Environment and Forest Department

Policy Note 2014-2015

Demand No.15

Tamil Nadu Pollution Control Board

TAMILNADU POLLUTION CONTROL BOARD

1. INTRODUCTION

The Tamilnadu Pollution Control Board (TNPCB) was constituted by the Government of Tamilnadu in 1982 in pursuance of the Water (Prevention and Control of Pollution) Act, 1974 (Central Act 6 of 1974). It enforces the provisions of the:-

- The Water (Prevention and Control of Pollution) Act, 1974
- The Water (Prevention and Control of Pollution) Cess Act, 1977
- The Air (Prevention and Control of Pollution) Act, 1981
- The Environment (Protection) Act, 1986
- The Environment (Protection) Rules, 1986
- The Noise Pollution (Regulation and Control) Rules, 2000 as amended
- The Municipal Solid Wastes (Management and Handling) Rules, 2000

- The Biomedical Waste (Management and Handling) Rules, 1998 as amended in 2000 & 2003
- The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 as amended in 1994 and 2000
- The Battery (Management and Handling) Rules, 2001 and its amendments
- The Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 and its amendment
- The Plastic Waste (Management and Handling) Rules, 2011
- e-Waste (Management & Handling) Rules, 2011.

2. FUNCTIONS

The main functions of the TNPCB under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981 are as follows:-

- To plan a comprehensive programme for the prevention, control and abatement of water and air pollution.
- To inspect sewage and trade effluent treatment plants for their effectiveness and review plans, specifications for corrective measures.
- To inspect industrial plants or manufacturing process, any control equipment and to give directions to take steps for the prevention, control or abatement of air pollution.
- To lay down, modify or annul effluent standards for the sewage and trade effluents and for the emission of air pollutants into the atmosphere from industrial plants and automobiles or for the discharge of any air pollutant into the atmosphere from any other source.

- To collect samples of sewage and trade effluents and emissions of air pollutants and to analyze the same for specific parameters.
- To collaborate with the Central Pollution Control Board in organizing training of persons engaged or to be engaged in programme relating to prevention, control or abatement of water and air pollution and to organize mass education programme relating thereto.
- To advise the State Government on any matter concerning the prevention, control or abatement of water and air pollution.
- To perform such other functions as may be prescribed by the State Government or Central Pollution Control Board.

3. CONSTITUTION OF TNPCB

TNPCB is constituted by the State Government. It comprises a full time Chairman, 5 officials nominated by the State Government, 5 persons to represent local authorities, 3 non-officials to represent the interests of agriculture, fishery or industry or trade, 2 persons to represent the companies or corporations owned by the State Government and a full time Member Secretary.

4. ORGANISATIONAL SET UP

The TNPCB has established its organization structure with a three-tier system consisting of head-office at Chennai, Regional offices and District offices with total staff strength of 768. There are 34 District offices, 32 of which are headed by District Environmental Engineers and 2 by Assistant Environmental Engineers. Two flying squads are also functioning at Erode and Tiruppur. To assist the Board in monitoring the industries, 5 Advanced

Environmental Laboratories and 10 District Environmental Laboratories are functioning. These laboratories carry out analysis on samples of sewage, trade effluents, emissions and hazardous wastes.

5. MONITORING OF INDUSTRIES AND ISSUE OF CONSENT

Industries have to obtain consent for discharge of sewage / trade effluent into any stream or well or into sewer or land under the Water (Prevention and Control of Pollution) Act, 1974 as amended and to operate the plant in air pollution control area of entire Tamil Nadu under the Air (Prevention and Control of Pollution) Act, 1981 as amended. Industries are categorized as, Red, Orange, and Green according to their pollution potential. The industries have also been classified as Large, Medium and Small scale based on the gross fixed assets of the industry and they are monitored periodically.

The consent is issued to industries in two stages. ‘Consent to Establish’ is issued depending upon the suitability of the site before the industry takes up the construction activity. ‘Consent to Operate’ is issued before commissioning the industrial unit after the compliance of conditions of ‘Consent to Establish’ is issued. The field officers of the Board inspect the industries under their jurisdiction periodically to assess the adequacy of pollution control measures provided by the industries to treat sewage, trade effluents and emissions and to monitor their performance. They also investigate complaints of pollution received from the public, organizations and the Government.

During the year 2013-2014, the Board has issued 1,700 ‘Consent to Establish’ orders and 1,709 ‘Consent to Operate’ orders under the Water (Prevention and Control of Pollution) Act, 1974 as amended and the Air (Prevention and Control of Pollution) Act, 1981 as amended. During the year 2013-14, ambient air quality surveys were

conducted in 1,156 industries and 22,368 samples of sewage and trade effluents were collected for analysis.

6. CARE CENTRE

TNPCB has established a “CARE Centre” (Central Application Receiving Centre) as an industry friendly initiative to help industries to file applications painlessly and to expedite the process of issue of consent / authorization. The Centre counsels industries on the rules, it helps them to file the applications, it gives the status of pending applications and despatches consent orders within specified time limits through the single window system. Applicants can know the status of their applications online by accessing the TNPCB website. This Centre caters to the needs of industries/ local bodies located in Chennai, Tiruvallur and Kancheepuram Districts.

During the year 2013-14, 2,430 applications were received by the Care Centre and

1,556 consent orders have been issued. Consent fees of Rs.11.51 crores has been collected by the Care Centre.

7. INSPECTIONS OF INDUSTRIAL UNITS AND SAMPLE COLLECTION PERIODICITY

The Board vide B.P. Ms No. 22 dated 25.2.2004 has fixed norms for inspection and sample collection from the industries as follows:-

Type of Industry	Category	Inspection	Sample Collection
Large	Red	Once in 3 months	Once in a month
	Orange	Once in 6 months	Once in 4 months
	Green	Once in 2 years	----
Medium	Red	Once in 4 months	Once in 3 months
	Orange	Once in 6 months	Once in 6 months
	Green	Once in 2 years	----
Small	Red	Once in a year	Once in 3-6 months
	Orange	Once in 2 years	Once in 6 months
	Green	Once in 2 years	----
17 Category of Industries		Once in a month	Once in a month

8. COMMON EFFLUENT TREATMENT PLANTS STATUS

The TNPCB plays an important role in the establishment of Common Effluent Treatment Plants (CETPs) for clusters of small-scale industries in various parts of the State. Small-scale industries often express financial difficulties, lack of space and other reasons which prevent them from putting up required individual Effluent Treatment Plant (ETP). The Board in coordination with other Departments assists the units for preparation of proposals, obtaining approvals, mobilization of financial resources and in the technical scrutiny of the plan proposals for the CETPs.

CETPs are formulated in the following sectors:-

Tanneries	13 Schemes
Textile Bleaching & Dyeing Units	30 Schemes
Hotels & Lodges	1 Scheme

Out of 13 CETP schemes established for tanneries, 11 CETPs are under operation with

Zero Liquid Discharge (ZLD) system. The remaining two CETPs for tanneries have opted for dilution of tannery effluent with sewage to achieve the standards prescribed by the Board.

Out of 30 CETPs established for textile dyeing processing units, 19 CETPs have implemented the ZLD system. Among the remaining 11 CETPs, 10 CETPs are closed in view of orders of Hon'ble High Court. The other one CETP is permitted to operate for preparation of ZLD proposal.

For the 18 CETP schemes of textile dyeing processing units in Tiruppur, the State Government has sanctioned Rs.179.34 crores, out of Rs.200 crores interest free loan announced by the State Government for modernization/improvement of ZLD system. The sanctioned amount is released to the respective 18 CETP schemes for textile dyeing processing units by the Director of Handlooms and Textiles.

9. WASTE MANAGEMENT

9.1 MANAGEMENT OF MUNICIPAL SOLID WASTE

The Municipal Solid Wastes (Management & Handling) Rules, 2000 has been notified by Government of India for the proper management of municipal solid wastes. The role of Pollution Control Board is to issue authorisation to municipal authorities, to monitor the compliance of the standards regarding ground water, ambient air, leachate quality and the compost quality including incineration standards for waste processing and disposal facilities. The Board has issued authorisation to 5 Corporations, 50 Municipalities and 87 Town Panchayats for composting of municipal solid waste and setting up of waste processing facility. The Board is advocating the concept of segregation of wastes at source, reduction, recycle and reuse of wastes to avoid any environmental issues during handling.

9.2 MANAGEMENT OF PLASTIC WASTE

The Ministry of Environment and Forests, Government of India vide Notification dated 4.2.2011 notified “The Plastic Waste (Management and Handling) Rules, 2011”. As per this notification, no person shall manufacture, stock, distribute or sell any carry bag made of virgin or recycled or compostable plastic, which is less than 40 microns in thickness. Plastic carry bags, multilayered plastic pouch (or) sachet units, recycle plastic carry bags shall obtain registration certificate from Pollution Control Board. The role of Pollution Control Board is to enforce the provisions of these rules which are related to authorization, manufacture, recycling and disposal of plastic wastes.

Awareness programmes were conducted for the Public/Government bodies by TNPCB on the ill effects of plastics and the need to use alternatives to the “use and throw plastic” items. In order to implement the Plastic Waste (Management &

Handling) Rules, 2011 in all the Districts of Tamil Nadu, on 24.10.2013, a drive was carried out under the chairmanship of District Collector, in co-ordination with the officials of TNPCB and officials of local bodies, to ensure that the traders do not sell the banned plastic carry bags and for imposing fine on defaulters.

9.3 MANAGEMENT OF HAZARDOUS WASTE

TNPCB is taking effective steps in handling and management of hazardous wastes, its treatment and disposal in an environmentally safe manner. The Board has identified and listed out 3,067 units generating hazardous wastes under the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 as on 31.03.2014.

A common hazardous waste Treatment Storage and Disposal Facility (TSDF) is established at SIPCOT industrial estate, Gummidipoondi and it is in operation. The federation of common effluent

treatment plants, Tiruppur, has identified a site for CETP at Nallur village, in Tiruppur District. The federation of CETPs & ETPs in Karur have identified a site at Mathagiri Village, in Karur District to establish a secure landfill facility for disposal of sludge generated from treatment of textile dyeing effluents. A common treatment storage and disposal facility is proposed to be established in Virudhunagar District for which Environmental Clearance is awaited. Further, action is being taken to establish a common hazardous waste treatment storage and disposal facility at SIPCOT, Perundurai.

Textile hazardous waste generated from the sludge of ZLD is being used in co-processing of cement factory as an alternate method of disposal. Prior to it, a detailed study and evaluation was done at a cement factory in the presence of Central Pollution Control Board (CPCB) and it established the compatibility of textile hazardous waste that can be used in co-processing in cement factory.

Similarly, tannery hazardous waste from the sludge of ZLD is used in cement factory, as an alternate method which is under trial in a cement factory for establishing the hazardous waste compatibility.

9.4 MANAGEMENT OF BIOMEDICAL WASTE

The Biomedical Waste (Management & Handling) Rules, 1998 are applicable to every occupier of an institution generating, collecting, receiving, storing, transporting, treating, disposing and / or any other form of handling of bio-medical waste. As per the Rules authorization of State Pollution Control Board (SPCB) is required for handling of Bio Medical Waste (BMW). It is the duty of the occupier of an institution generating BMW to take all steps to ensure that the BMW is handled without any adverse effect to human health and environment.

The Board has so far inventorised 6,246 private and Government hospitals in the State. All these hospitals have made agreement

with the Common Biomedical Waste Treatment Facilities (CBMWTF) for the disposal of the BMW. The CBMWTF consists of autoclave, shredder, incinerator and secured land fill facilities. There are 12 CBMWTFs in Tamil Nadu out of which 11 are in operation and one at Uthukottai in Tiruvallur District is under construction. All the 11 common treatment facilities have been issued authorisation by the Board and so far 5,679 health care facilities have also been issued authorisation. About 38.93 Tonnes per day of BMW is handled by the CBWTF facility.

Global Healthcare Waste Project – Tamil Nadu Component

The Global Environment Facility (GEF) an international funding body under the United Nations Development Program (UNDP) identified Tamil Nadu State for funding the project titled ***'Demonstrating and promoting best techniques and practices for reducing health care waste to avoid environmental releases of***

dioxins and mercury'. GEF has granted about Rs.1.4 crores and the fund is routed through Ministry of Environment and Forests, Government of India.

Under this project, 14 hospitals with a composition of 6 Government hospitals, 8 private hospitals and one common treatment facility (CTF) have been identified for up-gradation and development. The CTF was provided with an autoclave, shredder, online stack monitor and software for waste tracking. The 14 hospitals were provided with needle hub cutters (totally 300 nos.), non-mercury BP apparatus (totally 869 nos.), non-mercury thermometers (totally 1,288 nos.) so as to complete elimination of using mercury devices. In addition, the government hospitals were provided with electronic weighing scales, and consumables. They were also trained on bio-medical waste management, mercury spill management etc.

9.5 MANAGEMENT OF e- WASTE

MOEF, GOI has published guidelines for Environmentally Sound Management of e-waste in March 2008. e-Waste (Management & Handling) Rules, 2011 was published by MOEF, GOI in Notification dated 12.05.2011 and is effective from 1.5.2012 in Tamil Nadu.

As per these Rules, Pollution Control Board has to issue authorisation for the producer of electrical and electronic equipments, e-waste recyclers, e-waste dismantlers and e-waste collection centres.

TNPCB has issued consent to 19 e-Waste recyclers for segregation & recovery of Printed Circuit Board (PCB), Integrated Chip (IC), Iron, Copper, Rubber and Glass from the mixed computer electronics and electrical goods scrap and sent for recycling. PCB/IC wastes are exported to foreign countries such as USA, Singapore and Malaysia to recover the heavy metals present in the said wastes and other wastes are disposed through the authorised inland recyclers.

TNPCB has issued registration to 16 units and authorisation for 23 units under the e-Waste (Management & Handling) Rules, 2011.

10 AIR QUALITY MONITORING

TNPCB is operating the following ambient air quality monitoring stations in Tamil Nadu under National Air Quality Monitoring Programme (NAMP).

Sl. No.	CITY/ TOWN	LOCATION	LAND USE
1	Chennai	Kathivakkam	Industrial zone
		Manali	Industrial zone
		Thiruvottiyur	Industrial zone
		Kilpauk	Commercial (traffic inter-section)
		Thiyagaraya Nagar	Commercial (traffic inter-section)
		Vallalar Nagar	Commercial (traffic inter-section)

		Anna Nagar	Residential zone
		Adyar	Residential zone
2	Thoothukudi	Raja Agencies	Industrial zone
		SIPCOT	Industrial zone
		A.V.M. Building	Mixed zone
3	Coimbatore	G.D. Matriculation School Building	Mixed zone
		Ponnaiya-rajapuram	Residential zone
		SIDCO Building	Industrial zone
4	Salem	Sowdeswari College	Mixed zone
5	Madurai	Highways Project Building	Residential zone
		M/s.Susee Cars and Trucks Co., Ltd.	Industrial zone
		Madurai Corporation Office (South)	Mixed zone

6	Trichy	Gandhi Market	Commercial zone
		Main Guard Gate	Traffic intersection
		Bishop Heber College	Mixed zone
		Golden rock	Residential zone
		Central bus stand	Traffic intersection

All the above stations are functioning on 24 hours basis, twice a week. The samples collected from NAMP stations are analysed for the Respirable Suspended Particulate Matter (RSPM) (RSPM is particulate matter less than 10 microns) and gaseous pollutants such as oxides of Sulphur and Nitrogen.

During 2013-14, the average values of oxides of Sulphur and Nitrogen were found to be well within the prescribed standards for Ambient Air in all the stations. However the average value of RSPM was found to have exceeded the prescribed standards in certain locations.

11 CARE AIR CENTRE

In order to monitor both source emissions and ambient air quality on a real time basis, TNPCB has established a Centre for Accessing Real Time Air (Quality) Information Report **(CARE AIR)** at the Head office of the Board. This is a continuous real time emission monitoring system which is functioning on 24 X 7 basis. This is the first of its kind in the whole country and has been appreciated by the Government of India. When the emission levels exceed the norms, an inbuilt alarm system has been established to inform the concerned industry and the District Environmental Engineer/Member Secretary through automated SMS for remedial action immediately. So far, 237 industries have been connected to the CARE AIR centre and the emissions are monitored continuously. Apart from the above, monitoring of effluent discharge has also been included and is being monitored at the centre.

12. WATER QUALITY MONITORING

TNPCB is monitoring the water quality of major rivers and its tributaries under the Monitoring of Indian National Aquatic Resources (MINARS) programme and under the Global Environmental Monitoring System (GEMS) as detailed below:-

Sl. No	Water Bodies	No.of stations	Water quality of water body
1	Cauvery and its tributaries	33	Suitable for outdoor bathing, drinking water source with conventional treatment followed by disinfection and also for fish culture and wild life propagation.
2	Tamirabarani	12	Suitable for out door bathing, drinking water source with conventional treatment followed by disinfection

3	Palar	1	Suitable for drinking water source with conventional treatment followed by disinfection.
4	Vaigai	1	Suitable for drinking water source with conventional treatment followed by disinfection.
5	Lakes	8	Suitable for drinking water with conventional treatment followed by disinfection and fish culture and wild life propagation

13. OTHER ACTIVITIES OF THE BOARD

13.1 ENVIRONMENTAL TRAINING INSTITUTE

Environmental Training Institute **(**ETI) established in 1994 is an organizational wing of TNPCB. The main objective of the training institute is to impart training to staff of the Pollution Control Board, representatives of Industry and non-governmental organizations. During the year 2013-14, the ETI has conducted 14 training

programmes, in which 757 participants have been trained. Training programme was conducted for the Medical College Students, Officials of Local Bodies, Fire Department and Deputy Collectors on pollution control legislations, decentralized treatment system for community sewage management, Biomedical Waste Management etc.,

13.2 CLEANER TECHNOLOGIES

TNPCB is involved in promoting a holistic approach of environment protection by cleaner technology options more than mere end-of-pipe treatment. With active support and encouragement from the Board, several industrial units in Tamil Nadu have switched over to cleaner technologies such as adoption of membrane cell instead of mercury cell in caustic soda manufacturing, adoption of dry process instead of wet process to reduce air pollution in cement factories, utilization of 25 to 30% of fly ash in PPC cement manufacturing, adoption of double conversion and double absorption technology in sulphuric acid

manufacturing, gas carburizing instead of cyanide salt in heat treatment and cyanide free electroplating. Pulp and paper industries are encouraged to go in for elemental chlorine free bleaching to reduce the formation of organo-chlorides including dioxins. Industries consuming ozone-depleting substances are systematically changing to environment friendly compounds. Recently TNPCB has initiated steps for demonstrating best available technologies for MSME through Technology Demonstration Centre established at IIT, Madras.

13.3 TECHNOLOGY DEMONSTRATION CENTRE

TNPCB has established a Technology Demonstration Centre at IIT, Madras, entered into an Memorandum of Understanding (MOU) and a sum of Rs.5 crores have been allocated for this purpose. The MOU has been signed with IIT in presence of Honourable Minister for Environment on 17.4.2013. The Technology Demonstration

Centre has conducted treatability studies for rice mills, sago and small scale textile processing units. This centre has also conducted awareness programme on landfill fire management on 2.5.14 for the Municipal Authorities, Fire Department and TNPCB officials. The centre has also conducted technical workshop for sago industries on 12.5.2014 and 13.5.2014 for better understanding the characteristics of sago waste water, anaerobic treatment, biogas generation, optimizing the process parameters to enhance the composition and quantity of biogas generated.

13.4 MASSIVE TREE PLANTING PROGRAMME

During the year 2012, to commemorate the 64th Birth Anniversary of the Hon'ble Chief Minister, 64 lakh seedlings were planted throughout Tamil Nadu through the Forest Department. TNPCB has funded the project.

In the year 2013 and 2014 to commemorate the 65th and 66th Birth Anniversary of the Hon'ble Chief Minister, TNPCB has provided funds to the

Forest Department for planting 65 and 66 lakh seedlings respectively.

13.5 OFFICE BUILDING CONSTRUCTION

TNPCB is having own buildings for 10 District offices. The remaining 24 District offices are functioning in rented buildings. During the last 3 years, TNPCB had initiated action for construction of 8 new District office buildings. The construction of new office buildings are in progress in Villupuram, Thanjavur, Pudukottai, Sivagangai, Dindigul, Virudhunagar, Namakkal and Coimbatore.

13.6 GREEN AWARDS

Green award is given to industries who have adopted best practices in achieving best environmental quality in emission, developing green belt, discharge of wastewater and solid and hazardous waste management.

13.7 ENVIRONMENTAL AWARENESS AND PUBLIC PARTICIPATION

A special ambient air quality survey on pre-bhogi and bhogi days were carried out in Chennai at 15 places as a part of the awareness campaign among the public about the health hazards caused due to air pollution by burning of wastes. During Deepavali noise level and Ambient Air Quality are monitored. The Deepavali survey is carried out in the important cities viz. Chennai, Trichy, Coimbatore, Madurai, Tirunelveli, Vellore, Salem, Hosur, Tiruppur, Dindigul and Cuddalore.

13.8 TNPCB AND YOU

To guide the new entrepreneurs in understanding the various environmental legislations and the procedure for obtaining consent of TNPCB, the Board has published a book titled 'TNPCB and You' during the World Environment Day function. The soft copy of the book is also available in Board's web site (www.tnpcb.gov.in).

13.9 LIBRARY

The TNPCB Library was established during the year 1989. At present, it has a collection of about 11,092 books and reports. The Library subscribes to 76 Journals (English & Tamil), 9 Newspapers and 16 Magazines related to environment. Membership is open to all the stake holders in the environmental sector.

13.10 NEWS LETTER

TNPCB is publishing a news letter on quarterly basis, containing the news about the activities of the Board, environmental issues in various districts, poetry and essays on environmental issues etc. This news letter is widely circulated among the Government Departments, District Collectorates in the State. Copies of this newsletter are sent to other State Pollution Control Boards in India. All the awareness programme details, best practices in Industries, Climate change and mitigation and Board initiatives for better enforcement are the highlights of the news letter.

14. CONCLUSION

TNPCB has always set an example for the other State Pollution Control Boards in the country in helping the small scale sector to establish CETPs. TNPCB is the first Board in the country to establish the CARE AIR Centre for online continuous monitoring of air emissions, around 237 industries have been connected online and are being monitored 24 hours. TNPCB is also the first Board in the country to establish 11 CBMWTFs for treating and disposal of BMW. TNPCB is again the first Board to implement the ZLD system in the country effectively in more than 30 CETPs established for the textile dyeing units and tanneries.

TNPCB is taking all efforts to ensure that the effluent generated from industries is treated to the standards prescribed and the environment is protected. The Board under the able guidance of the Hon'ble Chief Minister is taking fullest efforts

to translate the “Vision 2023” into a reality for a sustainable development of the State and to make TNPCB the number one Board.

THOPPU N.D. VENKATACHALAM
MINISTER FOR ENVIRONMENT