

Kamlesh Kr Jha

From: Kamlesh Kr Jha
Sent: 23 May 2024 14:50
To: 'JSPCB, Jamshedpur'; 'ro.ranchi-mef@gov.in'; 'ranchijspcb@gmail.com'; 'nazim.cpcb@nic.in'
Subject: Submission of Half yearly compliance status report (Unit I) for the period – October 2023 to March 2024,-Reg.
Attachments: Annexure XIV-EMC Cell (2).pdf; Annexure X-LDO analysis report.pdf; Annexure XV-HYC-Unit I (April 2023- Sept 2023)-Acknowledgement Copy.pdf; Annexure XVI-Environment Statement -Unit I (2022-23).pdf; Covering Letter with Compliance report of EC -Unit I(APNRL).pdf; Annexure I-CEMS_APNRL.pdf; Annexure III-- DE & DS system at CHP.pdf; Annexure II-Stack Monitoring Report- U I.pdf; Annexure IV- Fly Ash Disposal report (2023-24).pdf; Annexure IX-LDO Certificate 2023-26.pdf; Annexure V-Bottom Ash Report.pdf; Annexure VI-Ash Pond Outlet Water Quality Report.pdf; Annexure VII-ETP Treated Water Quality Report.pdf; Annexure VIII- Sewage Treatment Plant -60KLD.pdf; Annexure XI-Baseline Ground water quality report.pdf; Annexure XIII-Ambient Air Quality Report.pdf; Annexure XII-Noise Monitoring Report.pdf

Ref:- MoEF & CC issued Environment Clearance File No.J-13011/8/2009-IA.II(T), dated 29th Aug 2009.

Sir,

With reference to the above referred Environmental Clearance, we are pleased to submit herewith the half yearly compliance status report with Annexures **(Unit I)** for the period of **October 2023 to March 2024**.

Following Documents are attached :

1. Covering Letter with compliance report of Environment Clearance –Unit I
2. Annexure I- Details of CEMS & Photographs
3. Annexure II- Stack Monitoring Report –Unit I
4. Annexure III- Photographs of DE & DS system
5. Annexure IV- Fly Ash Disposal report (2023-24)
6. Annexure V-Bottom Ash Report
7. Annexure VI-Ash Pond Outlet Water Quality Report
8. Annexure VII-ETP Treated Water Quality Report
9. Annexure VIII- Sewage Treatment Plant -60KLD
10. Annexure IX-LDO Certificate 2023-26
11. Annexure X-LDO analysis report
12. Annexure XI-Baseline Ground water quality report
13. Annexure XII-Noise Monitoring Report
14. Annexure XIII-Ambient Air Quality Report
15. Annexure XIV-EMC Cell (2)
16. Annexure XV-HYC-Unit I (April 2023- Sept 2023)-Acknowledgement Copy
17. Annexure XVI-Environment Statement -Unit I (2022-23)

This is for your reference and record, please.

Thanks & Regards,

Kamlesh Kumar

Adhunik Power & Natural Resources Ltd.

Vill.-Padampur,,Behind P.G.C.I.L Substation,Tata-Kandra Road

Saraikela-Kharsawan,Pincode:-832402,Jharkhand

Cell No: - 07763818994

Email Id:- kamleshkrjha@adhunikpower.co.in

Website:- www.adhunikpower.com



ADHUNIK POWER & NATURAL RESOURCES LIMITED

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

Ref: MOE&F, RNC/HYC/KKJ/23524/01

Dated: 23.05.2024

To,

The Regional Office (Eastern-Central Zone)
Ministry of Environment, Forest & Climate Change
2nd Floor, Jharkhand State Housing Board (HQ)
Harmu Chowk, Ranchi, Jharkhand-834002

Sub: - Submission of Half-yearly compliance status report (Unit I) for the period – October 2023 to March 2024 -Reg.

Ref: - MoEF letter No.J-13011/8/2009-IA.II (T), dated 29th Aug 2009.

Sir,

With reference to the above-referred Environmental Clearance, we are pleased to submit herewith the half-yearly compliance status report (Unit I) for the period of **October 2023 to March 2024**.

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

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

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

REGD. OFFICE

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

Website

: www.adhunikpower.com

REPORT

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



OCTOBER 2023 – MARCH 2024

**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: J-13011/8/2009-IA.II(T), dated 29th Aug 2009.		
Period Of Compliances: October 2023 to March 2024		
SI No	EC Conditions	Status as on 31st March 2024
1	No additional land in excess of 119 ha shall be acquired for any activity/facility of this project.	Total Land acquired for Unit I is well within the land mentioned in Environment Clearance.
2	EC is subject to obtaining clearance under the Wildlife Protection Act, 1972 from the competent authority	WLMP Prepared and approval has been obtained from PCCF. Complied
3	EC is subject to final order of the Hon'ble Supreme court of India in the matter of Goa foundation Vs Union of India in Writ. Petition (Civil) no. 460 of 2004 as may be applicable to this project.	Not applicable.
4	Project proponent should contribute @ Rs. 20000/ha for project area as proportionate cost to the regional Wildlife Conservation plan and a copy of the plan should be submitted to the ministry.	As in Sl. No. 2 the Wild Life Management Plan (WLMP) prepared has already been approved by PCCF, Ranchi on May'10.2010. 1 st installment already submitted. Complied
5	Sulphur and ash contents in the coal to be used in the project shall not exceed 0.45 % and 46 % respectively at any given time. In case of variation of coal quality at the time of issuance of LOA, a fresh reference shall be made to MoEF for suitable amendment to EC 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.
6	A single stack of 220 m height shall be provided with continuous online monitoring equipment's for Sox, Nox and PM. Exit velocity of flue gases shall not be less than 25 m/sec. Hg emission from stack may also be monitored on periodic basis.	Twin flue chimney of 275m height has constructed for proper dispersion of gases. Online monitoring equipment has installed in chimney. Photographs with details of CEMS enclosed as Annexure I
		Hg concentration in flue gases is well within prescribed limits.
7	High efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emissions does not exceed 50 mg/Nm3	High efficient ESPs of 32 fields has been installed to ensure control Particulate matter emission in flue gas. Stack monitoring report for the month of March 2024 enclosed as Annexure II.
8	Adequate dust extraction system such as cyclones/bag filters and water spray in dusty areas such as in coal handling and ash handling points, transfer area 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. Photographs Attached as Annexure III.
9	Fly ash shall be collected in dry form and storage facility (Silos) shall be provided. 100 % fly ash utilization shall be ensured from 4th year onwards. Unutilized 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	Fly Ash utilization are adhered in compliance with MoEF&CC notification dated 31.12.2021. Fly Ash generation & Utilization report (April 2023-March 2024) are enclosed as Annexure IV. 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

	emanating from the existing ash pond. No ash shall be disposed off in low lying area.	pond for the month of March 2024 enclosed as Annexure V & Annexure VI respectively.
10	Ash pond shall be lined with impervious lining. Adequate safety measures shall be implemented to protect the ash dyke from getting breached.	Complied
11	Closed cycling cooling system with natural cooling towers shall be provided. The effluents shall be treated as per the prescribed norms.	The project design involves closed cycle cooling systems with induce draft cooling towers. The effluent generated from process operation is being treated in a Guard pond to ensure conformance to CPCB standards and recycled in plant process. Treated effluent analysis report of ETP for the month of March 2024 enclosed as Annexure VII.
12	No ground water shall be extracted for project work at any stage.	We adhere.
13	Natural drainage system within the project site should not be disturbed.	Natural drainage system has not been disturbed.
14	The treated effluents conforming to the prescribed standards shall be re-circulated and reused within the plant. There shall be no discharge outside the plant boundary except during monsoon. Arrangements shall be made that effluents and storm water do not get mixed.	The project is designed with zero discharge provisions and there is separate arrangement for storm water and effluent water. Complied
15	A sewage treatment plant shall be provided and the treated sewage shall be used for raising green belt /plantation.	STP 60 KLD capacity (03 No) has installed within plant premises to treat sewage waste. Photographs enclosed as Annexure VIII.
16	Rainwater harvesting should be adopted CGWA shall be consulted for finalization of appropriate rain water technology within a period of three months from the date of clearance and details shall be furnished	The Rain water harvesting report has submitted and approved from CGWA Ranchi. 13 No Rain water harvesting system has been constructed in accordance with the approved rain water harvesting plan.
17	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires of 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 RO of the Ministry at Bhubaneswar.	The design of coal yard along with provision of fire safety measures viz. fire hydrants, water sprinklers has installed and submitted to the Ministry. Complied
18	Storage facilities of auxiliary liquid fuel such as LDO and HFO/LSHS shall be made in the plant area in consultation with dept. Of Explosive, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5 %. DMP shall be prepared to meet any eventuality in case of an accident taking place due to storage oil.	Approval received on dated 24.02.2023. License No. P/HQ/JH/15/1065 (P257355) valid upto 31 st Dec 2026 for LDO storage installation (under Petroleum Class "C") for operations. Copy of Approval are enclosed as Annexure IX. Disaster management plan (DMP) has been prepared to handle the any eventuality in case of an accident taking place due to storage of oil. 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 X.
19	Regular monitoring of ground water in and around to ash pond area including heavy metals (Hg, Cr, As, Pb) shall be carried out, records maintained and six monthly report shall be furnished to RO of ministry. The	Regular monitoring of ground water in and around ash pond area including heavy metals is being carried out. Ground water analysis report of upstream & downstream of ash pond compared with baseline data for the month of March 2024 enclosed as

	data so obtained should be compared with the base line data so as to ensure that the ground water quality is not adversely affected due to the project.	Annexure XI.
20	A green belt of adequate width and density shall be developed around the plant periphery covering 1/3 of the project area preferably with local species.	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.
21	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	Plant is under operation however first aid center comprising of competent medical staff (6 no's) and equipped with necessary medical facilities is made available onsite to provide emergency medical aid to both contract workers and company staff.
22	Noise level emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75 dBA. For people working in the high noise area, requisite PPE like ear plug/ear muff 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 2024 As Annexure XII.
23	Regular monitoring of ground level concentration of SO ₂ , NO _x , RSPM 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 RO of ministry. The data shall also be put on the website of the company.	Monitoring of Air quality is being conducted by APNRL on monthly basis. Review of air quality monitoring results revealed compliance to NAAQS. Ambient Air monitoring reports for the month of March 2024 is enclosed as Annexure XIII.
24	Provision shall be made for the housing of construction labor 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 structure to be removed after the completion of the project.	Plant is in operational condition and local labors are coming from nearby villages.
25	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 EC and copies of clearance letter are available with the SPCB/committee and may also be seen at Website of the MoEF at	Complied.

	http://envfor.nic.in .	
26	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat Zila Praised/Municipal Corporation, urban local body and the local NGO, is any from whom suggestion/representation, if any were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	Complied.
27	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	A Environmental Management Cell is being operational onsite to ensure effective implementation of specific EMPs. Organization chart of Environmental Management Cell enclosed as Annexure XIV.
28	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the RO of MoEF the respective zonal office of CPCB and the SPCB the criteria pollutant level namely SPM, RSPM, SO ₂ , NO _x (ambient level as stack emission) shall be monitored and 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 displayed at 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. Status of compliance of the stipulated EC conditions has been uploaded on company website for the period of April 2023 to September 2023.
29	The project proponent shall also submit six monthly report on the status of compliance of the stipulated condition including result of monitored data (both in hard copy as well by email) to the respective RO of MoEF, the respective zonal office of CPCB and the SPCB.	Last six monthly reports (April 2023 to September 2023) for the project along with environmental monitoring data submitted to MoEF RO at Ranchi vide letter No MOE&F,RNC/HYC/KKJ/281123/01 dated 28th November 2023 . Acknowledgement copy of same enclosed as Annexure XV.
30	The environmental statement for each financial year ending 31st September in form-V as is mandated to be submitted by the project proponent to the concern SBCB 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 the compliance of EC condition and shall also be sent to the respective RO of MoEF by email.	The last environmental statement for financial year (2022-2023) in Form V has submitted dated 20 th Sep 2023. Acknowledgement copy of same enclosed as Annexure XVI.
31	RO of the MoEF located at Bhubaneswar will monitor the implementation of the stipulated conditions. A complete set-up of documents including EIA report EMP along with the additional information submitted from time to time shall be forwarded to the RO for their use during monitoring. Project proponent will upload the compliance status their website and update the same from	The updated compliance status of the stipulated EC conditions along with monitored data has been displayed at 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. However Half yearly progress report is being sent to RO office, Ranchi on regular basis as per the requirement & uploaded on company website.

	time to time at least six monthly basis. Criteria pollutant level (Stack and ambient level of NOx) will be displayed at the main gate of the power plant.	
32	Separate fund shall be allocated for implementation of environmental protection measures along with item wise break up this 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.
33	The project authorities shall inform the RO as well as the ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work and commissioning of plant.	Complied
34	Full cooperation shall be extended to the Scientists/officers from the ministry / RO of the ministry at Bhubaneswar/the CPCB/the SPCB who would be monitoring the compliance of environmental status.	We ensure.



CODEL

REF: DCEM2100/DS/02

DATA SHEET DCEM2100 DUST MONITOR		
GENERAL		
1.	Make	Codel, UK.
2.	Model	DCEM2100 Dust Monitor
3.	Type	In-Situ Non contact cross duct type
4.	Qty of units	2 No
5.	Tag No.	HNE10CQ003
FEATURES		
6	Range	0-100% Opacity , 0-999mg/m ³ , 0-999mg/Nm ³ (Fully site selectable)
7	Min. detectable conc.	1 mg/m ³
8	Measurement Units	Fully selectable units-, mg/m ³ (measured) , mg/Nm ³ (Normalized) and opacity(%)
9	Measurement averaging	Fully selectable in range 10sec to 30 days
10	Response time	90% in 5 seconds.
11	Auto/manual calibration	In built automatic zero and span calibration
12	Accuracy	+/-0.2% Opacity of measurement
13	Drift	Less than 1% per month
14	Resolution	+/-0.1% opacity
15	Linearity	+/- 0.1% of full scale
16	Repeatability	+/-0.1% opacity
17	Power supply	88 – 264 VAC , 50-60Hz, 125 VA
18	Remote/Local control unit	Isolated 2x 4-20 mA, 500 ohms outputs fully configurable. 3 x Volt free SPCO contact rated at 50 VDC 1 Amp. 2 Line X 32 character alpha-numeric LCD displays with 4 key keypad.
19	Automatic misalignment detection	Provided in the instrument as a warning signal of misalignment
20	Correction for contamination	Automatic window contamination check
21	Error Diagnostics	Dirty optics, Misalignment, Valve 1 closed, Valve 2 closed to indicate the error conditions.
22	Construction material and Enclosures	Fully sealed aluminum enclosures to IP 66
DESIGN CONDITIONS		
23	Source	Modulated high intensity LED
24	Detector	Silicon photocell
25	Ambient air temp.	- 20deg.C to 60 deg.C
26	Gas Temperature	Upto 850 deg.c
CONNECTIONS & DIMENSIONS		
27	Analyzer mounting details	Analyser can be mounted in Chimney at Elevation of 91.6 Mtrs. Please refer drawing for analyser mounting flange details.
28	Path length	Suitable for 0.5 to 12m duct/stack inner diameter
ACCESSORIES		
29	Fail safe shutters	Built in
30	Air Purges	Air purges for continuous air supply to instrument provided
31	Interconnecting cables and mounting hardware	Included in supply.
32	Temp. transmitter	24 VDC Supply Make: Precision Converter Model: PCHMR Range: 0 to 300 Deg C

Ref: GCEM40A0/DS/02

DATA SHEET			
CO, SO₂, NO_x GAS ANALYSER			
GENERAL			
1.	Make	CODEL International Ltd., UK	
2.	Model/Article No	GCEM4000 Series Article no GCEM40A0	
3.	Type	Infrared Absorption Analyser-In-Situ type	
4.	Qty	2 No.	
5.	Tag No.	SO _x	HNE10CQ004
		NO _x	HNE10CQ001
		CO	HNE10CQ002
FEATURES			
6.	Range	CO : 0 to 1000ppm, 0 to 1000mg/m ³ , 0 to 1000mg/Nm ³ SO ₂ : 0 to 1000ppm, 0 to 1000mg/m ³ , 0 to 1000mg/Nm ³ , NO _x : 0 to 1000ppm, 0 to 1000mg/m ³ , 0 to 1000mg/Nm ³ , CO ₂ : 0 to 25% H ₂ O : 0 to 25% Above ranges are site selectable up to 3000 ppm	
7.	Min. detectable conc.	1 ppm , 1mg/m ³ , 1mg/Nm ³ for CO,SO ₂ ,NO _x & 0.5% for CO ₂ ,H ₂ O.	
8.	Measurement Units	Fully selectable units-ppm or % by volume, mg/m ³ (measured) and mg/Nm ³ (Normalised to temperature, pressure, H ₂ O & CO ₂)	
9.	Measurement averaging	Fully selectable in range 10Sec to 1 hour	
10.	Response time (T90)	Detector less than 10 seconds, Calibration less than 200 seconds.	
11.	Auto & manual calibration	In built and selectable	
12.	Function	Continuous function	
13.	Accuracy	+/- 2% of measured value for CO,SO ₂ , NO _x ,& 0.5% for CO ₂ & H ₂ O	
14.	Zero /span drift(24hrs)	Over all drift less than +/-2% per month	
15.	Repeatability	Less than 2% of span	
16.	Sensitivity	1 ppm for CO,SO ₂ ,NO _x , 0.5% for CO ₂ ,H ₂ O	
17.	Linearity	Less than 2%	
18.	LCD Display	LCD with back light	
19.	Power supply	240VAC, 50-60Hz, +/-10% 400VA	
20.	Outputs	Analog : 5 x 4-20 mA isolated, max. 500 Ohms, full configurable from Keypad for CO,SO ₂ ,NO _x in ppm & CO ₂ ,H ₂ O in % to DCS fully site configurable. Logic: 5 x Volt free contacts, SPCO rated at 50 volt 1A & 1x data invalid output (System fault)	
21.	Serial Communications	RS232/RS485 Modbus O/P	
22.	Construction material and Enclosures	Electronic Housings (DDU) : Corrosion resistant, epoxy coated Aluminium housing sealed to IP 66 Probe : SS316L	

DESIGN CONDITIONS		
23.	Infrared source	Heater cartridge assembly
24.	Infrared detector	Lead selenid detector
25.	Ambient air temp.	Transceiver unit 0 to 70 °C, Electronic unit (PSU & DDU) 0 to 60 °C
26.	Flue gas temp.	Up to 350 deg.C

CONNECTIONS & DIMENSIONS		
27	Analyser mounting details	Please refer drawing for analyser mounting flange details. Mounting location on Chimney at 91 Mtrs Elevation.
28	Stack width	Suitable for duct/Stack inner diameter of more than 2000mm.
ACCESSORIES		
29	Standard span gas for calibration	Make : Chemtron Science Laboratory, Mumbai Material : Aluminium Cylinder Capacity : 10 ltr W.C Filled with : 500ppm CO, 500ppm SO ₂ , 500ppm NO and balance Nitrogen (N ₂) Cylinder with SS regulator, necessary tubing's & fittings. Filled pressure: filled at 120-130kg/cm ²
30	Zero Calibration	For zero calibration we use plant compressed air.
31	Air dryer unit	Maximum Pressure : 10 bar Maximum temperature : 57 deg.C Air dryer unit to dry down the compressed air to -20 deg.c .
32	Zero/span gas calibration tubes	For zero calibration, client to provide plant instrument air line up to probe (10 mm OD connection) For span gas calibration, 20 mtr length SS tube of 10mm OD with necessary fittings from Cylinder to probe.
33	Pressure transmitter	Mounted on GCEM40A0 probe Make : Druck Range : 1 .6bar absolute with 4-20mA output Input supply : 24VDC operated
34	Temperature transmitter	Mounted on GCEM40A0 probe Make : Peak Sensor Limited, Washington Type: K type thermocouple Range : 0 – 600 deg.C with 4-20mA output Input supply : 24VDC operated
35	Plant instrument air Consumption	5 LPM @3 bar pressure continuous 10LPM @3 bar pressure during zero calibration

Continuous emission monitoring system





YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Certified by :-

ISO 9001:2015 & ISO 45001:2018



TC-12989

Test Report

URL(Unique Lab Report) No.			TC	1	2	9	8	9	2	4	0	0	0	0	0	0	1	3	2	F
Discipline	Chemical	Group	Atmospheric Pollution						Sample Description						Stationary Source Emission					
Report Release Date		16 th March, 2024						Report ID						YBAEEL-240229-152312- S1						
W. Order / JSPCB App. No.		3030006964						Work Order Date						03.02.2024						
Type of Industry(If any)		Thermal Power Plant						Job code/ Ref. no.						YBAEEL/WA/L/A/Mar.-24/01						
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand.																		
Sampling Period		05/03/2024						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 % - 57						Temp. – 29°C						
Sample receipt Date		07/03/2024			Analysis Started on			07/03/2024			Analysis completed on						16/03/2024			

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)	176 Ton/Hr.
Stack Description (Shape & Material)	Circular / RCC	Total production Capacity	274 MW
Sampling port	Available	Height of Stack from ground level	275mtr.
Stack Identification	Unit - I	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
Stack gas Temperature (k)	393.0		
Stack gas Velocity (m/s)	26.0		
Volumetric Flow Rate (Nm ³ /hr)	982418.0		

Emission Rate based on Calculation of Volumetric Flow rate

1.	Particulate Matter (PM)	Kg/hr	48.5
2.	Sulphure Dioxide (SO ₂)	Kg/hr	1192.5
3.	Oxide of Nitrogen (as NO _x)	Kg/hr	645.2

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

Sl	Parameters	Test Method	Units	Results	Limits
1.	Particulate Matter (PM)	IS 11255 (Part 1)2009, RA 2019	mg/Nm ³	44.3	50
2.	Sulphure Dioxide (SO ₂)	IS 11255 (Part 2)2009, RA 2019	mg/Nm ³	1213.8	600
3.	Oxide of Nitrogen (as NO _x)	IS 11255 (Part 7)2005, RA 2022	mg/Nm ³	436.9	450
4.	Carbon Monoxide (CO)	IS 13270:1992:2009, RA 2019	%	BDL (MDL 0.2)	--

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 report unless specified otherwise
	The liability of the laboratory is limited to the invoiced amount.
Remarks	All disputes are subjected to the Ranchi Jurisdiction.
	Sample complies with prescribed limits, except SO ₂ .

Sample Drawn By – Mukesh Singh
Tested By – Akash Khalkho (Lab Analyst)

Sanjeev Kumar Singh
16/03/24

Verified & Issued by
Sanjeev Kumar Singh

(Technical Manager)
Authorized Signatory
Atmospheric Pollution
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

Enquiry Office - Jamshedpur Dhanbad Hazaribag Pakur

Main Office Cum Laboratory :- Plot No. 551, Khata No 62, Sidroul, P.O. Namkum, P.S. Namkum, Ranchi, Jharkhand

Ph : 09835197960, 9304955304, Email - ybaeel@gmail.com, Web - https://ybaeel.in



ISO 9001:2015
ISO 45001:2018



YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Certified by :-

ISO 9001:2015 & ISO 45001:2018

Test Report

Discipline	Chemical	Group	Atmospheric Pollution	Sample Description	Stationary Source Emission
Report Release Date	16 th March, 2024			Report ID	YBAEEL-240229-152312- S1
W. Order / JSPCB App. No.	3030006964			Work Order Date	03.02.2024
Type of Industry(If any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/A/Mar.-24/01
Report Issue to	M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand.				
Sampling Period	05/03/2024		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 % - 57		Temp. – 29°C
Sample receipt Date	07/03/2024	Analysis Started on	07/03/2024	Analysis completed on	16/03/2024

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)	176 Ton/Hr.
Stack Description (Shape & Material)	Circular / RCC	Total production Capacity	274 MW
Sampling port	Available	Height of Stack from ground level	275mtr.
Stack Identification	Unit - I	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
Stack gas Temperature (k)	393.0		
Stack gas Velocity (m/s)	26.0		
Volumetric Flow Rate (Nm ³ /hr)	982418.0		

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

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

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 report 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 - Mukesh Singh
Tested By - Akash Khalkho (Lab Analyst)

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

Signature
16/03/24

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

Authorized Signatory
Atmospheric Pollution
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Enquiry Office -

Jamshedpur

Dhanbad

Hazaribag

Pakur

Main Office Cum Laboratory :- Plot No. 551, Khata No 62, Sidroul, P.O. Namkum, P.S. Namkum, Ranchi, Jharkhand

Ph : 09835197960, 9304955304, Email - ybaeel@gmail.com, Web - https://ybaeel.in



Bag Filter installed at Coal mill building



Bag Filter installed at Ash silo



Bag filter at buffer hopper



Dust suppression through Tanker



Fixed type DS system for coal Conveyor



DE system at Coal Crusher House



Closed type coal conveying system



Fixed type dust suppression system



Fixed type DS system at Coal Yard



ADHUNIK POWER & NATURAL RESOURCES LTD.

FLY ASH Stock & Generation Report (2023-24)

Month	Current Year Ash Utilization (2023-24)					Fly Ash Utilization Mode					Filling in Low Lying Area	Total Ash Utilization
	Month Coal Consumption	TA Generation	Ash %	Total Ash Utilization	Utilization %	Fly ash based Products	Cement Manufacturing	Ready mix concrete	Construct ion of road and fly over embankm ent	export of ash to other countries		
Apr-23	1,24,286.34	52,557.94	42.29%	44,268.86	84.23%	189.00	37,168.00	6,868.00	-	43.86	-	44,268.86
May-23	1,29,116.83	52,569.24	40.71%	44,767.00	85.16%	1,180.00	36,464.00	7,123.00	-	-	-	44,767.00
Jun-23	1,68,814.57	68,155.20	40.37%	58,079.00	85.22%	3,104.00	47,415.00	7,560.00	-	-	-	58,079.00
Jul-23	2,60,174.69	1,06,258.40	40.84%	74,880.01	70.47%	8,255.00	59,174.71	7,450.30	-	-	-	74,880.01
Aug-23	2,76,754.49	1,09,489.66	39.56%	72,985.81	66.66%	8,127.00	56,379.48	8,243.50	235.83	-	-	72,985.81
Sep-23	2,82,140.67	1,20,023.49	42.54%	76,496.72	63.73%	12,525.00	57,545.45	6,426.27	-	-	-	76,496.72
Oct-23	2,87,624.41	1,30,715.14	45.45%	87,651.29	67.06%	12,634.00	67,841.75	7,175.54	-	-	-	87,651.29
Nov-23	2,09,834.33	89,996.38	42.89%	74,750.50	83.06%	9,687.00	58,892.35	5,265.51	-	-	905.64	74,750.50
Dec-23	2,25,402.00	99,340.00	44.07%	88,920.15	89.51%	7,544.00	68,284.14	7,232.01	-	-	5,860.00	88,920.15
Jan-24	2,35,605.18	1,00,713.11	42.75%	89,378.79	88.75%	10,220.00	64,802.54	7,455.25	-	-	6,901.00	89,378.79
Feb-24	2,46,020.14	98,960.86	40.22%	98,940.27	99.98%	12,789.00	75,520.31	10,630.96	-	-	-	98,940.27
Mar-24	2,58,248.00	1,04,951.99	40.64%	1,04,948.55	100.00%	18,940.00	76,243.42	9,765.13	-	-	-	1,04,948.55
Total	27,04,021.64	11,33,731.39	41.93%	9,16,066.95	80.80%	1,05,194.00	7,05,731.15	91,195.47	235.83	43.86	13,666.64	9,16,066.95

Karfa



YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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

Test Report

Discipline	Chemical	Group	Pollution & Environment	Sample Description	ASH
Report Release Date	16 th March, 2024			Report ID	YBAEEL-240229-152312- 01
W. Order / JSPCB App. No.	3030006964			Work Order Date	03.02.2024
Type of Industry (If any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/C/Mar-24/06
Report Issue to	M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand				
Sampling Date	06/03/2024			Mode of sample collection	By YBAEEL Team
Sampling Protocol	YBAEEL/Soil/SOP/01/00			Sample Code	240307-AS-E01
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 % - 60		Temp. - 33°C
Sample receipt Date	07/03/2024	Analysis Started on	07/03/2024	Analysis completed on	16/03/2024

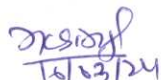
*****Test Results*****

Sl	Parameter	Test Method	Units	Results
1.	Iron (as Fe)	USEPA 3050 B :1996/APHA 3111 B	ppm	33.4
2.	Zinc (as Zn)	USEPA 3050 B :1996/APHA 3111 B	ppm	0.12
3.	Copper (as Cu)	USEPA 3050 B :1996/APHA 3111 B	ppm	0.01
4.	Lead (as Pb)	USEPA 3050 B :1996/APHA 3111 B	ppm	BDL (MDL 0.02)
5.	Nickel (as Ni)	USEPA 3050 B :1996/APHA 3111 B	ppm	0.07
6.	Cadmium (as Cd)	USEPA 3050 B :1996/APHA 3111 B	ppm	0.1
7.	Chromium (as Cr)	USEPA 3050 B :1996/APHA 3111 B	ppm	0.43
8.	Arsenic (as As)	USEPA 3050 B :1996/APHA 3112 B	ppm	0.08
9.	Mercury (Hg)	USEPA 3050 B :1996/APHA 3111 B	ppm	0.04
10.	Selenium (as Se)	USEPA 3050 B :1996/APHA 3111 B	ppm	BDL (MDL 0.01)

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 - Mukesh Singh
Tested By - Shivani Kumari Singh (Sr. Lab Analyst)

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


Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)
Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory



ISO 9001:2015
ISO 45001:2018

Enquiry Office - Jamshedpur Dhanbad Hazaribag Pakur

Main Office Cum Laboratory :- Plot No. 551, Khata No 62, Sidroul, P.O. Namkum, P.S. Namkum, Ranchi, Jharkhand
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TC-12989

Test Report

ULR (Unique Lab Report) No.				TC	1	2	9	8	9	2	4	0	0	0	0	0	0	1	4	6	F		
Discipline	Chemical	Group	Pollution & Environment					Sample Description					Waste Water / Effluent Water										
Report Release Date		16 th March, 2024							Report ID					YBAEEL-240229-152312-WW01									
W. Order / JSPCB App. No.		3030006964							Work Order Date					03.02.2024									
Type of Industry(if any)		Thermal Power Plant							Job code/ Ref. no.					YBAEEL/WA/L/W/Mar.-24/01									
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand.																					
Sampling Date		06/03/2024							Mode of sample collection					By YBAEEL Team									
Sampling Protocol		IS : 17614 (Part-1): 2021							Sample Code					240307-WW-E01									
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 % - 49					Temp.–26°C									
Sample receipt Date		07/03/2024		Analysis Started on				07/03/2024			Analysis completed on							16/03/2024					

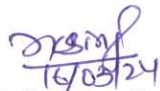
*****Test Results*****

Sl	Parameter	Test Method	Units	Results	Limits
1.	pH value	IS 3025 (P-11):2022 (Electrometric Method)	pH	7.15 at 26.0°C	6.5 - 8.5
2.	Temperature	IS 3025 (P-09):2023	°C	26.0	--
3.	Total Suspended Solids	IS 3025 (P-17):2022 (Gravimetric Method)	mg/l	84.0	100
4.	Oil & Grease	IS 3025 (P-39):2021 (Partition Gravimetric Method)	mg/l	BDL (MDL 4.0)	20
5.	Arsenic (as As)	APHA 3114 C 24 th edition 2023 (Continuous Hydride Generation Method)	mg/l	BDL (MDL 0.003)	--
6.	Lead (as Pb)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	--
7.	Mercury (as Hg)	APHA 3112 B 24 th edition 2023 (Cold Vapour AAS Method)	mg/l	BDL (MDL 0.003)	--
8.	Chromium (as Cr)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.4	--

Limit is specified as	Environmental (Protection) Rule - 1986.
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Remarks	Sample complies with prescribed limit.

Sample Drawn By - Mukesh Singh
Tested By - Shivani Kumari Singh (Sr. Lab Analyst)

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


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



TC-12989

Test Report

ULR (Unique Lab Report) No.			TC	1	2	9	8	9	2	4	0	0	0	0	0	0	0	1	4	8	F
Discipline	Chemical	Group	Pollution & Environment					Sample Description					Waste Water / Effluent Water								
Report Release Date		16 th March, 2024						Report ID					YBAEEL-240229-152312-WW01								
W. Order / JSPCB App. No.		3030006964						Work Order Date					03.02.2024								
Type of Industry(If any)		Thermal Power Plant						Job code/ Ref. no.					YBAEEL/WA/L/W/Mar.-24/03								
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand.																			
Sampling Date		06/03/2024						Mode of sample collection					By YBAEEL Team								
Sampling Protocol		IS : 17614 (Part-1): 2021						Sample Code					240307-WW-E01								
Sampling Location		ETP 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 % - 42					Temp.–27°C								
Sample receipt Date		07/03/2024		Analysis Started on			07/03/2024			Analysis completed on			16/03/2024								

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

Sl	Parameter	Test Method	Units	Results	Limits
1.	pH value	IS 3025 (P-11):2022 (Electrometric Method)	pH	7.70 at 27.0°C	5.5 - 9.0
2.	Temperature	IS 3025 (P-09):2023	°C	27.0	--
3.	Total Suspended Solids	IS 3025 (P-17):2022 (Gravimetric Method)	mg/l	12.0	100
4.	BOD (3 days at 27°C)	IS 3025 (P-44):1993, RA 2019 (Oxygen Depletion Method)	mg/l	4.8	30
5.	COD	IS 3025 (P-58):2006, RA 2022	mg/l	44.0	250
6.	Chloride (as Cl ⁻)	IS 3025 (P-32):1988, RA 2019 (Argentometric Method)	mg/l	10.9	--
7.	Sulphate (as SO ₄ ²⁻)	IS 3025 (P-24-Sec 1):2022 (Turbidity Method)	mg/l	18.4	--
8.	Copper (as Cu)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.01)	3
9.	Lead (as Pb)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	0.1
10.	Zinc (as Zn)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.10	5
11.	Chromium (as Cr)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.37	2

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Remarks	Sample complies with prescribed limit.

Sample Drawn By - Mukesh Singh
Tested By - Shivani Kumari Singh (Sr. Lab Analyst)

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

Verified & Issued by
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ISO 9001:2015
ISO 45001:2018

Enquiry Office - Jamshedpur Dhanbad Hazaribag Pakur

Main Office Cum Laboratory :- Plot No. 551, Khata No 62, Sidroul, P.O. Namkum, P.S. Namkum, Ranchi, Jharkhand
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Sewage Treatment Plant





भारत सरकार
भारत सरकार

Government of India

वाणिज्य और उद्योग मंत्रालय

Ministry of Commerce & Industry

पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पेसो)

Petroleum & Explosives Safety Organisation (PESO)

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

रांची- 834001

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

E-mail : dycceranchi@explosives.gov.in

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

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

दिनांक /Dated : 24/02/2023

सेवा में /To,

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

24 FEB 2023

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

महोदय /Sir
(s),

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

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

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

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

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

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

कृपया पावली दें।

Please acknowledge the receipt.

भवदीय /Yours faithfully,

((आशेंद्र सिंह))
(Ashendra Singh)

उप मुख्य विस्फोटक नियंत्रक

Dy. Chief Controller of Explosives
रांची/Ranchi

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

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

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

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

नवीनीकरण के प्रमाण के लिए स्थान
SPACE FOR ENDORSEMENT OF RENEWALS

पेट्रोलियम अधिनियम, अनुमति की शर्तों का उल्लंघन न होने की दशा में यह अनुमति फिस में बिना किसी छूट के दस वर्ष तक नवीकृत की जा सकेगी। This licence shall be renewable without any concession in fee for ten years in the absence of contravention of any provisions of the Petroleum Act, 1934 or of the rules framed thereunder or of any of the conditions of this licence.	नवीकरण की तारीख Date of Renewal	समाप्ति की तारीख Date of Expiry of license	अनुमति 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	Sd/- K. Thiagarajan Jt. Chief Controller of Explosives For Dy. Chief Controller of Explosives Ranchi
4).	24/02/2023	31/12/2026	Ashendra Singh Dy. Chief Controller of Explosives Ranchi

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

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

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



भारत सरकार
भारत सरकार

Government of India

वाणिज्य और उद्योग मंत्रालय

Ministry of Commerce & Industry

पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पेसो)

Petroleum & Explosives Safety Organisation (PESO)

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

रांची- 834001

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

E-mail : dycceranchi@explosives.gov.in

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

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

दिनांक /Dated : 24/02/2023

सेवा में /To,

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

24 FEB 2023

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

महोदय /Sir
(s),

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

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

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

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

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

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

कृपया पावती दें।

Please acknowledge the receipt.

भवदीय /Yours faithfully,

((आशेंद्र सिंह))
(Ashendra Singh)

उप मुख्य विस्फोटक नियंत्रक

Dy. Chief Controller of Explosives
रांची/Ranchi

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

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

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

HINDUSTAN PETROLEUM CORPORATION LIMITED

(A Government of India Enterprise)

QUALITY CONTROL LABORATORY

Visakha New Terminal

CONVENT JN.-SHEELANAGAR ROAD, BEHIND AIRPORT,

VISAKHAPATNAM- 530014

TEST REPORT

Product : HP INDUSTRIAL DIESEL OIL

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

Density/Type of Sample
Catg / Evnt / Actvty : Aft Receipt thru Dedicated P/L
Receipt/Despatch Mode :
Sample Drawn by : RAMAKRISHNA

Test Report No. : BFT/10835

Date of Sample Drawn : 20/07/19

Date of Sample Receipt : 21/07/19

Date of Sample Testing : 22/07/19

Date of Report : 22/07/19

Date of Printing : 22/07/19

JDE Sample Number : 865213

Batch No :

Test Line Number	Characteristics	Units	Test Method	Specifications		Result Value
				Min	Max	
5	DENSITY@ 15°C	Kg/m3	IS 1448 [P:16]	-	-	867.8
6	KINEMATIC VISCOSITY @ 40° C	cSt	IS 1448 P:25	2.500	15.000	4.860
7	FLASH POINT - PMCC	°C	IS 1448 P:21	66	-	79
8	WATER CONTENT	% Vol	IS 1448 P:40	-	.250	.100
9	TOTAL SULPHUR	% Mass	ASTM D 4294	-	1.50	.47
10	POUR POINT SUMMER	°C	IS 1448 P:10	-	21	3

Remarks:

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

Appearance : Light Brown

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

Tested By : 35323320

VELAMURI DATTATREYA

Reviewed and Approved By : 35323320

VELAMURI DATTATREYA

*** END OF TEST REPORT ***

Page No. : 1 of 1



YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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

Test Report

Baseline Ground Water Quality Report						
Discipline	Chemical	Group	Water	Sample Description	Ground Water	
Report Release Date		16 th March, 2024		Type of Industry(If any)	Thermal Power Plant	
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand.				
Sampling Date		06/03/2024		Mode of sample collection		By YBAEEL Team
Sampling Protocol		IS : 17614 (Part-1): 2021		Sample Code		240307-GW-E02
Sampling Location		Hariharpur Village, 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 % - 52		Temp. – 25°C
Sample receipt Date		07/03/2024	Analysis Started on	07/03/2024	Analysis completed on	16/03/2024

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

SI	Parameter	Test Method	Units	Results	Baseline Ground Water Quality	Permissible Limit (as per IS 10500 Specification)
1.	pH value	IS 3025 (P-11):2022 (Electrometric Method)	pH	6.79 at 28.5°C	6.9-7.4	6.5-8.5
2.	Taste	IS 3025 (P-07 & 08):2017&2023	--	Agree.	Agreeable	Agreeable
3.	Odour	IS 3025 (P-05):2018	--	Agree.	Unobjectionable	Agreeable
4.	Colour	IS 3025 (P-04):2021 (Visual Comparison Method)	Hazen	5	<5	5-15
5.	Conductivity	IS 3025 (P-14):2013, RA 2019	µs/cm	486.0	--	--
6.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23):1986, RA 2019 (Indicator Method)	mg/l	92.0	147-269	200-600
7.	Total Hardness (as CaCO ₃)	IS 3025 (P-21):2009, RA 2019 (EDTA Method)	mg/l	178.0	128-308	200-600
8.	Total dissolved solids	IS 3025 (P-16):2023 (Gravimetric Method)	mg/l	242.0	251-538	500-2000
9.	Chlorine Residual	IS 3025 (P-26):2021 (Iodometric Method)	mg/l	BDL (MDL 0.07)	<0.05	0.2-1
10.	Chloride (as Cl)	IS 3025 (P-32):1988, RA 2019 (Argentometric Method)	mg/l	61.0	42-74	250-1000
11.	Fluoride (as F ⁻)	APHA 4500 F-C 24 th edition 2023 (Ion Selective Electrode Method)	mg/l	0.48	0.31-0.50	1.0-1.5
12.	Nitrate (as NO ₃ ⁻ N)	APHA 4500 NO ₃ ⁻ (B) 24 th edition 2023 (UV Screening Method)	mg/l	8.62	03-24	45-No relaxation
13.	Sulphate (as SO ₄ ²⁻)	IS 3025 (P-24-Sec 1):2022 (Turbidity Method)	mg/l	28.6	06-28	200-400
14.	Calcium (as Ca)	IS 3025 (P-40): 1991, RA 2019 (EDTA Titrimetric Method)	mg/l	40.08	41-99	75-200
15.	Magnesium (as Mg)	APHA 3500 Mg B 24 th edition 2023	mg/l	18.90	--	30-100
16.	Sodium (as Na ⁺)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	20.0	--	--
17.	Potassium (as K ⁺)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	2.0	--	--

Prepared By - Shivani Kumari Singh
(Sr. Lab Analyst)

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

Authorized Signatory
Chemical Section

Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

Branch Office :- Jamshedpur Dhanbad Hazaribag Pakur

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

Ph : 098351-97960, 09304955304, Email - ybaeel@gmail.com, Web - https://ybaeel.in



ISO 45001:2018



ISO 9001:2015



YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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

Test Report

Baseline Ground Water Quality Report					
Discipline	Chemical	Group	Water	Sample Description	Ground Water
Report Release Date	16 th March, 2024			Type of Industry (if any)	Thermal Power Plant
Report Issue to	M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand.				
Sampling Date	06/03/2024		Mode of sample collection	By YBAEEL Team	
Sampling Protocol	IS : 17614 (Part-1): 2021		Sample Code	240307-GW-E02	
Sampling Location	Hariharpur Village, 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 % - 52	Temp. - 25°C	
Sample receipt Date	07/03/2024	Analysis Started on	07/03/2024	Analysis completed on	16/03/2024

SI	Parameter	Test Method	Units	Results	Baseline Ground Water Quality	Permissible Limit (as per IS 10500 Specification)
18.	Cyanide(as CN ⁻)	IS 3025 (P-27/Sec1):2021 (Titrimetric Method)	mg/l	BDL (MDL 1.0)	--	0.05-No relaxation
19.	Arsenic (as As)	APHA 3114 C 24 th edition 2023 (Continuous Hydride Generation Method)	mg/l	BDL (MDL 0.003)	<0.01	0.01-No relaxation
20.	Copper (as Cu)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.03	<0.01	0.05-1.5
21.	Iron (as Fe)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.71	0.13-0.90	1.0-No relaxation
22.	Lead (as Pb)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	<0.01	0.01-No relaxation
23.	Selenium (as Se)	APHA 3114 C 24 th edition 2023 (Continuous Hydride Generation Method)	mg/l	BDL (MDL 0.01)	--	0.01-No relaxation
24.	Zinc (as Zn)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.10	0.31-0.47	5-15
25.	Cadmium (as Cd)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	<0.01	0.003-No relaxation
26.	Mercury (as Hg)	APHA 3112 B 24 th edition 2023 (Cold Vapour AAS Method)	mg/l	BDL (MDL 0.003)	<0.001	0.001-No relaxation
27.	Chromium (as Cr)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.03	<0.01	0.05-No relaxation
28.	Nickel (as Ni)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	--	0.02-No relaxation
29.	Cobalt (Co)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.03)	--	--
30.	Aluminium (as Al)	IS 3025 (P-55):2003, RA 2019 (Eriochrome Cyanine R Method)	mg/l	BDL (MDL 0.02)	--	0.03-0.2

Limit is specified as	IS 10500:2012, RA 2018.
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.
Remarks	All disputes are subjected to the Ranchi Jurisdiction.
	Sample complies with prescribed limits.

Prepared By – Shivani Kumari Singh
(Sr. Lab Analyst)

Sanjeev Kumar Singh
16/03/24

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

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

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

Branch Office :- Jamshedpur Dhanbad Hazaribag Pakur

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

Ph : 098351-97960, 09304955304, Email - ybaeel@gmail.com, Web - https://ybaeel.in



ISO 45001:2018



ISO 9001:2015



YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Certified by :-

ISO 9001:2015 & ISO 45001:2018

Test Report

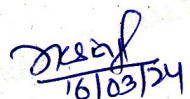
Baseline Ground Water Quality Report					
Discipline	Chemical	Group	Water	Sample Description	Ground Water
Report Release Date	16 th March, 2024			Type of Industry (If any)	Thermal Power Plant
Report Issue to	M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand.				
Sampling Date	06/03/2024		Mode of sample collection	By YBAEEL Team	
Sampling Protocol	IS : 17614 (Part-1): 2021		Sample Code	240307-GW-E01	
Sampling Location	Srirampur Village, 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 % - 51	Temp. - 23°C	
Sample receipt Date	07/03/2024	Analysis Started on	07/03/2024	Analysis completed on	16/03/2024

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

Sl	Parameter	Test Method	Units	Results	Baseline Ground Water Quality	Permissible Limit (as per IS 10500 Specification)
1.	pH value	IS 3025 (P-11):2022 (Electrometric Method)	pH	6.89 at 28.2°C	6.9-7.4	6.5-8.5
2.	Taste	IS 3025 (P-07 & 08):2017&2023	--	Agree.	Agreeable	Agreeable
3.	Odour	IS 3025 (P-05):2018	--	Agree.	Unobjectionable	Agreeable
4.	Colour	IS 3025 (P-04):2021 (Visual Comparison Method)	Hazen	5	<5	5-15
5.	Conductivity	IS 3025 (P-14):2013, RA 2019	µs/cm	640.0	--	--
6.	Total Alkalinity (as CaCO ₃)	IS 3025 (P-23):1986, RA 2019 (Indicator Method)	mg/l	162.0	147-269	200-600
7.	Total Hardness (as CaCO ₃)	IS 3025 (P-21):2009, RA 2019 (EDTA Method)	mg/l	220.0	128-308	200-600
8.	Total dissolved solids	IS 3025 (P-16):2023 (Gravimetric Method)	mg/l	306.0	251-538	500-2000
9.	Chlorine Residual	IS 3025 (P-26):2021 (Iodometric Method)	mg/l	BDL (MDL 0.07)	<0.05	0.2-1
10.	Chloride (as Cl)	IS 3025 (P-32):1988, RA 2019 (Argentometric Method)	mg/l	69.0	42-74	250-1000
11.	Fluoride (as F ⁻)	APHA 4500 F-C 24 th edition 2023 (Ion Selective Electrode Method)	mg/l	0.63	0.31-0.50	1.0-1.5
12.	Nitrate (as NO ₃ ⁻ N)	APHA 4500 NO ₃ ⁻ (B) 24 th edition 2023 (UV Screening Method)	mg/l	2.68	03-24	45-No relaxation
13.	Sulphate (as SO ₄ ²⁻)	IS 3025 (P-24-Sec 1):2022 (Turbidity Method)	mg/l	26.7	06-28	200-400
14.	Calcium (as Ca)	IS 3025 (P-40): 1991, RA 2019 (EDTA Titrimetric Method)	mg/l	46.10	41-99	75-200
15.	Magnesium (as Mg)	APHA 3500 Mg B 24 th edition 2023	mg/l	25.45	--	30-100
16.	Sodium (as Na ⁺)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	23.0	--	--
17.	Potassium (as K ⁺)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	3.0	--	--

Prepared By - Shivani Kumari Singh
(Sr. Lab Analyst)

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


16/03/24
Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory



ISO 9001:2015
ISO 45001:2018

Enquiry Office - Jamshedpur Dhanbad Hazaribag Pakur
Main Office Cum Laboratory :- Plot No. 551, Khata No 62, Sidroul, P.O. Namkum, P.S. Namkum, Ranchi, Jharkhand
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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Certified by :-

ISO 9001:2015 & ISO 45001:2018

Test Report

Baseline Ground Water Quality Report						
Discipline	Chemical	Group	Water	Sample Description	Ground Water	
Report Release Date		16 th March, 2024		Type of Industry(If any)	Thermal Power Plant	
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand.				
Sampling Date		06/03/2024		Mode of sample collection		By YBAEEL Team
Sampling Protocol		IS : 17614 (Part-1): 2021		Sample Code		240307-GW-E01
Sampling Location		Srirampur Village, 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 % - 51		Temp. – 23°C
Sample receipt Date		07/03/2024	Analysis Started on	07/03/2024	Analysis completed on	16/03/2024

Sl	Parameter	Test Method	Units	Results	Baseline Ground Water Quality	Permissible Limit (as per IS 10500 Specification)
18.	Cyanide(as CN ⁻)	IS 3025 (P-27/Sec1):2021 (Titrimetric Method)	mg/l	BDL (MDL 1.0)	--	0.05-No relaxation
19.	Arsenic (as As)	APHA 3114 C 24 th edition 2023 (Continuous Hydride Generation Method)	mg/l	BDL (MDL 0.003)	<0.01	0.01-No relaxation
20.	Copper (as Cu)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.02	<0.01	0.05-1.5
21.	Iron (as Fe)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.77	0.13-0.90	1.0-No relaxation
22.	Lead (as Pb)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	<0.01	0.01-No relaxation
23.	Selenium (as Se)	APHA 3114 C 24 th edition 2023 (Continuous Hydride Generation Method)	mg/l	BDL (MDL 0.01)	--	0.01-No relaxation
24.	Zinc (as Zn)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.11	0.31-0.47	5-15
25.	Cadmium (as Cd)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	<0.01	0.003-No relaxation
26.	Mercury (as Hg)	APHA 3112 B 24 th edition 2023 (Cold Vapour AAS Method)	mg/l	BDL (MDL 0.003)	<0.001	0.001-No relaxation
27.	Chromium (as Cr)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.04	<0.01	0.05-No relaxation
28.	Nickel (as Ni)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	--	0.02-No relaxation
29.	Cobalt (Co)	APHA 3111 B 24 th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.03)	--	--
30.	Aluminium (as Al)	IS 3025 (P-55):2003, RA 2019 (Eriochrome Cyanine R Method)	mg/l	BDL (MDL 0.02)	--	0.03-0.2

Limit is specified as	IS 10500:2012, RA 2018.
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility
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	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.
Remarks	All disputes are subjected to the Ranchi Jurisdiction.
	Sample complies with prescribed limits.

Prepared By – Shivani Kumari Singh
(Sr. Lab Analyst)

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

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Enquiry Office -

Jamshedpur

Dhanbad

Hazaribag

Pakur

Main Office Cum Laboratory :- Plot No. 551, Khata No 62, Sidroul, P.O. Namkum, P.S. Namkum, Ranchi, Jharkhand
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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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TC-12989

Test Report

ULR (Unique Lab Report) No.			TC	1	2	9	8	9	2	4	0	0	0	0	0	0	1	3	0	F
Discipline	Chemical	Group	Atmospheric Pollution					Sample Description					Ambient Noise							
Report Release Date		16 th March, 2024					Report ID					YBAEEL-240229-152312- N01								
W. Order / JSPCB App. No.		3030006964					Work Order Date					03.02.2024								
Type of Industry (If any)		Thermal Power Plant					Job code/ Ref. no.					YBAEEL/WA/L/A/Mar.-24/01								
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand.																		
Sampling Period		04/03/2024– 05/03/2024					Mode of sample collection					By YBAEEL Team								
Sampling Protocol		IS 9989:1981 (RA 2020)																		
Meteorological Cond. of Field		W.C.– Cloudy					RH % - 59					Temp. - 29°C								
Sample receipt Date		07/03/2024		Analysis Started on			07/03/2024			Analysis completed on				16/03/2024						

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

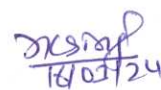
Sl.	Locations	Parameters	Units	Day Time (6.00 a.m. to 10.00 p.m.)	Night Time (10.00 p.m. to 6.00 a.m.)	Limits
1.	Near Sati Steel	Leq	dB (A)	53.7	49.1	Day - 75 Night - 70
2.	Near Reservoir	Leq	dB (A)	56.9	53.9	
3.	Near Occupational Health Centre	Leq	dB (A)	47.8	42.6	
4.	Near Main Gate	Leq	dB (A)	61.9	54.6	

- 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 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility.
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	The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise
	The liability of the laboratory is limited to the invoiced amount.
Remarks	All disputes are subjected to the Ranchi Jurisdiction.
	Samples comply with prescribed limit.

Sample Drawn By - Mukesh Singh
Tested By - Akash Khalkho (Lab Analyst)

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


Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)
Atmospheric Pollution
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Enquiry Office - Jamshedpur Dhanbad Hazaribag Pakur

Main Office Cum Laboratory :- Plot No. 551, Khata No 62, Sidroul, P.O. Namkum, P.S. Namkum, Ranchi, Jharkhand
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TC-12989

Test Report

ULR (Unique Lab Report) No.			TC	1	2	9	8	9	2	4	0	0	0	0	0	0	0	1	3	1	F
Discipline	Chemical	Group	Atmospheric Pollution						Sample Description				Work Zone Noise								
Report Release Date		16 th March, 2024						Report ID				YBAEEL-240229-152312- N01									
W. Order / JSPCB App. No.		3030006964						Work Order Date				03.02.2024									
Type of Industry (If any)		Thermal Power Plant						Job code/ Ref. no.				YBAEEL/WA/LA/Mar.-24/01									
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand.																			
Sampling Period		05/03/2024 – 06/03/2024						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 % - 59				Temp. - 29°C									
Sample receipt Date		07/03/2024		Analysis Started on				07/03/2024				Analysis completed on				16/03/2024					

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

Sl.	Locations	Parameters	Units	Day Time (6.00 a.m. to 10.00 p.m.)	Night Time (10.00 p.m. to 6.00 a.m.)	Limits
1.	Near CHP Area	Leq	dB (A)	65.2	62.8	85
2.	Near Cooling Tower	Leq	dB (A)	84.1	83.4	
3.	Near Turbine Floor	Leq	dB (A)	84.4	83.2	
4.	Pump House	Leq	dB (A)	73.5	71.8	
5.	Near Compressor House	Leq	dB (A)	84.2	84.1	

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 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	Samples comply with prescribed limit.

Sample Drawn By - Mukesh Singh
Tested By - Akash Khalkho (Lab Analyst)

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

Sanjeev Kumar Singh
16/03/24

Verified & Issued by

Sanjeev Kumar Singh

(Technical Manager)

Authorized Signatory
Atmospheric Pollution
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Enquiry Office -

Jamshedpur

Dhanbad

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Main Office Cum Laboratory :- Plot No. 551, Khata No 62, Sidroul, P.O. Namkum, P.S. Namkum, Ranchi, Jharkhand

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TC-12989

Test Report

ULR (Unique Lab Report) No.			TC	1	2	9	8	9	2	4	0	0	0	0	0	0	0	1	2	7	F
Discipline	Chemical	Group	Atmospheric Pollution					Sample Description					Ambient Air Quality (Core Zone)								
Report Release Date		16 th March, 2024						Report ID					YBAEEL-240229-152312- A01								
W. Order / JSPCB App. No.		3030006964						Work Order Date					03.02.2024								
Type of Industry(If any)		Thermal Power Plant						Job code/ Ref. no.					YBAEEL/WA/L/A/Mar.-24/01								
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand.																			
Sampling Period		04/03/2024 – 05/03/2024						Mode of sample collection					By YBAEEL Team								
Sampling Protocol		IS:5182 and CPCB Air Manual Volume-1(NAAQM/36/2012-13)																			
Sampling Locations		A. Near Admin. Building								22°50'22"N, 86°03'35"E											
		B. Sati Steel								22°49'41"N, 86°03'48"E											
		C. Near Store								22°50'04"N, 86°03'41"E											
Meteorological Cond. of Field		W.C.– Cloudy				RH % - 59				Temp. - 29°C					W.D.– SE-NW						
Sample receipt Date		07/03/2024		Analysis Started on			07/03/2024			Analysis completed on					16/03/2024						

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

Parameters	Test Methods	Units	Sampling Location			Limits
			Site A	Site B	Site C	
Particulate matter (PM ₁₀)	IS:5182 (P-23) 2006, RA 2022	µg/m ³	75.6	89.3	68.9	100
Particulate matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	54.6	44.9	37.8	60
Sulphure Dioxide (SO ₂)	IS:5182 (P-2/Sec1) 2023	µg/m ³	19.0	17.5	55.4	80
Nitrogen Dioxide (NO ₂)	IS:5182 (P-6) 2006 RA 2022	µg/m ³	60.3	27.9	28.5	80
Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	89.10	67.90	86.4	400
Ozone (O ₃)	IS:5182 (P-09):1974, RA 2019	µg/m ³	13.0	21.2	60.7	180 (1 hr.)
Lead (Pb)	IS:5182 (P-22) 2004, RA 2019	µg/m ³	0.107	0.037	0.041	1
Nickel (Ni)	IS:5182 (P-26) 2020	ng/m ³	BDL (MDL - 4)	BDL (MDL - 4)	BDL (MDL - 4)	--
Arsenic (As)	USEPA - IO 3.2	ng/m ³	BDL (MDL -02)	BDL (MDL -02)	BDL (MDL -02)	--

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

Sample Drawn By - Mukesh Singh
Tested By - Akash Khalkho (Lab Analyst)

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

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)
Authorized Signatory
Atmospheric Pollution
Yugantar Bharati Analytical &
Environmental Engineering Laboratory



YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Certified by :-

ISO 9001:2015 & ISO 45001:2018

Test Report

Discipline	Chemical	Group	Atmospheric Pollution		Sample Description	Ambient Air Quality (Core Zone)	
Report Release Date		16 th March, 2024			Report ID	YBAEEL-240229-152312- A01	
W. Order / JSPCB App. No.		3030006964			Work Order Date	03.02.2024	
Type of Industry (If any)		Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/A/Mar.-24/01	
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand.					
Sampling Period		04/03/2024 – 05/03/2024		Mode of sample collection		By YBAEEL Team	
Sampling Protocol		IS:5182 and CPCB Air Manual Volume-1(NAAQM/36/2012-13)					
Sampling Locations		A. Near Admin. Building			22°50'22"N, 86°03'35"E		
		B. Sati Steel			22°49'41"N, 86°03'48"E		
		C. Near Store			22°50'04"N, 86°03'41"E		
Meteorological Cond. of Field		W.C.– Cloudy		RH % - 59		Temp. - 29°C	W.D.– SE-NW
Sample receipt Date		07/03/2024	Analysis Started on		07/03/2024	Analysis completed on	
						16/03/2024	

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

Parameters	Test Methods	Units	Sampling Location			Limits
			Site A	Site B	Site C	
Carbon Monoxide (CO)	SOP No. YBAEEL/SOP/AIR/01	mg/m ³	BDL (MDL 1.8)	BDL (MDL 1.8)	BDL (MDL 1.8)	4
Benzene (C ₆ H ₆)	IS:5182 (P-11) 2006, RA 2022	µg/m ³	BDL (MDL 0.06)	BDL (MDL 0.06)	BDL (MDL 0.06)	--
Benzo (a)pyrene (BaP) (Particulate Phase Only)	IS:5182 (P-12) 2004, RA 2019	ng/m ³	BDL (MDL 0.2)	BDL (MDL 0.2)	BDL (MDL 0.2)	--

Limit is specified as	Environmental (Protection) Rule – 1986.
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit,
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility
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Remarks	All disputes are subjected to the Ranchi Jurisdiction.
	Samples comply with prescribed limits.

Sample Drawn By – Mukesh Singh
Tested By – Akash Khalkho (Lab Analyst)

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

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

Authorized Signatory
Atmospheric Pollution
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Enquiry Office -

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TC-12989

Test Report

ULR (Unique Lab Report) No.			TC	1	2	9	8	9	2	4	0	0	0	0	0	0	1	2	8	F		
Discipline	Chemical	Group	Atmospheric Pollution					Sample Description					Ambient Air Quality (Buffer Zone)									
Report Release Date		16 th March, 2024						Report ID					YBAEEL-240229-152312- A01									
W. Order / JSPCB App. No.		3030006964						Work Order Date					03.02.2024									
Type of Industry(If any)		Thermal Power Plant						Job code/ Ref. no.					YBAEEL/WA/L/A/Mar.-24/01									
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand.																				
Sampling Period		05/03/2024 – 06/03/2024					Mode of sample collection					By YBAEEL Team										
Sampling Protocol		IS:5182 and CPCB Air Manual Volume-1(NAAQM/36/2012-13)																				
Sampling Locations		A. Pindrabera Village																				
		B. Srirampur Village																				
		C. Padampur Village																				
Meteorological Cond. of Field		W.C.– Clear				RH % - 48				Temp. - 30°C				W.D.– SW-NE								
Sample receipt Date		07/03/2024		Analysis Started on			07/03/2024			Analysis completed on					16/03/2024							

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

Parameters	Test Methods	Units	Sampling Location			Limits
			Site A	Site B	Site C	
Particulate matter (PM ₁₀)	IS:5182 (P-23) 2006, RA 2022	µg/m ³	94.6	78.4	88.3	100
Particulate matter (PM _{2.5})	IS:5182 (P-24) 2019	µg/m ³	43.6	34.6	47.5	60
Sulphure Dioxide (SO ₂)	IS:5182 (P-2/Sec1) 2023	µg/m ³	24.3	42.5	56.2	80
Nitrogen Dioxide (NO ₂)	IS:5182 (P-6) 2006 RA 2022	µg/m ³	31.1	16.8	49.3	80
Ammonia (NH ₃)	IS:5182 (P-25) 2018	µg/m ³	79.9	29.0	99.1	400
Ozone (O ₃)	IS:5182 (P-09):1974, RA 2019	µg/m ³	9.6	2.2	46.9	180 (1 hr.)
Lead (Pb)	IS:5182 (P-22) 2004, RA 2019	µg/m ³	0.060	0.071	0.062	1
Nickel (Ni)	IS:5182 (P-26) 2020	ng/m ³	BDL (MDL- 4)	BDL (MDL- 4)	BDL (MDL- 4)	--
Arsenic (As)	USEPA – IO 3.2	ng/m ³	BDL (MDL -02)	BDL (MDL -02)	BDL (MDL -02)	--

Limit is specified as	Environmental (Protection) Rule – 1986.
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility.
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Remarks	All disputes are subjected to the Ranchi Jurisdiction.
	Samples comply with prescribed limits.

Sample Drawn By – Mukesh Singh
Tested By – Akash Khalkho (Lab Analyst)

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

Sanjeev Kumar Singh
16/03/24

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

Authorized Signatory
Atmospheric Pollution
Yugantar Bharati Analytical &
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Enquiry Office -

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Test Report

Discipline	Chemical	Group	Atmospheric Pollution	Sample Description	Ambient Air Quality (Buffer Zone)
Report Release Date		16 th March, 2024		Report ID	YBAEEL-240229-152312- A01
W. Order / JSPCB App. No.		3030006964		Work Order Date	03.02.2024
Type of Industry (If any)		Thermal Power Plant		Job code/ Ref. no.	YBAEEL/WA/L/A/Mar.-24/01
Report Issue to		M/s Adhunik Power & Natural Resources Ltd. Vill.-Padampur, PGCILS, Kandra-832402, Seraikela-Kharsawan, Jharkhand.			
Sampling Period		05/03/2024 – 06/03/2024		Mode of sample collection	By YBAEEL Team
Sampling Protocol		IS:5182 and CPCB Air Manual Volume-1(NAAQM/36/2012-13)			
Sampling Locations		A. Pindrabera Village B. Srirampur Village C. Padampur Village			
Meteorological Cond. of Field		W.C.– Clear	RH % - 48	Temp. - 30°C	W.D.– SW-NE
Sample receipt Date		07/03/2024	Analysis Started on	07/03/2024	Analysis completed on 16/03/2024

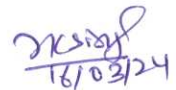
*****Test Results *****

Parameters	Test Methods	Units	Sampling Location			Limits
			Site A	Site B	Site C	
Carbon Monoxide (CO)	SOP No. YBAEEL/SOP/AIR/01	mg/m ³	BDL (MDL 1.8)	BDL (MDL 1.8)	BDL (MDL 1.8)	4
Benzene (C ₆ H ₆)	IS:5182 (P-11) 2006, RA 2022	µg/m ³	BDL (MDL 0.06)	BDL (MDL 0.06)	BDL (MDL 0.06)	--
Benzo (a)pyrene (BaP) (Particulate Phase Only)	IS:5182 (P-12) 2004, RA 2019	ng/m ³	BDL (MDL 0.2)	BDL (MDL 0.2)	BDL (MDL 0.2)	--

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

Sample Drawn By – Mukesh Singh
Tested By – Akash Khalkho (Lab Analyst)

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


Verified & Issued by
Atish Kumar Singh
(Technical Manager)
Atmospheric Pollution
Yugantar Bharati Analytical &
Environmental Engineering Laboratory



ISO 9001:2015
ISO 45001:2018

Enquiry Office - Jamshedpur Dhanbad Hazaribag Pakur

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ADHUNIK POWER & NATURAL RESOURCES LIMITED

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

01.12.2022

Office Order

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

Roles & Responsibility of Environment Cell

Following the broad scope of the Cell

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

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

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

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

REGD. OFFICE

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

Website

: www.adhunikgroup.com



ADHUNIK POWER & NATURAL RESOURCES LIMITED

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

01.12.2022

Annexure I

Responsibilities of the members of the environment management cell

S. No.	Designation	Responsibility	Reporting to
01	Managing Director	Environmental policy and directions	
02	Plant Head	Overall responsibility for environmental management and decision making for all environmental issues	Managing Director
03	Environment Manager Kamlesh Kumar (M.Sc.- Environmental Science)	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 Head
04	CSR Manager Sanjeet Sinha (M.Sc – Maths)	Responsibility to implement social impact improvement /mitigation measures.	Plant Head
05	Safety Manager Bidesh Bid B.Sc in Chemistry(H) Diploma in Industrial Safety	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 Head
06	Medical Officer Dr. Ganesh Prasad Murmu, MBBS	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 Head
06	Chemist Tapas Kumar Mahato B.Sc/ M.Sc	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 Ravi Prakash Sharma Graduate	Responsible for development of Green belt & Land Scape on vacant land of Plant premises.	Environment Manager

[Signature]
DGM(HR)

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

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Phone : +91 - 657 - 6628400, Fax : +91 - 657 - 6628440
CIN - U40101WB2005PLC102935

Ref: MOE&F, RNC/HYC/KKJ/281123/01

Dated: 28.11.2023

To,

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

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

Ref:- MoEF letter No.J-13011/8/2009-IA.II(T), dated 29th Aug 2009.

Sir,

With reference to the above referred Environmental Clearance, we are pleased to submit herewith the half yearly compliance status report (Unit I) for the period of April 2023 to September 2023.

This is for your reference and record, please.

Thanking you,

For Adhunik Power & Natural resources Limited

(Authorized Signatory)

Encl: As Above

Copy to:

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



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

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

REGD. OFFICE

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Website

: www.adhunikpower.com



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Adityapur - Kandra Road, Saraikela - Kharsawan, PIN - 832402 Jharkhand
Phone : +91 - 657 - 6628400, Fax : +91 - 657 - 6628440
CIN - U40101WB2005PLC102935

Ref No APNRL/JSPCB/ES/2022-23/01

Date: 20th Sep 2023

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

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

Ref: Environmental Clearance letter No J-13011/8/2009-IA.II(T), Dated 29th Aug 2009.

Dear Sir,

In line with compliance of above referred EC letter point No XXX of general condition, Please
find attached herewith Environmental statement (Form V) for the financial year 2022-23.

This is for your kind information & record please.

Thanking You

Your's faithfully

Kamlesh Kumar
Sr. Manager (Environment)

Encl: As mentioned above

CC: 1. Integrated Regional Office -Ranchi,

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



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

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

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

Website

: www.adhunikpower.com

ENVIRONMENTAL STATEMENT

For

1 X 270 MW COAL BASED THERMAL POWER PLANT

(UNIT I)

FINANCIAL YEAR 2022-23



September 2023



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

FORM-V

From:

Adhunik Power & Natural Resources Limited

Village: Padampur

Dist: Saraikela-Kharsawan – 832 402

Jharkhand.

To,

Member Secretary

Jharkhand State Pollution Control Board,

HEC Campus, Dhurva,

Ranchi , Jharkhand.

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

PART – A

- | | | | |
|-------|---|---|---|
| (i) | Name & Address of the owner/occupier of the Industry operation or process | : | Sh. G.D. Agarwal
Adhunik Power & Natural Resources Ltd, Vill- Padampur, Adityapur- Kandra Road, Dist- Sariekela- Kharswan, Jharkhand |
| (ii) | Industry Category
Primary – STC Code
Secondary – STC Code | : | Red Category |
| (iii) | Production Capacity – (Units-MT) | : | Power(270 MWH) |
| (iv) | Year of Establishment
(COMMERCIAL PRODUCTION DECLARED) | : | 21 st January-2013 |
| (v) | Date of Last Environmental Statement Submitted | : | 20th September 2022 |

PART-B

Water and Raw Material Consumption

(i) Water Consumption KL/Day

Process : 1237.6

Cooling : 10795.17

Domestic : 97.3

Name of product	Process water consumption KL/ MW	
	During the previous financial year	During the current financial year
	2021-22	2022-23
Electricity	0.211	0.223

(ii) Raw Material Consumption

Name of Raw Materials	Name of product	Consumption of raw material per MW	
		During the previous financial year 2021-22	During the current financial year 2022-23
Coal	Power	0.6709 MT	0.6720 MT
LDO		0.00035 KL	0.00023 KL

PART – C

Pollution Discharged to environment / unit of output.

(Parameter as specified in the consent issued)

Pollutants	Qty. Of pollutants discharged (Mass / Day)	Concentration of Pollutants in discharges (Mass / Day)	Percentage of variation from prescribed standards with reasons
(i) Water Unit Limit pH 5.5. to 9.0 SS < 100 mg/l Oil & Grease < 10 mg/l BOD ₅ < 30 mg/l COD < 250 mg/l	1) Effluent generated from Cooling tower, DM plant, IBD tank, CPI separator is being utilized in Ash Handling system. 2) Effluent generated from CBD is being reutilized in quenching & dust suppression system. 3) Effluent generated from STP is being utilized for gardening		Concentration is below the prescribed limits. ETP & STP analysis report are enclosed as Annexure I
(ii) Air(Stack) PM SO ₂ NO _x	836.3 Kg/Day 22853.85 Kg/Day 8311.56 Kg/Day	42.36 mg/Nm ³ 1157.6 mg/Nm ³ 421 mg/Nm ³	Concentration of PM are below the prescribed limits Stack monitoring report are enclosed as Annexure II

Refer to MoEF notification dated 07.12.2015 and amendment to, FGD system installation are in progress to reduce the concentration of SO₂ in Flue gases.

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

PART - D

HAZARDOUS WASTES

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

Hazardous Wastes	Total Quantity (KL).	
	During the previous financial Year	During the current financial Year
	2021-2	2022-23
1 From Process	Used Oil-5.434 KL Waste Oil-2.090 KL	Used Oil- 4.808 KL Waste Oil- 1.463KL
2 From Pollution Control Facilities		

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

PART -E

Solid Wastes

	Total Quantity (MT)	
	During the previous financial Year	During the current financial Year
	2021-22	2022-23
(a) From Process Bottom Ash	72718.99 MT	81632.25 MT
(b) From Pollution Control Facility Fly Ash	412074.32 MT	462582.79 MT
(c) (1) Quantity recycled or re-utilized within the unit (2) Sold (3) Disposed Fly Ash Bottom Ash	412074.32 MT 31306.3 MT	447346.8 MT 0 MT

PART – F

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

Hazardous Waste:

1) Solid Hazardous Waste:

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

2) Liquid Hazardous waste:

- In this financial year, Used Oil-4.808 KL & Waste Oil-1.463 KL have been generated from process and disposed to authorized recycler as per norms of MoEF.

PART - G

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

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

- We are using effluent water generated from Cooling tower, DM plant, IBD tank for Ash handling system instead of fresh water from River Subarnarekha.
- Extensive tree plantation is under progress as a part of green belt development, which will control the impact of Air pollution and optimize the ambient temperature of surrounding areas.
- Twin flue stack with height of 275 m are provided as per the CPCB guidelines for better dispersion of emissions and keep the concentrations within JSPCB/CPCB specified standards.
- High efficiency Electrostatic precipitators (ESPs) are provided for control of dust emissions into flue gases.
- Dust suppression system is installed at Truck tipping area.
- Dust Extraction system along with bag Filters have been installed at Coal Silo, Coal bunker, Intermediate Silo & Ash Silo to arrest the fugitive emissions.
- Roof sheeting and side cladding in conveyor galleries and TPs are installed to control fugitive dust
- The plant is designed on COC of more than 5 which is helpful in water conservation which further lead to reduction in overall fresh water intake.

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

PART - H

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

- APNRL is regularly monitoring ambient air, stack, noise level, water quality and soil quality in and around the plant premises. All the emissions and discharges are meeting the permissible limits prescribed by MoEF / CPCB / JSPCB. It is proposed to further strengthen the monitoring and reporting process.
- Ash Water Recovery System is installed for further reuse of ash water. Green belt development within plant premises is proposed to be accelerated.
- As per New Environment Norms, we are in process to install FGD system & DeNOx system for reducing level of SO₂ and Oxide of Nitrogen in Flue gases.

PART – I

Any other particulars for improving the quality of the environment:

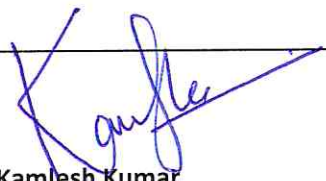
The part – I of any Environmental Statement report is perhaps the best scale to measure various parameters of the plans, target, achievements and ultimate impact. APNRL has made sincere efforts to visualize the general environmental scenario and implemented plan for the associated improvements. Some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

1. Received certification for ISO 9001:2008, ISO 14001: 2004 & ISO 18001:2007 from BSI.
2. Training on EMS to all employees and contract labors to create Environment awareness.
3. Green Belt development is under progress.
4. Only PUC certified vehicles are engaged.

5. Monitoring of Ambient air quality, Surface and ground water quality, stack monitoring, soil, Noise level is being done through MoEF & NABL accredited laboratory.
6. Full-fledged Environmental laboratory has been installed.
7. Installation of Online Effluent monitoring system has been completed.
8. Webhosting of online environment data on CPCB/SPCB website have been completed.
9. Electronics Display board is provided at the main gate for public data display.
10. Audit by recognized organization i.e. ERM has been conducted to improve Environmental & Social Management system (EMS).
11. Celebration of Environmental promotional activities (Environment day, Earth Day, Water day, Ozone day).
12. Remote calibration facility of CEMS has been completed.
13. Solar light system has been installed in plant premises.

Date: 19/09/2023



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



Institute for Environmental Management

Accredited by

Jharkhand State Pollution Control Board, JSPCB

Certified By

National Accreditation Board for Testing Laboratory (NABL) vide TC-11515

ISO 9001:2015 (QMS) & ISO 45001:2018



Test Report

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

---Test Result---

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

---End of Report---

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

Tested By: Panya Harsit Dadel

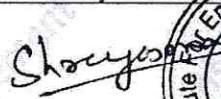
Sample Drawn By: Rahul Kumar Singh & Team

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5. Total liability of Institute for Environmental Management will be limited to invoiced amount only.
6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com

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

Quality Checked Environmental Authorized Signatory

Shreya Singh  

(Shreya Singh) Dr. S. C. Jain

Dy. Quality Manager, Ranchi Director

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

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

Ranchi-834002, Jharkhand, India

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



Institute for Environmental Management

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



Test Report

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

---Test Result---

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

---End of Report---

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

Tested By: Punya Harsit Dadel

Sample Drawn By: Rahul Kumar Singh & Team

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

Quality Checked by Authorized Signatory

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

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

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

Ph - 8407804253, 8407804251, Email - iem2012@rediffmail.com



Institute for Environmental Management



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

Test Report

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

----Test Result----

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

----End of Report----

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

Tested By: Punya Harsit Dadel

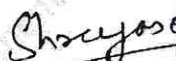
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6. In case of feedback/ complaints, please send an email at qm.iemeco@gmail.com

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

Quality Checked by _____ Authorized Signatory


(Shreya Sonal)

Dy. Quality Manager * Ranchi * Director



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

Laboratory Site - H.No. - A-13, Saket Vihar, Near Sohrai Bhawan, Harmu Housing Colony,
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Institute for Environmental Management

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



Test Report

ULR No.:	T	C	1	1	5	1	5	2	3	0	0	0	0	0	0	4	2	
Discipline:	Chemical					Group: Atmospheric Pollution					Sub-Group: Stack Emission							
Report Issue Date:	31-03-2023										Test Report No.: RN-230320001S1							
Sample ID:	230330AP05001										Sample Description: Stack Emission							
Challan No./P.O. No.:	3030006457										Challan Date/P.O. Date.: 06-12-2022							
Issued to: ADHUNIK POWER & NATURAL RESOURCES LTD. VILL PADMPUR, PGCILS/S, KANDRA-832402																		
Type of Industry: Power Plant										Customer Representative: Kamlesh Jha								
Sample Drawn by: IEM Team										Sampling Date: 28-03-2023								
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series																		
Field Meteorological Information					A. Temp.(°C): 28			R.H. (%): 61			W.C.: Clear			W.D.: NE - SW				
Sample Receiving Date: 29-03-2023					Testing Started: 29-03-2023					Testing Ended: 31-03-2023								

General Physical Information			
Stack Identification	Single	Stack Height from Ground Level (m)	275
Emission Due to	Boiler	Port Hole Height from Ground Level (m)	90
Plat Form	Permanent	Inner Dimension of Stack (m)	4.2
Stack Description	Stack Unit - 1	Type of Fuel Used	Coal
Shape of Stack	Circular	Quantity of Fuel	-----
Construction Material	Metal	Production Capacity	-----
Sampling Port	Available	Pollution Control Device (if any)	ESP

Test Result

Sl. No.	Parameters	Test Methods	Unit	Result	Limits
1.	Flue Gas Temperature	IS 11255 (Part-3)	°K	389	---
2.	Flue Gas Velocity	IS 11255 (Part-3)	m/s	21.8	---
3.	Flue Gas Volumetric Flow Rate	IS 11255 (Part-3)	Nm ³ /hr.	822601.9	---
4.	Particulates Matter (PM)	IS 11255 (Part-1)	mg/Nm ³	42.36	50
5.	Sulphur Dioxide (SO ₂)	IS 11255 (Part-2)	mg/Nm ³	1157.6	600
6.	Oxides of Nitrogen (NO ₂)	IS 11255 (Part-7)	mg/Nm ³	526.96	450
7.	Carbon Monoxide (CO)	IS 13270:1992	%	BDL(MDL-0.2)	---

Dust	Kg/hr	35.85
Sulphur Dioxide	Kg/hr	952.24
Oxide of Nitrogen	Kg/hr	433.48

---End of Report---

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

Tested By: Akanksha Sourabh

Sample Drawn By: Rahul Kr. Singh & team

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

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

Test Report

Discipline: Chemical		Group: Atmospheric Pollution		Sub-Group: Stack Emission	
Report Issue Date: 31-03-2023			Test Report No.: RN-230320001S1		
Sample ID: 230330AP05001			Sample Description: Stack Emission		
Challan No./P.O. No.: 3030006457			Challan Date/P.O. Date.: 06-12-2022		
Issued to: ADHUNIK POWER & NATURAL RESOURCES LTD. VILL PADMPUR, PGCILS/S, KANDRA-832402					
Type of Industry: Power Plant			Customer Representative: Kamlesh Jha		
Sample Drawn by: IEM Team			Sampling Date: 28-03-2023		
Protocol: CPCB Guideline (LATS/80/2013-14) & IS Method 11255 Series					
Field Meteorological Information		A. Temp.(°C): 28	R.H. (%): 61	W.C.: Clear	W.D.: NE - SW
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3.	Flue Gas Volumetric Flow Rate	IS 11255 (Part-3)	Nm ³ /hr.	822601.9	---
4.	Mercury (Hg)	(LATS/80/2013-2014)	mg/Nm ³	BDL(MDL-0.03)	0.03

---End of Report---

Env. Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit, BDL: Below Detection Limit
Limit is Specified	---
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On the basis of Quality Checked and Technical data verified by the Authorized signatory, the report is issued by the Director of the Organization.

Quality Checked by _____ Authorized Signatory

Shreya Soni
(Shreya Soni)
Dy. Quality Manager

S. C. Jain
Director



ISO 9001:2015

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ISO 45001:2018