

MAHARASHTRA POLLUTION CONTROL BOARD

Phone : 4010437/4020781
/4037124/4035273
Fax : 24044532/4024068 /4023516
Email : enquiry@mpcb.gov.in
Visit At : <http://mpcb.gov.in>



Kalpataru Point, 3rd & 4th floor, Sion- Matunga
Scheme Road No. 8, Opp. Cine Planet Cinema, Near
Sion Circle, Sion (E),
Mumbai - 400 022

Consent order No:- BO/EIC No.NG-1519-15/CAC-CELL/CAC-2805

Date- 25/02/2016

To,

M/s. Maharashtra State Power Generation Co. Ltd.

Khaperkheda Thermal Power Station.

(500MW x 01 No.), Unit No. - V,

At- Khaperkheda, Ta- Saoner Dist - Nagpur.

Subject: Renewal of Consent to Operate under RED category.

Ref : 1. Earlier Consent granted vide no. BO/EIC No.NG-11373-14/CAC-CELL/CAC- 911
dtd-28.01.2015 valid upto 31.08.2015.

2. Minutes of CAC meeting held on 02.02.2016

Your application: CO1508000330

Dated: 28.02.2015.

For: Renewal of Consent to Operate

under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 5 of the Hazardous Wastes (M, H & T M) Rules 2008 is considered and the consent is hereby granted subject to the following terms and conditions and as detailed in the schedule I, II, III & IV annexed to this order:

1. The consent is granted for a period from 01.09.2015 to 31.08.2016.
2. The actual capital investment of the industry is Rs. 3428.81 Crores. (As per C. A. Certificate submitted by industry)
3. The Consent is valid for the manufacture of -

Sr. No.	Product / By-Product Name	Maximum Quantity in MT/A
1.	Electricity Generation (Coal based Power generation)	1 x 500 MW

4. Conditions under Water (P&CP), 1974 Act for discharge of effluent:

Sr. no.	Description	Permitted quantity of discharge (CMD)	Standards to be achieved	Disposal
1.	Trade effluent	7600 m ³ /Day	As per Schedule -I	Recycle / Reuse
2.	Domestic effluent	60 m ³ /Day	As per Schedule -I	Recycle / Reuse

5. Conditions under Air (P& CP) Act, 1981 for air emissions:

Sr. no.	Description of stack / source	Number of Stack	Standards to be achieved
1.	Boiler	1	As per Schedule -II

6. Conditions about Non Hazardous Wastes:

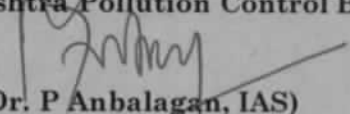
Sr. no.	Type Of Waste	Quantity & UoM	Treatment	Disposal
1.	Fly Ash /Bottom Ash	94,400 MT/Month	---	Shall be send to Cement Manufacture. Dispose as per Govt. of India Guidelines Notification vide No. SO 763 (E) dated 14.09.1999.

Conditions under Hazardous Waste (MH & TM) Rules, 2008 for treatment and disposal of hazardous waste:

Sr. No.	Type Of Waste	Category	Quantity	UOM	Treat ent	Disposal
1	Used Oil/Spent Oil	5.1	5.01	KL/Year	--	Sale to authorized reprocessor
2	Chemical Sludge from waste water treatment	34.3	10.0	MT/Year	--	CHWTSDF, Butibori, Nagpur
3	Polythene Bags / Discarded HDPE Bags	33.3	5.0	MT/Year	--	
4	Wastes / residue containing oil (Waste grease / oil contaminate cotton waste)	34.2	1.0	KL/Year	--	

- The Board reserves the right to review, amend, suspend, revoke etc. this consent and the same shall be binding on the industry.
- Industry shall promote adoption of clean coal (with ash content less than 34%) and clean power generation technologies and comply with the notification issued by MoEF for utilization of fly ash from coal or lignite based thermal power plants dated 14th September, 1999 and as amended on 3rd November, 2009.
- This consent should not be construed as exemption from obtaining necessary NOC/permission from any other Government authorities.

For and on behalf of the
Maharashtra Pollution Control Board


(Dr. P Anbalagan, IAS)
Member Secretary

Received Consent fee of -

Sr. No.	Amount(Rs.)	DD. No.	Date	Drawn On
1.	68,57,632 /-	123929	01.08.2015	Dena Bank

Copy to:

- Regional Officer Nagpur, MPCB .
- Sub-Regional Officer- Nagpur-I, MPCB - They are directed to ensure the compliance of the consent conditions.
- Chief Accounts Officer, MPCB, Mumbai.
- CC/CAC desk- for record & website updation purposes.

Schedule-I

Terms & conditions for compliance of Water Pollution Control:

- 1) A] As per your application, you have provided the Effluent Treatment Plant (ETP) with the design capacity of 400 CMD / hr.
- B] The Applicant shall operate the effluent treatment plant (ETP) to treat the trade effluent so as to achieve the following standards prescribed by the Board or under EP Act, 1986 and Rules made there under from time to time, whichever is stringent.

Sr No.	Parameters	Standards prescribed by Board
I. Condenser cooling Water		
Limiting Concentration in mg/l, except for pH		
01	pH	Between 6.5 to 8.5
02	Temperature	Not to exceed 5°C. than that of intake water temp.
03	Free available chlorine	Not to exceed 0.5 mg/l
II. Boiler Blow Down		
01	Suspended Solids	Not to exceed 100mg/l
02	Oil & Grease	Not to exceed 10mg/l
03	Copper (Total)	Not to exceed 1mg/l
04	Iron (Total)	Not to exceed 1mg/l
III. Cooling Tower Blow Down		
1	Free available chlorine	Not to exceed 0.5mg/l
2	Zinc	Not to exceed 1mg/l
3	Chromium (Total)	Not to exceed 0.2mg/l
4	Phosphate	Not to exceed 5mg/l
IV D.M. Plant Effluent		
1	pH	Between 5.5 to 9
2	Suspended Solids	Not to exceed 100mg/l
3	Oil & Grease	Not to exceed 10mg/l
4	BOD 3 days	Not to exceed 30mg/l
5	COD	Not to exceed 250mg/l
5	TDS	Not to exceed 2100mg/l

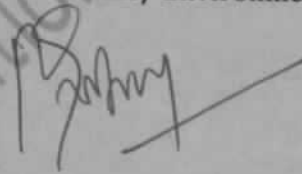
- C) The treated effluent shall maximum Recycled/Reused for Ash handling, coal handling, dust suppression & remaining on land of 29.65 acres for gardening.
- 2) A.] As per your consent application, you have provided the sewage treatment system with the design capacity of STP 2.5 M3/Hr and STP-II 2.5 M3/Hr.
- B] The Applicant shall operate the sewage treatment system to treat the sewage so as to achieve the following standards/ prescribed under EP Act, 1986 and Rules made there under from time to time, whichever is stringent.
- | | | | | |
|-----|-------------------|---------------|-----|-------|
| (1) | Suspended Solids. | Not to exceed | 50 | mg/l. |
| (2) | BOD 3 days 27°C. | Not to exceed | 30 | mg/l. |
| (3) | COD. | Not to exceed | 100 | mg/l. |

- C] The treated sewage shall be disposed on land of 29.65 acres for gardening/irrigation/

- 3) The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification thereof & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or and extension or addition thereto.
- 4) The industry shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.
- 5) The Applicant shall comply with the provisions of the Water (Prevention & Control of Pollution) Cess Act, 1977 and as amended, by installing water meters, filing water cess returns in Form-I and other provisions as contained in the said act.

Sr. no.	Purpose for water consumed	Water consumption quantity (CMD)
1.	Industrial Cooling, spraying in mine pits or boiler feed	39,300 m ³ /day
2.	Domestic purpose	150 m ³ /day
3.	Processing whereby water gets polluted & pollutants are easily biodegradable	4,560 m ³ /day
4.	Processing whereby water gets polluted & pollutants are not easily biodegradable and are toxic	---

- 6) The Applicant shall provide Specific Water Pollution control system as per the conditions of EP Act, 1986 and rule made there under from time to time/ Environmental Clearance / CREP guidelines.



Schedule-II

Terms & conditions for compliance of Air Pollution Control:

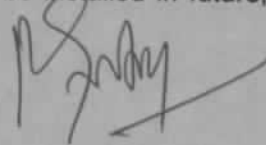
1. As per your application, you have provided the Air pollution control (APC) system and also erected following stack (s) and to observe the following fuel pattern-

Sr. No.	Stack Attached To	APC System	Height in Mtrs.	Type of Fuel	Quantity & UoM	S %	SO ₂ Kg/Day
1	Boilers	ESP	275	Coal	7759 MT/Day	0.4%	62072
				Furnace Oil	7.9 KL/day	4.5%	711
				LDO	1.98 KL/day	1.8%	71.28

2. The Applicant shall provide Specific Air Pollution control equipments as per the conditions of EP Act, 1986 and rule made there under from time to time / Environmental Clearance / CREP guidelines. (Concern section shall mention specific control equipments)
3. The applicant shall operate and maintain above mentioned air pollution control system, so as to achieve the level of pollutants to the following standards:

Particulate matter	Not to exceed	50 mg/Nm ³
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4. The Applicant shall obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or replacement/alteration well before its life come to an end or erection of new pollution control equipment.
5. The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).
6. Control Equipments:
- Electrostatic Precipitator of sufficient capacity provided to each Boiler and any other sources of particulate matter shall be operate and maintain so as to ensure that TPM emission do not exceed 50 mg/Nm³.
 - Dust collection system and automatic water sprinkler system provided to Coal Handling Plant shall be operate and maintain continuously.
 - Dust collector of sufficient capacity provided to coal crusher and any other sources of SPM shall operate and maintain continuously.
 - There shall not be any fugitive emission from coal storage yard.
 - The industry shall make necessary provisions for installing FGD with 90 % efficiency in its design and layout ad sufficient floor space so that it can be installed in future, as & when directed by Board.



**Schedule-III
Details of Bank Guarantees**

Forfeited BG History

Sr. No.	Consent (C to E/O/R)	Amt of BG Imposed	Amt of BG forfeited from BG imposed	Purpose of BG Forfeiture
1.	C to R (Already forfeited)	Rs. 25 Lakhs	Rs. 12.5 Lakhs	As JVS reports of stack of are exceeding the consented limit

Existing top up & extension BG details

Sr. No.	Consent (C to E/O/R)	Amt of BG Imposed	Submission Period	Purpose of BG	Compliance Period	Validity Date
1	C to R (Existing to be Extended & top up)	Out of Rs. 25/- Lakhs Rs. 12.5/- Lakhs remaining Rs. 12.5/- Lakhs to be extended & top up 25/- Lakhs to be obtained to make= Total BG of Rs. 37.5/- Lakhs	15 Days	Towards Operation and Maintenance of Air Pollution Control Devices to achieve emission standards.	31.08.2016	31.12.2016

Existing BG's to be extended

Sr. No.	BG Code	Amt of BG Imposed	Submission Period	Purpose of BG	Compliance Period	Validity Date
	PNC1			Handling and disposal of flyash		
1	PNC1a	5/- Lakhs	15 Days	To switch over to 100% usable dry fly ash collection and storage	Continuous	31.12.2016
2	PNC1b	1/- Lakh	15 Days	Towards utilization of flyash as per flyash notification 1999.	Continuous	31.12.2016
3	PNC1c	1/- Lakh	15 Days	Towards Mitigation of seepages from wet fly ash conveying system	Continuous	31.12.2016
4	PNC1d	1/- Lakh	15 Days	Towards Scientific operation of ash pond i.e. uniform distribution of wet slurry in the pond so as to have minimum depth of water	Continuous	31.12.2016

5	PNC1e	1/- Lakh	15 Days	Towards Providing arrangement for reuse of 100% seepage water, arising from ash pond, for ash slurry	Continuous	31.12.2016
6	PNC1e	5/- Lakhs	15 Days	Towards Scientific closure of abandoned ash pond with soil cover and plantation over it	Continuous	31.12.2015
7	PWO1	5/- Lakhs	15 Days	Towards Operation & Maintenance of the Effluent Treatment Plant to achieve disposal standards.	Monthly	31.12.2015

[Handwritten Signature]

Maharashtra Pollution Control Board

Schedule-IV

General Conditions:

- 1) The applicant shall provide facility for collection of environmental samples and samples of trade and sewage effluents, air emissions and hazardous waste to the Board staff at the terminal or designated points and shall pay to the Board for the services rendered in this behalf.
- 2) Industry should monitor effluent quality, stack emissions and ambient air quality monthly/quarterly.
- 3) The applicant shall provide ports in the chimney/(s) and facilities such as ladder, platform etc. for monitoring the air emissions and the same shall be open for inspection to/and for use of the Board's Staff. The chimney(s) vents attached to various sources of emission shall be designated by numbers such as S-1, S-2, etc. and these shall be painted/ displayed to facilitate identification.
- 4) Whenever due to any accident or other unforeseen act or even, such emissions occur or is apprehended to occur in excess of standards laid down, such information shall be forthwith Reported to Board, concerned Police Station, office of Directorate of Health Services, Department of Explosives, Inspectorate of Factories and Local Body. In case of failure of pollution control equipments, the production process connected to it shall be stopped.
- 5) The applicant shall provide an alternate electric power source sufficient to operate all pollution control facilities installed to maintain compliance with the terms and conditions of the consent. In the absence, the applicant shall stop, reduce or otherwise, control production to abide by terms and conditions of this consent.
- 6) The firm shall submit to this office, the 30th day of September every year , the Environmental Statement Report for the financial year ending 31st March in the prescribed Form-V as per the provisions of rule 14 of the Environment (Protection) (Second Amendment) Rules, 1992.
- 7) The industry shall send used oil to reprocess/re refiners authorized by MPCB & the Hazardous Waste to CHWTSDF Butibori Nagpur as per the provision contain in the HW(MH&TM) Rules 2008.
- 8) The industry should comply with the Hazardous Waste (M,H & TM) Rules, 2008 and submit the Annual Returns as per Rule 5(6) & 22(2) of Hazarsous Waste (M,H & TM) Rules, 2008 for the preceding year April to March in Form-IV by 30th June of every year.
- 9) An inspection book shall be opened and made available to the Board's officers during their visit to the applicant.
- 10) The applicant shall obtain Consent to Operate from Maharashtra Pollution Control Board before actual commencement of the Unit/ Activity for proposed other units (in case of Consent to establish).
- 11) **The applicant shall make an application for renewal of the consent before the date of the expiry of the consent.**
- 12) Industry shall strictly comply with the Water (P&CP) Act, 1974, Air (P&CP) Act,1981 and Environmental Protection Act,1986 and industry specific standard under EP Rules 1986 which are available on MPCB website(www.mpcb.gov.in).
- 13) The industry shall constitute an Environmental cell with qualified staff/personnel/agency to see the day to day compliance of consent condition towards Environment Protection.
- 14) Separate drainage system shall be provided for collection of trade and sewage effluents. Terminal manholes shall be provided at the end of the collection system with arrangement for measuring the flow. No effluent shall be admitted in the pipes/sewers downstream of the terminal manholes. No effluent shall find its way other than in designed and provided collection system.
- 15) Neither storm water nor discharge from other premises shall be allowed to mix with the effluents from the factory.
- 16) The applicant shall install a separate meter showing the consumption of energy for operation of domestic and industrial effluent treatment plants and air pollution control

system. A register showing consumption of chemicals used for treatment shall be maintained.

- 17) Conditions for D.G. Set
 - a) Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.
 - b) Industry should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room should be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB (A) shall also be provided. The measurement of insertion loss will be done at different points at 0.5 meters from acoustic enclosure/room and then average.
 - c) Industry should make efforts to bring down noise level due to DG set, outside industrial premises, within ambient noise requirements by proper siting and control measures.
 - d) Installation of DG Set must be strictly in compliance with recommendations of DG Set manufacturer.
 - e) A proper routine and preventive maintenance procedure for DG set should be set and followed in consultation with the DG manufacturer which would help to prevent noise levels of DG set from deteriorating with use
 - f) D.G. Set shall be operated only in case of power failure.
 - g) The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set.
 - h) The applicant shall comply with the notification of MoEF dated 17.05.2002 regarding noise limit for generator sets run with diesel
- 18) The industry should not cause any nuisance in surrounding area.
- 19) The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standard in respect of noise to less than 75 dB (A) during day time and 70 dB (A) during night time. Day time is reckoned in between 6 a.m. and 10 p.m. and night time is reckoned between 10 p.m. and 6 a.m.
- 20) The applicant shall maintain good housekeeping.
- 21) The applicant shall bring minimum 33% of the available open land under green coverage/ plantation. The applicant shall submit a statement on available open plot area, number of trees surviving as on 31st March of the year and number of trees planted by September end, with the Environment Statement.
- 22) The non-hazardous solid waste arising in the factory premises, sweepings, etc. be disposed of scientifically so as not to cause any nuisance / pollution. The applicant shall take necessary permissions from civic authorities for disposal of solid waste.
- 23) The applicant shall not change or alter the quantity, quality, the rate of discharge, temperature or the mode of the effluent/emissions or hazardous wastes or control equipments provided for without previous written permission of the Board. The industry will not carry out any activity, for which this consent has not been granted/without prior consent of the Board.
- 24) The industry shall ensure that fugitive emissions from the activity are controlled so as to maintain clean and safe environment in and around the factory premises.
- 25) The industry shall submit quarterly statement in respect of industries' obligation towards consent and pollution control compliance's duly supported with documentary evidences (format can be downloaded from MPCB official site).
- 26) The industry shall submit official e-mail address and any change will be duly informed to the MPCB.
- 27) The industry shall achieve the National Ambient Air Quality standards prescribed vide Government of India, Notification dt. 16.11.2009 as amended.
- 28) The industry shall comply with the notification issued by MoEF for utilization of fly ash from coal or lignite based thermal power plants dated 14th September, 1999 and as amended on 3rd November, 2009.

- 29) Industry shall provide dry fly ash handling & collection system and utilize the fly ash as per the fly ash notification of the Govt. of India
- 30) The use of beneficiated coal as per GOI Notification shall be implemented. Transportation of coal shall be carried out through trucks by covering tarpolin properly till the Rly facility from Walgaon to factory site is provided. Fly ash shall be by transported through bunker having closed system, coal carrying conveyor belt shall be covered from all side with provision of water springing/spraying system properly.
- 31) The applicant shall Operate online opacity meter/continuous monitoring system for process stack emission analysis & same shall be directly connected to MPCB website <http://mpcb.gov.in> as well as to the respective Regional Office within 3 months period and operate the same regularly.
- 32) The applicant shall Operate four continuous automatic ambient air and micrometeorological monitoring station at location indicated by MPC Board to be set up and operate at its own cost for measurement of SO₂, NO_x and particulate matter. These CAAQMS shall also have necessary provision of networking to the Air Quality Monitoring network of MPCB.
- 33) They shall promote adoption of clean coal and clean power generation technologies.
- 34) The coal handling system shall be covered with proper hooding and ventilation arrangements connected to dust suppress agent so as not to allow any fugitive emissions.
- 35) If due to any technological improvements or otherwise this Board is of opinion that all or any of the conditions referred above require variation (including the change of any control equipment either in whole or in part), this Board shall after giving the applicant an opportunity of being heard very all or any of such conditions and thereupon the applicant shall be bound to comply with the conditions so varied.

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