



No. 15-01/C.E (Gen.)/ABVTPS/ 1493

Marwa, dt. 14/07/2022

To,

The Member Secretary,
Chhattisgarh Environment Conservation Board,
Paryavas Bhawan, North Block,
Sector-19, Atal Nagar, Nava Raipur, (C.G.) - 492002.

Sub: - Submission of Environmental Audit Report for the financial year 2021-2022.

Ref: - Environment (Protection) Act, 1986, Amended 1991.

Please find enclosed herewith "Environmental Audit Report" pertaining to 2x500 MW, ABVTPS, CSPGCL, Marwa for the financial year ending on 31.03.2022.

Encl: - As above.

14/07/2022
14.07.22
Chief Engineer (Gen.)
2x500 MW, ABVTPS, CSPGCL, Marwa

Copy to:-

01. The Executive Director (O&M:Gen), CSPGCL, Dangania, Raipur.
02. The Addl.Chief Engineer (O&M), 2x500 MW, ABVTPS, CSPGCL, Marwa.
03. The Addl. Chief Engineer (S&SC), 2x500 MW, ABVTPS, CSPGCL, Marwa.
04. The Senior Chief Chemist, 2x500 MW, ABVTPS, CSPGCL, Marwa.
05. The Regional Officer, Integrated Regional Office, MoEF&CC. Aranya Bhawan, North Block. Sector -19, Naya Raipur, Atal Nagar (C.G)-492002.
06. The Regional Officer, Chhattisgarh Environment Conservation Board, Vyapar Vihar, Near Pt. Deen Dayal Upadhyay Park, Bilaspur (C.G.).

FORM – V
(See Rule 14)

ENVIRONMENT STATEMENT FOR THE FINANCIAL YEAR ENDING ON 31.03.2022
2x500 MW, ABVTPS, CSPGCL, Marwa

PART – A

1	Name & address of the owner/ Occupier of the Industry, Operation or process	The Chief Engineer (Gen). 2x500 MW, Atal Bihari Vajpayee Thermal Power Station, Marwa Chhattisgarh State Power Generation Company Limited, PO.-Vidyut Nagar (Lachanpur), Dist- Janjgir-Champa, PIN-495669.
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(ii) Industry category Primary ---- (STC code) Secondary. ----- (SIC Code)

(iii) Production capacity = 1000 MW, 2 x 500 MW.

(iv) Year of establishment – 2016.

(v) Date of the last environmental statement submitted – 01.05.2021

PART – B

2	Water and Raw Material Consumption:		
	Water Consumption m ³ /day	Average basis (m ³ /Day)	Yearly basis (MT)
	a) Process Water	17639	6438338
	b) Cooling Water + Boiler Feed	25106	9163755
	c) Domestic Water	789	288000

3	Name of the Product :	Water Consumption per unit of product (kg/kwh)		
		Head	Last Year (2020-21) (kg/kwh)	Current year (2021-22) (kg/kwh)
	a) Electricity (kwh) = 4828043000	Process Water	1.459	1.333
		Cooling Water + Boiler Feed.	1.553	1.898
		Domestic Water	0.061	0.060

4	Raw Material Consumption	Consumption of Raw Material/Unit of product (kg/kWh)		
	Name of Raw Material & Quantity (MT)	Name of Product & Quantity (kWh)	Last Year (2020-21) (kg/kwh)	Current year (kg/kwh) (2021-22)
	a) Coal = 3572184 MT	Electricity = 4828043000	0.748	0.740
	b) Water = 15890093 M ³		3.073	3.291

Note : Raw water Quantity is summation of a,b&c of Sr.no.2

PART - C

Pollution discharged to environment/unit of output

(Parameter as specified in the consent issued)

Pollutant	Qty. of Pollutant generated (SPM)	Variation from a prescribed Standard
a) Air	Max = 48 mg/Nm ³ Min = 37 mg/Nm ³	(-) 4 %. (-) 26%.
b) Water	ETP	No deviation from standard.
Max	NA - Zero discharge is being maintained.	-
Min	NA - Zero discharge is being maintained.	-

PART - D

Hazardous Waste: -

Hazardous Waste	Total Quantity.	
	During last year 2020-21	During current year 2021-22
a) From Process	55 Nos. empty barrels & 20 KL Spent Ion exchange resin.	1. Used/Spent oil-9.090 KL. 2. Waste or residue containing oil- 2.3700 KL (Approx. 1.56 MT) 3. Spent ion exchange resin-2 KL.
b) From Pollution	Nil	Nil

PART - E

Solid Waste:

Solid Waste	Total Qty. in (MT)	
	During last year 2020-21	During current year 2021-22
a) From Process		
From Pollution (Total ash)	1470253 Metric Tonne	1513438 Metric Tonne
Qty. Disposed	1000314.2 Metric Tonne	1037889 Metric Tonne

PART - F

(Please specify the characteristics (in terms of concentration and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes).

Bottom Ash is being disposed off as lean slurry to ash bund. Fine ash is being provided to brick manufactures, Cement industries, Road construction and used for filling of low lying area. Remaining ash is being disposed of as High Concentration Ash Slurry Disposal (HCSD) into Ash dykes. Pond Fly ash also is being used for road construction work.

Total fly Ash generated during the year 2021-22, **1513438 MT** out of which **1037889 MT** has been utilized for various purpose.

PART -G

(Impact of the pollution control measures taken on conservation of natural resources and consequently on the cost of production.

01. Effluent Treatment Plant (ETP) is in operation for maintaining zero effluent discharge. Oily water waste and process waste water are being treated through ETP and treated water is being reutilized for various purposes in this TPS.
02. Rain Water Harvesting System has been installed in CSPGCL residential colony and Power House area for water conservation.
03. AWRS (Ash Water Recycling System) has been commissioned and is in operation for recycling of water from ash pond for ash handling at power house.
04. Garland drains and check dams are constructed inside the plant and along the coal storage area (CHP). 2 No. sump of capacity of 5250 m³ each have been constructed for sedimentation of coal runoff water. The decanted water is used for various purposes.
05. STP has been constructed inside the Power Plant. The treated water is being used for plantation inside the premise.
06. Extensive Plantation around ash dyke, within power house premises, residential area and along roadside from National Highway (Janjgir- Champa Road) to power house have been done. Total 303998 plants have been planted by this TPS till 04.05.2022. Extensive plantation improves the air quality, reduce the global warming and prevent the soil erosion.

PART - H

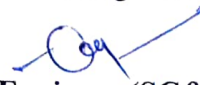
(Additional measures/investment proposal for environmental protection including abatement of pollution.

1. ESPs of M/s BHEL make with design efficiency of 99.968% has been installed for both Units. 1 & 2, of 2x500 MW, ABVTPS, CSPGCL Marwa for control suspended particulate
2. Dust Extraction, dust suppression & water sprinklers system are being installed in coal yard & CHP area to mitigate fugitive emission.
3. Bag filters are installed in ash silo for control of fugitive emission.
4. Installation of solar panels for utilization of solar power for this TPS is under Process.
5. For installation of FGD, tender is floated for procurement process of FGD installation in ABVTPS, Marwa.

PART - I

Any other particulars for improving the quality of the environment.

01. To mitigate the effect of high noise, machines are enclosed in acoustic enclosure. Sound proof chamber have been constructed for operator in high noise area. Appropriate PPEs provided to the person working in high noise area. A clear warning of “**HIGH NOISE AREA**” has been displayed in vulnerable areas with instructions to use suitable PPEs.
02. Ash Stock Availability of ash bund has been display in company website. ABVTPS, Marwa and in the web site of Ash availability & Utilization Portal, Ministry of Power with the link of <https://mapp.ntpc.co.in/asha> in every month. Ash stock & utilization of ABVTPS, Marwa TPS are also available in Ash Track Mobile App for needy agencies for maximum ash utilization.
03. Four Nos. CAAQMS are in service for monitoring of ambient air quality at ABVTPS, Marwa.. Real time data of CAAQMS is being transmitted to CECB/CPCB.
04. Continuous Emission Monitoring System (CEMS) & Effluent quality Monitoring System (EQMS) has been installed for monitoring of various polluting parameters in ABVTPS, Marwa. Real time data of CEMS & EQMS are being transmitted to CECB/CPCB.


Superintending Engineer (SC&AUM)
2x500 MW, ABVTPS, CSPGCL, Marwa