरण को इस आशय की वचनबद्धता देनी होगी कि प्रयोक्ता अभिकरण वन्य प्राणी 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।

अनु0-यथोक्त।

विश्वासभाजन,


21/7

प्रधान मुख्य वन संरक्षक,
झारखण्ड, रांची।

2/7/17



YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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



Test Certificate

ULR (Unique Lab Report) No.			T	C	4	0	3	2	2	2	0	0	0	0	0	4	9	1	F
Discipline	Chemical	Group	Water			Sample Description					Ground Water								
Report Release Date		31 st March, 2022				Report ID					YBAEEL-220322-183133-- GW01								
W. Order/ JSPCB App. No.		3030005781				Work Order Date					18.12.2021								
Type of Industry(If any)		Thermal Power Plant				Job code/ Ref. no.					YBAEEL/WA/L/C/Mar-22/16								
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand																	
Sampling Date		24/03/2022				Mode of sample collection					By YBAEEL Team								
Sampling Protocol		IS : 3025 (Part-1) 1987, R-2003				Sample Code					220324-GW-A01								
Sampling Location		Srirampur Borewell				Sampling Source					Ground Water								
Sample pkg. Condition		Sealed Pack in PP Bottle				Sample Quantity					3000 ml								
Meteorological Cond. of Field		W.C.- Clear				RH % - 45					Temp. - 31°C								
Sample receipt Date		24/03/2022		Analysis Started on			24/03/2022			Analysis completed on			30/03/2022						

*****Test Results*****

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	pH value	IS 3025 (P-11):2002	pH	1.77	6.89	6.5-8.5
2.	Colour	IS 3025 (P-04):1983	Hazen	--	5	5-15
3.	Conductivity	IS 3025 (P-14):2013	µs/cm	1.90	576.0	--
4.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23):2003	mg/l	3.68	192.0	200-600
5.	Total Hardness (as CaCO ₃)	IS 3025 (P-21):2009	mg/l	1.35	180.0	200-600
6.	Total dissolved solids	IS 3025 (P-16):2006	mg/l	2.85	280.0	500-2000
7.	Chlorine Residual	IS 3025 (P-26):2003	mg/l	30.64	BDL (MDL 0.07)	0.2-1
8.	Chloride (as Cl ⁻)	IS 3025 (P-32):2003	mg/l	3.41	47.5	250-1000
9.	Fluoride (as F ⁻)	APHA 4500 F-C 23 rd edition 2017	mg/l	12.22	0.6	1.0-1.5
10.	Nitrate (as NO ₃ ⁻)	APHA 4500 NO ₃ ⁻ (B) 23 rd edition 2017	mg/l	11.33	2.52	45-No relaxation
11.	Calcium (as Ca ²⁺)	IS 3025 (P-40): 2003	mg/l	4.19	55.2	75-200
12.	Magnesium (as Mg ²⁺)	APHA 3500 Mg B : 2017	mg/l	1.90	10.21	30-100
13.	Sulphate (as SO ₄ ²⁻)	IS 3025 (P-24):2003	mg/l	5.42	18.7	200-400
14.	Sodium (as Na ⁺)	APHA 3111 B 23 rd edition 2017	mg/l	16.98	26.0	--
15.	Potassium (as K ⁺)	APHA 3111 B 23 rd edition 2017	mg/l	9.21	3.0	--

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

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

Sample Drawn By : Angad Munda
Tested By : Prem Kumar (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Technical Manager
Yugantar Bharati Analytical &
Environmental Engineering Laboratory



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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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

Test Certificate

Discipline	Chemical	Group	Water	Sample Description	Ground Water
Report Release Date	31 st March, 2022			Report ID	YBAEEL-220322-183133- GW01
W. Order/ JSPCB App. No.	3030005781			Work Order Date	18.12.2021
Type of Industry(if any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/C/Mar-22/16
Report Issue to	M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand				
Sampling Date	24/03/2022			Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Sample Code	220324-GW-A01
Sampling Location	Srirampur Borewell			Sampling Source	Ground Water
Sample pkg. Condition	Sealed Pack in PP Bottle			Sample Quantity	3000 ml
Meteorological Cond. of Field	W.C.- Clear			RH % - 45	Temp. - 31°C
Sample receipt Date	24/03/2022	Analysis Started on	24/03/2022	Analysis completed on	30/03/2022

*****Test Results*****

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

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

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

Sample Drawn By : Angad Munda
Tested By : Prem Kumar (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

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TC-4032

Test Certificate

ULR (Unique Lab Report) No.			T	C	4	0	3	2	2	2	0	0	0	0	0	4	9	3	F	
Discipline	Chemical	Group	Water		Sample Description				Residue & Contaminants in Water											
Report Release Date		31 st March, 2022				Report ID				YBAEEL-220322-183133- GW01										
W. Order/ JSPCB App. No.		3030005781				Work Order Date				18.12.2021										
Type of Industry(if any)		Thermal Power Plant				Job code/ Ref. no.				YBAEEL/WA/L/R/Mar-22/06										
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand																		
Sampling Date		24/03/2022				Mode of sample collection				By YBAEEL Team										
Sampling Protocol		IS : 3025 (Part-1) 1987, R-2003				Sample Code				220324-GW-A01										
Sampling Location		Srirampur Borewell				Sampling Source				Ground Water										
Sample pkg. Condition		Sealed Pack in PP Bottle				Sample Quantity				3000 ml										
Meteorological Cond. of Field		W.C.- Clear				RH % - 45				Temp. - 31°C										
Sample receipt Date		24/03/2022		Analysis Started on		24/03/2022		Analysis completed on		30/03/2022										

*****Test Results*****

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Arsenic (as As)	APHA 3114 B 23 rd edition 2017	mg/l	10.34	BDL (MDL 0.003)	0.01-No relaxation
2.	Copper (as Cu)	APHA 3111 B 23 rd edition 2017	mg/l	11.11	BDL (MDL 0.01)	0.05-1.5
3.	Iron (as Fe)	APHA 3111 B 23 rd edition 2017	mg/l	2.34	0.75	1.0-No relaxation
4.	Lead (as Pb)	APHA 3111 B 23 rd edition 2017	mg/l	10.64	BDL (MDL 0.02)	0.01-No relaxation
5.	Zinc (as Zn)	APHA 3111 B 23 rd edition 2017	mg/l	15.35	0.18	5-15
6.	Cadmium (as Cd)	APHA 3111 B 23 rd edition 2017	mg/l	5.0	BDL (MDL 0.02)	0.003-No relaxation
7.	Mercury (as Hg)	APHA 3112 B 23 rd edition 2017	mg/l	8.47	BDL (MDL 0.003)	0.001-No relaxation
8.	Chromium (as Cr)	APHA 3111 B 23 rd edition 2017	mg/l	12.53	BDL (MDL 0.02)	0.05-No relaxation
9.	Nickel (as Ni)	APHA 3111 B 23 rd edition 2017	mg/l	13.72	BDL (MDL 0.02)	0.02-No relaxation
10.	Cobalt (Co)	APHA 3111 B 23 rd edition 2017	mg/l	28.33	BDL (MDL 0.03)	--

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

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
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Remarks	Sample complies with prescribed limits.

Sample Drawn By : Angad Munda
Tested By : Shivani Kumari Singh (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Technical Manager
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Branch Office : - Jamshedpur | Dhanbad | Hazaribag | Pakur

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





YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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

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

Test Certificate

Discipline	Chemical	Group	Water	Sample Description	Residue & Contaminants in Water
Report Release Date	31 st March, 2022			Report ID	YBAEEL-220322-183133- GW01
W. Order/ JSPCB App. No.	3030005781			Work Order Date	18.12.2021
Type of Industry (if any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/R/Mar-22/06
Report Issue to	M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand				
Sampling Date	24/03/2022			Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Sample Code	220324-GW-A01
Sampling Location	Srirampur Borewell			Sampling Source	Ground Water
Sample pkg. Condition	Sealed Pack in PP Bottle			Sample Quantity	3000 ml
Meteorological Cond. of Field	W.C.- Clear			RH % - 45	Temp. - 31°C
Sample receipt Date	24/03/2022	Analysis Started on	24/03/2022	Analysis completed on	30/03/2022

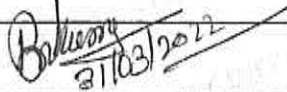
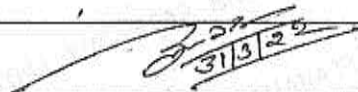
*****Test Results*****

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

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

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

Sample Drawn By - Angad Munda
Tested By - Shivani Kumari Singh (Lab Analyst)

 21/03/2022	 31/3/22
Verified by	Issued by
Brij Nandan Kumar	Umesh Das
Section In-Charge	Technical Manager

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Technical Manager
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Branch Office :- Jamshedpur Dhanbad Hazaribag Pakur

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ISO 45001:2018



ISO 9001:2015



YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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



TC-4032

Test Certificate

ULR (Unique Lab Report) No.			T	C	4	0	3	2	2	2	0	0	0	0	0	4	7	4	F	
Discipline	Biological	Group		Water			Sample Description				Ground Water									
Report Release Date		31 st March, 2022						Report ID			YBAEEL-220322-183133- GW01									
W. Order/ JSPCB App. No.		3030005781						Work Order Date			18.12.2021									
Type of Industry(If any)		Thermal Power Plant						Job code/ Ref. no.			YBAEEL/WA/L/M/Mar-22/05									
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand																		
Sampling Date		24/03/2022						Mode of sample collection				By YBAEEL Team								
Sampling Protocol		IS : 1622:1982, R - 2019						Sample Code				220324-GW-A01								
Sampling Location		Srirampur Bore well						Sampling Source				Ground Water								
Sample pkg. Condition		Sealed Pack in PP Bottle						Sample Quantity				250 ml								
Meteorological Cond. of Field			W.C.- Clear						RH % - 45						Temp. - 31°C					
Sample receipt Date		24/03/2022		Analysis Started on			25/03/2022			Analysis completed on			27/03/2022							

*****Test Results*****

Sl	Parameter	Test Method	Units	Results	Limits
1.	Total coliform	APHA 9221B 23 rd Edition 2017	MPN/100 ml	BDL (MDL 1.1)	Shall not to be Detectable in any 100 ml sample
2.	Fecal coliform	APHA 9221E 23 rd Edition 2017	MPN/100 ml	BDL (MDL 1.1)	
3.	E coli	APHA 9221-F 22 nd Edition 2012	MPN/100 ml	BDL (MDL 1.1)	

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

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

Sample Drawn By - Angad Munda
Tested By - Madhuri Sinha (Lab Analyst)

 Verified by Mukesh Kumar Section In-Charge Microbiological Section Yugantar Bharati Analytical & Environmental Engineering Laboratory		 Issued by Umesh Das Technical Manager Yugantar Bharati Analytical & Environmental Engineering Laboratory	
Branch Office :-	Jamshedpur	Dhanbad	Hazaribag



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

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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



TC-4032

Test Certificate

ULR (Unique Lab Report) No.			T	C	4	0	3	2	2	2	0	0	0	0	0	4	9	2	F
Discipline	Chemical	Group	Water			Sample Description								Ground Water					
Report Release Date		31 st March, 2022					Report ID					YBAEEL-220322-183133- GW02							
W. Order/ JSPCB App. No.		3030005781					Work Order Date					18.12.2021							
Type of Industry(if any)		Thermal Power Plant					Job code/ Ref. no.					YBAEEL/WA/L/C/Mar-22/16							
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand																	
Sampling Date		24/03/2022					Mode of sample collection					By YBAEEL Team							
Sampling Protocol		IS : 3025 (Part-1) 1987, R-2003					Sample Code					220324-GW-A02							
Sampling Location		Padampur Borewell					Sampling Source					Ground Water							
Sample pkg. Condition		Sealed Pack in PP Bottle					Sample Quantity					3000 ml							
Meteorological Cond. of Field		W.C.- Clear					RH % - 45					Temp. - 31°C							
Sample receipt Date		24/03/2022		Analysis Started on			24/03/2022			Analysis completed on			30/03/2022						

*****Test Results*****

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	pH value	IS 3025 (P-11):2002	pH	1.77	6.79	6.5-8.5
2.	Colour	IS 3025 (P-04):1983	Hazen	--	5	5-15
3.	Conductivity	IS 3025 (P-14):2013	µs/cm	1.90	520.0	--
4.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23):2003	mg/l	3.68	104.0	200-600
5.	Total Hardness (as CaCO ₃)	IS 3025 (P-21):2009	mg/l	1.35	170.0	200-600
6.	Total dissolved solids	IS 3025 (P-16):2006	mg/l	2.85	252.0	500-2000
7.	Chlorine Residual	IS 3025 (P-26):2003	mg/l	30.64	BDL (MDL 0.07)	0.2-1
8.	Chloride (as Cl ⁻)	IS 3025 (P-32):2003	mg/l	3.41	44.5	250-1000
9.	Fluoride (as F ⁻)	APHA 4500 F-C 23 rd edition 2017	mg/l	12.22	0.4	1.0-1.5
10.	Nitrate (as NO ₃ ⁻)	APHA 4500 NO ₃ ⁻ (B) 23 rd edition 2017	mg/l	11.33	12.48	45-No relaxation
11.	Calcium (as Ca ²⁺)	IS 3025 (P-40): 2003	mg/l	4.19	48.0	75-200
12.	Magnesium (as Mg ²⁺)	APHA 3500 Mg B : 2017	mg/l	1.90	12.15	30-100
13.	Sulphate (as SO ₄ ²⁻)	IS 3025 (P-24):2003	mg/l	5.42	40.1	200-400
14.	Sodium (as Na ⁺)	APHA 3111 B 23 rd edition 2017	mg/l	16.98	24.0	--
15.	Potassium (as K ⁺)	APHA 3111 B 23 rd edition 2017	mg/l	9.21	2.8	--

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

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
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Remarks	Sample complies with prescribed limits.

Sample Drawn By : Angad Munda
Tested By : Prem Kumar (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Technical Manager
Yugantar Bharati Analytical &
Environmental Engineering Laboratory



Branch Office : - Jamshedpur | Dhanbad | Hazaribag | Pakur

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ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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

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

Test Certificate

Discipline	Chemical	Group	Water	Sample Description	Ground Water
Report Release Date	31 st March, 2022			Report ID	YBAEEL-220322-183133- GW02
W. Order/ JSPCB App. No.	3030005781			Work Order Date	18.12.2021
Type of Industry(If any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/C/Mar-22/16
Report issue to	M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand				
Sampling Date	24/03/2022		Mode of sample collection	By YBAEEL Team	
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003		Sample Code	220324-GW-A02	
Sampling Location	Padampur Borewell		Sampling Source	Ground Water	
Sample pkg. Condition	Sealed Pack in PP Bottle		Sample Quantity	3000 ml	
Meteorological Cond. of Field	W.C.- Clear		RH % - 45	Temp. - 31°C	
Sample receipt Date	24/03/2022	Analysis Started on	24/03/2022	Analysis completed on	30/03/2022

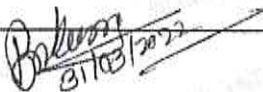
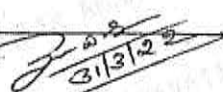
*****Test Results*****

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

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

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature $27 \pm 2^\circ\text{C}$ and Relative Humidity $65 \pm 5\%$ in all testing areas as per IS 196:1966 (C).
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Remarks	Sample complies with prescribed limits.

Sample Drawn By : Angad Munda
Tested By : Prem Kumar (Lab Analyst)

 31/03/2022	 31/3/22
Verified by	Issued by
Brij Nandan Kumar	Umesh Das
Section In-Charge	Technical Manager

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Technical Manager
Yugantar Bharati Analytical &
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ISO 45001:2018



ISO 9001:2015



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Jharkhand State Pollution Control Board (JSPCB)
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TC-4032

Test Certificate

ULR (Unique Lab Report) No.			T	C	4	0	3	2	2	2	0	0	0	0	0	4	9	4	F	
Discipline	Chemical	Group	Water		Sample Description				Residue & Contaminants in Water											
Report Release Date		31 st March, 2022				Report ID				YBAEEL-220322-183133– GW02										
W. Order/ JSPCB App. No.		3030005781				Work Order Date				18.12.2021										
Type of Industry(If any)		Thermal Power Plant				Job code/ Ref. no.				YBAEEL/WA/L/R/Mar-22/06										
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand																		
Sampling Date		24/03/2022				Mode of sample collection				By YBAEEL Team										
Sampling Protocol		IS : 3025 (Part-1) 1987, R-2003				Sample Code				220324-GW-A02										
Sampling Location		Padampur Borewell				Sampling Source				Ground Water										
Sample pkg. Condition		Sealed Pack in PP Bottle				Sample Quantity				3000 ml										
Meteorological Cond. of Field		W.C.– Clear				RH % - 45				Temp. - 31°C										
Sample receipt Date		24/03/2022		Analysis Started on		24/03/2022		Analysis completed on		30/03/2022										

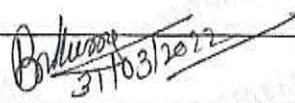
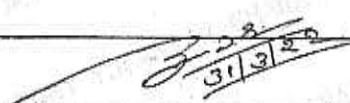
*****Test Results*****

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Arsenic (as As)	APHA 3114 B 23 rd edition 2017	mg/l	10.34	BDL (MDL 0.003)	0.01-No relaxation
2.	Copper (as Cu)	APHA 3111 B 23 rd edition 2017	mg/l	11.11	BDL (MDL 0.01)	0.05-1.5
3.	Iron (as Fe)	APHA 3111 B 23 rd edition 2017	mg/l	2.34	0.72	1.0-No relaxation
4.	Lead (as Pb)	APHA 3111 B 23 rd edition 2017	mg/l	10.64	BDL (MDL 0.02)	0.01-No relaxation
5.	Zinc (as Zn)	APHA 3111 B 23 rd edition 2017	mg/l	15.35	0.19	5-15
6.	Cadmium (as Cd)	APHA 3111 B 23 rd edition 2017	mg/l	5.0	BDL (MDL 0.02)	0.003-No relaxation
7.	Mercury (as Hg)	APHA 3112 B 23 rd edition 2017	mg/l	8.47	BDL (MDL 0.003)	0.001-No relaxation
8.	Chromium (as Cr)	APHA 3111 B 23 rd edition 2017	mg/l	12.63	0.16	0.05-No relaxation
9.	Nickel (as Ni)	APHA 3111 B 23 rd edition 2017	mg/l	13.72	BDL (MDL 0.02)	0.02-No relaxation
10.	Cobalt (Co)	APHA 3111 B 23 rd edition 2017	mg/l	28.33	BDL (MDL 0.03)	--

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

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
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Remarks	Sample complies with prescribed limits.

Sample Drawn By : Angad Munda
Tested By : Shivani Kumari Singh (Lab Analyst)

 Verified by Brij Nandan Kumar Section In-Charge		 Issued by Umesh Das Technical Manager	
--	--	---	--

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Technical Manager
Yugantar Bharati Analytical &
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Certified by :- An ISO 9001:2015 & ISO 45001:2018

Test Certificate

Discipline	Chemical	Group	Water	Sample Description	Residue & Contaminants in Water	
Report Release Date	31 st March, 2022			Report ID	YBAEEL-220322-183133- GW02	
W. Order/ JSPCB App. No.	3030005781			Work Order Date	18.12.2021	
Type of Industry(If any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/R/Mar-22/06	
Report Issue to	M/s Adhunik Power & Natural Resources Ltd. VIII.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand					
Sampling Date	24/03/2022			Mode of sample collection	By YBAEEL Team	
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Sample Code	220324-GW-A02	
Sampling Location	Padampur Borewell			Sampling Source	Ground Water	
Sample pkg. Condition	Sealed Pack in PP Bottle			Sample Quantity	3000 ml	
Meteorological Cond. of Field	W.C.- Clear			RH % - 45	Temp. - 31°C	
Sample receipt Date	24/03/2022	Analysis Started on	24/03/2022	Analysis completed on	30/03/2022	

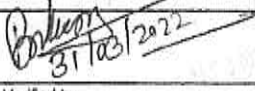
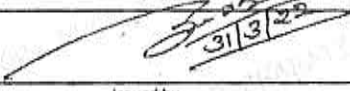
*****Test Results*****

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

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

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

Sample Drawn By : Angad Munda
Tested By : Shivani Kumari Singh (Lab Analyst)

 31/03/2022	 31/3/22
Verified by	Issued by
Brij Nandan Kumar	Umesh Das
Section In-Charge	Technical Manager

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Technical Manager
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

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ISO 45001:2018



ISO 9001:2015



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ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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



TC-4032

Test Certificate

ULR (Unique Lab Report) No.			T	C	4	0	3	2	2	2	0	0	0	0	4	7	5	F
Discipline	Biological	Group	Water			Sample Description				Ground Water								
Report Release Date		31 st March, 2022				Report ID				YBAEEL-220322-183133- GW02								
W. Order/ JSPCB App. No.		3030005781				Work Order Date				18.12.2021								
Type of Industry(if any)		Thermal Power Plant				Job code/ Ref. no.				YBAEEL/WA/L/M/Mar-22/05								
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. VIII.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand																
Sampling Date		24/03/2022				Mode of sample collection				By YBAEEL Team								
Sampling Protocol		IS : 1622:1982, R - 2019				Sample Code				220324-GW-A02								
Sampling Location		Hariharpur Bore well				Sampling Source				Ground Water								
Sample pkg. Condition		Sealed Pack in PP Bottle				Sample Quantity				250 ml								
Meteorological Cond. of Field		W.C.- Clear				RH % - 45				Temp. - 31°C								
Sample receipt Date		24/03/2022		Analysis Started on		25/03/2022		Analysis completed on		27/03/2022								

*****Test Results*****

Sl	Parameter	Test Method	Units	Results	Limits
1.	Total coliform	APHA 9221B 23 rd Edition 2017	MPN/100 ml	BDL (MDL 1.1)	Shall not to be Detectable in any 100 ml sample
2.	Fecal coliform	APHA 9221E 23 rd Edition 2017	MPN/100 ml	BDL (MDL 1.1)	
3.	E coli	APHA 9221-F 22 nd Edition 2012	MPN/100 ml	BDL (MDL 1.1)	

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

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

Sample Drawn By : Angad Munda
Tested By : Madhuri Sinha (Lab Analyst)

Verified by Mukesh Kumar Section In-Charge	Authorized Signatory Microbiological Section Yugantar Bharati Analytical & Environmental Engineering Laboratory	Issued by Umesh Das Technical Manager	Technical Manager Yugantar Bharati Analytical & Environmental Engineering Laboratory
--	---	---	---

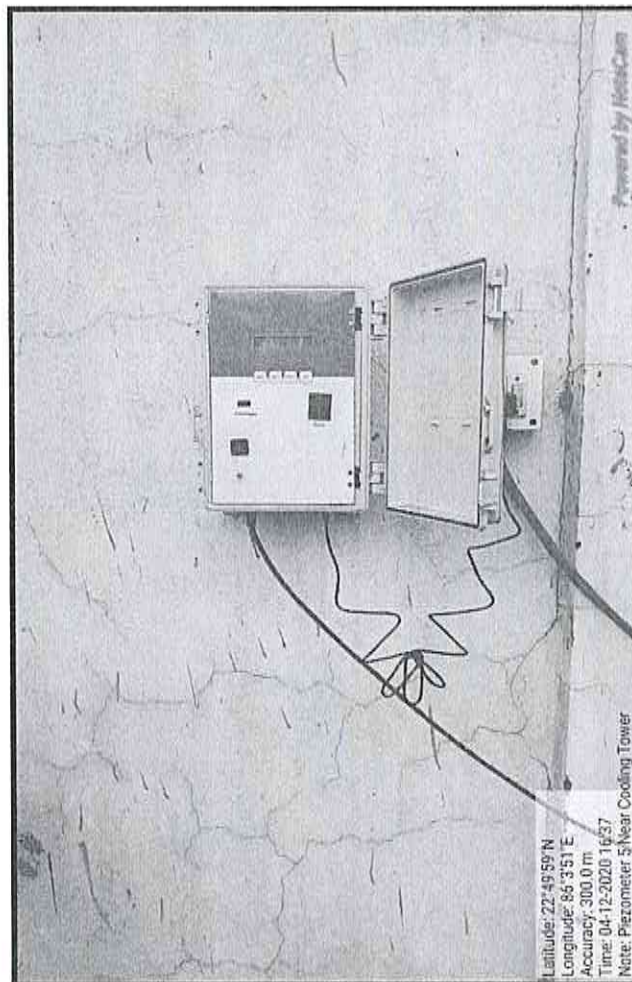


Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

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Piezometer At Plant premises





YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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



TC-4032

Test Certificate

ULR (Unique Lab Report) No.			T	C	4	0	3	2	2	2	0	0	0	0	0	4	9	5	F
Discipline	Chemical	Group	Water			Sample Description				Surface Water									
Report Release Date		31 st March, 2022				Report ID				YBAEEL-220322-183133– SW01									
W. Order/ JSPCB App. No.		3030005781				Work Order Date				18.12.2021									
Type of Industry(If any)		Thermal Power Plant				Job code/ Ref. no.				YBAEEL/WA/L/C/Mar-22/17									
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. VIII.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand																	
Sampling Date		24/03/2022				Mode of sample collection				By YBAEEL Team									
Sampling Protocol		IS : 3025 (Part-1) 1987, R-2003				Sample Code				220324-SW-A01									
Sampling Location		Padampur Pond				Sampling Source				Surface Water									
Sample pkg. Condition		Sealed Pack in PP Bottle				Sample Quantity				3000 ml									
Meteorological Cond. of Field		W.C.– Clear				RH % - 45				Temp. - 31°C									
Sample receipt Date		24/03/2022		Analysis Started on			24/03/2022			Analysis completed on			30/03/2022						

*****Test Results*****

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	pH value	IS 3025 (P-11):2002	pH	1.77	7.72	6.5-8.5
2.	Conductivity	IS 3025 (P-14):2013	µs/cm	1.90	726.0	--
3.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23):2003	mg/l	3.68	216.0	--
4.	Total Hardness (as CaCO ₃)	IS 3025 (P-21):2009	mg/l	1.35	166.0	--
5.	Oxygen (dissolved)	IS 3025 (P-38):2003	mg/l	6.5	4.3	5
6.	Total dissolved solids	IS 3025 (P-16):2006	mg/l	2.85	346.0	--
7.	Total suspended solids	IS 3025 (P-17):2012	mg/l	5.7	30.0	--
8.	Oil and grease	IS 3025 (P-39):2003	mg/l	8.79	8.4	--
9.	BOD	IS 3025 (P-44):2009	mg/l	11.04	2.6	3
10.	COD	IS 3025 (P-58):2006	mg/l	8.75	52.0	--
11.	Chlorine Residual	IS 3025 (P-26):2003	mg/l	30.64	BDL (MDL 0.07)	--
12.	Chloride (as Cl ⁻)	IS 3025 (P-32):2003	mg/l	3.41	75.0	--
13.	Fluoride (as F ⁻)	APHA 4500 F-C 23 rd edition 2017	mg/l	12.22	1.0	--
14.	Nitrate (as NO ₃ ⁻)	APHA 4500 NO ₃ - (B) 23 rd edition 2017	mg/l	11.33	1.20	--
15.	Sulphate (as SO ₄ ²⁻)	IS 3025 (P-24):2003	mg/l	5.42	24.3	--
16.	Sodium (as Na ⁺)	APHA 3111 B 23 rd edition 2017	mg/l	16.98	40.0	--
17.	Potassium (as K ⁺)	APHA 3111 B 23 rd edition 2017	mg/l	9.21	3.0	--

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

Limit is specified as	G.S.R. 742 (E) 25 th September, 2000.
Abbreviation	MDL : Minimum detection limit. BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 198:1986 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise The liability of the laboratory is limited to the invoiced amount. All disputes are subject to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits, except parameter Oxygen (dissolved) Serial no. 5.

Sample Drawn By : Angad Munda
Tested By : Prem Kumar (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Technical Manager
Yugantar Bharati Analytical &
Environmental Engineering Laboratory



Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

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

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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

Test Certificate

Discipline	Chemical	Group	Water	Sample Description	Surface Water
Report Release Date	31 st March, 2022			Report ID	YBAEEL-220322-183133- SW01
W. Order/ JSPCB App. No.	3030005781			Work Order Date	18.12.2021
Type of Industry (if any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/C/Mar-22/17
Report Issue to	M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand				
Sampling Date	24/03/2022			Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Sample Code	220324-SW-A01
Sampling Location	Padampur Pond			Sampling Source	Surface Water
Sample pkg. Condition	Sealed Pack in PP Bottle			Sample Quantity	3000 ml
Meteorological Cond. of Field	W.C.- Clear			RH % - 45	Temp. - 31°C
Sample receipt Date	24/03/2022	Analysis Started on	24/03/2022	Analysis completed on	30/03/2022

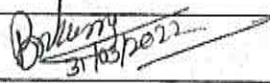
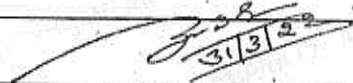
*****Test Results*****

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Odour	IS 3025 (P-05):2002	--	--	Agree.	--
2.	Ammonia Nitrogen	IS:3025 (Part-34):1988	mg/l	--	0.6	--
3.	Phenols (C ₆ H ₅ OH)	IS 3025 (P-43):1992	mg/l	--	0.24	--

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

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

Sample Drawn By : . Angad Munda
Tested By : . Prem Kumar (Lab Analyst)

	
Verified by	Issued by
Brij Nandan Kumar	Umesh Das
Section In-Charge	Technical Manager

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Technical Manager
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Branch Office : - Jamshedpur Dhanbad Hazaribag Pakur

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

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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



TC-4032

Test Certificate

ULR (Unique Lab Report) No.			T	C	4	0	3	2	2	2	0	0	0	0	0	4	9	7	F
Discipline	Chemical	Group	Water		Sample Description								Residue & Contaminants in Water						
Report Release Date		31 st March, 2022					Report ID					YBAEEL-220322-183133– SW01							
W. Order/ JSPCB App. No.		3030005781					Work Order Date					18.12.2021							
Type of Industry(if any)		Thermal Power Plant					Job code/ Ref. no.					YBAEEL/WA/L/R/Mar-22/07							
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand																	
Sampling Date		24/03/2022					Mode of sample collection					By YBAEEL Team							
Sampling Protocol		IS : 3025 (Part-1) 1987, R-2003					Sample Code					220324-SW-A01							
Sampling Location		Padampur Pond					Sampling Source					Surface Water							
Sample pkg. Condition		Sealed Pack in PP Bottle					Sample Quantity					3000 ml							
Meteorological Cond. of Field		W.C.– Clear					RH % - 45					Temp. - 31°C							
Sample recelpt Date		24/03/2022		Analysis Started on			24/03/2022			Analysis completed on			30/03/2022						

*****Test Results*****

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Arsenic (as As)	APHA 3114 B 23 rd edition 2017	mg/l	10.34	BDL (MDL 0.003)	--
2.	Copper (as Cu)	APHA 3111 B 23 rd edition 2017	mg/l	11.11	BDL (MDL 0.01)	--
3.	Iron (as Fe)	APHA 3111 B 23 rd edition 2017	mg/l	2.34	0.03	--
4.	Lead (as Pb)	APHA 3111 B 23 rd edition 2017	mg/l	10.64	BDL (MDL 0.02)	--
5.	Zinc (as Zn)	APHA 3111 B 23 rd edition 2017	mg/l	15.35	0.03	--
6.	Cadmium (as Cd)	APHA 3111 B 23 rd edition 2017	mg/l	5.0	BDL (MDL 0.02)	--
7.	Mercury (as Hg)	APHA 3112 B 23 rd edition 2017	mg/l	8.47	BDL (MDL 0.003)	--
8.	Chromium (as Cr)	APHA 3111 B 23 rd edition 2017	mg/l	12.53	0.09	--
9.	Nickel (as Ni)	APHA 3111 B 23 rd edition 2017	mg/l	13.72	BDL (MDL 0.02)	--
10.	Cobalt (Co)	APHA 3111 B 23 rd edition 2017	mg/l	28.33	BDL (MDL 0.03)	--

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

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

Sample Drawn By : Angad Munda
Tested By : Shivani Kumari Singh (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Technical Manager
Yugantar Bharati Analytical &
Environmental Engineering Laboratory



Branch Office : - Jamshedpur | Dhanbad | Hazaribag | Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand
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ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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

Test Certificate

Discipline	Chemical	Group	Water	Sample Description	Residue & Contaminants in Water	
Report Release Date	31 st March, 2022			Report ID	YBAEEL-220322-183133– SW01	
W. Order/ JSPCB App. No.	3030005781			Work Order Date	18.12.2021	
Type of Industry(if any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/R/Mar-22/07	
Report Issue to	M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand					
Sampling Date	24/03/2022			Mode of sample collection	By YBAEEL Team	
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Sample Code	220324-SW-A01	
Sampling Location	Padampur Pond			Sampling Source	Surface Water	
Sample pkg. Condition	Sealed Pack in PP Bottle			Sample Quantity	3000 ml	
Meteorological Cond. of Field	W.C.– Clear			RH % - 45	Temp. - 31°C	
Sample receipt Date	24/03/2022	Analysis Started on	24/03/2022	Analysis completed on	30/03/2022	

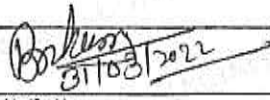
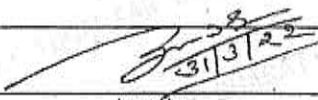
*****Test Results*****

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

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

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

Sample Drawn By : Angad Munda
Tested By : Shivani Kumari Singh (Lab Analyst)

 31/03/2022	 31/3/22
Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Technical Manager
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Branch Office : - Jamshedpur | Dhanbad | Hazaribag | Pakur

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



TC-4032

Test Certificate

ULR (Unique Lab Report) No.			T	C	4	0	3	2	2	2	0	0	0	0	0	4	7	6	F
Discipline	Biological	Group	Water			Sample Description				Surface Water									
Report Release Date		31 st March, 2022				Report ID				YBAEEL-220322-183133- SW01									
W. Order/ JSPCB App. No.		3030005781				Work Order Date				18.12.2021									
Type of Industry (if any)		Thermal Power Plant				Job code/ Ref. no.				YBAEEL/WA/L/M/Mar-22/06									
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand																	
Sampling Date		24/03/2022				Mode of sample collection				By YBAEEL Team									
Sampling Protocol		IS : 1622:1982, R - 2019				Sample Code				220324-SW-A01									
Sampling Location		Padampur Pond				Sampling Source				Surface Water									
Sample pkg. Condition		Sealed Pack in PP Bottle				Sample Quantity				250 ml									
Meteorological Cond. of Field		W.C.- Clear				RH % - 45				Temp. - 31°C									
Sample receipt Date		24/03/2022		Analysis Started on		25/03/2022		Analysis completed on		28/03/2022									

*****Test Results*****

Sl	Parameter	Test Method	Units	Results	Limits
1.	Total coliform	APHA 9221B 23 rd Edition 2017	MPN/100 ml	330	--
2.	Fecal coliform	APHA 9221E 23 rd Edition 2017	MPN/100 ml	230	2500

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

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

Sample Drawn By : Angad Munda
Tested By : Madhuri Sinha (Lab Analyst)

Verified by	Authorized Signatory	Issued by	Technical Manager
Mukesh Kumar	Microbiological Section	Umesh Das	Yugantar Bharati Analytical & Environmental Engineering Laboratory
Section In-Charge		Technical Manager	



Branch Office : - Jamshedpur | Dhanbad | Hazaribag | Ennore

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



TC-4032

Test Certificate

ULR (Unique Lab Report) No.			T	C	4	0	3	2	2	2	0	0	0	0	0	4	9	6	F
Discipline	Chemical	Group	Water			Sample Description							Surface Water						
Report Release Date		31 st March, 2022					Report ID					YBAEEL-220322-183133– SW02							
W. Order/ JSPCB App. No.		3030005781					Work Order Date					18.12.2021							
Type of Industry(If any)		Thermal Power Plant					Job code/ Ref. no.					YBAEEL/WA/L/C/Mar-22/17							
Report issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand																	
Sampling Date		24/03/2022					Mode of sample collection					By YBAEEL Team							
Sampling Protocol		IS : 3025 (Part-1) 1987, R-2003					Sample Code					220324-SW-A02							
Sampling Location		Srirampur Pond					Sampling Source					Surface Water							
Sample pkg. Condition		Sealed Pack in PP Bottle					Sample Quantity					3000 ml							
Meteorological Cond. of Field		W.C.– Clear					RH % - 45					Temp. - 31°C							
Sample receipt Date		24/03/2022		Analysis Started on			24/03/2022			Analysis completed on			30/03/2022						

*****Test Results*****

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	pH value	IS 3025 (P-11):2002	pH	1.77	7.49	6.5-8.5
2.	Conductivity	IS 3025 (P-14):2013	µs/cm	1.90	830.0	--
3.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23):2003	mg/l	3.68	244.0	--
4.	Total Hardness (as CaCO ₃)	IS 3025 (P-21):2009	mg/l	1.35	330.0	--
5.	Oxygen (dissolved)	IS 3025 (P-38):2003	mg/l	6.5	4.6	5
6.	Total dissolved solids	IS 3025 (P-16):2006	mg/l	2.85	396.0	--
7.	Total suspended solids	IS 3025 (P-17):2012	mg/l	5.7	10.0	--
8.	Oil and grease	IS 3025 (P-39):2003	mg/l	8.79	6.0	--
9.	BOD	IS 3025 (P-44):2009	mg/l	11.04	2.4	3
10.	COD	IS 3025 (P-58):2006	mg/l	8.75	48.0	--
11.	Chlorine Residual	IS 3025 (P-26):2003	mg/l	30.64	BDL (MDL 0.07)	--
12.	Chloride (as Cl ⁻)	IS 3025 (P-32):2003	mg/l	3.41	26.5	--
13.	Fluoride (as F ⁻)	APHA 4500 F-C 23 rd edition 2017	mg/l	12.22	1.0	--
14.	Nitrate (as NO ₃ ⁻)	APHA 4500 NO ₃ ⁻ (B) 23 rd edition 2017	mg/l	11.33	0.29	--
15.	Sulphate (as SO ₄ ²⁻)	IS 3025 (P-24):2003	mg/l	5.42	84.5	--
16.	Sodium (as Na ⁺)	APHA 3111 B 23 rd edition 2017	mg/l	16.98	90.0	--
17.	Potassium (as K ⁺)	APHA 3111 B 23 rd edition 2017	mg/l	9.21	8.0	--

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

Limit is specified as	G.S.R. 742 (E) 25 th September, 2000.
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits, except parameter Oxygen (dissolved) Serial no. 5.

Sample Drawn By : Angad Munda
Tested By : Prem Kumar (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory,
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Technical Manager
Yugantar Bharati Analytical &
Environmental Engineering Laboratory



Branch Office : - Jamshedpur | Dhanbad | Hazaribag | Pakur

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

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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

Test Certificate

Discipline	Chemical	Group	Water	Sample Description	Surface Water
Report Release Date	31 st March, 2022			Report ID	YBAEEL-220322-183133- SW02
W. Order/ JSPCB App. No.	3030005781			Work Order Date	18.12.2021
Type of Industry (If any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/C/Mar-22/17
Report Issue to	M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand				
Sampling Date	24/03/2022			Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Sample Code	220324-SW-A02
Sampling Location	Srirampur Pond			Sampling Source	Surface Water
Sample pkg. Condition	Sealed Pack in PP Bottle			Sample Quantity	3000 ml
Meteorological Cond. of Field	W.C.- Clear			RH % - 45	Temp. - 31°C
Sample receipt Date	24/03/2022	Analysis Started on	24/03/2022	Analysis completed on	30/03/2022

*****Test Results*****

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Odour	IS 3025 (P-05):2002	--	--	Agree.	--
2.	Ammonia Nitrogen	IS:3025 (Part-34):1988	mg/l	--	0.8	--
3.	Phenols (C ₆ H ₅ OH)	IS 3025 (P-43):1992	mg/l	--	0.075	--

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

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

Sample Drawn By : Angad Munda
 Tested By : Prem Kumar (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory
 Chemical Section
 Yugantar Bharati Analytical &
 Environmental Engineering Laboratory

Technical Manager
 Yugantar Bharati Analytical &
 Environmental Engineering Laboratory

Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

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ISO 45001:2018



ISO 9001:2015



YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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



TC-4032

Test Certificate

ULR (Unique Lab Report) No.			T	C	4	0	3	2	2	2	0	0	0	0	0	4	9	8	F
Discipline	Chemical	Group	Water			Sample Description				Residue & Contaminants in Water									
Report Release Date		31 st March, 2022					Report ID				YBAEEL-220322-183133- SW02								
W. Order/ JSPCB App. No.		3030005781					Work Order Date				18.12.2021								
Type of Industry(If any)		Thermal Power Plant					Job code/ Ref. no.				YBAEEL/WA/L/R/Mar-22/07								
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand																	
Sampling Date		24/03/2022					Mode of sample collection				By YBAEEL Team								
Sampling Protocol		IS : 3025 (Part-1) 1987, R-2003					Sample Code				220324-SW-A02								
Sampling Location		Srirampur Pond					Sampling Source				Surface Water								
Sample pkg. Condition		Sealed Pack in PP Bottle					Sample Quantity				3000 ml								
Meteorological Cond. of Field		W.C.- Clear					RH % - 45				Temp. - 31°C								
Sample receipt Date		24/03/2022		Analysis Started on			24/03/2022			Analysis completed on			30/03/2022						

*****Test Results*****

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Arsenic (as As)	APHA 3114 B 23 rd edition 2017	mg/l	10.34	BDL (MDL 0.003)	--
2.	Copper (as Cu)	APHA 3111 B 23 rd edition 2017	mg/l	11.11	BDL (MDL 0.01)	--
3.	Iron (as Fe)	APHA 3111 B 23 rd edition 2017	mg/l	2.34	0.45	--
4.	Lead (as Pb)	APHA 3111 B 23 rd edition 2017	mg/l	10.64	BDL (MDL 0.02)	--
5.	Zinc (as Zn)	APHA 3111 B 23 rd edition 2017	mg/l	15.35	0.13	--
6.	Cadmium (as Cd)	APHA 3111 B 23 rd edition 2017	mg/l	5.0	BDL (MDL 0.02)	--
7.	Mercury (as Hg)	APHA 3112 B 23 rd edition 2017	mg/l	8.47	BDL (MDL 0.003)	--
8.	Chromium (as Cr)	APHA 3111 B 23 rd edition 2017	mg/l	12.53	0.03	--
9.	Nickel (as Ni)	APHA 3111 B 23 rd edition 2017	mg/l	13.72	BDL (MDL 0.02)	--
10.	Cobalt (Co)	APHA 3111 B 23 rd edition 2017	mg/l	28.33	BDL (MDL 0.03)	--

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

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

Sample Drawn By : Angad Munda
Tested By : Shivani Kumari Singh (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Technical Manager
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Branch Office : - Jamshedpur | Dhanbad | Hazaribag | Pakur

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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

Test Certificate

Discipline	Chemical	Group	Water	Sample Description	Residue & Contaminants in Water
Report Release Date	31 st March, 2022			Report ID	YBAEEL-220322-183133- SW02
W. Order/ JSPCB App. No.	3030005781			Work Order Date	18.12.2021
Type of Industry (if any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/R/Mar-22/07
Report Issue to	M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand				
Sampling Date	24/03/2022			Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Sample Code	220324-SW-A02
Sampling Location	Srirampur Pond			Sampling Source	Surface Water
Sample pkg. Condition	Sealed Pack in PP Bottle			Sample Quantity	3000 ml
Meteorological Cond. of Field	W.C.- Clear			RH % - 45	Temp. - 31°C
Sample receipt Date	24/03/2022	Analysis Started on	24/03/2022	Analysis completed on	30/03/2022

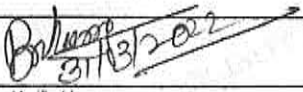
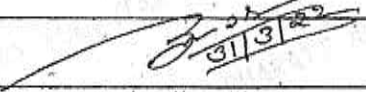
*****Test Results*****

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

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

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

Sample Drawn By : Angad Munda
Tested By : Shilvani Kumari Singh (Lab Analyst)

	
Verified by	Issued by
Brij Nandan Kumar	Umesh Das
Section In-Charge	Technical Manager

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Technical Manager
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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



TC-4032

Test Certificate

ULR (Unique Lab Report) No.			T	C	4	0	3	2	2	2	0	0	0	0	4	7	7	F
Discipline	Biological	Group	Water			Sample Description				Surface Water								
Report Release Date		31 st March, 2022				Report ID				YBAEEL-220322-183133- SW02								
W. Order/ JSPCB App. No.		3030005781				Work Order Date				18.12.2021								
Type of Industry(If any)		Thermal Power Plant				Job code/ Ref. no.				YBAEEL/WA/L/M/Mar-22/06								
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. VIII.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand																
Sampling Date		24/03/2022				Mode of sample collection				By YBAEEL Team								
Sampling Protocol		IS : 1622:1982, R - 2019				Sample Code				220324-SW-A02								
Sampling Location		Srirampur Pond				Sampling Source				Surface Water								
Sample pkg. Condition		Sealed Pack in PP Bottle				Sample Quantity				250 ml								
Meteorological Cond. of Field		W.C.- Clear				RH % - 45				Temp. - 31°C								
Sample receipt Date		24/03/2022		Analysis Started on			25/03/2022			Analysis completed on			28/03/2022					

*****Test Results*****

Sl	Parameter	Test Method	Units	Results	Limits
1.	Total coliform	APHA 9221B 23 rd Edition 2017	MPN/100 ml	350	--
2.	Fecal coliform	APHA 9221E 23 rd Edition 2017	MPN/100 ml	49	2500

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

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

Sample Drawn By : Angad Munda
Tested By : Madhuri Sinha (Lab Analyst)

Verified by Mukesh Kumar Section In-Charge	Authorized Signatory Microbiological Section Yugantar Bharati Analytical & Environmental Engineering Laboratory	Issued by Umesh Das Technical Manager	Yugantar Bharati Analytical & Environmental Engineering Laboratory
Branch Office :- Jamshedpur	Dhanbad	Hazaribag	Rohtak



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

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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



Test Certificate

ULR (Unique Lab Report) No.			T	C	4	0	3	2	2	2	0	0	0	0	4	8	2	F		
Discipline	Chemical	Group	Atmospheric Pollution					Sample Description					Stationary Source Emission							
Report Release Date		31 st March, 2022							Report ID					YBAEEL-220322-183133- S2						
W. Order/ JSPCB App. No.		3030005781							Work Order Date					18.12.2021						
Type of Industry(if any)		Thermal Power Plant							Job code/ Ref. no.					YBAEEL/WA/L/A/Mar-22/38						
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand																		
Sampling Period		21/03/2022							Mode of sample collection					By YBAEEL Team						
Sampling Protocol		IS: 11255 & CPCB Guideline (Lats/80/2013-14)																		
Meteorological Cond. of Field		W.C.- Clear							RH % - 45					Temp.-34°C						
Sample receipt Date		23/03/2022			Analysis Started on			23/03/2022			Analysis completed on			26/03/2022						

General Information

As observed while sampling		As reported by customer	
Location	Sampling port hole	Type of fuel Used	Coal
Platform	Permanent	Quantity of Fuel Used (During Sampling)	163 Ton/Hr.
Stack Description (Shape & Material)	Circular / RCC	Total production Capacity	263 MW
Sampling port	Available	Height of Stack from ground level	275 mtr.
Stack Identification	Unit - II	Inner Diameter of Stack	4.2 mtr.
Height of port hole from Ground level	90 mtr.	Pollution Controlling Device (if any)	ESP
Running Oven during sampling (if any)	N/A	Total No. of Oven (if any)	N/A

*****Test Results*****

Sl	Parameters	Test Method	Units	MU %	Results	Limits
1.	Stack gas Temperature	IS 11255 (Part 3)2008	k	--	401.0	-
2.	Stack gas Velocity	IS 11255 (Part 3)2008	m/s	--	25.4	-
3.	Volumetric Flow Rate	IS 11255 (Part 3)2008	Nm ³ /hr	--	908186.4	-
3.	Particulate Matter (PM)	IS 11255 (Part 1)2009	mg/Nm ³	2.12	40.37	50
4.	Sulphure Dioxide (SO ₂)	IS 11255 (Part 2)2009	mg/Nm ³	3.06	1284.8	600
5.	Oxide of Nitrogen (as NO _x)	IS 11255 (Part 7)2005 RA 2012	mg/Nm ³	2.70	696.8	450
6.	Carbon Monoxide (CO)	IS 13270:1992 (RA 2009)	%	--	BDL (MDL 0.2)	-

Emission Rate

1.	Particulate Matter (PM)	IS 11255 (Part 1)2009	kg/hr.	36.66	--
2.	Sulphure Dioxide (SO ₂)	IS 11255 (Part 2)2009	kg/hr.	1166.85	--
3.	Oxide of Nitrogen (as NO _x)	IS 11255 (Part 7)2005 RA 2012	kg/hr.	632.8	--

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

Limit is specified as	Environmental (Protection) Rule - 1986.
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 195:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility This report, in full or in part, shall not be used for advertising or as evidence in any court of law This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits, except parameter Sulphure Dioxide & Oxide of Nitrogen Serial No. 4 & 5.

Sample Drawn By - Angad Munda
Tested By - Amit Kumar Sinha (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory
Atmospheric Pollution
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Technical Manager
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

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

YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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

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

Test Certificate

Discipline	Chemical	Group	Atmospheric Pollution	Sample Description	Stationary Source Emission
Report Release Date	31 st March, 2022			Report ID	YBAEEL-220322-183133- S2
W. Order/ JSPCB App. No.	3030005781			Work Order Date	18.12.2021
Type of Industry(If any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/LIA/Mar-22/38
Report Issue to	M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand				
Sampling Period	21/03/2022			Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS: 11255 & CPCB Guideline (Lats/80/2013-14)				
Meteorological Cond. of Field	W.C.– Clear			RH % - 45	Temp.–34°C
Sample receipt Date	23/03/2022	Analysis Started on	23/03/2022	Analysis completed on	26/03/2022

General Information

As observed while sampling		As reported by customer	
Location	Sampling port hole	Type of fuel Used	Coal
Platform	Permanent	Quantity of Fuel Used (During Sampling)	163 Ton/Hr.
Stack Description (Shape & Material)	Circular / RCC	Total production Capacity	263 MW
Sampling port	Available	Height of Stack from ground level	275 mtr.
Stack Identification	Unit - II	Inner Diameter of Stack	4.2 mtr.
Height of port hole from Ground level	90 mtr.	Pollution Controlling Device (if any)	ESP
Running Oven during sampling (if any)	N/A	Total No. of Oven (if any)	N/A

*****Test Results *****

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

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

Limit is specified as	Environmental (Protection) Rule - 1986.
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 198:1986 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits.

Sample Drawn By - Angad Munda
Tested By - Amit Kumar Sinha (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory
Atmospheric Pollution
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Technical Manager
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

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

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



Adhunik Power & Natural Resource Limited

FLY ASH GENERATION & UTILIZATION REPORT (2021-22)

Ash Generation and Utilization							Mode of Ash Utilization					
Sl. No.	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	Fly Ash In Reclamation of Low Lying Area	Bottom Ash In Reclamation of Low Lying Area	Pond Ash In Reclamation of Low Lying Area /Brick Plant
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)		(10)	(11)	(12)
1	APRIL	243924	39.38	96051.2	96051.25	100.0%	10574.90	50300.9	3477.0	17290.8	14407.69	
2	MAY	193394	39.16	75739.2	75739.19	100.0%	4859.80	29912.2	2551.1	27055.2	11360.9	
3	JUNE	213058	45.11	96115.0	96114.99	100.0%	4555.87	40141.9	3691.7	33308.3	14417.2	
4	JULY	246476	48.00	118299.3	118299.31	100.0%	4119.92	27285.3	3595.1	65554.1	17744.9	
5	AUG	178436	51.75	92344.6	92344.64	100.0%	4500.68	18187.3	3570.1	52234.9	13851.7	
6	SEP	152138	42.53	64710.7	64710.73	100.0%	3393.18	33497.9	3539.7	14573.4	9706.6	
7	OCT	220681	41.67	91959.8	58286.75	63.4%	6506.91	47207.8	4572.1			
8	NOV	193574	43.99	85148.5	64300.87	75.5%	6115.13	55300.9	2884.8			
9	DEC	244445	41.05	100350.2	66448.99	66.2%	4652.73	59639.5	2156.8			
10	JAN	199873	49.80	99535.1	80329.59	80.7%	5398.28	72387.2	2544.1			
11	FEB	215192	43.39	93368.2	73286.27	78.5%	6231.91	63596.2	3458.2			
12	MAR	246362	43.12	106240.8	90304.64	85.0%	7816.50	79794.1	2694.0			



YUGANTAR BHARATI

Annexure VII

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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

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

Test Certificate

Discipline	Chemical	Group	Pollution & Environment	Sample Description	ASH
Report Release Date	31 st March, 2022	Report ID	YBAEEL-220322-183133- S02		
W. Order/ JSPCB App. No.	3030005781	Work Order Date	18.12.2021		
Type of Industry (if any)	Thermal Power Plant	Job code/ Ref. no.	YBAEEL/WA/L/S/Mar-22/02		
Report Issue to	M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand				
Sampling Date	24/03/2022	Mode of sample collection	By YBAEEL Team		
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003	Sample Code	220324-S-A02		
Sampling Location	Hopper	Sampling Source	Bottom Ash		
Sample pkg. Condition	Sealed Pack in Zipper Bag	Sample Quantity	2.5 Kg Approx.		
Meteorological Cond. of Field	W.C.- Clear	RH % - 46	Temp. - 30°C		
Sample receipt Date	24/03/2022	Analysis Started on	24/03/2022	Analysis completed on	30/03/2022

*****Test Results*****

Sl	Parameter	Test Method	Units	MU %	Results
1.	Iron (as Fe)	USEPA 3050 B :1996/APHA 3111 B	ppm	2.73	22.8
2.	Zinc (as Zn)	USEPA 3050 B :1996/APHA 3111 B	ppm	4.44	0.29
3.	Copper (as Cu)	USEPA 3050 B :1996/APHA 3111 B	ppm	10.18	BDL (MDL 0.01)
4.	Lead (as Pb)	USEPA 3050 B :1996/APHA 3111 B	ppm	2.82	BDL (MDL 0.02)
5.	Nickel (as Ni)	USEPA 3050 B :1996/APHA 3111 B	ppm	4.10	BDL (MDL 0.02)
6.	Cadmium (as Cd)	USEPA 3050 B :1996/APHA 3111 B	ppm	9.57	1.1
7.	Chromium (as Cr)	USEPA 3050 B :1996/APHA 3111 B	ppm	5.44	0.38
8.	Arsenic (as As)	USEPA 3050 B :1996/APHA 3114 B	ppm	--	0.1
9.	Mercury (Hg)	USEPA 3050 B :1996/APHA 3112 B	ppm	--	0.06
10.	Unburn Carbon	IS 1727:1967	%	--	2.6
11.	Selenium (as Se)	USEPA 3050 B :1996/APHA 3114 B	ppm	--	0.06

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

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

Sample Drawn By : Angad Munda
 Tested By : Shivani Kumari Singh (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Technical Manager
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

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

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ISO 45001:2018



ISO 9001:2015

YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY



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



TC-4032

Test Certificate

ULR (Unique Lab Report) No.			T C 4 0 3 2 2 2 0 0 0 0 0 4 8 7 F															
Discipline	Chemical	Group	Pollution & Environment				Sample Description				Waste Water / Effluent Water							
Report Release Date		31 st March, 2022				Report ID				YBAEEL-220322-183133- WW03								
W. Order/ JSPCB App. No.		3030005781				Work Order Date				18.12.2021								
Type of Industry(If any)		Thermal Power Plant				Job code/ Ref. no.				YBAEEL/WA/L/W/Mar-22/20								
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand																
Sampling Date		24/03/2022				Mode of sample collection				By YBAEEL Team								
Sampling Protocol		IS : 3025 (Part-1) 1987, R-2003				Sample Code				220324-WW-A03								
Sampling Location		Ash Pond				Sampling Source				Effluent Water								
Sample pkg. Condition		Sealed Pack in PP Bottle				Sample Quantity				3000 ml								
Meteorological Cond. of Field		W.C.- Clear				RH % - 45				Temp. - 31°C								
Sample receipt Date		24/03/2022		Analysis Started on		25/03/2022		Analysis completed on				30/03/2022						

*****Test Results*****

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	pH value	IS 3025 (P-11):2002	pH	2.53	7.16	6.5 - 8.5
2.	Temperature	IS 3025 (P-09)	°C	1.55	30.2	--
3.	Total suspended solids	IS 3025 (P-17):2012	mg/l	8.26	68.0	100
4.	Oil and grease	IS 3025 (P-39):2003	mg/l	14.60	BDL (MDL - 4.0)	20.0
5.	Arsenic (as As)	APHA 3114 B 23 rd edition 2017	mg/l	7.86	BDL (MDL 0.003)	--
6.	Chromium (as Cr)	APHA 3111 B 23 rd edition 2017	mg/l	7.14	0.12	--
7.	Lead (as Pb)	APHA 3111 B 23 rd edition 2017	mg/l	6.26	BDL (MDL 0.02)	--
8.	Mercury (as Hg)	APHA 3112 B 23 rd edition 2017	mg/l	25.0	BDL (MDL 0.003)	--
9.	Chloride (as Cl ⁻)	IS 3025 (P-32):2003	mg/l	3.44	98.97	--

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

Limit is specified as	Environmental (Protection) Rule - 1985.
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1965 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits.

Sample Drawn By : Anged Munda
Tested By : Shivani Kumari Singh (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
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Adhunik Power & Natural Resources Limited,

CSR-Annual Report 2021-2022



**Works: Village – Padampur, Post Office – Kandra
District – Saraikela-Kharsawan, Pin-832402**



Period April 2021 to March 2022

Adhunik Power & Natural Resources Limited, Padampur took up the community development projects as a part of corporate social responsibility with support of Rapcha Gram Panchayat, Dugdha Gram Panchayat & Gamharia Panchayat Samiti/Block and executed the development projects in peripheral villages. The focused area of development projects were as under:

- I. Health & Sanitation.
- II. Education.
- III. Women Empowerment & Livelihood.
- IV. Sports & Culture.
- V. Infrastructural Development.
- VI. Environment.

The community development initiatives were implemented in the villages of Kandra, Dumra, Rapcha & Dugdha Gram Panchayats. The details of the CSR activities undertaken are as hereunder:

Health & Sanitation

1. Rural Health Camp:

Provided medical facilities to the villagers on regular basis in peripheral villages of plant area; villagers (males/females) underwent for health check-ups and received free medical treatment including medicines accordingly.



The **objectives** of the medical services were:

1. To extend support towards better health of community.



2. To conduct general health check-up of the villagers and provide medical counseling and respective medical treatment to them.
3. To make villagers aware of preventive and curative measures of common diseases such as cold, cough, skin related issues, abdominal issues, malaria etc.

2. Ambulance Services for referral cases:

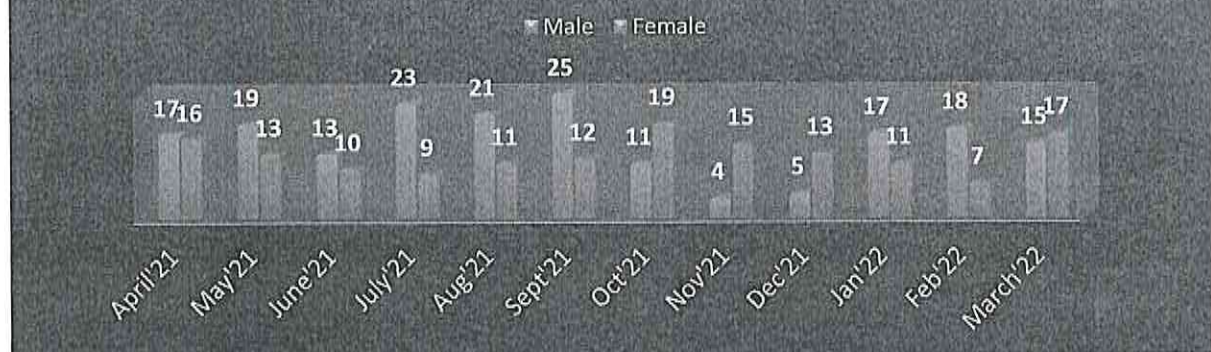
24 X 7 ambulance facility was provided to the villagers of peripheral villages for immediate treatment. Monthly



an average of **25 families** from nearby villages in **3 Gram Panchayats** were provided Ambulance service to ensure timely medical treatment at the referred health institution(s)/by the doctor(s). The Ambulance Service was started with the **objectives** of:

- To ensure timely referral health services to the needy village patients.
- To facilitate the pregnant women for timely institutional delivery.

Villagers availed free ambulance services - month-wise status



3. Sprinkling and distribution of Bleaching Powder:

Bleaching powder sprinkled in every well and drainages of the peripheral





areas of Badahariharpur, Chotahariharpur, Padampur, Bikanipur & Pindrabera for cleanliness from May' 2021 onwards with the support of village volunteers and villagers under the **project of Swachhh Gram Swasth Gram**. Subsequently, groups of villagers were formed for this purpose and sprinkling of bleaching powder on regular interval. Bleaching powder also got distributed among the villagers for the further use to save them from water borne diseases.

4. Blood Donation Camp:

A blood donation camp jointly organized by Adhunik Power & Natural Resources Limited,



Padampur and Power Project Bisthapit – Prabhavit Swalambi Samiti, Padampur at Community Hall (Club) Padampur village on 22.9.2021 from 9.30 AM to 4.00 PM in association with Jamshedpur Blood Bank, Jamshedpur. The villagers of Padampur, Badahariharpur, Chotahariharpur, Srirampur, Pindrabera, Bikanipur, Balidih etc. participated with enthusiasm and

collected 46 units of blood for this noble cause. Jamshedpur Blood Bank and Voluntary Blood Donors Association of Jharkhand, Jamshedpur were very active and conducted the camp under the guidance of Dr. (Mrs.) N. Jha.

Coffee & refreshments were provided to the persons who were part of the camp and also distributed T-shirt to donors.

Mr. Krishna Baskey, Gram Pradhan, Padampur, Mr. Ram Das Tudu, Ex Pramukh, Mr. Rajesh Kumar Bhagat, Badahariharpur, Mr. Indro Murmu, Up Mukhiya, Dr. G. P. Murmu, Head-Medical



Services, APNRL, Mr Sanjeet K. Sinha, Sr. Manager-CSR, APNRL, Mr. Harsh Choudhary HR-APNRL Mr. Ranjeet Singh-HR-APNRL and other officials also participated in the camp.

5. One day orientation training on HIV /AIDS:

A HIV awareness program organized for our employees on 23.12.2021 with the support of Jharkhand State AIDS Control Society, Ranchi with the **Objective as follows:**



- To raise awareness of the global AIDS epidemic
- To support the millions that are living with HIV & AIDS
- To remember those who have died from HIV & AIDS

About 30 individuals participated from different Departments of APNRL including Mr. M.N. Singh, Head -M & O, Dr. G. P. Murmu (Head-Medical Services), Mr. Sanjeet Kumar Sinha-CSR and Mr. Devashish Chakravarty, Dy. Director – JSACS, Ranchi (as the resources person).

Mr. Devashish Chakravarty, Dy. Director, JSACS, Ranchi explained about HIV/AIDS in details with Power Point Presentation & advised the participants as follows - HIV, or Human Immunodeficiency Virus, weakens your immune system by destroying important cells that fight other diseases and



infections. The training was really informative and people appreciated towards the awareness program.

6. Free COVID-19 vaccination camp: Under Corporate Social Responsibility (CSR), Adhunik Power



& Natural Resources Limited had organized covid-19 vaccination camps for its employees and their dependents, the contract labors and surrounding area villagers. So far, the company has completed the statistics of overall 1800 persons vaccinated to prevent them from COVID-19 with the support of District administration.

The company has also provided 600 covid-19 medicines kits along with 10Lakhs INR to District administration, Saraikela-Kharsawan including masks and sanitizer.

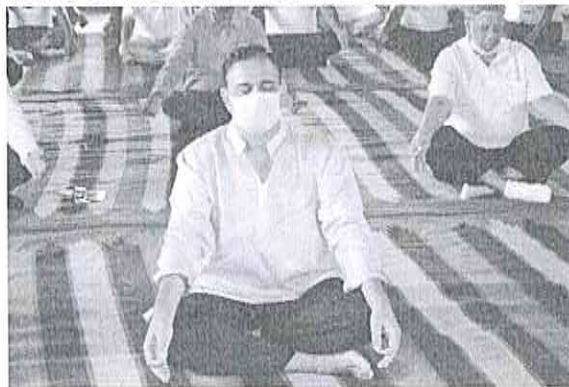
6. Drinking Water Supply: Drinking water was supplied to the villagers through water tanker to meet the requirement of fresh water during social functions which happened in villages from 03 Gram Panchayats namely Rapcha & Kandra, Dugdha.



7. Installation of water purification(RO)plant- 1000 litter per hour capacity water purification (RO) unit inaugurated by MD Sir Mr. Prakash Tiwari on 11.6.2021. This water unit had been installed near at "Swarnrekha Bhawan" APNRL to provide purified drinking water to the villagers as well as employees.



8. International Yoga Day: International Yoga Day was celebrated at Shram Shakti Bhawan - APNRL on Monday, 21 June 2021 to bring peace, harmony, happiness and success to every soul.



This was a great opportunity to imbibe the value of discipline. Yoga is a mental, physical



and spiritual practice that needs to be carried every day. Employees got the chance to know how yoga embodies unity of mind and body. About 50 employees including contract employees participated. The inaugural speech was given by the Mr. Prakash Tiwari, MD-APNRL who emphasized the importance of Yoga and physical exercises in daily life. The sessions started at 6.30 am and carried out under the guidance of the yoga instructor Mr. Ashish Ranjan.

EDUCATION

Children in rural areas continue to be deprived of quality education owing to factors like poverty, lack of competent and committed teachers, lack of textbooks or teaching-learning materials, and so on. The company under CSR is to provide comprehensive approach for quality of education in the villages and to ensure that each child of marginalized sector is educated.



Project CYBER VILLAGE, Badahariharpur:

A computer literacy center is still running smoothly under self-sustainable project Cyber Village in Badahariharpur, in which the youth of the surrounding areas are being made computer literate. Around 45 rural students from nearby completed the computer course this year.



Women Empowerment/Livelihood

1. **Strengthening of Self Help Groups:** Self Help Groups is a simple yet effective way of reaching out to improve the livelihood of the rural poor women. The group enables its members to gain their identity as individuals, while realizing and utilizing the immense power of mutual aid. It provides them with a platform from where they can access banks and public services and spearhead changes that affect them as poor women.

Under Economic Development programme, Adhunik Power & Natural Resources Limited (APNRL) is proactively working since its inception for the benefit of local people. In order to strengthen the Women Self Help Groups (SHG) of the villages in and around its operational areas, the Company organized trainings on various livelihood activities to make them capable for additional source of income.



Monthly meetings with all the SHG members were organized in villages like Padampur, Badahariharpur, Chotahariharpur, Srirampur, Shankarpur, Pindrabera & Ramchandrapur.

The **objectives** of Self Help Group meeting were as under: (a) To explore the functional aspects of SHGs in promoting micro saving and inter loaning activities. (b) To increase social cohesiveness among the members of women Self-Help-Group.

2. **National Nutritional Month (Poshan Mah) - 2021:** The CSR Department of APNRL celebrated National Nutrition Month of September 2021 to fight against malnutrition. We empowered the village women through various training events to lead their life with sustainable social recognition. In continuation we organized the *seminar, rally and godh bhara*i function in Chotahariharpur, Bikanipur, Bahahariharpur and Padampur villages which covered 5 villages. Approximately 300 women including Aganwadi Sevika, pregnant women and SHG members participated in the programme. The main objective was to raise awareness on the importance



of nutrition for health which has an impact on development, productivity, economic growth and ultimately National development.



On 23th September 2021 a Seminar and **Godh bhara**i was organized in Community Hall, Padampur of Rapcha Gram Panchayat. The seminar began with the welcome note by Senior Manager-CSR Mr. Sanjeet Kumar Sinha of Adhunik Power and Natural Resources Limited. Mr. Sinha warmly

welcomed all the participants and explained the benefit & goal of the Seminar.

Our Chief Guest Mrs. Sadhna Choudhary- CDPO, ICDS, Gamharia said that malnutrition is directly linked to human resources development, productivity and ultimately to the national growth. She also explained Women, infants, children, and adolescents are at particular risk of malnutrition. Optimizing nutrition early in life—including the 1000 days from conception to a child's second



birthday—ensures the best possible start in life, with long-term benefits.

Dr.G.P.Murmu-Head Medical Services, APNRL explained the Malnutrition refers to deficiencies, excesses, or imbalances in a person's intake of energy and/or nutrients. Around 45% of deaths among children under 5 years of age are linked to undernutrition. He also said that importance of breastfeeding within one hour of birth and exclusive breastfeeding up to six months, and continues breastfeeding for two years along with semi-solid food (complimentary feeding).

Godh bharai function organized for pregnant women; it is performed during pregnancy to pray for the good health of the mother and baby, and the safe delivery. A group of women come together to bless the mom-to-be and the baby and feast on some delicious treats. About 50 pregnant women were also honored on this occasion.

Following people were also present on this occasion – Mr. Anil Kumar Soni, GM-HR & Adm. Mr. Harsh Choudhary –HR, Anil





Sardar-APNRL, Salaindra Tudu-APNRL, AWWs. The oath program was facilitated by Mrs. Urmila Kumari, LS-ICDS.

3. Livelihood Projects:

Agarbatti Making- Vinapani Self-help Group, Chotahariharpur : The members of Vinapani Self-help group engaged in making of Agarbatti. This had helped them in increasing corpus fund for their group. They have made this activity as their livelihood with guidance of CSR team of Adhunik Power & Natural Resources Limited, Padampur.



Sports and Culture

Distribution of Volley ball with net & Football at Badahariharpur Padampur:

As we all know that there is no better activity than sports for refreshment. Sports are very important for developing healthy and strong body. Sports play great role in improving and maintaining the health and



fitness, improving mental skills and concentration level. Also, sports increase the self-esteem and mental alertness and this is the most effective when we involve in some sports activities at Village and School as in early age, we have a good grasping power.

Our programme is focused on supporting School Children to achieve meaningful, long term outcomes. Volley Ball and Football is the most popular game in Jharkhand, everyone loves to play it. Volley ball & Football distribution functions were organized at Football ground, Padampur and Middle School, Badahariharpur on 18.2.2022 and 21.2.2022 respectively. Mr. Anil Kumar Soni-GM - HR, APNRL gave his valuable speech during the function. In his speech, he highlighted the importance of sports. He encouraged the team to participate in the sports program and he provided volley ball and football on company's behalf. Dr. G.P.Murmu, OHC-APNRL, Mr. Anil





Kumar Soni-GM-HR, Sanjeet Kumar Sinha-CSR, APNRL, Mr. Krishna Baskey, President –Village Committee, Indro Murmu - Up Mukhiya, Padampur , Principal Mr. Harendra Kumar Pathak , Middle School, Badahariharpur and approximately 30 villagers including school students participated in the program. The Village team and middle school team were really delighted to have received Volley ball, net and football.

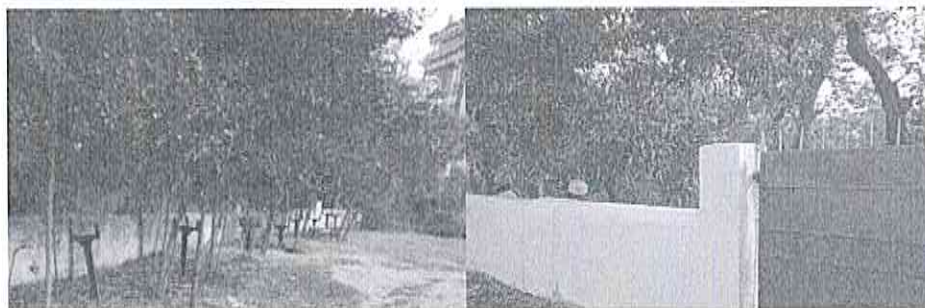
Annual Sports at Badahariharpur on 1.3.2022-3.3.2022 - Every Year Adiwasi Avan Akhara, Hariharpur-Srirampur organize a Sports and Culture program at Badahariharpur Ground. The programme motivates the local youths to gather at a place with team spirit and it promotes the rural sports activity in the area. Similarly, this year the major events were Football Tournament, Chaw Nitya, etc.

48-football team participated in football tournament from nearby villages of Saraikela Kharsawan District. Adhunik Power & Natural Resources Limited, Padampur facilitated with financial support of 51,000 INR and other required resources like medical team, ambulance service, preparations for making playground ready, cleaning of sites etc.



The organizers were happy and praising about the company's contribution towards successful conduction events and specially thanked the plant for managing for the same.

White washing, painting and cleaning work: The Company intervened in the direction of boundary wall painting and cleaning work in Sarna Asthal, Padampur on the occasion of Sarhul Puja. The Company facilitated with financial support of 75,000 INR.



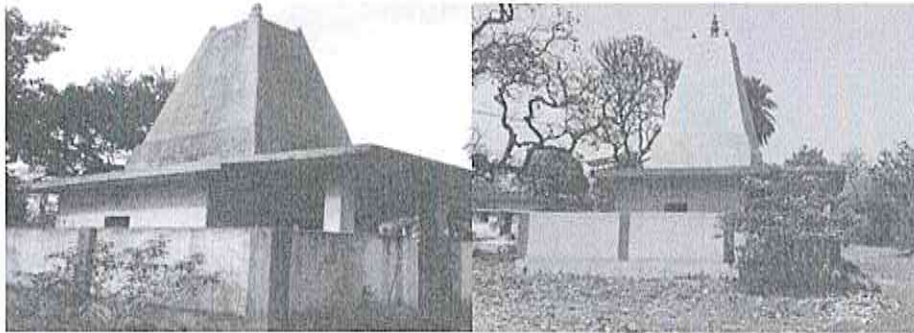
The Sarhul Puja was organized on 13th March 2022 at Padampur. The festival is known as the flower festival or 'Baa Porob'.

Company employees and villagers worshiped together and enjoyed during Sarhul Puja. Approx. 600 people from various village participated in the festival including company (APNRL) employees.





White-washing of Shiva-Temple was done with the support of villagers from Badahriharpur on the occasion



of Shiv Ratri Puja, which was very much needed. Villagers were very happy with this work. **Maha Shivratri puja** was organized at Shiva Mandir, Badahariharpur on 1st March 2022.

Maha Shivaratri is a great festival of Hindu, celebrated annually with the devotion and religious enthusiasm in the honor of the Lord Shiva, deities of Hindu Trinity.

Cleaning of Sarnaasthal, Srirampur - On the occasion of Sarhul Puja, the company did the cleaning work of Sarnashal and the approach-road which was in pathetic condition. The villagers were very happy with this work.

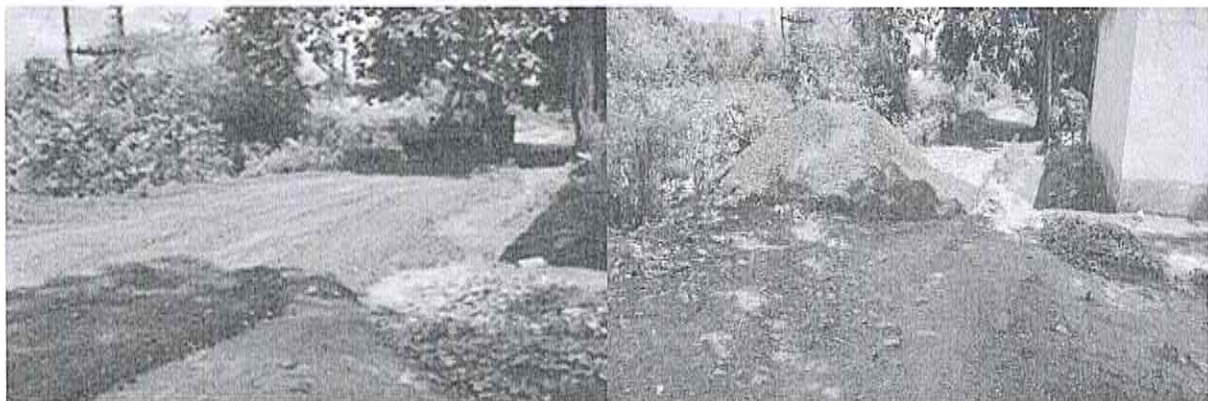


Infrastructure

Repairing of Village Road

Adhunik Power & Natural Resources Limited, Padampur is playing an important role in improving the socio-economics conditions of local communities around which the company is operative.

A meeting was convened by villagers of Barahariharpur with the CSR team, where villagers reported the bad condition of village road. The badly damaged 100-meter road was immediately repaired by the company, on 10th sept. 2021. The villagers were thankful to the company.





Environment

World Environment Day: Adhunik Power & Natural Resources Limited, Padampur celebrated the World Environment Day on 5.6.2021 at plant premises and created awareness about importance of environment and plantation. Senior Officers of the company planted saplings on this occasion.



Shri Mahesh Agarwal said, "Conservation of Environment is need of time, we have to be serious on this issue. Our life is correlated with pure environment somehow; if we care environment then only environment will care for us." The Managing Director Shri Prakash Tiwari said, "We have planted the saplings

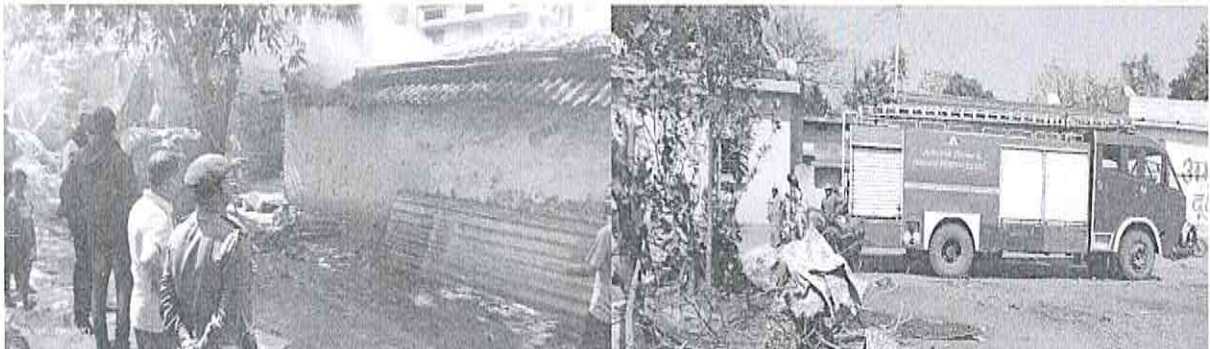


that's very good but our responsibility is not yet over. We should take pledge that we will take all care and put best efforts to save those planted saplings till it does grow big." Special guests Mr. Vaibhav Agarwal and Mr. Mayank Agarwal along with Chief Operating Officer Mr. Rakesh Gupta planted saplings followed by Mr. M N Singh, Mr. Rajesh Sharma, Mr. Ravinder Agarwal, Mr. NSP Rao, Mr. Amal Baidya, Mr. Anil Kumar Soni, Mr. Rajesh Singh, Mr. Shirish Waghmare, Mr. Maninder Singh, Mr. Sanjeet Sinha, Mr. Arjun Singh, Mr. B N Sundray.

Other Initiative:

Fire Brigade Services:

A fire broke out in Shiva Sardar's house on 15.2.2022 at 11 am in Kendra Basti. The fire brigade of Adhunik power reached on time and brought the fire under control. The villagers were very grateful and appreciated the work of the company.



कोविड को मात देने के लिए आधुनिक पॉवर ने सरकार को दी 10 लाख रुपये की मदद

मार्गदर्शक 29 (अभिनव) की ओर
प्रधानमंत्री ने एक पत्र भेजा था।
में है, इस प्रकार की घटनाओं में उन्हें
आपसी समझौते से गुजरनी पड़ेगी।
है। जो बातें मैं सरकार को
आपसी समझौते से गुजरनी पड़ेगी।
मार्गदर्शक 29 (अभिनव) की ओर
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आपसी समझौते से गुजरनी पड़ेगी।
है। जो बातें मैं सरकार को

[illegible]

आधुनिक पावर में 158 का हुआ रैपिड एंटीजन टेस्ट, सभी निगेटिव

समरसिद्धा, १७ जुलाई (निर्देशक) : कोविड महामारी के निरोधन में शिक्षा प्रणाली महत्वपूर्ण भूमिका निभा रही है। महामारी से निरोधन के माध्यम से शिक्षा प्रणाली को निरोधक के रूप में उपयोग करने के माध्यम से १९८ वर्षों के शिक्षा के इतिहास में पहली बार महामारी को निरोधक के रूप में उपयोग करने में सफलता मिली है।



अनुमानित होकर शिक्षा निर्देशों का पालन करने हुए टेम्प का नाम	महादेवनाथ-शुभमाया	ब
विषय	वैशाख अथवा वासवधान	क
	महादेवनाथ अथवा श्री महादेव	ख

अनाक जिले में गौडबल टोप के लई भूख भोगी के अपहरण महंगी भ बचनी के मोहकन और सभ भूख विभाग के इलाक़ों में पैदा होखे वाला रोग (टीबी) ओहपन परस हो जाय। जन्मभुक्त सावर एह बेमसल रोगोदर विपरीत होखी गीसी तरह के भूखदर कहेल सलखत बा। गीसी से हो गये के इस बालक कम्पनी में बीस भूखी से रोखबलन ओहपन अनाक काले 545 किलोग्राम में बढेला कलकत्ता के होखेला।

Adhunik Power felicitates health workers

Corona period gave opportunities for innovative thinking: Rakesh Gupta

Jamshedpur, August 16: Adaniya Farms & Natural Resources Limited Company, facilitated health workers of district administration, Sarsikela, Chhatisgarh on the auspicious occasion of Independence Day. They have been bestowed as Good citizens for their services during the COVID-19 period.

Asst. Commr. Raj. Kanta Kumar, Asst. Mohr. and Panditji Kumar



Addressing the employees on the occasion, Ranchi UAPA said that this 100th year period is given some opportunities to be thinking "We should increase those opportunities and take of Nation and the country to the path of progress by implementing progressive ideas," and UAPA, the apex, when the work, dreams, determination, effort and participation of all the employees increase more than their work increases. That of the company will achieve the heights of success. Definitely, voluntary spread and progress conducted by And Kumar UAPA which 10% of them proposed.

NRI Kan

Get addicted to Yoga: Tiwari

Mail News Service

Jamshedpur, June 21 : The employees of Adhunik Power & Natural Resources Limited celebrated 7th International Yoga day with all vigor and enthusiasm at the plant site here on Monday.

Aidhunik Power personnel also pledged to make yoga regular practice in their daily routine life.

Company's Managing Director Prakash Tiwari has also performed various postures of yoga asanas to mark the day. Speaking on the occasion Mr. Tiwari said, "I must say everyone should get addicted to yoga because Yoga is a boon and



COO Rakesh Gupta, Operation & Maintenance, Head, M S Singh, HR, Head, Anil Kumar Soni, Sanjeev Sinha of CSR department, Ramlesh

Kumar and many others participated with full zeal. Yoga instructor Ashish Ranjan taught all participants with various kinds of yoga asanas during the three-hour session. Program was completed by Anil Kumar Soni while vote of thanks proposed by Satjeet Sinha. (W-mb)

Health security of employees is our utmost priority: MD

Mail News Service

Jamshedpur, July 7: Altogether 200 employees of Adambik Power & Mineral Resources Limited have vaccinated at Paderpur medical plant here on Wednesday.

A one-day vaccination drive was organised by the CSR department of Adambik Power with the support of district administration, Sanatola Khasman. To keep protected from COVID-19 infection a threshold vaccine has been

200 employees vaccinated at Adhunik Power



vaccinated for all contractor agencies were also benefited at the district Managing Director Prakash Doshi extended a

Speaking out the occasion, Mr. Tosiw said that health security of employees is also the company's prime priority and this is the reason that company has organized this drive. The heads of team of Kanakdatta Khatriw along with Anil Kumar Saha, Head (HR), Arun Kumar, P. G. P. Murmu and Sampat Saha contributed full part in the success of the vaccination drive (Wmb).

कांड्रा मध्य बरती में लगी आग, एक
मकान जलकर पूरी तरह खाक

- सरकारी यात्रियों की सुविधा के लिए बसों का समय देना
- आयुक्तों के कार्यालय में सुविधा देना

[illegible][illegible]

आधुनिक पायर के वैयरीनेशन
अभियान में 1150 का टीकाकरण



समस्याएँ, ३० अक्टूबर (सोमवार) :- आन्ध्रप्रदेश सरकार ने आज अनुसूचित जाति शिक्षा विभाग के माध्यम से विद्यार्थियों को आन्ध्र प्रदेश सरकार द्वारा आयोजित कार्यक्रमों में भागीदारी के लिए एक पत्र भेजा है। पत्र में कहा गया है कि आन्ध्र प्रदेश सरकार द्वारा आयोजित कार्यक्रमों में भागीदारी के लिए एक पत्र भेजा है। पत्र में कहा गया है कि आन्ध्र प्रदेश सरकार द्वारा आयोजित कार्यक्रमों में भागीदारी के लिए एक पत्र भेजा है।

योग अपनायें और इसके आदी बनें : प्रकाश

प्रभाल मंत्र संख्याद्वारा

[illegible]

आधुनिक पावर में मनाया गया योग दिवस



एक वर्षदान का समान है। योग प्रशिक्षक आशीष राय ने दो घंटे के सत्र के दौरान सभी प्रतिभागियों को परिचित प्रकार के योगासनों को सिखाया। कार्यक्रम का संघालन अजित कुमार सोनी ने किया जबकि धन्यवाद ज्ञापन राजीव सिन्हा ने किया।

LIST OF LOCAL EMPLOYEES OF APNRL

Annexure X (B)

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



YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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



TC-4032

Test Certificate

ULR (Unique Lab Report) No.				T	C	4	0	3	2	2	2	0	0	0	0	0	4	8	5	F
Discipline	Chemical	Group	Pollution & Environment					Sample Description					Waste Water / Effluent Water							
Report Release Date		31 st March, 2022					Report ID					YBAEEL-220322-183133- WW01								
W. Order/ JSPCB App. No.		3030005781					Work Order Date					18.12.2021								
Type of Industry(if any)		Thermal Power Plant					Job code/ Ref. no.					YBAEEL/WA/L/W/Mar-22/18								
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand																		
Sampling Date		24/03/2022					Mode of sample collection					By YBAEEL Team								
Sampling Protocol		IS : 3025 (Part-1) 1987, R-2003					Sample Code					220324-WW-A01								
Sampling Location		Effluent Treatment Plant Outlet					Sampling Source					Effluent Water								
Sample pkg. Condition		Sealed Pack in PP Bottle					Sample Quantity					3000 ml								
Meteorological Cond. of Field		W.C.- Clear					RH % - 45					Temp. - 31°C								
Sample receipt Date		24/03/2022		Analysis Started on			24/03/2022			Analysis completed on			30/03/2022							

*****Test Results*****

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	pH value	IS 3025 (P-11):2002	pH	2.53	8.25	5.5 - 9.0
2.	Temperature	IS 3025 (P-09)	°C	1.55	29.6	--
3.	Total suspended solids	IS 3025 (P-17):2012	mg/l	8.26	16.0	100
4.	Chloride (as Cl ⁻)	IS 3025 (P-32):2003	mg/l	3.44	13.4	--
5.	BOD	IS 3025 (P-44):2009	mg/l	6.85	16.0	30
6.	COD	IS 3025 (P-58):2006	mg/l	4.02	120.0	250
7.	Chromium (as Cr)	APHA 3111 B 23 rd edition 2017	mg/l	7.14	BDL (MDL 0.02)	2
8.	Copper (as Cu)	APHA 3111 B 23 rd edition 2017	mg/l	16.09	BDL (MDL 0.01)	3
9.	Lead (as Pb)	APHA 3111 B 23 rd edition 2017	mg/l	6.26	BDL (MDL 0.02)	0.1
10.	Zinc (as Zn)	APHA 3111 B 23 rd edition 2017	mg/l	6.57	0.08	5
11.	Sulphate (as SO ₄ ²⁻)	IS 3025 (P-24):2003	mg/l	4.37	14.8	--

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

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

Sample Drawn By : Angad Munda
Tested By : Shilvani Kumari Singh (Lab Analyst)

Verified by	Issued by
Brij Nandan Kumar	Umesh Das
Section In-Charge	Technical Manager

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Technical Manager
Yugantar Bharati Analytical &
Environmental Engineering Laboratory



Branch Office : - Jamshedpur | Dhanbad | Hazaribag | Pakur

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



Sewage Treatment Plant



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

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

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

फीस रूप (Fee Rs.) 50000/- per year

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

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

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

पेट्रोलियम का विवरण /Description of Petroleum	अनुमति मात्रा (किलोलीटरों में) /Quantity licenced in KL
वर्ग A प्रपुंज पेट्रोलियम /Petroleum Class A in bulk	NIL
वर्ग A प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class A, otherwise than in bulk	NIL
वर्ग B प्रपुंज पेट्रोलियम /Petroleum Class B in bulk	NIL
वर्ग B प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class B, otherwise than in bulk	NIL
वर्ग C प्रपुंज पेट्रोलियम /Petroleum Class C in bulk	5000.00 KL
वर्ग C प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class C, otherwise than in bulk	NIL
कुल क्षमता /Total Capacity	5000.00 KL

December 15, 2011

Chief Controller of Explosives

1). Amendment dated - 23/12/2011

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

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

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

पृष्ठ सं. 2

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

नवीनीकरण के पंजीकरण 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 फिर से बिना किसी छूट के दस वर्ष तक नवीकृत की जा सकेगी।
 This licence shall be renewable without any concession in fee for ten years in the absence of contravention of any provisions of the Petroleum Act, 1934 or of the rules framed thereunder or of any of the conditions of this licence.

पेट्रोलियम अधिनियम, १९३४ के उपबन्धों या उनके अधीन बनाए गए नियमों या इस अनुमति की शर्तों का उल्लंघन न होने की दशा में यह अनुमति फिर से 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 Date of Renewal	समाप्ति की तारीख Date of Expiry of license	अनुमान प्राधिकारी के हस्ताक्षर और स्टाम्प Signature and office stamp of the licensing authority.
1).		31/12/2013	Sd/- PESO ADMIN
2).	23/09/2013	31/12/2018	Sd/- R.P.Singh Jt. Chief Controller of Explosives For Dy. Chief Controller of Explosives Ranchi
3).	18/02/2019	31/12/2022	K. Thilagarajan Dy. Chief Controller of Explosives Ranchi

K. Thilagarajan
 Dy. Chief Controller of Explosives, Ranchi

यदि अनुमति धारक इसमें उपाचय विवरण और शर्तों के अनुरूप नहीं पाए जाते हैं और जिन नियमों और शर्तों के अधीन यह अनुमति मंजूर की गई है उनमें से 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 परचालवर्ती अपराध के लिए साधारण कारावास से जो तीन मास तक हो सकता है, या जुर्माने से, जो पांच हजार रुपये तक हो सकता है, या दोनों से, दण्डनीय होगा।
 This licence is liable to be cancelled if the licensed premises are not found conforming to the description given on the approved plan attached hereto and contravention of any of the rules and conditions under which this licence is granted and the holder of this licence is also punishable for the first offence with simple imprisonment which may be extend to one month, or with fine which may extend to one thousand rupees, or with both and for every subsequent offence with simple imprisonment which may extend to three months, or with fine which may extend to five thousand rupees or with both.

HINDUSTAN PETROLEUM CORPORATION LIMITED

(A Government of India Enterprise)

QUALITY CONTROL LABORATORY

Visakh New Terminal

CONVENT JN.-SHEELANAGAR ROAD, BEHIND AIRPORT,

VISAKHAPATNAM- 530014

TEST REPORT

Product : HP INDUSTRIAL DIESEL OIL

Customer / Supplier /	: NBOT-BONDED TANKS-PSD	Test Report No.	: BFT/10835
Branch Plant		Date of Sample Drawn	: 20/07/19
Source of Sample	: TK105	Date of Sample Receipt	: 21/07/19
Tank No	: TK105	Date of Sample Testing	: 22/07/19
Qty of Sample	: 1ltr uml / 1k70/868.3 b.no.35/2019		
Density/Type of Sample		Date of Report	: 22/07/19
Catg / Evnt / Actvty	: Alt Receipt thru Dedicated P/L	Date of Printing	: 22/07/19
Receipt/Despatch Mode	: *	JDE Sample Number	: 855213
Sample Drawn by	: RAMAKRISHNA	Batch No	:

Test Line Number	Characteristics	Units	Test Method	Specifications		Result Value
				Min	Max	
5	DENSITY @ 15°C	Kg/m3	IS 1448 (P:16)	-	-	887.8
6	KINEMATIC VISCOSITY @ 40°C	cSt	IS 1448 P:25	2,500	15,000	4,850
7	FLASH POINT - PMCC	°C	IS 1448 P:21	65	-	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



YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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



TC-4032

Test Certificate

ULR (Unique Lab Report) No.			T	C	4	0	3	2	2	2	0	0	0	0	0	4	7	9	F
Discipline	Chemical	Group	Atmospheric Pollution						Sample Description				Work Zone Noise						
Report Release Date		31 st March, 2022						Report ID				YBAEEL-220322-183133- N01							
W. Order / JSPCB App. No.		3030005781						Work Order Date				18.12.2021							
Type of Industry(if any)		Thermal Power Plant						Job code/ Ref. no.				YBAEEL/WA/L/A/Mar-22/38							
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand																	
Sampling Period		21/03/2022 – 22/03/2022						Mode of sample collection				By YBAEEL Team							
Sampling Protocol		IS : 9989:1981 (RA 2020), CPCB (Factory Act 1948)																	
Meteorological Cond. of Field		W.C.– Clear						RH % - 40				Temp. - 33°C							
Sample receipt Date		23/03/2022		Analysis Started on				23/03/2022		Analysis completed on				26/03/2022					

*****Test Results*****

Sl	Locations	Parameters	Units	MU %	Day Time	Night Time	Limit
1.	Near CHP Area	Leq	dB (A)	1.003	64.1	63.1	85
2.	Cooling Tower	Leq	dB (A)	1.003	83.2	81.1	
3.	Turbine Floor	Leq	dB (A)	1.003	82.3	80.9	
4.	Pump House	Leq	dB (A)	1.003	79.5	77.6	
5.	Compressor House	Leq	dB (A)	1.003	84.7	84.2	

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

Limit is specified as	Factory Act. 1948 (8 hrs.)
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 198:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Samples comply with prescribed limit.

Sample Drawn By - Angad Munda
Tested By - Amit Kumar Sinha (Lab Analyst)

Verified by	Issued by
Brij Nandan Kumar	Umesh Das
Section In-Charge	Technical Manager

Authorized Signatory
Atmospheric Pollution
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Technical Manager
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Branch Office :- Jamshedpur Dhanbad Hazaribag Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand
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Jharkhand State Pollution Control Board (JSPCB)
Certified by: - ISO 9001:2015 & ISO 45001:2018



TC-4032

Test Certificate

ULR (Unique Lab Report) No.			T	C	4	0	3	2	2	2	0	0	0	0	0	4	8	0	F	
Discipline	Chemical	Group	Atmospheric Pollution					Sample Description					Ambient Noise							
Report Release Date		31 st March, 2022						Report ID					YBAEEL-220322-183133- N02							
W. Order / JSPCB App. No.		3030005781						Work Order Date					18.12.2021							
Type of Industry (If any)		Thermal Power Plant						Job code/ Ref. no.					YBAEEL/WA/L/A/Mar-22/41							
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand																		
Sampling Period		22/03/2022 – 23/03/2022						Mode of sample collection					By YBAEEL Team							
Sampling Protocol		IS 9989:1981 (RA 2020) & CPCB Method S.O.50 (E) dated 11/01/2010																		
Meteorological Cond. of Field		W.C.– Cloudy						RH % - 41					Temp. - 28°C							
Sample receipt Date		24/03/2022		Analysis Started on			24/03/2022			Analysis completed on			28/03/2022							

*****Test Results*****

Sl	Locations	Parameters	Units	MU %	Day Time (6.00 a.m. to 10.00 p.m.)	Night Time (10.00 p.m. to 6.00 a.m.)	Limits
1.	Sati Steel	Leq	dB (A)	1.32	56.3	53.7	Day – 75 Night – 70
2.	Reservoir	Leq	dB (A)	1.32	55.1	52.1	
3.	Occupational Health Centre	Leq	dB (A)	1.32	58.7	55.1	
4.	Near Main Gate	Leq	dB (A)	1.32	63.3	54.2	

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

- Silence zone is an area comprising not less than 100 meters around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority. - Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority. - dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale(A) which is relatable to human hearing.	Area	Unit	Day Time	Night time
	A Industrial Area	dB (A)	75.0	70.0
	B Commercial Area	dB (A)	65.0	55.0
	C Residential Area	dB (A)	55.0	45.0
	D Silence Zone	dB (A)	50.0	40.0

Limit is specified as	Noise pollution (Regulation & Control) Rules, 2000.
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1956 (C)
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Samples comply with prescribed limit.

Sample Drawn By – Angad Munda
Tested By – Amit Kumar Sinha (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory
Atmospheric Pollution
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Technical Manager
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

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



TC-4032

Test Certificate

ULR (Unique Lab Report) No.			T C 4 0 3 2 2 2 0 0 0 0 0 4 8 4 F																		
Discipline	Chemical	Group	Atmospheric Pollution					Sample Description					Ambient Air Quality (Buffer Zone)								
Report Release Date		31 st March, 2022					Report ID					YBAEEL-220322-183133- A02									
W. Order/ JSPCB App. No.		3030005781					Work Order Date					18.12.2021									
Type of Industry (If any)		Thermal Power Plant					Job code/ Ref. no.					YBAEEL/WA/LA/Mar-22/41									
Report issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand																			
Sampling Period		22/03/2022 – 23/03/2022					Mode of sample collection					By YBAEEL Team									
Sampling Protocol		IS:5182 and CPCB Air Manual Volume-1(NAAQM/36/2012-13)																			
Sampling Locations		A. Pindrabera Village					B. Srirampur Village					C. Padampur Village									
Meteorological Cond. of Field		W.C.– Cloudy					RH % - 41					Temp. - 28°C					W.D.– NE-SW				
Sample receipt Date		24/03/2022		Analysis Started on			24/03/2022			Analysis completed on			28/03/2022								

*****Test Results*****

Parameters	Test Methods	Units	MU %	Sampling Location			Limits
				Site A	Site B	Site C	
Particulate matter (PM ₁₀)	IS:5182 (P-23) 2006, RA 2017	µg/m ³	2.68	90.0	88.6	77.9	100
Particulate matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	2.60	58.8	50.4	47.0	60
Sulphure Dioxide (SO ₂)	IS:5182 (P-2) 2001 RA 2017	µg/m ³	7.84	23.1	26.9	23.1	80
Nitrogen Dioxide (NO ₂)	IS:5182 (P-6) 2006 RA 2017	µg/m ³	4.17	51.8	48.6	51.8	80
Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	3.7	25.1	28.0	21.9	400
Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	9.09	23.4	31.0	22.4	180 (1 hr.)
Lead (Pb)	IS:5182 (P-22) 2004, RA 2019	µg/m ³	7.95	0.177	0.151	0.202	1
Nickel (Ni)	IS:5182 (P-26) 2020	ng/m ³	14.71	BDL (MDL - 4)	BDL (MDL - 4)	BDL (MDL - 4)	--
Arsenic (As)	USEPA - IO 3.2	ng/m ³	2.05	BDL (MDL -02)	BDL (MDL -02)	BDL (MDL -02)	--

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

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

Sample Drawn By - Angad Munda
Tested By - Amit Kumar Sinha (Lab Analyst)

Verified by BrijNandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
--	---

Authorized Signatory
Atmospheric Pollution
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Technical Manager
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

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



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ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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

Test Certificate

Discipline	Chemical	Group	Atmospheric Pollution	Sample Description	Ambient Air Quality (Buffer Zone)
Report Release Date	31 st March, 2022	Report ID	YBAEEL-220322-183133- A02		
W. Order/ JSPCB App. No.	3030005781	Work Order Date	18.12.2021		
Type of Industry (If any)	Thermal Power Plant	Job code/ Ref. no.	YBAEEL/WA/L/A/Mar-22/41		
Report Issue to	M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand				
Sampling Period	22/03/2022 - 23/03/2022	Mode of sample collection	By YBAEEL Team		
Sampling Protocol	IS:5182 and CPCB Air Manual Volume-1(NAAQM/36/2012-13)				
Sampling Locations	A. Pindrabera Village	B. Srirampur Village	C. Padampur Village		
Meteorological Cond. of Field	W.C.- Cloudy	RH % - 41	Temp. - 28°C	W.D.- NE-SW	
Sample receipt Date	24/03/2022	Analysis Started on	24/03/2022	Analysis completed on	28/03/2022

*****Test Results*****

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

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

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

Sample Drawn By - Angad Munda
Tested By - Amit Kumar Sinha (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

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ISO 45001:2018



ISO 9001:2015



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TC-4032

Test Certificate

ULR (Unique Lab Report) No.			T C 4 0 3 2 2 2 0 0 0 0 0 4 8 3 F																
Discipline	Chemical	Group	Atmospheric Pollution				Sample Description				Ambient Air Quality (Core Zone)								
Report Release Date		31 st March, 2022				Report ID				YBAEEL-220322-183133- A01									
W. Order/ JSPCB App. No.		3030005781				Work Order Date				18.12.2021									
Type of Industry/(f any)		Thermal Power Plant				Job code/ Ref. no.				YBAEEL/WA/L/A/Mar-22/38									
Report issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand																	
Sampling Period		21/03/2022 – 22/03/2022				Mode of sample collection				By YBAEEL Team									
Sampling Protocol		IS:5182 and CPCB Air Manual Volume-1(NAAQM/36/2012-13)																	
Sampling Locations		A. Bachelor Hostel				B. Switch Yard				C. Sati Steel (CHP Area)									
Meteorological Cond. of Field		W.C.– Clear				RH % - 40				Temp. - 33°C				W.D.– West-East					
Sample receipt Date		23/03/2022		Analysis Started on		23/03/2022		Analysis completed on				26/03/2022							

*****Test Results*****

Parameters	Test Methods	Units	MU %	Sampling Location			Limits
				Site A	Site B	Site C	
Particulate matter (PM ₁₀)	IS:5182 (P-23) 2006, RA 2017	µg/m ³	2.68	83.1	93.6	87.6	100
Particulate matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	2.60	53.3	57.1	51.2	60
Sulphure Dioxide (SO ₂)	IS:5182 (P-2) 2001 RA 2017	µg/m ³	7.84	22.3	28.5	25.4	80
Nitrogen Dioxide (NO ₂)	IS:5182 (P-6) 2006 RA 2017	µg/m ³	4.17	48.6	50.8	55.1	80
Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	3.7	21.2	27.1	23.5	400
Ozone (O ₃)	IS:5182 (P-09) 2019	µg/m ³	9.09	21.4	25.0	23.2	180 (1 hr.)
Lead (Pb)	IS:5182 (P-22) 2004, RA 2019	µg/m ³	7.95	0.096	0.222	0.182	1
Nickel (Ni)	IS:5182 (P-26) 2020	ng/m ³	14.71	BDL (MDL- 4)	BDL (MDL- 4)	BDL (MDL- 4)	--
Arsenic (As)	USEPA - IO 3.2	ng/m ³	2.05	BDL (MDL -02)	BDL (MDL -02)	BDL (MDL -02)	--

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

Limit is specified as	Environmental (Protection) Rule - 1986
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit
Env. Condition of Lab	Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
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Remarks	Samples comply with prescribed limits.

Sample Drawn By - Angad Munda
Tested By - Amit Kumar Sinha (Lab Analyst)

Verified by BrijNandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
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Test Certificate

Discipline	Chemical	Group	Atmospheric Pollution	Sample Description	Ambient Air Quality (Core Zone)		
Report Release Date		31 st March, 2022		Report ID	YBAEEL-220322-183133- A01		
W. Order/ JSPCB App. No.		3030005781		Work Order Date	18.12.2021		
Type of Industry(if any)		Thermal Power Plant		Job code/ Ref. no.	YBAEEL/WA/L/A/Mar-22/38		
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand					
Sampling Period		21/03/2022 – 22/03/2022		Mode of sample collection	By YBAEEL Team		
Sampling Protocol		IS:5182 and CPCB Air Manual Volume-1(NAAQM/36/2012-13)					
Sampling Locations		A. Bachelor Hostel		B. Switch Yard	C. Sati Steel (CHP Area)		
Meteorological Cond. of Field		W.C.– Clear		RH % - 40	Temp. - 33°C	W.D.– West-East	
Sample receipt Date		23/03/2022		Analysis Started on	23/03/2022	Analysis completed on	26/03/2022

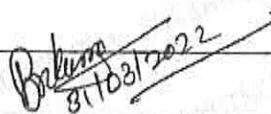
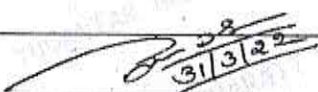
*****Test Results*****

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

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

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

Sample Drawn By – Angad Munda
Tested By – Amit Kumar Sinha (Lab Analyst)

	
Verified by	Issued by
Brij Nandan Kumar	Umesh Das
Section In-Charge	Technical Manager

Authorized Signatory
Atmospheric Pollution
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Technical Manager
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

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





Adhunik
GROUP OF INDUSTRIES

ADHUNIK POWER & NATURAL RESOURCES LIMITED

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

APNRL/HR/Office Order/10
5th August'2016

Office Order

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

Roles & Responsibility of Environment Cell

Following the broad scope of the Cell

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

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

Annexure I:
CORPORATE OFFICE : "LANSDOWNE TOWER", 2nd Floor, 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

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CIN - U40101WB2005PLC102935

05.08.2016

Annexure I

Responsibilities of the members of the environment management cell

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

Sr. Manager (HR)

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Annexure XVII

ADHUNIK POWER & NATURAL RESOURCES LIMITED

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CIN - U40101WB2005PLC102935

Ref No APNRL/JSPCB/ES/2020-21/02

Date: 20th Sep 2021

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 09th 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 2020-21.

This is for your kind information & record please.

Thanking You

Yours faithfully

Kamlesh Kumar
Manager (Environment)

Encl: As mentioned above

CC: 1. Regional Office (ECZ),

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

2. Regional Officer

Jharkhand Pollution Control Board

Jamshedpur, Jharkhand

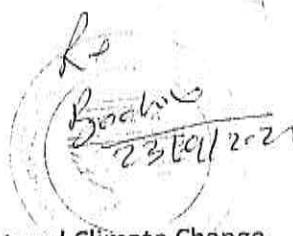
CORPORATE OFFICE : "LANSDOWNE TOWER", 2/1A, Sarat Bose Road, Kolkata - 700 020
Ph : +91 - 33 - 30517100 / 7200 / 7300 • Fax : +91 - 33 - 22890285

REGD. OFFICE

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

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: www.adhunikpower.com





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CIN - U40101WB2005PLC102935

Ref: MOE&F, RNC/HYC/KKJ/271121/02

Dated: 27.11.2021

To,

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

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

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

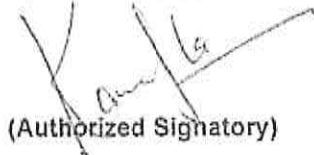
Sir,

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 2021 to September 2021

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

31.8.21
27.11.21


Bodh
29/11/21



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

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