

Letter No. MBPMPL/APR/PCB/20120-21/ 672

Date: 11/06/2020

To,

**The Member Secretary,
Madhya Pradesh Pollution Control Board,
Bhopal, Madhya Pradesh.**

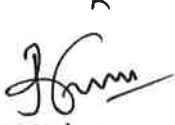
Sub. Environment Statement (Form-V) for the year 2019-20.

Dear Sir,

Please find attached herewith Environment Statement (Form-V) for the year 2019-20 ended on 31st March 2020 for our 2 x 600 MW thermal Power Plant Located Anuppur in Madhya Pradesh.

This is for your information and record please.

For MB Power (Madhya Pradesh) Ltd.


BK Mishra
COO/Plant Head



1. The additional PCCF,
Regional Office, Western Region, MOEFCC
Kendriya Paryavaran Bhawan, Link Road-3,
Bhopal-462016.
2. The Zonal Officer,
Zonal Office, CPCB Bhopal
Madhya Pradesh-462016.
3. The Regional Officer,
MPPCB, Shahdol, Madhya Pradesh

MB Power (Madhya Pradesh) Limited

Registered Office & Site Office: Laharpur, Jaithari, Anuppur, Madhya Pradesh - 484330
Corporate Off: 239, Okhla Industrial Estate Phase-III, New Delhi 110020, India. Phone 91-11-47624100, Fax: 91-11-47624229.
CIN: U40101MP2008PLC022066, Website: www.hindustanpowerprojects.com Email Id: contact@hpppl.on

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कार्यालय/OFFICE
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Ministry of Environment, Forests & Climate Change
क्षेत्रीय कार्यालय (पश्चिम क्षेत्र)/Regional Office (Western Zone)
भोपाल (म.प्र.)/Bhopal-462016

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ENVIRONMENTAL STATEMENT 2019-20

INTRODUCTION

MB Power (Madhya Pradesh) Limited has entered into MOU with Government of MP to set up a 2520 MW coal based power plant. MB Power (Madhya Pradesh) Limited is already implemented 2 X 600 MW subcritical coal based power plant at District Anuppur and Tehsil Jaitahari. An area of 403 Ha (996 acre) has been acquired for phase-1 and coal being sourced from SECL/CIL. The Project has been granted Consent to operate for 2 x 600 MW TPP from M.P. Pollution control board.

SALIENT FEATURES OF THE PROJECT

Item	Main Design Parameters
Location of the Plant	Murra, Guwari, Belia, Jaithari Village Dist- Anuppur (MP)
Longitude	81°47'28.68" E
Latitude	23°04' 5.16" N
Net Capacity	1200 MW
No. of units and configuration	2 X 600 MW
Technology	Conventional
Steam Generator	Sub critical
Pressure at SH outlet	175 KG/cm ²
Temperature at SH outlet	540°C
Turbo generator	Turbine 167 KG/ cm ² (a), 535 °C, 3000 RPM, Generator- 600 MW each
Main Fuel : Coal	Annual requirement 6.6 MTP at 85% PLF Source - SECL mines/open market and others Grade - E/F, Avg. GCV - 3280 Kcal/KG
No. of stack	01 (with 02 fluecane)
Stack height (meter)	275
No. of flue	02
Additional equipment	ESP
Manpower utilization	1500 Nos (Approx)
Water requirement (Annual)	26.4 MCM (agreement qty)
Water Source	Son river
Cooling System	Induced draft cooling system
Total discharge of water	Ziro Liquid Discharge (ZLD)
Pollution level	Within the prescribed norms

ENVIRONMENTAL STATEMENT 2019-20

ANEXURE

ENVIRONMENTAL STATEMENT FORM – V

(See rule 14)

Environmental Statement For The Financial Year, Ending March - 2019

PART – A

- i. Name and address of owner / occupier of the industry : Shri Basanta Kumar Mishra
:MB Power (Madya Pradesh) Ltd.
Jaithari, Thermal Power Plant,
Village- Laharpur, PO- Laharpur-484330
District- Anuppur (M.P.)

Operation or process.

- ii. Industry category :
Primary-(stc code) : Large scale industry
Secondary-(stc code) : (Thermal Power Plant)
- iii. Production Capacity : 1200 MW
- iv. Year of establishment : 2015
- v. Date of last environment Statement submitted : 28.09.2019

PART- B

Water and Raw Material Consumption for the year 2019-20.

- i. Water consumption in m3/d
- | | |
|------------------------|----------|
| Process (Boiler feed): | 308.95 |
| Cooling : | 29025.85 |
| Domestic (Plant) : | 91.00 |

ENVIRONMENTAL STATEMENT 2019-20

Name of Products	Process water consumption per unit of products	
	During the previous financial year 2018-19 [Specific wtr consumption m ³ /MWh]	During the current financial year 2019-20 [Specific wtr consumption m ³ /MWh]
1. Electricity	2.22	2.20

i. Raw material consumption

Name of raw materials	Name of Products	Consumption of raw material per unit of output	
		During the previous financial year 2018-19	During the current financial year 2019-20
Coal	Electricity	0.7056 KG/KWH	0.744 KG/KWH
Oil	Electricity	0.032 ml/ KWH	0.18 ml/ KWH

PART-C

Pollution discharged to environment/unit of output:

(Parameter as specified in the consent issued)

Pollutants	Quantity of Pollutants discharged (mass/day)	Concentration of pollutants discharged (mass/volume)	Percentage of variation from prescribed standards with reasons
(a) Water	0.00	NA	NA

Note: It is ZLD unit.

(b) Ambient Air Quality report

Parameters	Average value	Permissible limit	Remarks
PM10 (µg/m ³)	51.70	100	Value is under limit
PM2.5 (µg/m ³)	20.49	60	Value is under limit
SO ₂ (µg/m ³)	26.46	80	Value is under limit
NO _x (µg/m ³)	11.36	80	Value is under limit
O ₃ (µg/m ³)	1.82	2	Value is under limit
O ₃ (mg/m ³)	21.15	180	Value is under limit

ENVIRONMENTAL STATEMENT 2019-20**PART - D****HAZARDOUS WASTES**

As specified under the hazardous wastes (management, handling and trans boundary movement) rule 2008 and amendment as on 2016

Hazardous Wastes	Total Quantity (KL)	
	During the previous financial year (2018 - 2019)	During the current financial year (2019 - 2020)
From Process	45.49	27.84
From pollution control facility.	Nil	Nil

Note: Generated hazardous waste disposed as per authorization granted by MPPCB.

PART-E**SOLID WASTE**

Solid Wastes (Ash)	Total quantity (MT/Annum)	
	During the previous financial year (2018 - 19)	During the current financial year (2019 - 20)
a. From process (Ash)	1577875.30	1552755
b. From pollution control facility	Nil	Nil
c. Quantity recycled or reutilized within the unit	Used outside: 890894 Used within unit :745064	Used outside : 1328762 Used within unit: 270003

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.

- Total hazardous waste generated at plant is 27.84 MT. Out of this quantity, 13.10 MT is stored at plant and 14.74 MT disposed as per authorization granted by MPPCB.
- Ash is being generated as solid waste and being utilized by cement industries, brick manufacturer, Roof sheet manufacturer, and reclamation of waste land etc. and only remaining quantity is being disposed in ash pond. During 2019-20, total

ENVIRONMENTAL STATEMENT 2019-20

1552755 MT ash generated and 1598765 MT i.e. 103 % ash utilized. In this utilization, about 3 % ash utilized from old stock of pond ash.

PART-G

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

- ETP installed for treatment of industrial effluent and treated waste water is being used for dust suppression and ash slurry disposal system, resulting fresh water consumption is being optimised. Quality of treated ETP water being maintained within the limit. We submit test report to MPPCB twice in a year by third part and monthly by in house monitoring.
- STP installed for treatment of domestic effluent and treated water is being used for irrigation in green belt and landscaping area, due to this, fresh water consumption is being optimised. Quality of treated STP water is being maintained within the limit. We submit test report to MPPCB twice in a year.
- Ash water recovery system installed at plant for recycling and reuse of water. Due to this reason, effluent generation being optimised and zero liquid discharge maintained. We submit test report to MPPCB twice in a year.
- Rain water harvesting system installed at plant and township area to recharge the groundwater table.
- Thick greenbelts have been developed in the plant area to control dust and reduce noise level. Total 2.15 Lakhs Nos sapling planted till date within plant premises.
- We use ash (solid waste) only for reclamatiom of waste land, resulting soil conservation is being done.
- We have installed high efficient ESP to control dust emission from plant. Dry Fog Dust Extraction system (DFDS)/ Dust Extracrtiom (DE)/ water spray system have been installed to avoid fugitive emission from plant. Ambient air quality of plant being maintained within the prescribed limit. There is 03 Nos online AAQM system which transfer online data to MPPCB and CPCB. These data are being displays in main gate of company for public awairness.

Total recurring cost for operation, maintenance of environment pollution control equipment, managing environmental compliance and environmental conservation is about 27.46 Crore.

PART - H

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

- Bi-flue stack of 275 meter height has been constructed with an expenditure of approximate Rs.39.28 Crores for the proper dispersion of particulate matter and to maintain the ground level concentration of air.
- To control air pollution. 02 nos of ESP have been installed for both the unites with an expenditure of approximate Rs. 243.25 Crores.
- To control water pollution, water treatment plant i.e STP and ETP have been installed for treatment of industrial and domestic effluent respectively with and expenditure of approximate 19.76 Crores.
- Induced draft cooling tower (IDCT) to maintain 5 to 8 COC of water (natural resource conservation) with and expenditure of Rs. 143.91 Crores.
- We have installed ash handling system for dry ash collection and disposal, wet ash collection and disposal with and expenditure of approximate 97.74 Crores.
- We have constructed ash dyke with lining of HDP and concrete flooring in side the ash dyke, also turfing done on outer wall of ash dyke with an expenditure approximate Rs. 76.91 Crores.
- Green belt developed in 193 acres of land till date.
- Total Rs. 27.46 Crore has been used as recurring expenditure in the year 2019-20 for controlling pollution and managing environment.

PART - I

Miscellaneous

OTHER PARTICULARS OF IMPROVING OF QUALITY OF THE ENVIRONMENT

ONLINE AMBIENT AIR QUALITY MONITORING SYSTEM (AAQMS)

We have installed 03 Nos online ambient air quality monitoring system in the plant premises. And another 01 Nos installed at Collector office Anuppur (MP). Data of all the four air monitoring systems are being transmitted online to state pollution control board



ENVIRONMENTAL STATEMENT 2019-20

as well as central pollution control board. Monitoring result help us to improve the quality of environment.

CONTINUOUS EMISSION MONITORING SYSTEM (CEMS)

We have installed 02 nos continuous emission monitoring system in our both stacks to know the emission level of stacks. This monitoring system helps us to reduce the emission level and maintain within the norms. Monitoring data are being transmitted online to State and central pollution control board. We have provided remote location calibration facility in both the monitoring system. MPPCB/CPCB are able to calibrate our CEMS from their location.

HOUSE KEEPING

Good house keeping contributes greatly to efficient operations, improved employee morale, better productivity and reduction of accidents. House keeping standards reflect an organization's work culture. Good house keeping can only be achieved by proper planning. This includes a well-planned process layout, orderly arrangement of equipment; systematic material storage stacking and movement with day-to-day maintenance of cleanliness and tidiness. Water tanker has engaged for water spraying round the clock on all the internal roads. The entire roads are being made concreted to reduce the fugitive emission level.

PLANTATION

Plantation efforts are being carried-on to the maximum possible extent in and around MB Power (Madhya Pradesh) Limited campus. In this direction, we are making efforts for avenue plantation from, near by villages and their school, community building etc. which shows our sincerity in making efforts for continual improvement in quality of environment not only inside the MB Power (Madhya Pradesh) Limited campus, but also in the adjacent area. Our effort is not only economical, but also viable and easily adoptable as the saplings are well familiar to survive and grown in the same atmosphere prevailing in the campus. We have planted around 2.15 Lakhs sapling of indigenous species i.e. neem, sirish, amla, karanj, teak. Khamhar, arjun, ashok, gulmohar, shisham, bamboo, sitafal, cassia, acasia, peltaforam, mango, anar. Amrood, lemon, lichi, bargad, tikoma, kaner, bel etc. Also we are taking care of around 22000 natural grown trees in side the plant premises. We have covered more than 215 acres land of green belt area under trees cover.

ENVIRONMENTAL STATEMENT 2019-20

WATER CONSERVATION

As per gazette notifications, new norms for water consumption is 2.5 m³/mwh for the units commissioned after Jan'2017 and 3.5 m³/mwh for units commissioned before Jan'17. We are coming under category of 3.5 m³/mwh. But based on our past water consumption pattern and maintaining from 5 to 8 COC, we are consuming around 2.2 m³/mwh.

Managing water consumption is another way to reduce environmental impacts. We pay careful attention to our water treatment and the quality of water discharged. Water is utmost essential element of nature for operating thermal power plants. There is Risks due to drought situations or less rainfall from average rainfall in monsoon, or regulated allocation of water. We MBPMPL are implementing the 3R principle (Reuse, Reduce, and Recycle) for the preservation of natural resource. Apart from Sewage Treatment Plant (STP) & Effluent Treatment Plant (ETP), rain water harvesting systems and medium density ash slurry handling system have been implemented. The rain water harvesting structures would enable capturing and reusing rain water during monsoon. No water being taken from the river flow during lean season because we maintain same flow in downstream as received in upstream. No ground water was used at plants during the reporting year.

SOIL CONSERVATION

We are using fly ash bricks from starting of project in place of Normal soil bricks. Also we are using ash in place of soil or murum for void filling for reclamation. By using ash or ash bricks we conserve soil.

BIO DIVERSITY

MBPMPL produces, transmit and sell electricity in Madhya Pradesh, uttar Pradesh and other state of India, and our plant operation may interact with diverse ecosystem, landscapes and species. There is no protected area, sanctuaries, reserve forest, or any important area of biodiversity. There is no biodiversity affect due to plant establishment and operation.

Due to water storage in our water reservoir (100acres), several varieties of birds (wild) came permanently and population of these birds are getting increased regularly. We have placed the ducks and fishes in our water reservoir and nala within the plant premises to improve biodiversity of the area. We have deputed security guards round the clock for security of these ducks and birds. Hunting of these birds and fishing is prohibited. We have developed suitable atmosphere for different type of birds within the plant and township area by providing shelter, food, water and pollution free environment, that is why population of these birds (sparrow, pigeon, cormorants etc.) increasing.

ENVIRONMENTAL STATEMENT 2019-20

ENERGY CONSERVATION

Power Consumption Achievement

- 1) ESP controller tuning done to reduce ESP power consumption
- 2) Installation of timers in lighting circuits to reduce unwanted power consumption (timer based cut-in / out)
- 3) Installation of Flue gas flow stream-liners i.e. diverter plates inside the flue gas ducts at the outlet of Boiler which has reduced Induced Draft Fan and Forced Draft Fan power consumption
- 4) Operating voltage in 'main lighting distribution board' is reduced thus reducing power consumption by 60KW per day. Further effort in this line is being explored.
- 5) Cooling water pumps are stopped during winter days, to take advantage of low ambient water temperature.
- 6) Motor driven boiler feed pump (11 MW motor) is not operated during unit start up, provided second unit is running and auxiliary steam is available.

PROMOTIONAL ACTIVITIES

Environment Day Celebration

We celebrate world environment day every year on 5th June to promote environment. To celebrate this occasion we organize several competitions like poster, quiz, slogan and speech among employee, school children and housewives. We provide prize and certificate to winner of competition through chief guest during closing ceremony.

Employee participation in plantation

We are conducting the afforestation awareness program every year among our employee and contract workers. Our employees are participating every year in plantation during monsoon. Few photographs of the plantation programs are attached herewith for reference.

ENVIRONMENT CELL

We have Environment Cell which monitor all the activities related to environment on regular basis and findings used to be discussed in meeting on regular basis.

We have received following award for the year 2019-20 in the outstanding performance of Environment department.

1. Shining Glory Award for excellence performance in Horticulture
 2. GMF annual Award for excellence performance in Horticulture
 3. Shining Glory Award for Excellence Performance in Environment Management
 4. Apex India Environment Award "Gold" Category.
 5. Apex India Aforestation Award "Silver" Category.
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