



# **Environment and Forest Department**

**Policy Note 2011-2012**

**Demand No.15**

## **Tamil Nadu Pollution Control Board**

## **TAMIL NADU POLLUTION CONTROL BOARD**

### **Introduction**

The Tamil Nadu Pollution Control Board (TNPCB) was constituted by the Government of Tamil Nadu 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 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, and the rules made under the Environment (Protection) Act, 1986 which includes

- The Environment (Protection) Rules, 1986
- The Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 as amended in 2009 and 2010.
- The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 as amended in 1994 and 2000

- The Biomedical Waste (Management and Handling) Rules, 1998 as amended in 2000 and 2003.
- The Plastic Waste (Management and Handling) Rules, 2011.
- The Noise Pollution (Regulation and Control) Rules, 2000 as amended
- The Municipal Solid Wastes (Management and Handling) Rules, 2000
- The Battery (Management and Handling) Rules, 2001 as amended in 2010.

### **2. Constitution of TNPCB**

The Tamil Nadu Pollution Control Board was 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. The TNPCB has established its organization structure with a two-tier system consisting of head-office at Chennai and district offices with total staff strength of 708. There are 31 district offices. 28 are headed by District Environmental Engineers and 3 offices are under the control of Assistant Environmental Engineers. To assist the Board in monitoring the industries, 5 Advanced Environmental Laboratories, 9 District Environmental Laboratories are functioning. These laboratories carry out analysis on samples of sewage, trade effluents, emissions and hazardous wastes.

### **3. Monitoring of Industries and issue of consent**

With the increasing pace of industrialization in Tamil Nadu, the need for continuous monitoring of pollution due to industrial sources has become significant. Industries are required to provide pollution control measures to meet the standards prescribed by the Board. 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 effluent and emissions and to monitor their performance. They also investigate complaints of pollution received from the public, organizations and the Government. For effective monitoring, industries are categorized as Ultra Red, Red, Orange, and Green according to their pollution potential. Also the industries have been classified as Large, Medium and Small scale based on the gross fixed assets of the industry. Depending upon the category and size, industries are monitored periodically.

#### **3.1 Procedure for issue of consent**

Industry requires 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 and to operate the plant in air pollution control area of

entire Tamil Nadu under the Air (Prevention and Control of Pollution) Act, 1981. 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 compliances of conditions of 'Consent to Establish' issued.

As on 31.03.2011, TNPC Board has granted 13994 orders for Consent to Establish and 33055 orders for Consent to Operate under the Water (Prevention and Control of Pollution) Act, 1974. Similarly as on 31.03.2011, 13922 orders for Consent to Establish and 30199 orders for Consent to Operate was issued under Air (Prevention and Control of Pollution) Act, 1981.

### **3.2 Care Centre**

The Tamil Nadu Pollution Control Board enforces the Water (Prevention and Control

Pollution) Act, 1974, the Air (Prevention and Control Pollution) Act, 1981 and various Rules under the Environment (Protection) Act, 1986.

Over the years, obtaining consent orders/ authorization by industries was found subjected to delays. In many cases, incomplete applications or applications with vague and incomplete information received without the required documents and clarifications, etc. which had to be returned thus causing delays. The District Offices of the Tamil Nadu Pollution Control Board did guide the industries / local bodies in filling the application. However, sufficient time was not given to make the applicant industries thorough with the application process. The Tamil Nadu Pollution Control Board, therefore, considered that there is a need to have a dedicated team to guide the industries in filling up the application and also to simplify and standardize the application submission process as well as to expedite the issue of consent orders.

The Tamil Nadu Pollution Control Board has, therefore, established a “CARE Centre” as an industry friendly initiative to help industries to file applications painlessly and to expedite the process of issue of consent / authorization at a single point. All the consent fee payments can also be made at the Care Centre. In the first phase, this Centre caters to the needs of industries / local bodies located in Chennai, Tiruvallur and Kancheepuram Districts, comprising industries in Chennai, Tambaram, Ambattur, Kancheepuram, Sriperumpudur, Tiruvallur areas. The Care Centre has simplified and standardized the receipt of applications. It effectively monitors the application from the time of its receipt to the issue of the consent order. 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. Three officers have been specifically posted to the Care Centre for this purpose.

The Care Centre has been instructed to issue of consent within the time limits specified below:

<b>Sl. No.</b>	<b>Category of industries</b>	<b>Time limit for issue of consent / rejection of application etc.</b>
<b>1</b>	<b>Red</b>	<b>30 days</b>
<b>2</b>	<b>Orange</b>	<b>15 days</b>
<b>3</b>	<b>Green</b>	<b>10 days</b>

All applicant entrepreneurs can know the status of their applications online by accessing the TNPCB website. In addition, any clarifications pertaining to filling up of application or ascertaining the status of their application, issue of consent / authorization, can also be obtained over telephone by contacting the Care Centre. Senior officers of the Board regularly review the issue of orders by the Care Centre.

### **3.3 Inspection of Industrial Units 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 operations 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 effluents satisfy 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 (Prevention and Control of Pollution) 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.

#### 4. 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.

##### 4.1 Status of common Effluent Treatment Plants

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

Tanneries	15 Schemes
Textile Bleaching & Dyeing Units	31 Schemes
Hotels & Lodges	1 Scheme
<b>Total</b>	<b>47</b>

Out of 15 CETP schemes in Tannery sector, 7 CETPS have completed the Reverse Osmosis (RO) and Reject Management System (RMS) which are under trial run and for another 6 CETPs works for RO Plant are under progress. The remaining 2 CETPs have a proposal to mix the treated tannery effluent from their CETP with one third of the treated sewage from the proposed Sewage treatment Plant (STP) of their Municipalities, to meet the Total Dissolved Salts (TDS) standards. Further among 31 CETPs in Textile Sector, 18 CETPs have completed the construction of Zero Liquid Discharge (ZLD) system consisting of RO with RMS and commissioned the ZLD system and 2 CETPs are implementing the ZLD system and are at various stages of implementation. The remaining

11 CETPs have installed conventional Treatment system and not yet installed the ZLD system. 1 CETP scheme for hotels and lodges is in operation.

## **5. Waste Management**

### **5.1 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 2855 units generating hazardous wastes under the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 as on 31.03.2011. These units are being subjected to strict supervision. A common hazardous waste treatment storage and disposal facility (TSDF) is established at SIPCOT Industrial Estate, Gummidipoondi and it has commenced its operations. The federation of common effluent treatment plants, Tiruppur, has

identified a site at Karupagoundarpalayam, Nallur village, Tiruppur taluk, Tiruppur District and the federation of CETPs and ETPs in Karur have identified a site at Mathagiri Village, Krishnarayapuram Taluk, Karur District to establish a secure landfill facility for disposal of sludge generated from treatment of textile dyeing effluents. Consent to establish has been issued by the Board to these two facilities. Work will be undertaken in Karur District after obtaining local body clearance in the above site and work is to be started at Tiruppur District site. To adopt recycling and reuse principles, cement industries are encouraged to utilize the sludge from CETPs as raw materials and a trial run has also been taken in Chettinad Cements at Puliur. Similarly, the cement industries such as A.C.C, Madukarai and Grasim Industries, have taken trial runs for utilizing paint sludge, Tar waste, Petroleum refinery sludge as incineration material. Moreover, action is being taken to establish a common hazardous waste treatment storage and disposal facility at SIPCOT,

Perundurai, Erode District and SIPCOT has been addressed to allocate a suitable site in Sriperumpudur, Kancheepuram District.

## **5.2 Management of Biomedical waste**

The Biomedical Waste (Management & Handling) Rules, 1998 applies 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 rule authorization of SPCB is required for handling of bio-medical waste. It is the duty of the occupier of an institution generating biomedical waste to take all steps to ensure that the biomedical waste is handled without any adverse effect to human health and environment. Biomedical waste shall be treated and disposed in accordance with schedule I and in compliance with the standards prescribed in schedule V of the said rules.

Board has inventoried 3283 Private hospitals, 308 Government hospitals in the State.

All these hospitals have made agreement with the Common Biomedical Waste Treatment Facilities (CBMWTF) for the disposal of the biomedical waste. The CBMWTF consists of autoclave, shredder, incinerator and secured land fill facilities. In Tamil Nadu, 11 CBMWTF are in operation. They are at Thenmelpakkam village and Kinnar village in Kancheepuram district, Kandipedu village in Vellore district, two facilities at Orattukuppai village in Coimbatore district, Sengipatti village in Thanjavur district, Muthuvayal village in Ramanathapuram district, Coonoor in the Nilgiris district, Pappankulam village in Tirunelveli district, Thangayur village in Salem district and Undurmikidakulam village in Virudhunagar district. TNPCB issued authorization to the 11 common facilities and 3253 health care facilities in the State.

In 2010, United Nation Development Programme (UNDP) has selected Tamil Nadu for their funding project on “Demonstrating and promoting best techniques and practices for

reducing health care waste to avoid environmental releases of dioxins and mercury". In June 2010, TNPCB signed MOU with Ministry of Environment and Forests (MoEF), Tamil Nadu Health System Project (TNHSP) and CBMWTF. Under this scheme, UNDP provides fund of 2,58,000 US dollars in a span of three years. For this project, five Government hospitals, one Chennai Corporation hospital, nine private hospitals and one common bio medical waste management treatment facility have been selected to make them as model to other hospitals in biomedical waste management. Under this scheme, IGNOU also provides training to health care professionals and 6 month certificate programme on health care waste management. The scheme is under implementation.

### **5.3 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 No Objection Certificate (NOC) to 122 Municipalities and 7 Corporation for composting of municipal solid waste and setting up waste processing facility. NOCs issued for 89 Municipalities have been converted as authorization.

### **5.4 Management of Plastic waste**

The use of non-biodegradable material especially plastics has been increasing rapidly in the State of Tamil Nadu in recent years. After use, these non-biodegradable materials are thrown in open places, roads, canals, lakes, water bodies, besides finding their way in to the municipal solid waste and landfills. Plastic waste pollutes the land, water and air.

Tamil Nadu Pollution Control Board has identified 1941 industries manufacturing plastic

products like carry bags, plastic sheets, plastic ropes, PVC pipes etc., Out of these 1941 industries, around 150 industries are manufacturing the plastic products from recycled plastics. In Tamil Nadu, about 10,400 tons of municipal solid waste is generated every day. It has been estimated that around 9% (936 tons) of the municipal solid waste by weight contains plastics. Out of 936 tons of plastics, 749 tons are recycled and the balance of 187 tons non-recyclable plastics are dumped on land or burnt causing environmental pollution.

The Tamil Nadu Pollution Control Board has been taking many initiatives to deal with the plastic wastes. TNPCB has instructed all the local bodies to pass resolution and ban the use of use and throw carry bags, cups, tumblers, sheets, plastic plates etc.,. In continuation to the above, many awareness programmes have been conducted by TNPCB on the ill effects of plastics and the need to use alternatives to the use and throw plastic items to the Public/Government body. All the marriage halls,

hotels, educational institutions, Government offices in Tamil Nadu were instructed not to use the use and throw plastic items.

The Ministry of Environment and Forests, Government of India vide notification dated 4.2.2011 notified '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;

### **5.5 Co-Incineration of Plastic waste in Cement kilns**

Tamil Nadu Pollution Control Board is taking various initiatives to safeguard the environment from degradation due to the hazardous wastes and plastic wastes. As part of this endeavour, the Board is directing the cement industries to co-incinerate the plastic waste as an alternate fuel in the cement kiln. The cement industry at Tirunelveli

is utilizing the plastic wastes in the cement kiln regularly. The Board is insisting the other cement industries to co-incinerate the plastic waste in their cement kiln.

### **5.6 Management of E-Waste**

TNPCB has been taking several initiatives in the management of E-waste generated in Tamil Nadu. 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 Tamil Nadu. A workshop on E-waste was held to create awareness among the stakeholders. TNPCB has issued consent to 10 E-waste recyclers for segregation and recovery of Printed Circuit Board (PCB), Integrated Circuit (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 authorized industries in the country for recycling them.

## **6. Monitoring of Air & Water Quality**

### **6.1 Air Quality Monitoring**

With the increased industrial activities and vehicular pollution in the vicinity of major cities, the quality of ambient air is affected. As per the Air (Prevention and Control of Pollution) Act, 1981, the entire State of Tamil Nadu 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. In addition to that, the Board has established 5 Ambient Air Quality monitoring stations in Chennai City and 5 in Thiruchirappalli. These stations are monitoring the ambient air quality in residential, industrial, commercial and mixed zones of these Cities. Besides these, TNPCB is also monitoring the Air Quality level in

major cities / towns in Tamil Nadu during the festival seasons like Deepavali and Bhogi. The Ministry of Environment and Forests, Government of India has revised the air quality standards since 18.9.2009. In order to meet the requirement of monitoring capabilities due to the revised standards, Board has proposed to upgrade all its 13 Air Monitoring Laboratories by providing PM<sub>10</sub> & PM<sub>2.5</sub> samplers.

### **6.2 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, 62 industries have been connected to the CARE AIR centre and the emissions are monitored continuously.

### **6.3 Vehicle emission monitoring**

The Government of Tamil Nadu made necessary amendments in the Tamil Nadu Motor Vehicle Rules, 1989 to get Pollution Under Control Certificate (PUC) for Goods Vehicles in Chennai City from authorised private testing centres also like other vehicles. Prior to that, testing and issuing of PUC for Goods Vehicle in Chennai City was entrusted only to TNPCB. Accordingly, 75 authorised private centres in Chennai City are also testing and issuing PUC for Goods vehicles. In addition to that, TNPCB is also testing and issuing PUC for Goods Vehicles in the testing centre located at Ambattur.

## **6.4 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 and its tributaries river water quality at 29 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 Udhgamandalam lake, Kodaikanal lake, Yercaud lake, Veeranam lake, Poondi lake, Red hills, Porur and Pulicate lake are being monitored.

### **6.4.1 River Cauvery and its Tributaries**

Samples are collected from 33 stations and analysed. In general, the water quality is categorized for the designated best use of outdoor bathing, drinking water source with conventional

treatment followed by disinfection and also for fish culture and wild life propagation.

### **6.4.2 Thamiraparani River**

Samples are collected from 12 stations and analysed. The water quality of the river Thamirabarani is categorized for the designated best use of out door bathing, drinking water source with conventional treatment followed by disinfection.

### **6.4.3 Palar River**

The water quality of the Palar river is being monitored by collecting the samples from the collection well of Vaniyambadi Municipal head works. The water quality of the infiltration well is categorized for the designated best use of drinking water source with conventional treatment followed by disinfection.

#### **6.4.4 Vaigai River**

The water quality of the Vaigai river is being monitored by collecting the samples from the collection well of Thirubuvanam head works. The water quality of the infiltration well is categorized for the designated best use of outdoor bathing, drinking water source with conventional treatment followed by disinfection.

#### **6.4.5 Lakes**

The water quality of the Udthagamandalam, Kodaikanal, Yercaud, Veeranam, Poondi, Redhills, Pulicate and Porur lakes are being monitored and are categorized for the designated best use of drinking water with conventional treatment followed by disinfection and fish culture and wild life propagation.

#### **6.5 Monitoring of Chennai waterways**

Water ways of Adyar, Cooum, Buckingham Canal and Otteri Nullah are being monitored at 34 river stations and 24 industrial outlets.

### **7. Other activities of the Board**

#### **7.1 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 Industries and non-governmental organizations. During the year 2010-11, the Environmental Training Institute conducted 14 training programmes, in which 757 participants have been trained.

## **7.2 Environmental Awareness and Public Participation**

As a part of the awareness campaign to create awareness among the public about the health effects caused due to air and noise pollution by bursting of crackers continuously, special monitoring programmes were launched by TNPCB for 2010-2011, During Deepavali, noise level and Ambient Air Quality are monitored During Bhogi festival Ambient Air Quality is monitored. The survey is carried out in the important cities of Tamil Nadu viz. Chennai, Trichy, Coimbatore, Madurai, Tirunelveli, Vellore, Salem, Hosur, Tiruppur and Cuddalore. A special ambient air quality survey on pre-bhogi, bhogi and post-bhogi days is carried out in Chennai at nine places viz. Anna Nagar, Besant Nagar, Kilpauk, Royapuram, Thiyagaraya Nagar, Vallalar Nagar, Vyasarpadi, Triplicane and Mandaveli.

As a part of awareness programme the mobile exhibition vehicle was conducted in the schools of Tamil Nadu for creating awareness

among the students and the public. In the Anna FM, environmental programmes were broadcast. Apart from the above, TNPCB has conducted awareness programmes on various environmental issues for the public, school students, other institutions etc. During 2010-2011 the Board has carried out 160 awareness programmes.

## **7.3 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 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.

#### **7.4 Library**

The TNPC Board 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 both in English and Tamil, 9 Newspapers and 16 Magazines related to environment. Membership is open to all those involved in environmental concerns.

#### **7.5 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 the newsletters are sent to other State Pollution Control Boards in India.

**T.K.M. CHINNAYYA**  
**MINISTER FOR ENVIRONMENT**