

APPENDIX – 26

ENVIRONMENTAL STANDARDS FOR POWER PLANTS

(i) Thermal Power Plant : Emission Standards

Generation Capacity	Pollutant	Emission limit
Generation capacity 210 MW or more	Particulate matter	150 mg/Nm ³
Generation capacity less than 210 MW	Particulate matter	300 mg/Nm ³

Depending upon the requirement of local situation, such as protected area, the State Pollution Control Boards and other implementing agencies under the Environment (Protection) Act, 1986, may prescribe a limit of 150 mg/Nm³, irrespective of generation capacity of the plant.

(ii) Thermal Power Plants : Stack Height/Limits

Generation Capacity	Stack Height (Metres)
500 MW and above	275
200 MW/210 MW and above to less than 500 MW	220
Less than 200 MW/210 MW	$H = 14 Q^{0.3}$ where Q is emission rate of SO ₂ in kg/hr, and H is Stack height in meters, subject to a minimum of 30 meters.

Source : EPA Notification
[G.S.R. 742(E), dt. 30th Aug; 1990]

(iii) Liquid waste discharge limit

Parameter	Maximum limit of concentration (mg/l except for pH and temperature)
pH	6.5-8.5
Temperature	As applicable for other thermal power plants
Free available chlorine	0.5
Suspended solids	100.0
Oil and grease	20.0
Copper (total)	1.0
Iron (total)	1.0
Zinc	1.0
Chromium (total)	0.2
Phosphate	5.0

Source: MOEF New Delhi Notification G.S.R.7. dated 22.12.1998

APPENDIX - 27

TEMPERATURE LIMIT FOR DISCHARGE OF CONDENSER COOLING WATER FROM THERMAL POWER PLANT

A: New thermal power plants, which will be using water from rivers/lakes/reservoirs, shall install cooling towers irrespective of location and capacity. Thermal power plants which will use sea water for cooling purposes, the condition below will apply.

B: New projects in coastal areas using sea water.

The thermal power plants using sea water should adopt suitable system to reduce water temperature at the final discharge point so that the resultant rise in the temperature of receiving water does not exceed 7°C over and above the ambient temperature of the receiving water bodies.

C: Existing thermal power plants.

Rise in temperature of condenser cooling water from inlet to the outlet of condenser shall not be more than 10°C.

D: Guidelines for discharge point:

The discharge point shall preferably be located at the bottom of the water body at mid-term for proper dispersion of thermal discharge.

In case of discharge of cooling water into sea, proper marine outfall shall be designed to achieve the prescribed standards. The point of discharge may be selected in consultation with concerned State Authorities/NIO.

No cooling water discharge shall be permitted in estuaries or near ecologically sensitive areas such as mangroves, coral reefs/spawning and breeding grounds of aquatic flora and fauna.

Source: MOEF New Delhi Notification G.S.R.7. dated 22.12.1998