



# **Environment and Forest Department**

**Policy Note 2008-2009**

**Demand No.15**

## **Tamil Nadu Pollution Control Board**

### 3. TAMILNADU POLLUTION CONTROL BOARD

#### 1.0 INTRODUCTION

Tamilnadu Pollution Control Board (TNPCB) has the responsibilities of enforcing the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Water (Prevention and Control of Pollution) Cess Act, 1977, Air (Prevention and Control of Pollution) Act, 1981, enacted in the Parliament and the rules made under the Environment (Protection) Act, 1986. Tamilnadu Pollution Control Board has headquarters in Chennai with District Offices all over the State.

#### 2.0 CONSTITUTION OF TNPCB

In order to monitor the functioning of the Board and to take policy decision and guide the Board, a group of Board members have been formed. State Government nominates full time Chairman of the Board. Along with Chairman, 5 senior level Government Officials, 5 persons representing local bodies, 3 experts representing important sectors of agriculture, fishery and trade, 2 persons representing the companies or corporations and a full time Member Secretary are the members of the Board.

District Offices of the Board are located in 25 districts. The details of the location of District Office and the jurisdiction covered are given below :-

Sl.No.	Location	Jurisdiction
1	Joint Chief Environmental Engineer, Madurai	Madurai & Sivagangai Districts.
2	District Environmental Engineer, Salem	Salem District.
3	District Environmental Engineer, Chennai	Chennai District.
4	District Environmental Engineer, Tiruvallur (Ambattur)	Tiruvallur District.
5	District Environmental Engineer, Kancheepuram (Tambaram)	Kancheepuram District.
6	District Environmental	Virudhunagar &

	Engineer, Virudhunagar	Ramanathapuram Districts.
7	District Environmental Engineer, Karur	Karur District.
8	District Environmental Engineer, Namakkal	Namakkal District.
9	District Environmental Engineer, Tiruchirapalli	Tiruchirapalli and Perambalur Districts.
10	District Environmental Engineer, Tirunelveli	Tirunelveli District,
11	District Environmental Engineer, Tiruppur	Avinashi, Palladam, & Tiruppur Taluks of Coimbatore District.
12	District Environmental Engineer, Tuticorin	Tuticorin District.
13	Joint Chief Environmental Engineer, Vaniyambadi	Vaniyambadi, Tirupattur and Katpadi Taluks of Vellore District.
14	District Environmental Engineer, Vellore	Arcot, Wallajah & Arakonam Taluks of Vellore District & Tiruvannamalai District.
15	District Environmental Engineer, Coimbatore	Mettupalayam, Pollachi, Udumalpettai & Valparai Taluks of Coimbatore Dist.
16	District Environmental Engineer, Cuddalore	Cuddalore District.
17	District Environmental Engineer, Dindigul	Dindigul & Theni Districts.
18	District Environmental Engineer, Erode	Erode District.
19	District Environmental Engineer, Hosur	Krishnagiri & Dharmapuri Districts.
20	District Environmental Engineer, Pudukottai	Pudukottai District.
21	Assistant Environmental Engineer, Udhagamandalam	The Nilgiris District.
22	Assistant Environmental Engineer, Thanjavur	Thanjavur District.
23.	Assistant Environmental Engineer, Villupuram	Villupuram District.
24.	Assistant	Nagabattinam & Tiruvarur

	Environmental Engineer, Nagapattinam	Districts.
25	Assistant Environmental Engineer, Nagercoil	Kanyakumari District.

The total staff working in this Board is 735. Chief Engineers, District Environmental Engineers, Assistant Environmental Engineers, Scientists, Legal Officer form part of this total strength.

### **3.0 MONITORING OF INDUSTRIES AND ISSUE OF CONSENT**

With the rapid industrialization in Tamilnadu, there has been a marked increase in the need for continuous monitoring of pollution of industrial activities. The field officers of the TNPCB inspect the industries under their jurisdiction periodically to assess the adequacy of pollution control measures provided by the industries to treat sewage, trade effluent and emissions and monitor their performance. As on 31.03.2008, TNPC Board has granted consent orders for operation under the Water (Prevention and Control of Pollution) Act, 1974.

Industries had been categorised in to 3 categories as red, orange, and green category based on the pollution load discharged. Highly polluting industries are classified as red category industries, medium polluting industries are classified as orange category industries and less polluting industries are classified as green category industries. From August 2007 onwards, the highly polluting red category industries have been split into ultra red and red category in order to have effective monitoring.

### **3.1 INSPECTION AND SAMPLE COLLECTION PERIODICITY**

The field engineers in the District Office inspect the large scale ultra red industries every month and ordinary red category units once in three months. The medium scale red category units are inspected once in four months and the small scale red category units once in a year. Similarly the large and medium scale orange category units are inspected once in six months and the small

scale orange category units once in two years. The less polluting green category units are inspected once in two years.

By analysing samples of trade effluent collected from industries, the operation of treatment units are monitored. Samples are collected for analysis once a month from the large scale ultra red and ordinary red category industries. In respect of medium scale red category units, samples are collected once in three months and in case of small scale red category units, samples are collected once in three to six months. With regard to orange category units, samples are collected once in four months from large scale units, once in six months from medium and small scale units. Samples collected are analyzed to monitor whether the quality of treated effluent satisfies the standards prescribed by the Board. If the quality of the effluent exceeds the standards prescribed by the Board, the units are instructed to operate the effluent treatment plant effectively and in case of repeated non compliance, action is initiated as per the Water Act.

Industries are constantly insisted to continuously operate and maintain the pollution control measures. Industries are monitored for the continuous operation of pollution control measures and industries which have operated the pollution control devices to achieve board standards are issued with renewal of consent in time. Since the renewals are issued in time, the Board is encouraging the industries to comply with the conditions imposed in the renewal of consent.

### **3.2 HOT SPOT MONITORING**

The TNPCB has identified 10 Hot spot areas based on the location of hazardous waste nature of the industries, high level of polluting industries and cluster of highly polluting industries. In these areas TNPCB has posted one Assistant Environmental Engineer for each area for effective monitoring and to contact local public directly. The ten locations are as follows.

1. Manali
2. Cuddalore
3. Thoothukudi
4. Mettur
5. Ranipet

6. Sriperumpudur
7. IT Corridor at Perungudi
8. Perundurai
9. Gummidipoondi
10. Tiruppur

With regard to any pollution problem arising from the industries in these areas, the public can contact the locally available Board Engineers directly for taking corrective action.

#### **4.0 SECTOR SPECIFIC TECHNICAL REPORT ON ENVIRONMENT**

In order to develop a ready reckoner for various stakeholders' use, TNPCB is preparing sectorwise document report for 23 sectors. This report will be ready in 6 months. The report will contain complete details on the new cleaner technology options, latest developments in pollution control technologies at the national and international level, pollution discharge standards, etc, for each sector.

#### **5.0 COMMON EFFLUENT TREATMENT PLANTS**

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 individual effluent treatment plants. The Board assists the units in mobilization of financial resources and in the technical scrutiny of the proposals for the establishment of common effluent treatment plants.

#### **STATUS OF COMMON EFFLUENT TREATMENT PLANTS ( CETP )**

Common effluent treatment plants have been formulated in the following sectors:-

Tanneries	26 Schemes
Textile Bleaching & Dyeing Units	42 Schemes
Hotels & Lodges	1 Scheme

Out of this 69 CETPs formulated, 14 CETP schemes for tanneries, 18 CETP schemes for textile dyeing units and 1 CETP scheme for hotels and lodges are under operation. In addition, 12 CETP schemes for tanneries and 24 CETP schemes for textile dyeing units are under various stages of implementation. Government of Tamil Nadu has sanctioned Rs.28.29 crores as subsidy to industries for the common effluent treatment plants.

## **6.0 WASTE MANAGEMENT**

### **6.1 MANAGEMENT OF HAZARDOUS WASTE**

The TNPCB is taking effective steps in handling and management of hazardous chemicals and treatment and disposal of hazardous wastes in an environmentally safe manner. The Board has identified and listed out 2480 units generating hazardous wastes under the Hazardous Wastes (Management and Handling) Rules, 1989 as amended in 2000 and 2003. These units are being subject to strict supervision. A common hazardous waste treatment storage and disposal facility (TSDF) is established at SIPCOT industrial estate, Gummidipoondi and it has just commenced its operations. The federation of common effluent treatment plants, Tiruppur, has identified a site at Nallur village, Karupagoundarpalayam, Tiruppur taluk, Coimbatore district and the federation of CETPs & ETPs in Karur have identified a site at Mathagiri village, Krishnarayapuram taluk, Karur district for establishing a secure landfill facility for disposal of sludge generated from treatment of textile dyeing effluents. EIA studies and public hearing of the site has been completed. Work will be undertaken after obtaining local body clearance in the above two sites. To adopt recycling and reuse principles, cement industries are encouraged to utilize the sludge from CETPs as raw materials and a trial run is under process in Chettinad Cements at Puliur. Similarly, the cement industries such as A.C.C, Madukarai and Grasim Industries, are conducting trial runs for utilizing paint sludge, tar waste, ETP sludge as incineration material. The Board has also issued authorization in this regard. Moreover, action will be taken to establish a common hazardous waste treatment storage and disposal facility at SIPCOT, Perundurai.

## **6.2 MANAGEMENT OF BIOMEDICAL WASTE**

Government of India have notified the Biomedical Waste (Management and Handling) Rules 1998 as amended in 2000 under Environment (Protection) Act, 1986. As per the notification, biomedical wastes are to be segregated and disposed in an approved manner through a biomedical waste treatment and disposal facility. The Board has so far listed out 2479 private hospitals and 317 Government hospitals in the State for which biomedical waste treatment is necessary. Sites for 11 common facilities for bio-medical waste treatment and disposal have been identified for the private sector health care units in the State of which ten common facilities are under operation and the remaining one facility at Coimbatore is nearing completion. To evaluate the performance of common bio-medical waste treatment and disposal facility, a monitoring team with District Environmental Engineers and Assistant Engineers has been formed.

Tamil Nadu Government have issued G.O. (4D) No.10, Health & Family Welfare(EAP 1/1)Department, dt.28.09.2007 for implementation of health care waste management in 29 District Headquarters Hospitals and 241 Sub District Hospitals, 41 Tertiary Care Hospitals, 130 upgraded Primary Health Centres and 8 ESI Hospitals in Tamilnadu.

## **6.3 MANAGEMENT OF MUNICIPAL SOLID WASTE**

With increasing urbanization and rising levels of municipal solid wastes generation, there is an urgent need to evolve scientific approaches for the management of municipal solid wastes. The Board is advocating the concept of segregation of wastes at source, reduction, recycle and reuse of waste. The Board has issued NOC to 104 Municipalities and one Corporation for composting of municipal solid waste and setting up waste processing facility. NOCs issued for 63 Municipalities have been converted as authorization. In order to develop one municipality or one special village panchayat in each district as a model town in municipal solid waste management, a seed money of Rs.2 lakhs to one municipality or Rs.1 lakh to one special village panchayat in each district has been given by the Board through District Collectors. Also Rs.5 lakhs each have been given to Dharapuram, Coonoor & Namakkal Municipalities for implementing and carrying out municipal

solid waste management and to make it a model municipality. In the year 2007-2008 Board has granted a total sum of Rs one crore for 8 Municipalities for implementation of solid waste management. A monitoring team headed by an Environmental Engineer has been formed to assess the present status of implementation of Municipal Solid Waste Rules, 2000. The team will furnish a report on the present status along with its recommendations.

#### **6.4 MANAGEMENT OF PLASTIC WASTE**

The environmental problems arising due to the indiscriminate use and disposal of throwaway plastic items is well known. The use of throwaway plastics has increased among the public which ultimately mix with municipal solid waste and cause environmental nuisance due to the non-biodegradable nature of plastics. In order to control and regulate the above, Tamilnadu Pollution Control Board is implementing the Plastic ( Manufacture, Sale and Usage ) Rules. As per the above Rules, the minimum thickness of carry bags manufactured shall be more than 20 microns.

Further, Tamilnadu Pollution Control Board will prepare a report during this financial year which will contain the inventories of the plastic recycling units and to formulate the methods for effectively implementing the Plastic Manufacture, Sale and Usage Rules.

#### **6. 5 MANAGEMENT OF E- WASTE**

TNPCB has taken several initiatives in the management of E-waste generated in Tamilnadu. A committee consisting of professors of Anna University, representatives of NGOs, an expert from National Metallurgical Laboratory has been formed towards the management of E-Waste generated in Tamilnadu. A workshop on E-waste was held to create awareness among the stakeholders. TNPCB has issued consent to eight E-waste recyclers for segregation and recovery of PCB, IC, Iron Copper, Rubber, Glass etc., PCB/IC wastes are exported to foreign countries such as USA, Singapore and Malaysia to recover the heavy metal present in the said wastes. Other wastes are sent to authorised industries in the country for recycling them.

## **7.0 MONITORING OF AIR & WATER QUALITY**

### **7.1 AIR QUALITY MONITORING**

With the increased industrial activities and vehicular pollution in the vicinity of major cities, the quality of the ambient air is affected. As per the Air (Prevention and Control of Pollution) Act, 1981, the entire State of Tamilnadu has been declared as air pollution control area. The Board is monitoring the ambient air quality in Chennai (3 stations), Coimbatore (3 stations), Thoothukudi (3 stations), Madurai (3 stations) and Salem (1 station) under the National Air Quality Monitoring Programme (NAMP). This monitoring programme is conducted with the financial assistance of Central Pollution Control Board. The Board has established 5 ambient air quality monitoring stations in Chennai City and 5 in Thiruchirapalli. These stations are monitoring the ambient air quality in thickly populated residential, commercial zones of these Cities.

In order to enable the public to know the ambient air quality, an electronic display board is installed at the Corporate office, Guindy. The information on ambient air quality of Chennai city is displayed in the display board. Action is being taken to install similar display boards at Kathivakkam, Manali, Madurai, Coimbatore, Trichy and Thoothukudi at a cost of Rs. 30 lakhs. Emission of volatile organic compounds from industrial processes such as Petrochemicals, PVC, Pesticides, Pharmaceutical manufacturing etc., pollutes the environment. The Board has proposed to procure six VOC analyzers at a cost of Rs. 25 lakhs to monitor VOCs in these industrial areas. Further, CPCB has sanctioned a sum of Rs 1.75 crores to study the Chennai urban air quality status and its sources of pollution. This project is being carried out by IIT, Madras.

### **7.2 VEHICLE EMISSION MONITORING**

The TNPCB has established 3 vehicle emission monitoring stations at Alandur, Madhavaram and Ambattur and is testing the emissions from goods carriages. The vehicles which do not satisfy the emission norms are instructed to rectify the defects to bring the emissions within the standards. Certificates are issued only after this is fulfilled.

In order to control the pollution due to vehicular emission in Chennai city action was taken for conversion of autorickshaws from petrol fuel to LPG fuel. In order to encourage the autorickshaws for conversion to LPG fuel, TNPCB has decided to grant substantial amount as subsidy to the autorickshaws. Subsidy by Tamilnadu Pollution Control Board will be granted to autorickshaws which are switching over to LPG if only the conversion kits are approved by Transport Department officials / Regional Transport Officers.

A total number of 20286 applications for conversion to LPG were received from autorickshaw owners by the Transport Department. Further, out of 33731 existing petrol driven autorickshaws scheduled to be converted to LPG mode, 4941 vehicles have already been converted to LPG mode. In order to meet the demand for LPG in Chennai city, 26 LPG dispensing stations (ALDS), have been established.

### **7.3 WATER QUALITY MONITORING**

The basic objective of the Water (Prevention and Control of Pollution) Act, 1974 is to protect the quality of water resources. To ensure this objective, regular monitoring of water quality is required. The TNPCB is monitoring the Cauvery river water quality at 16 locations under Monitoring of Indian National Aquatic Resources (MINARS) programme and 4 locations under the Global Environmental Monitoring System (GEMS). Apart from this under MINARS programme, the rivers Thamiraparani, Palar and Vaigai and lakes such as Udhamandalam lake, Kodaikanal lake and Yercaud lake are being monitored. In addition, TNPC Board is undertaking River Stretch Pollution studies for Cauvery, Thamiraparani, Palar and Vaigai rivers in association with reputed universities and educational institutions.

#### **7.3.1 RIVER CAUVERY**

Due to the discharge of sewage from panchayats and municipalities into the river, Erode, Bhavanisagar and Bhavani stations are categorized as 'highly contaminated' and the stations such as Sirumugai, R.N.Pudur, Pallipalayam, Mohanur, Musiri ferry gate, Grand Anaicut, Trichy are categorized as moderately contaminated, Badrakaliamman Koil, Paramathi Velur, Musiri, Madathukulam and Karuthatankudi are categorized as slightly contaminated.

It is observed with satisfaction that the water quality of Cauvery river as judged from monitoring at the river monitoring stations has improved when compared to previous years.

### **7.3.2 THAMIRAPARANI RIVER**

TNPCB is monitoring the water quality of Thamiraparani river at following 7 locations Cheranmadevi, Kokkirakulam, Papanasam, Morapanadu, Ambasamudram, Tiruvidaimaruthur and Attur. Due to the discharge of sewage from panchayats and municipalities into the river, the water quality at Attur and Kokkirakulam is slightly contaminated. However, the overall water quality of the river conforms to the standards prescribed for outdoor bathing and for use as drinking water after water treatment.

### **7.3.3 PALAR RIVER**

The water samples are collected from the Vaniyambadi Municipal head works and monitored every month. The quality of water from the infiltration wells in the Palar river bed conforms to the standards prescribed for class 'B' which designates best use for out door bathing and can be used as a drinking water source after conventional treatment and disinfection.

### **7.3.4 VAIGAI RIVER**

The water quality of the Vaigai river is monitored by collecting samples once in six months from the collection well of Thirubuvanam head works. The water quality of the water from the infiltration wells in the Vaigai river bed meets the standards prescribed for drinking water without conventional treatment but after disinfection.

### **7.3.5 LAKES**

Under Monitoring of Indian National Aquatic Resources (MINARS) programme, Udhagamandalam, Kodaikanal and Yercaud lakes are monitored by collecting samples once in three months. Among the three lakes, Ooty lake is contaminated with sewage pollution and Kodaikanal lake is relatively clean. The water quality of the Kodaikanal lake conforms to the class 'B' which designates suitably for out door bathing. However, the water quality of Udhagamandalam and Yercaud lakes conforms to the standard 'C' class, which designates suitability for use only after conventional treatment and disinfection.

## **8.0. OTHER ACTIVITIES OF THE BOARD**

### **8.1 ENVIRONMENTAL TRAINING INSTITUTE**

Environmental Training Institute (ETI) is an organizational wing of TNPCB established in 1994. 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 2007-08, the Environmental Training Institute has conducted 37 training programmes, in which 946 participants have been trained.

### **8.2 ENVIRONMENTAL AWARENESS AND PUBLIC PARTICIPATION**

An Awareness Cell is established in the head office, Chennai to promote environmental awareness. To highlight important environmental issues such as the noise and air pollution caused due to bursting of crackers during festival, air pollution caused due to burning of old materials during Bhogi, pollution due to vehicular emission, protection of ozone layer, municipal solid waste management, road safety, rain water harvesting, various awareness campaigns, workshops, rallies are being conducted regularly. During 2007-08, this Cell has carried out 46 awareness activities.

### **8.3 ENVIRONMENTAL ATLAS**

The TNPCB in co-ordination with CPCB is preparing the Environmental Atlas. So far the Board has prepared Environmental Atlas for 10 districts viz., Thiruvallur, Kancheepuram, Coimbatore, Vellore, Thoothukudi, Cuddalore, Villupuram, Erode, Salem and Karur. Environmental Management Plan for Chennai city has been prepared. Presently, the project on preparation of District Environmental Atlas for the 3 districts viz., Madurai, Trichy and Namakkal is under progress.

### **8.4 GREEN COVER PROGRAMME**

As a measure to mitigate pollution, industries have been directed to develop 25% of the land area as a green belt with trees having a thick canopy cover. Accordingly, industries have taken action to plant adequate number of trees in and around the industrial premises. TNPC

Board has also sanctioned a sum of Rs 3.0 crores to the Forest Department for green belt development to prevent pollution and implement a clean development mechanism in six municipal corporations of TamilNadu. Subsequently 1.2 lakhs saplings have been planted in these Municipal Corporations and their surroundings.

## **8.5 CLEANER TECHNOLOGIES**

The 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, the industrial units in Tamilnadu 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.

## **8.6 LIBRARY**

The TNPC Board Library was established during the year 1989. At present, it has a collection of about 10,000 books and reports. The Library subscribes to 70 Journals (English & Tamil), 9 Newspapers and 13 Magazines related to environment. Membership is open to all those involved in environmental concerns.

## **8.7 NEWS LETTER**

TNPCB is publishing 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 to Government departments, District Collectors and all State Pollution Control Boards.

## **9.0 INSTITUTIONAL STRENGTHENING AND CAPACITY BUILDING**

In order to develop the infrastructure facilities of the Board, apart from the Corporate office own building at Guindy, TNPCB has constructed own buildings for district offices at Ambattur, Hosur, Madurai, Trichy, Tirunelveli, Vellore and Chennai. The office buildings at Maraimalainagar, Thoothukudi are under construction. For capacity building of the Engineers and Scientists, TNPCB has given training through IIT Madras and 90 Engineers and Scientists have been benefited through this training programme. The Board Engineers were dejected in view of long pending promotion issues. In order to redress the grievances, during the year 2007–08, 65 engineers were promoted. Moreover, in order to fill up the vacancies, it was decided to fill up the post of 25 Engineers. In view of this, there will be further improvement in the functioning of the Board.

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