Kamlesh Kr Jha

From: Kamlesh Kr Jha
Sent: 24 September 2024 11:30
To: 'ranchijspcb@gmail.com'; 'ro.ranchi-mef@gov.in'; 'jspcb.jsr@gmail.com'
Subject: 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 for FY (2023-24).
Attachments: Environment Statement-Unit I (2023-24).pdf

To,
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 2023-24.

This is for your kind information & record please.

Thanking You
Regards
Kamlesh Kumar
A.G.M-Environment
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

Attachment: 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
2. Regional Office. JSPCB, Adityapur

Adhunik Power

ADHUNIK POWER & NATURAL RESOURCES LIMITED

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

Ref No APNRL/JSPCB/ES/2023-24/01 **Date: 23th Sep 2024**

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 2023-24.

This is for your kind information & record please.

Thanking You

Your's faithfully

23/9/24

(Authorized Signatory)
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

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-2024 for Unit-I (1 x 270 MW)

PART – A

(i)	Name & Address of the owner/occupier of the Industry operation or process	:	Sh. Nirmal 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)	:	21st January-2013
(v)	Date of Last Environmental Statement Submitted	:	20th September 2023

PART-B

Water and Raw Material Consumption

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

Process : 731.48

Cooling : 11726.4

Domestic : 119.2

Name of product	Process water consumption KL/ MW	
	During the previous financial year 2022-23	During the current financial year 2023-24
Electricity	0.211	0.126

(ii) **Raw Material Consumption**

Name of Raw Materials	Name of product	Consumption of raw material per MW	
		During the previous financial year 2022-23	During the current financial year 2023-24
Coal	Power	0.6720 MT	0.723 MT
LDO		0.00023 KL	0.00013 KL

PART – C

Pollution Discharged to environment / unit of output.

(Parameter as specified in the consent issued)

Pollutants	Qty. Of pollutants discharged (Mass / Day) NIL	Concentration of Pollutants in discharges (Mass / Day) NIL	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 SO2 NOx	 1044.5 Kg/Day 28614.3 Kg/Day 10301.6 Kg/Day	 44.3 mg/Nm3 1213.6 mg/Nm3 436.9 mg/Nm3	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 amendementto, 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 2022-23	During the current financial Year 2023-24
1 From Process	Used Oil- 4.808 KL Waste Oil- 1.463KL	Used Oil-2.80928 Kl Waste Oil-1.09152 KL
2 From Pollution Control Facilities	NA	NA

- **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 2022-23	During the current financial Year 2023-24
(a) From Process Bottom Ash	81632.25 MT	72753 MT
(b) From Pollution Control Facility Fly Ash	462582.79 MT	555830 MT
(c) (1) Quantity recycled or re-utilized within the unit		
(2) Sold		
(3) Disposed		
Fly Ash	447346.8 MT	462320.09 MT
Bottom Ash	0 MT	45844.67 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-2.80928 KL & Waste Oil-1.09152 KL have been generated from process and disposed to authorized recycler as per norms of MoEF.
3) E Waste
   - E Waste are disposed through Authorized recprocessors/Recyclers.

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:

- Specific Water consumption in FY 2023-24 is 2.19 m3 /MWh which is substantially below the statutory limit of 3.5 m3 /MWh.
- Reduce-Reuse-Recycle is adopted for water usage. We are using effluent water generated from Cooling tower, DM plant, IBD tank for Ash handling system instead of fresh water from River Subarnarekha.
- Ash water recirculation system (AWRS) is operational since inception of the plant. AWRS is used to recirculate decanted water from ash ponds to plant, where water is again used in ash slurry system, thus freshwater requirement is minimal.
- 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 tippling area.
- Dust Extraction system along with bag Filters have been installed at Coal bunkers, 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 of bidding 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: 23/09/2024

Signature : 23/9/24

Name : **M. N. Singh**

Designation : **Head – O&M**

Address : **Adhunik Power & Natural Resources Limited, Village : Padampur Dist: Saraikela-Kharsawan – 832 402. Jharkhand**

Annexure I (½)

YUGANTAR BHARATI
ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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	1	4	8	F			

Discipline	Chemical	Group	Pollution & Environment	Sample Description	Waste Water / Effluent Water
Report Release Date		16th 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 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.01)	3
9.	Lead (as Pb)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	0.1
10.	Zinc (as Zn)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.10	5
11.	Chromium (as Cr)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.37	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 certificate unless specified otherwise
	The liability of the laboratory is limited to the invoiced amount.
	All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limit.

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

16/03/24

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

Authorised Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

YUGANTAR BHARATI
ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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

TC-12989

Test Report

ULR (Unique Lab Report) No.	TC129892400000147F						
Discipline: Chemical	Group: Pollution & Environment			Sample Description	Waste Water / Effluent Water		
Report Release Date	16th 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.-24/02		
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	STP 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	7.32 at 27.0°C	6.5 – 8.5
2.	Temperature	IS 3025 (P-09):2023	°C	27.0	--
3.	Total Suspended Solids	IS 3025 (P-17):2022 (Gravimetric Method)	mg/l	36.0	100
4.	BOD (3 days at 27°C)	IS 3025 (P-44):1993, RA 2019 (Oxygen Depletion Method)	mg/l	16.0	30
5.	Oil & Grease	IS 3025 (P-39):2021 (Partition Gravimetric Method)	mg/l	BDL (MDL 4.0)	--
6.	Chloride (as Cl-)	IS 3025 (P-32):1988, RA 2019 (Argentometric Method)	mg/l	46.0	--

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

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

16/03/24

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

Annexure II

YUGANTAR BHARATI
ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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

TC-12989

Test Report

URL(Unique Lab Report) No.	TC1298 9240000 0013 2F				
Discipline: Chemical	Group: Atmospheric Pollution		Sample Description: Stationary Source Emission		
Report Release Date: 16th 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.
	All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits, except SO_2.

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

16/03/24

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

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