एनटीपीसी
NTPC

एन टी पी सी लिमिटेड
(भारत सरकार का उद्यम)
NTPC Limited
(A Govt. of India Enterprise)
(Formerly National Thermal Power Corporation Ltd.)

नबीनगर / Nabinagar

संदर्भ संख्या / Ref. No.: NSTPS/TS/EMG/2024 दिनांक / Date: 25.09.2024

To,
The Member Secretory
Bihar State Pollution Control Board
Parivesh Bhawan, Patliputra Industrial Area,
P.O. Sadakat Ashram, Patna-800010 (Bihar)

Email: bspcb@yahoo.com; msbspcb-bih@gov.in

Sub: Submission of Environmental Statement (Form V) for year 2023-24 of Nabinagar Super Thermal Power Station.

Dear Sir,
May pl find enclosed the Environmental Statement of NSTPS Nabinagar for the financial year ending 31st March 2024, under Rule 14 of the Environmental (Protection) Rule - 1986.

Yours faithfully,

B Agrawal 25/09/24

Brijendra Agrawal)
Add. General Manager(TS/EMG)
बृजेन्द्र अग्रवाल/ Brijendra Agrawal
अपर महाप्रबंधक (टी०एस०)
Addl. General Manager (Technical Services)
एन.टी.पी.सी./N.T.P.C.
नबीनगर सुपर थर्मल पावर स्टेशन
Nabinagar Super Thermal Power Station

Enclosure:
1. **Environmental Statement 2023-24.**

Copy:
Additional Principal Chief Conservator of Forests (Central)
Ministry of Environment, Forest & climate Change (ECZ)
Regional Office, Shyamali Colony
Ranchi-834002.

ENVIRONMENTAL STATEMENT

OF

Nabinagar Super Thermal Power Station, (NSTPS)

(FOR THE FINANCIAL YEAR ENDING 31ST MARCH 2024)

(Under Rule 14 of The Environmental (Protection) Rule – 1986)

ENVIRONMENT STATEMENT (NSTPS)

(*FOR THE FINANCIAL YEAR ENDING 31ST MARCH 2023*)

PART-A

1	Name & address of the Owner / occupier of the industry operation as process.	:	*Sh. Chandan Kumar Samanta, CGM, NSTPS, P.O. Aditi Nagar, Distt: Aurangabad, Bihar. Pin: 824304.*
2	Industry Category primary (STC Code)	:	Thermal
3	Production Capacity (MW)	:	3X660 MW (All Units are in commercial operation).
4	Year of Establishment	:	2008
5	Date of last Environment Statement Submitted	:	22.09.2023

PART-B

(Water and Raw Material Consumption)

01. Water Consumption (M^3/day):

Sl. No.	Water Consumption		(M^3/year)	(M^3/day)
1.	Industrial Cooling	:	39873039	109241
2.	For Process	:	1166510	3196
3.	For Domestic	:	756000	2071
	Total	:	41795549	114508

	Process water consumption per product output (Liters/kWh)			
	Name of Products		**During Previous Financial year (2022-23)**	**During the current financial Year (2023-24)**
i.	ELECTRICITY	:	2.95	2.90

02. Unit#1 declared commercial on 06th Sept. 2019, Unit#2 on 23rd July 2021 and Unit#3 on 01st Jun 2022.

03. Raw Material Consumption:

Sl. No.	Name of Raw Materials	Name of Product	Consumption of raw material/ Unit (Kg/kWh)	
			2022-23	2023-24
i.	Coal	Electricity	0.597	0.603

PART-C

POLLUTION DISCHARGED TO ENVIRONMENT/UNIT OF OUTPUT

(Parameters as specified in the Consent issued)

Pollutants	Quantity of Pollutants Discharged (Kg/day)	Concentration of Pollutants in Discharges (mg/Nm^3)	% of variation from prescribed standard with reasons.
A: AIR POLLUTION (Stack Emission): Average			
SPM	3667.85	28.23	Within limit
SO_2	143786.90	1106.67	Stack with 275 meters height is provided as per EC conditions. FGD installation is under process and will be completed by Dec' 2026. Limit not provided at initial stage. However, for NOx control, SOFA (Separated over fire air) and COFA (Close coupled over fire air) system is installed in the boiler. The boiler is *of sliding pressure supercritical, once-through* type, utilizing a Tangential Firing System.
NOx	35379.27	272.26	
B: WATER POLLUTION: Plant is designed for Zero liquid discharge (ZLD).			
(i) Ash Pond Effluents: There is no discharge from Ash Pond. **(ii) Main Plant Effluents:** Effluent is being treated and recycled.			

Sr. Mgr (EMG)

PART-D

HAZARDOUS WASTES

HAZARDOUS WASTE (GENERATED)		Total Quantity of waste Generated	
		2022-23	2023-24
(a)	**From Process:**		
1.	Used & dirty oil (in KL)	Nil	23.10
2.	Scrap Battery (in MT)	1.07	0.700
3.	Metal & Metal bearing Scraps	900 MT	1200 MT
(b)	**From Pollution Control Facilities:**		
		Nil	Nil

PART-E

SOLID WASTES

SOLID WASTE		TOTAL QUANTITY	
		During the previous fin. Year 2022-23	During the current fin. Year 2023-24
A.	**FROM PROCESS (Generated)**		
i)	ASH (MT)	26,07,000	29,92,072
B.	**FROM POLLUTION CONTROL FACILITY:**		
i)		Nil	Nil
C. (1)	**QUANTITY RECYCLED OR RE-UTILISED WITHIN THE UNIT:**		
i)	Fly Ash (MT)	2,45,200	26,793
ii)	Pond Ash (MT)		
(2)	**SOLD (MT):**		
i)	Fly Ash (MT)	1142203	11,01,227
ii)	Cenosphere (MT)	Nil	Nil
(3)	**DISPOSED off to Ash Dyke** (MT)	1219650	18,64,052

Note:-

1. The generated fly ash from Unit # 1, 2 & 3 is being lifted by different Cement industries from AHP Silo -1, 2, 3 & 4 and the balance is being disposed to ash pond.
2. The wet ash from ash pond is issued to NHAI on free of cost basis. For FY 2023-24, 9,72,870 MT has been issued to NHAI.

Sr. Mgr (Envt.)

PART-F

CHARACTERISATION (IN TERMS OF COMPOSITION OF QUANTUM) OF HAZARDOUS AS WELL AS SOLID WASTE AND DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORY OF WASTES

A. HAZARDOUS WASTE DOSPOSAL STATUS AT NSTPS:

S. No.	Hazardous Waste per Authorization	Category	Approx. Quantity of waste generated during operation (year 2023-24)	Method of Disposal/Qty. Dispatched (MT/KL)
01	Used or spent oil (KL)	5.1	23.1	Storage at identified place. Disposal as per procedure.
02	Plastic empty barrels/drum/container	33.1	Nil	
03	Contaminated cotton rags or other cleaning materials	33.2	Nil	
04	Waste or residues containing oil	5.2	Nil	
05	Spent ion exchange resin containing toxic metal	35.2	Nil	Storage at identified place. Disposal to authorized recycler
06	Oil and grease skimming	35.4	Nil	
07	Halogenated aliphatic compounds (C12-Eco-Toxic)	Sch-II as Class C	Nil	
08	Metal and metal bearing waste (Iron steel scraps)	Schedule-III as Part-D	Nil	Storage at identified place. Disposal as per procedure.

B. SOLID WASTE STATUS AT NSTPS:

S. No.	Solid Waste	Approx. Quantity/Year	Method of Disposal
01.	Ash (Fly + Bottom)	29.92LMT	In cement and brick manufacturing & NHAI. Balance quantity disposed to ash pond.

PART-G

IMPACT OF POLLUTION ABATEMENT MEASURES ON CONSERVATION OF NATURAL RESOURCES AND THE COST OF PRODUCTION.

- NSTPS is designed for Zero Liquid Discharge (ZLD) and accordingly system like Ash Water Recirculation System (AWRS) which recycles & reuses effluents from ash pond, Liquid Wastewater Treatment System (LWTS) which recycles & reuses entire effluents generated in main plant and Sewage Treatment Plant (STP) for township & plant domestic effluent, effectively. These systems reduce the water requirement and consumption leading to significant water conservation. Water conservation has both direct and indirect effect on the cost of production as water is most precious natural resources.

- Depreciation cost of pollution control devices & cost of Operation & Maintenance of these devices has direct impact on cost of production.

- Extensive tree plantation has been carried out as a part of Greenbelt development which will control the impact of Air pollution and optimize the ambient temperature of surrounding areas. *App. 1.50 lac. saplings have been planted so far.*

- Ash Utilization in cement industries, brick manufacturing industries and NHAI will lead to conservation of the topsoil and indirectly related to cost of production by reducing quantum of ash transportation to the ash dyke and additional capacity in ash dyke.

PART-H

ADDITIONAL MEASURES / INVESTMENT FOR ENVIRONMENT PROTECTION DETAILS

- Continuous ambient air monitoring stations at four locations are for better & effective monitoring of Ambient Air quality around the plant and township. AAQMS at all four locations are installed, commissioned and in service.
- Continuous Emission Monitoring System (CEMS) for stack emission and continuous effluent quality monitoring system (EQMS) are provisioned, installed in service.
- Adoption of new & environment friendly technologies and continuous strive for better environment management.
- Implementation of Zero Liquid Discharged (ZLD) is in progress and about to complete shortly.
- For better control of fugitive emission, water spraying is being done on unpaved internal roads except during rainy seasons.
- An amount of Rs. 801.3 Crores have been earmarked in the Feasibility Report for Nabinagar STPS towards environmental measures like ESP, Chimney, Cooling System, Ash Handling and Disposal, Effluent Treatment, Recycle and Reuse, Sewage Treatment, Dust Extraction and Suppression System, Fire Fighting and Safety, Green Belt and Afforestation etc. Various systems are under implementation at site.
- Flue Gas De-sulphurisation (FGD) system installation and commissioning is under progress for SO_2 control. COFA & SOFA installed and commissioned for NOx Control.
- Municipal Waste Management: Vermi-composting, waste segregation and disposal to common township waste-disposal facility.
- **Environmental Institutional set up:** Experienced, qualified, and dedicated environment management group at project level supported and assisted for environment monitoring and management at station, regional and corporate level.
- **Hazardous Waste Management:** Authorization (Ref No.: HW/B-2977 dtd. 03.07.2020, Valid Upto: 02.07.2025) by Bihar State Pollution Control Board (BSPCB). Storage and disposal of hazardous waste as per rule & direction contained in authorization.
- **Bio-Medical Waste Management:** Authorization (Ref No.: BMW/1794/20/B-3403 dtd. 19.08.2020 and Valid Upto: 18.08.2025) by Bihar State Pollution Control Board (BSPCB).

Sr. Mgr (EMG)

PART-I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT.

1. **Large Scale Plantation Program:** 1.5 lac. saplings have been planted under mass afforestation program. Further 20,000 saplings work under progress for Miyawaki plantation through DFO Aurangabad.
2. Regular monitoring of various Environmental Parameters is being carried out by vendor approved by MoEF/Govt of Bihar and all necessary steps are being taken to maintain the same within prescribed limit.
3. **Water Management:** Periodic water balance study and water meters installation at all required place to access actual water consumption and opportunity to reduce water consumption further.
4. **Ash Dyke Management:** Installation of Ash Water Recirculation System (AWRS), Toe drain water recirculation system (TDWRS) and maintaining water cover lagoon leads to reduce conservation and elimination of fugitive emission from ash dyke.
5. **Environmental Awareness:** Mass awareness programs such as training classes, mass tree plantation, slogan, essay writing, painting competition, Environmental Quiz competition among school children, employee & family members of NSTPS and their associate agencies are taken up for better awareness towards environmental protection.
6. Complete infrastructural facilities and technological support for proper monitoring & effective management of surrounding environment.
7. World Environment Day, 2024, World water day and other environment related celebrations were conducted at NTPC Nabinagar. 600 no's of Samplings are planted on the occasion of plants for mothers theme in NTPC nabinagar.

Agrawal 25/09/24

Date: 25.09.2024

(Brijendra Agrawal)
Add. General Manager(TS/EMG)
Nabinagar Super Thermal Power Station
P.O. Aditinagar (NSTPS Township)
Aurangabad, Bihar-824304.

बृजेन्द्र अग्रवाल/ Brijendra Agrawal
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