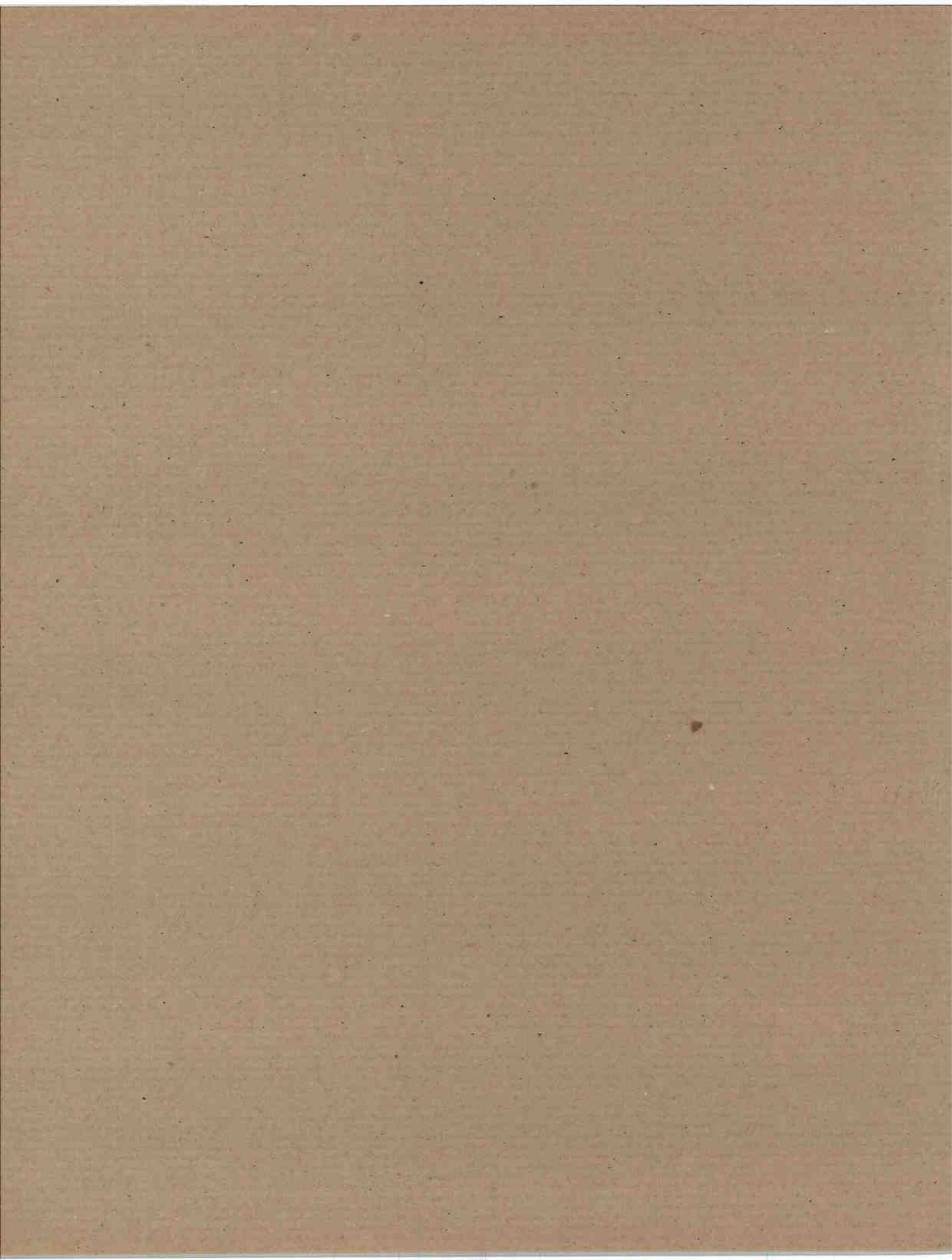




TAMILNADU POLLUTION CONTROL BOARD

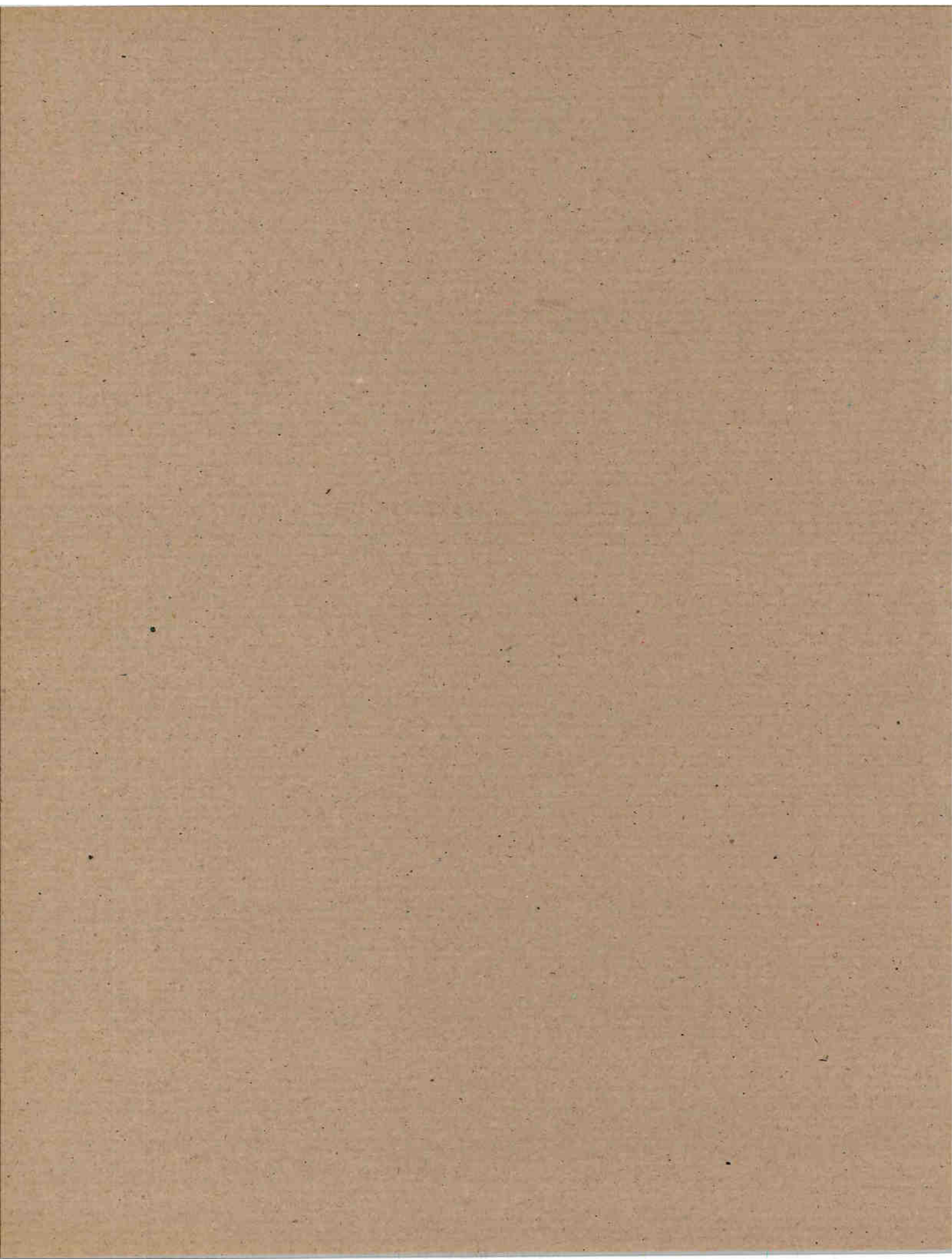


ANNUAL REPORT
2000 - 2001



INDEX

CHAPTER I	01
CHAPTER II	03
CHAPTER III	04
CHAPTER IV	13
CHAPTER V	24
CHAPTER VI	24
CHAPTER VII	25
CHAPTER VIII	27
CHAPTER IX	28
CHAPTER X	29
CHAPTER XI	30
FINANCE AND ACCOUNTS OF THE BOARD (PROVISIONAL FIGURES SUBJECT TO AUDIT)	35
ANNEXURES.....	36
ANNUAL ACCOUNTS	67



CHAPTER - I

1.1. INTRODUCTION

The Water (Prevention and Control of Pollution) Act, 1974 (Central Act 6 of 1974) was adopted in Tamilnadu in August 1981. The Government of Tamilnadu constituted the Tamilnadu Prevention and Control of Water Pollution Board on 27.02.82 under the Water (Prevention and Control of Pollution) Act, 1974. This was later renamed as the Tamilnadu Pollution Control Board (TNPCB). The Air (Prevention and Control of Pollution) Act, 1981 came into force on 16.05.1981. The TNPCB also enforces the provisions of the Air (Prevention and Control of Pollution) Act, 1981 and the rules made under Environment (Protection) Act, 1986 which includes:

- The Environment (Protection) Rules, 1986
- The Hazardous Waste (Management and Handling) Rules, 1989 as amended in 2000
- 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
- The Recycled Plastics Manufactures and Usage Rules, 1999
- The Noise Pollution (Regulation and Control) Rules, 2000
- The Municipal Solid Waste (Management and Handling) Rules, 2000.
- The Battery (Management and Handling) Rules, 2001

The main functions of the TNPCB are as follows:

- ▶▶ To plan a comprehensive programme for the prevention, control and abatement of water and air pollution.
 - ▶▶ To encourage, conduct and participate in investigations and research relating to problems of water, land and air pollution and its prevention, control and abatement thereof.
 - ▶▶ To inspect sewage and trade effluent treatment plants for their effectiveness and review plans, specifications for corrective measures.
 - ▶▶ To lay down, modify or annul effluent standards for the sewage/trade effluents and for the emissions of air pollutants into the atmosphere from the industrial plants and automobiles and for the discharge of any air pollutant into the atmosphere from any other source.
 - ▶▶ To evolve best economically viable treatment technology for sewage and trade effluents.
 - ▶▶ To evolve efficient methods of disposal of sewage and trade effluent on land.
 - ▶▶ To monitor the generation, transportation, treatment, storage and disposal of hazardous wastes.
 - ▶▶ To identify and monitor the isolated storage of hazardous chemicals.
 - ▶▶ To collect samples of sewage/trade effluents and emissions of air pollutants and to analyze the same for specific parameters.
 - ▶▶ To collaborate with Central Pollution Control Board in organizing the training of persons engaged or to be engaged in programmes relating to prevention, control or abatement of water/air pollution and to organise mass education programme relating thereto.
 - ▶▶ To perform such other functions as may be prescribed by the State Government or Central Pollution Control Board.

CHAPTER - I I

2.1 CONSTITUTION OF TNPCB

The TNPCB is constituted by the State Government. It comprises of a Chairperson, 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 constitution of the TNPCB may be seen in Annexure - 1.

2.2 ORGANISATIONAL SET UP

The TNPCB has established its organization structure with a two-tier system consisting of a Chennai head-office and district offices with a total strength of 745. There are 25 district offices- of which 5 are headed by Joint Chief Environmental Engineers, 15 district offices headed by District Environmental Engineers and 5 under the control of Assistant Environmental Engineers. The location of the district offices are shown in Annexure - II.

The TNPCB has delegated powers to the Chairperson to grant consent to all "Green Site" applications received from new industries pertaining to red category industries. The Board has delegated powers to Joint Chief Environmental Engineers, District Environmental Engineers and Assistant Environmental Engineers in the district offices to issue consent to establish / consent to operate and to renew consent to all new / existing orange and green category industries.

To assist the Board in monitoring the industries, 3 Advanced Environmental Laboratories, 10 District Environmental Laboratories and 2 Mobile Environmental Laboratories are functioning. These laboratories carry out analyses on samples of sewage / trade effluents and on emissions and hazardous wastes.

The organization chart of the Board, staff strength and year-wise growth of the Board are furnished in Annexures III , IV and V.

CHAPTER - I I I

3.1 ENVIRONMENTAL LEGISLATIONS

The various environmental legislations with which the TNPCB is concerned are given below. Some legislations are implemented directly by the Board and some by other departments of the Government.

The Water (Prevention and Control of Pollution) Act, 1974 as amended in 1978 & 1988.

The Tamilnadu Water (Prevention and Control of Pollution) Rules, 1983.

The Water (Prevention and Control of Pollution) Cess Act, 1977, as amended in 1991.

The Water (Prevention and Control of Pollution) Cess Rules, 1978 as amended in 1992.

The Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987.

The Tamilnadu Air (Prevention and Control of Pollution) Rules, 1983.

The Environment (Protection) Act, 1986.

The Environment (Protection) Rules, 1986 and its subsequent amendments.

The Hazardous Wastes (Management and Handling) Rules, 1989 as amended in 2000.

Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 as amended in 1994 & 2000.

The Manufacture, Use, Import, Export and Storage of Hazardous Micro organisms / genetically engineered organisms or Cell Rules, 1989.

The Public Liability Insurance Act, 1991 as amended in 1992.

The Public Liability Insurance Rules, 1991.

Coastal Regulation Zone Notification, 1991 as amended in 1994, 1997 & 2001.

The Environment Impact Assessment Notification, 1994 as amended in 1997, 2000 & 2001.

The National Environment Tribunal Act, 1995.

The National Environment Appellate Authority Act, 1997.

The National Environment Appellate Authority (Appeal) Rules, 1997.

The Bio Medical Waste (Management and Handling) Rules, 1998 as amended in 2000.

Fly ash Utilization Notification, 1999.

The Recycled Plastics Manufacture and Usage Rules, 1999.

The Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1999

Use of fly ash from Thermal power plants Notification, 1999.

The Municipal Solid Wastes (Management and Handling) Rules, 2000.

Noise Pollution (Regulation and Control) Rules, 2000.

Ozone Depleting Substances (Regulation and Control) Rules, 2000.

The Battery (Management and Handling) Rules, 2001.

3.2 MONITORING OF INDUSTRIES

With the increasing pace of industrialization in Tamilnadu, the need for continuous monitoring of pollution due to industrial sources has become significant. The field officers of the Board inspect industries under their jurisdiction periodically to assess the adequacy of the treatment 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. Depending upon the category viz, Red (highly polluting), Orange (medium polluting) and Green (less polluting) industries are monitored periodically.

3.3 PROCEDURE FOR ISSUE OF CONSENT

Industries have to obtain the consent of the Board for discharge of sewage / trade effluent into any stream or well or into any sewer or land under the Water (Prevention and Control of Pollution) Act, 1974 and to operate the plant in an air pollution control area under the Air (Prevention and Control of Pollution) Act, 1981. The TNPCB issues consent to industries in two stages. 'Consent to Establish' is issued depending upon the suitability of the site before the industry takes up construction activity. 'Consent to Operate' is issued after installation of suitable effluent treatment plants and air pollution control measures.

3.4 WATER POLLUTION CONTROL

The main purpose of the Water (Prevention and Control of Pollution) Act, 1974, as amended in 1988, is to prevent and control water pollution and to preserve or maintain or restore the quality of water. As per the provisions of the act, the local bodies and industries which discharge sewage / trade effluent are required to apply and obtain the consent from the Board. All industries generating trade effluent have to provide effluent treatment plants, to treat trade effluent, to satisfy the standards prescribed by the Board. Industries are constantly monitored regarding the functioning of their effluent treatment plants and samples of treated sewage / trade effluents are collected regularly to assess the quality of effluent discharged and also to assess the efficiency of the effluent treatment plants provided. During the year 2000-2001, 17,646 samples of sewage/ trade effluent from the industries were collected and analysed. The Board has issued 425 'Consent to Establish' orders and 924 'Consent to Operate' orders under the Water (Prevention and Control of Pollution) Act, 1974, during the year 2000-2001. Details of year-wise issue of consent is shown in Annexure - VI.



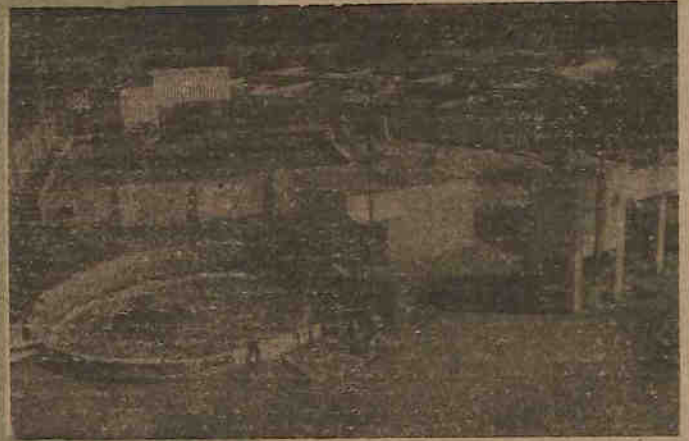
3.5 AIR POLLUTION CONTROL

The main purpose of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987, is to prevent and control air pollution and preserve the air quality. As per the provisions of this Act, the entire State of Tamilnadu has been declared as an Air Pollution Control Area. Industries which let out process emissions are regularly monitored through inspections of the air pollution control measures provided by the units. Ambient Air Quality surveys / Stack Emission surveys are conducted in and around the industries regularly to assess the quality of the emissions. On the basis of these reports, the industries are instructed to carry out necessary corrective measures. During the year 2000-2001, Ambient Air Quality Surveys have been conducted in 466 industries. The Board has issued 418 'Consent to Establish' orders and 890 'Consent to Operate' orders under the Air (Prevention and Control of Pollution) Act, 1981, during the year 2000 - 2001. Details of year-wise issue of consent are shown in Annexure - VII.



3.6. COMMON EFFLUENT TREATMENT PLANTS

The TNPCB plays an important role in the establishment of Common Effluent Treatment Plants (CETPs) for clusters of small polluting industries in various parts of the state. Small scale industries often quote financial difficulties, lack of space and other reasons that prevent them from putting up required effluent treatment plants. Since a large number of these units are in clusters and also in the Small Scale Sector, the Board has launched a massive programme to motivate these industries to set up Common Effluent Treatment Plants. The Board assists the units in mobilisation of financial resources, acquisition of land and in the scrutiny of the technical proposals for these plants.



Arial view of common effluent treatment plant: M/s TELCO VANITEC, Udayendiram sector, Vaniyambadi.

3.6.1. FINANCIAL PATTERN OF CETP SCHEMES

a. Subsidy by Central Government	25% of the project cost.
b. Subsidy by State Government	25% of the project cost.
c. Beneficiary's Contributions	20% of the project cost by way of share capital collections.
d. Financial Institution Loans	Balance by way of loans from financial institutions such as IDBI. (30% of project cost)

3.6.2. STATUS OF COMMON EFFLUENT TREATMENT PLANT.

Common Effluent Treatment Plants are formulated in the following sectors:

Tanneries	23
Textile Bleaching & Dyeing Units	23
Hotels & Lodges	1
Common facility for Hospital Wastes	1

Out of 48 CETPs formulated, 32 CETPs are under operation and the remaining are under various stages of implementation. So far 12 CETP schemes for tanneries, 18 CETP schemes for textile dyeing units, 1 CETP scheme for hotels and lodges and 1 common treatment facility for hospitals are under operation. 11 CETP Schemes for tanneries and 1 CETP scheme for textile dyeing units are under various stages of implementation. 4 CETP schemes for textile dyeing units are under initial stages of implementation. Besides this, 4 new schemes for textile dyeing units have been proposed. During the year 2000-2001, one CETP at Karur has been commissioned. Details of Common Effluent Treatment Plant Schemes and the funds so far received for the schemes from the State and Central Government are furnished in the Annexures VIII and IX.

3.7. MANAGEMENT OF HAZARDOUS WASTES AND CHEMICALS

The Government of India, Ministry of Environment and Forest have notified the following rules under the Environment (Protection) Act, 1986 for the management of hazardous substances.

3.7.1. Hazardous Wastes (Management & Handling) Rules, 1989 as amended in 2000.

This rule apply to all the generators or receivers of hazardous wastes. The objective of the rule is to control the generation, collection, treatment, transportation and disposal of hazardous wastes. Authorization is required for handling hazardous waste. So far 1170 applications in Form I, seeking the authorisation for handling hazardous wastes, have been received, for which 1158 authorisations have been issued.

The TNPCB is taking effective steps for the safe disposal of hazardous wastes. The Board has identified seven sites for the establishment of treatment and disposal facilities for hazardous wastes.

An Environmental Impact and Risk Assessment Study has been conducted for 2 sites at Mannellure, Thiruvallur district and Siruseri, Kancheepuram district by National Environmental Engineering Research Institute (NEERI), Nagpur. The identified site at Siruseri has been acquired by SIPCOT for establishment of the Golden Jubilee Bio-tech park for women society. An alternate site has been identified at Melakottaiyur village, Chengalpattu taluk, Kancheepuram district to develop a secured landfill.



'Enter upon Permission' has been obtained for the sites identified at Sevur village, Gudiyatham taluk, Vellore district, Thurppuganapalli village, Hosur taluk, Dharmapuri district and at Kollakanatham village, Kunnam taluk, Perambalur district for conducting EIA studies.

3.7.2. Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989.

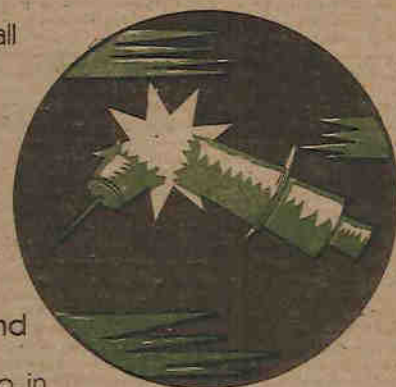
These rules are applicable to industrial activities involving usage of hazardous chemicals or isolated storage of chemicals. The main objective is to prevent the occurrence of major accidents during industrial activities. As per the provisions of these rules, occupiers of 'Isolated Storages' have to notify the sites to the Board either in schedule 7 or prepare a safety report as per schedule 8, onsite / offsite emergency plan as per schedule 10 and 11 based on the quantity of chemicals stored. So far 26 Isolated storages of hazardous chemicals have been identified and these units have furnished onsite emergency plans.

Import of hazardous chemicals is also covered under these rules. Units importing hazardous chemicals as listed in schedule 1 of these rules should ensure that all the details of physical and chemical properties of hazardous chemicals are maintained in the form of material safety data sheets.

These rules empower the Board to request the Port Trust authorities to take appropriate steps regarding safe handling and storage of hazardous chemicals.

3.8 MANAGEMENT OF BIO-MEDICAL WASTES

The Biomedical waste (Management & Handling) Rules, 1998 applies to all persons who generate, collect, receive, store, transport, treat, dispose or handle bio-medical waste in any form. As per these rules, authorisation is required for handling bio-medical wastes and the Chairperson of the TNPCB has been nominated as the prescribed authority for issuance of authorization. So far the Board has identified 1405 private hospitals, 242 government hospitals and 75 clinical labs in the state. All the health care facilities have been directed to go in for common treatment facilities having autoclaves, hydroclaves or microwaving to treat the bio-medical wastes. The Board is discouraging the installation of individual incinerators since hospitals are located in crowded areas. The Board has given instruction that incineration of bio-medical wastes should not be resorted to, except for body parts and human tissues in view of dioxin emission and complaints.



3.9. MANAGEMENT OF MUNICIPAL SOLID WASTES

Commissioners of corporation and Executive officers of town panchayats have been addressed to comply with the implementation schedule prescribed in schedule I of the Municipal Solid Waste (Management and Handling) Rules 2000. A one day workshop- 'Towards Zero Garbage' was conducted for all the municipal



The municipal solid waste composting plant at Tiruppur.

commissioners of corporation and municipalities to highlight the salient features of these rules. Municipal authorities have been asked to segregate the wastes as wet compostable waste, recyclable waste, domestic hazardous waste, inert waste and construction debris. The segregation of municipal solid waste at source is being carried out in Tiruppur. The wet compostable waste is being composted in a facility set up by a private operator.

Municipal solid waste management studies have been taken up for towns of tourist importance and pilgrim centres. M/sDHV Consultant, New Delhi and M/s Kampsax India Ltd., Chennai have been asked to conduct the study. A study on solid waste management for the local bodies of Udthagamandalam, Kodaikkanal, Palani, Thiruchendur, Kanyakumari, Rameswaram, Mamalapuram and Kuttralam in Tamilnadu has been taken up. The cost of the study is Rs. 23.60 lakhs. The consultants have furnished the initial report and the detailed study is in progress. These reports will help the local bodies implement the solid waste management projects.

3.10 MANAGEMENT OF PLASTIC WASTES

Government of India, Ministry of Environment and Forest notified the Recycled Plastics Manufacture and Usage Rules, 1999 under the Environment (Protection) Act, 1986 to manage the environmental problems caused by plastics. All District collectors, local bodies, Commissioner of Police, Special Commissioner and Commissioner of civil supplies have been addressed to ensure compliance with the provision of the said rules. The Board has identified 463 plastic units. These units use either virgin plastic or recycled plastics.



A mobile exhibition on alternatives to plastics was exhibited in various educational institutions and public places like parks, beaches etc. to create awareness. Public awareness rallies, highlighting the ill effects of use and disposal of plastic items were also conducted.

CHAPTER - I V

MONITORING NETWORK FOR QUALITY OF AIR AND WATER

4.1 AIR QUALITY MONITORING

With the increased industrial and commercial activities in the vicinity of major cities, the quality of the ambient air is being affected by emissions from the industries and from the ever increasing vehicular population. As per the provision of Air (Prevention and Control of pollution) Act, 1981, the entire state of Tamilnadu has been declared as an air pollution control area.

4.1.1 Ambient Air Quality Monitoring Programme in Chennai City

The TNPCB is operating eight ambient air quality monitoring stations in Chennai under two monitoring programmes:

- (i) National Ambient Air Quality Monitoring (NAAQM) Programme.
- (ii) Chennai Ambient Air Quality Monitoring (CAAQM) Programme.

Under the NAAQM programme, three ambient air quality monitoring stations are functioning on a 24 hour basis, twice a week. The samples collected from NAAQM stations are analysed for Suspended Particulate Matter (SPM) and gaseous pollutants like sulphur dioxide (SO_2) and oxides of nitrogen (NO_x).

Under the CAAQM programme, the TNPCB is operating five monitoring stations on an 8 hour basis, on all working days. The pollutants measured in the CAAQM stations are sulphur dioxide (SO_2), oxides of nitrogen (NO_x), Respirable Dust Particles (RDP) i.e. particulate matter less than 10 microns (PM_{-10}), suspended particulate matter (SPM) and lead (Pb) in all stations.

The eight ambient air quality monitoring stations in Chennai are:

(i)	Kathivakkam (NAAQM)	-	Industrial Area
(ii)	Manali (NAAQM)	-	Industrial Area
(iii)	Thiruvottriyur (NAAQM)	-	Commercial & Industrial Mixed Area
(iv)	Kilpauk (CAAQM)	-	Commercial (traffic intersection)
(v)	T.Nagar (CAAQM)	-	Commercial (traffic intersection)
(vi)	Vallalar Nagar (CAAQM)	-	Commercial (traffic intersection)
(vi)	Anna Nagar (CAAQM)	-	Residential Area
(viii)	Adyar (CAAQM)	-	Residential Area

The National Air Quality Standards prescribed are given below:

AREA	Annual average concentrations of pollutants in $\mu\text{g}/\text{mg}^{\text{a}}$				
	SO ₂	NO _x	RDP	SPM	Pb
Industrial	80	80	120	360	1
Residential, rural & mixed areas including traffic intersections.	60	60	60	140	0.75

The ambient air quality collected from the above mentioned air quality monitoring stations indicates that all the parameters such as sulphur dioxide, oxides of nitrogen and suspended particulate matter are found to be well controlled in industrial areas due to effective monitoring of industrial source emissions by the TNPCB. The average values of pollutants recorded under the NAAQM programme during the year 2000 - 2001 are given in Annexure X-A.

In general, the ambient air pollutants such as sulphur dioxide, oxides of nitrogen, suspended particulate matter, respirable dust particles and lead are well within the standards in Chennai city limit- except at traffic intersections where SPM and RDP levels exceeded the permissible limit mainly due to heavy vehicular traffic and pedestrians movement. The average values of pollutants recorded under the CAAQM programme during the year 2000 - 2001 are given in Annexure X-B.

4.1.2 Air Quality in Thoothukudi, Coimbatore, Salem and Madurai

At Thoothukudi, Ambient air quality stations are functioning from the year 1988 in the following locations

- (a) Regional Testing Laboratory - Industrial area
- (b) Fisheries College - Industrial area
- (c) A.V.M Building - Mixed area

At Coimbatore, the Ambient Air Quality Stations are functioning from the year 1991 in the following locations.

- (a) Collectorate Office Building - Mixed area
- (b) Saibaba Colony - Residential area
- (c) SIDCO Building - Industrial area

At Salem, the Ambient Air Quality station is functioning in the following location from July 1996 onwards.

- (a) Sowdeswari College - Mixed area

At Madurai, the Ambient Air Quality Stations are functioning from July 1996 in the following locations

- (a) M.K. University Evening College - Residential area
- (b) Fenner India Ltd., Building - Industrial area
- (c) Kunnathur Chatram - Mixed area

The ambient air quality data recorded during 2000-2001 indicate that all the parameters such as sulphur dioxide, oxides of nitrogen and suspended particulate matter are found to be well controlled except at Kunnathur Chatram, Madurai, where the annual average value of SPM is found to exceed the permissible limits due to heavy commercial activities and traffic flow. The annual average values of pollutants recorded during the year 2000-2001 are given in Annexure X-A.

4.2 VEHICULAR EMISSION MONITORING

4.2.1 VEHICLE EMISSION MONITORING IN CHENNAI CITY

The Board has established three vehicular emission testing centres at Guindy, Vyasarpadi and Ambattur in Chennai city for goods transport vehicles and has been conducting vehicular emission tests since 02.05.1992.

During the year 2000-2001, 24063 vehicles were tested. Among them, 6862 diesel driven vehicles and 2 petrol driven vehicles did not comply with the emission standards. "Emission under control" certificates for the vehicles not complying with the emission standards were issued only after corrective measures were taken by the owners of the vehicles.



4.2.2. VEHICLE EMISSION MONITORING IN THE DISTRICTS

As per the amendment in the Tamilnadu Motor Vehicles Act, 1989, vide G.O. Ms. No.1181 Home (Transport V.) Department dated 26.08.1996, testing of all vehicles except goods transport vehicles in Chennai urban agglomeration area is entrusted to private testing agencies, which are to be authorised by the Transport Department in coordination with the Board. The Board will continue to issue test certificates to goods carriage vehicles for obtaining fitness certificate and will continue to issue test certificates for all transport vehicles in Kancheepuram, Thiruvallur, Dindigul and Nilgiris districts. Accordingly the Board has commissioned 2 vehicle emission monitoring stations in Nilgiris district at Udthagamandalam on 26.08.1996 and Katteri in August '99, 2 stations at Dindigul and Palani on 10.03.1997 and 1 station at Chengalpattu in October, 1997.

The Board also imparts training to private entrepreneurs who opt for setting up emission testing centres and has issued certificates to nearly 200 centres and has trained 940 persons from private emission testing centres at Chennai, Coimbatore, Salem, Madurai and Tiruchirapalli.

The details of vehicles tested and number of vehicles which exceeded the standards are shown in Annexure X -C.

4.3. WATER QUALITY MONITORING

The basic objective of the Water (Prevention and Control of Pollution) Act, 1974 is to maintain and restore the wholesomeness of water. To ensure this objective, regular monitoring of water quality is required. The TNPCB is monitoring the inland water quality under two major programmes namely:

Monitoring of Indian National Aquatic Resources System (MINARS).

Global Environmental Monitoring System (GEMS).

4.3.1. Monitoring of Inland Water Quality

Under the MINARS programme, the rivers Thamiraparani, Palar and Vaigai and lakes such as Uthagamandalam lake, Kodaikanal lake and Yearcaud lake are being monitored. Under GEMS and MINARS programmes the river Cauvery is being monitored. The projects are funded by the Central Pollution Control Board, New Delhi.

4.3.1.1. THE CAUVERY RIVER

The Cauvery river is a major river in the State which drains more than one third of the State. The Cauvery river has been identified as a **major river** for studying the impact of pollution caused by various activities of the domestic and industrial sectors.

The quality of river water is being monitored at **20 places** along the river under GEMS (4 stations) and MINARS (16 stations). These places have been selected on the basis of the location of outlets for the discharge of industrial effluents and domestic wastes.

Physico-chemical and biological parameters are analysed at each of the monitoring stations. Sampling is done on a monthly basis and analyses are done at the **Advanced Environmental Laboratory, Salem**. The mean values of water quality are furnished in **Annexure XI - A & B**.

The overall analysis of the data reveals that the **faecal contamination of surface water of the Cauvery river is a common phenomenon** all along the course of the river basin due to the unhygienic anthropogenic activities and disposal of either untreated or partially treated municipal waste into the river systems directly or indirectly. In general, the water quality of the Cauvery river meets the standards prescribed for surface water quality under class 'C' (designated best use for the drinking water source with conventional treatment followed by disinfection).

Pollution abatement proposals for **5 stretches** of the Cauvery river namely Tiruchirapalli, Erode, Bhavani, Pallipalayam and Komarapalayam as prepared by the Board are under various stages of implementation by the Tamilnadu Water Supply and Drainage Board and by the concerned local bodies under the **National River Action Plan**. The implementation of the work is being coordinated by the **Director of Environment, Chennai**.

4.3.1.2. THE THAMIRAPARANI RIVER

The Board is monitoring the water quality of the Thamiraparani river on a monthly basis at 7 stations. The physico-chemical parameters and biological parameters are analysed in the Advanced Environmental Laboratory at Madurai and details have been furnished in Annexure XI - C.

The water quality study conducted during 2000-2001 shows that the level of pH values varied from 6.3 to 7.8 and Bio-Chemical Oxygen Demand (BOD) varies from 4.9 to 6.8 mg/l as against the standards prescribed for pH (6.5 - 8.5) and Bio Chemical Oxygen Demand (3mg/L). The other parameters analysed meet the standards prescribed for surface water quality under class 'C'.

Generally, the water quality of the Thamiraparani river meets the standards for surface water quality under class 'C'.

4.3.1.3. THE PALAR RIVER

One station viz., Vaniyambadi Municipal Head Works is being monitored every month and analysis of water samples is done at the Advanced Environmental Laboratory, Chennai, for physico-chemical and bacteriological parameters.

The analysed data revealed that the water quality of the Palar river at the sample point meets the standards prescribed for surface water quality under class 'C'. Details have been furnished in Annexure XI - D.

4.3.1.4. THE VAIGAI RIVER

The water quality of the Vaigai river is being monitored under this programme by collecting a sample every month from the collection well of Thirubuvanam Head Works and analysing it in the Advanced Environmental Laboratory, Madurai for physico chemical and bacteriological characteristics. Details have been furnished in Annexure XI-D.

The water quality of the Vaigai river meets the standards prescribed for surface water quality under class 'C'. Details have been furnished in Annexure XI-D.

4.3.1.5 LAKES

Under the MINARS programme, 3 important lakes of Tamilnadu at Udthagamandalam, Kodaikanal and Yercaud have been identified and monitored by collecting samples once in three months. The mean values of lake water quality are furnished in Annexure XI-E.

The total Coliform, BOD, DO and Fecal Coliform in Udthagamandalam lake is found to exceed the standards prescribed due to the surface run off and sullage either directly or indirectly.

In general, the water quality of the lakes meets the standards prescribed for surface water under 'C'.

A scheme for bioremediation of the lake water in Udthagamandalam and Kodaikanal and a sewage scheme for kodaikanal has been taken up with the assistance of the Government of India under the co-ordination of the Director of Environment, Chennai.

4.4.0. MONITORING OF WATER QUALITY OF CITY WATER WAYS OF CHENNAI CITY

Chennai City is traversed by four waterways namely the Cooum, Adyar, Buckingham Canal and Otteri Nullah. The TNPCB is monitoring these waterways to assess the level of pollution by collecting water samples every month both at water bodies and industrial outlets as detailed below:

Source	River No. of Stations	Industrial Outlets No. of Stations
1 Adyar	5	8
2 Cooum	11	4
3 Buckingham Canal	10	16
4 Otteri Nullah	8	6

During the year 2000-2001, 1222 samples were collected and analysed at the Advanced Environmental Laboratory, Chennai.

In general, Chennai City waterways are contaminated by various organic and inorganic pollutants received from domestic, industrial and other man-made activities. The levels of contamination of the pollutants is relatively high in the Buckingham canal followed by the Otteri nullah, the Cooum river and the Adayar river.

The Government of Tamilnadu has launched a major scheme called 'Chennai City Rivers Conservation Project' with an estimated cost of Rs.1700 Crores. For this project, the Ministry of Environment and Forests, Government of India has sanctioned approval for Rs.491.52 Crores under the National River Conservation Plan. Under the project, various works related to macro drainage network, micro drainage network, interception, diversion and treatment of sewage and relocation of slums have been taken up by the respective departments viz. Tamilnadu Public Works Department, Chennai. Municipal Corporation, Chennai. Metropolitan Water Supply and Sewerage Board and Tamilnadu Slum Clearance Board.

4.5 COASTAL MONITORING

Tamilnadu, with its 1000km long coastal line, has a fragile coastal environment susceptible to unsustainable human activities. In order to protect it from over exploitation, taking into consideration the features of ecologically sensitive areas, developed areas and relatively undisturbed areas, the coastal stretch has been classified as coastal regulation zone I, II & III restricting certain activities. The TNPCB has identified on shore discharges and seven hot spot areas viz, Ennore, Kasimedu, the confluence point of the Cooum river, Cuddalore, Nagapattinam, Thoothukudi and the confluence point of the Tamiraparani river at Punnaikayal on the Tamilnadu coast. The hot spot areas are monitored so as to assess the pollution load discharged into the sea and to implement suitable corrective actions.

4.6. MONITORING OF 17 CATEGORIES OF HIGHLY POLLUTING INDUSTRIES

The TNPCB has a special monitoring cell at its head office in Chennai to monitor the 17 categories of highly polluting industries specified by the Government of India. In Tamilnadu, 202 industries have been identified and these industries have implemented pollution control measures. By effective operation of these measures, the pollution load (bio chemical oxygen demand) from industries like sugars, paper & pulp and tanneries has been reduced considerably. Further, with the active support of the TNPCB, some of these industrial units are in the process of switching over to cleaner technologies. Distilleries are adopting bio-compositing of their partially treated effluent with pressmud from sugar mills to help them move towards achieving zero discharge. Caustic soda manufacturing units are switching over to membrane cell process, cement units are switching to dry process and sulphuric acid plants are switching to DCDA process to reduce pollution. Chlorine free bleaching is being encouraged in textile and paper & pulp industries. Dyeing industries are being asked to use only low salt dyes to reduce the total dissolved solids in the effluents. Industries using large quantities of water and energy are being monitored to reduce their use.

Details of these highly polluting industries are given in Annexure – XII.

Bio-compositing of pressmud with effluent of sugar mill



4.7. OZONE MONITORING CELL

The Earth is protected by the presence of ozone (i.e. a thin layer of 1 ppm to 5ppm by volume) in the stratosphere. The ozone layer serves as a shield from the harmful effects of ultra-violet rays coming from solar radiation.

Considering the importance of the issue of ozone layer depletion, the Board has established a **Ozone Monitoring Cell** as per G.O. Ms. No. 212 dated 29.06.1995 and it is functioning since 01.09.1995 in the Board's head office.

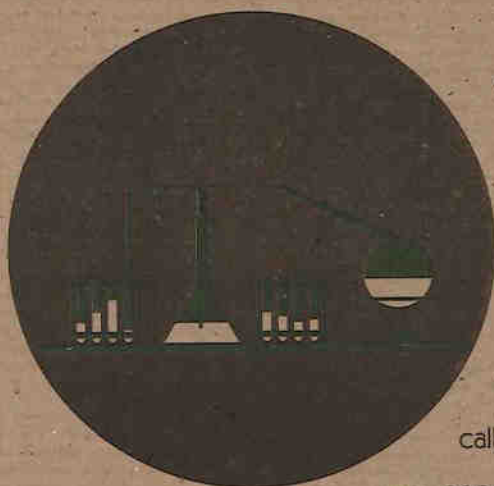
Its main objectives are:

- ▶▶ To survey, identify and maintain an inventory of the industries producing or consuming Ozone Depleting Substances (ODS) in the State
- ▶▶ Estimate the present demand and make future projections.
- ▶▶ Study the scope of the application of environmental friendly substitutes.
- ▶▶ Commit to phase out Ozone Depleting Substances by the year 2010 for essential uses as agreed to by all the countries.

The Board has conducted a detailed survey of all industries in the State producing or consuming Ozone Depleting Substances. Through this survey **55 industries** in the State have been found to consume Ozone Depleting Substances. Also, whenever new industries approach the Board for consent, consent orders are issued with a condition that they should not use ODS. The identified industries have been educated on the adoption of alternatives with Zero ODS depending on the controlled substance used.

4.8. LABORATORIES

To assist the Board in the monitoring of industries, the Tamilnadu Pollution Control Board has established 3 Advanced Environmental Laboratories, 10 District Environmental Laboratories and 2 Mobile Environmental Laboratories under section 17 (2) of the Water (Prevention and Control of Pollution) Act, 1974, as amended in 1978 and in 1988, so as to enable the Board to perform its functions efficiently and to cover the industries located in various Districts. Samples of effluents are collected periodically and analysed. The details of samples analysed laboratory wise during the year 2000-2001 are shown in Annexures XIII, XIV, & XV.



CHAPTER - V

ENVIRONMENTAL STANDARDS

One of the functions of the TNPCB is to lay down, modify or annul effluent standards for sewage / trade effluents and for the emission of air pollutants into the atmosphere from industrial plants or any other source.

The Board has prescribed standards for the discharge of treated sewage / trade effluents depending upon the mode of disposal either into inland surface water, sewers, marine coastal areas or on land. Treated effluent from the industries must satisfy the respective standards before disposal.

Ambient Air Quality standards and Emission standards have been fixed for all polluting industries. The Board monitors the industries so that they adhere to the prescribed effluent / emission standards.

CHAPTER - VI

6.1. LEGAL ACTION

The TNPCB is taking legal action against several defaulting industries. The Board has so far issued show cause notices to 16316 industries and closure orders to 3210 industries for not complying with the conditions prescribed by the Board. During the year 2000-2001, 2589 show cause notices and 318 closure notices have been issued.



6.2 GREEN BENCH

The Hon'ble High Court of Madras has constituted a Green Bench as per the directions of Hon'ble Supreme Court of India during the year 1996-97. The Green Bench deals with cases pertaining to tanneries and environmental related cases and sits every Thursday and on other days if necessary.

CHAPTER - V I I

7.1 BOARD MEETINGS

During the period from April 2000 to March 2001, 9 meetings of the Board were held at the head office in Chennai. These details are listed below:

Sl.No.	No. of subjects placed	Meeting No.	Date
01	28	177	10.05.2000
02	27	178	12.07.2000
03	12	179	21.07.2000
04	22	180	12.09.2000
05	21	181	14.11.2000
06	17	182	22.12.2000
07	14	183	19.01.2001
08	7	184	16.02.2001
09	12	185	16.03.2001

7.2. OTHER INITIATIVES TAKEN DURING THE YEAR 2000-2001

- 1.The Board approved the proposal for formulation of **solid waste management** in **Ooty, Kodaikanal, Palani, Tiruchendur, Kanyakumari, Rameshwaram, Courtralam and Mamallapuram** through TNUDF.
- 2.The Board decided that the Tamilnadu Pollution Control Board can provide **financial assistance** for carrying out the pollution abatement works in **river stretches** to the local bodies on a case-to-case basis.
- 3.The Board decided to pay an amount of **Rs.25.5 lakhs** being the share of the state Government for the maintenance of saplings to be raised by the **102 Municipalities** for implementation of a **green belt** for abatement of pollution and environmental improvement.
- 4.The Board decided to give **financial assistance** to the Corporation of Chennai for its **green belt project**.
- 5.The Board approved the proposal of a **model Green belt development** in the private stone crushing unit in Kancheepuram district through Tamilnadu State Forestry Research Institute.
- 6.The Board approved the proposal to evolve an economical and reliable method for **air pollution control** measures in **cashew** industries in Kanyakumari district, through the National Productivity Council.
- 7.The Board approved the proposal for **reorganising the field set-up of the Board** and making it a two tier system.
- 8.The Board approved the proposal to form three Environmental Districts at Nagapattinam, Pudukkottai and Villupuram.
- 9.The Board approved the proposal to create a **district office** at Virudhunagar bifurcating the district office at Madurai.
- 10.The Board approved the proposal for issue of "**Green Awards**" to the District collectors who have shown greatest initiatives in improving the environment.
- 11.The Board approved the proposal for **advertisements** in M.T.C buses to create environmental awareness.
- 12.The Board considered the proposal for creating environmental awareness through **programmes on AIR**.
- 13.The Board decided to take part in the **Asia-Urbs Ecological Project** in Cooperation with **Regione Toscana, Italy** which would provide know-how between local administration on environmental and industrial policies.
- 14.The Board approved the proposal for **procurement of emission testing equipment** for reducing vehicular emissions in Chennai city.

CHAPTER - V I I I

COMMITTEES CONSTITUTED BY THE BOARD AND THEIR ACTIVITIES

For more effective functioning of the Board, certain committees were constituted by the Board.

8.1. TECHNICAL ADVISORY COMMITTEE

To assist the Board in its various functions, such as evaluation of standards for various pollutants in effluent and emission, evaluation of economical effluent treatment methods for various industries, to obtain the views of experts in problematic cases etc., the Board has constituted a Technical Advisory Committee consisting of experts from various fields. During the year 2000-2001 one meeting was conducted to discuss about M/s SIV Industries Ltd, Coimbatore.

8.2. LIBRARY COMMITTEE

To streamline the system of purchase of publications for the library and to suggest measures for its improvement and better maintenance, a Library Committee has been constituted. The committee reviews periodically the requirements and functioning of the library.

In the library around 10000 books, 77 journals and 50 Periodicals are available. A Libsys system has been installed to search for required documents.

8.2.1 The Board has membership in the following institutions:

- »» Chemical Industries Association.
- »» TERI Information Centre
- »» British Council Division.
- »» Indian National Scientific Documentation Centre.
- »» Environment Quality Management Services.
- »» United States Information Service.
- »» Indian Environmental Association.
- »» Air and Waste Management Association.
- »» International Congress of Chemistry and Environment.

CHAPTER - I X

9.1. ENVIRONMENTAL TRAINING

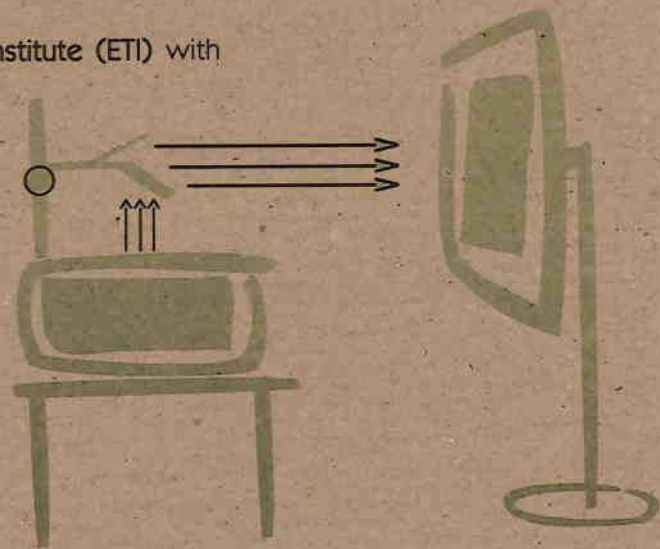
With a view to promote environmental awareness, Senior Officers, Engineers, Scientists and also Ministerial Staff have participated in Training / Seminars / Workshops in India and abroad. The Board has set up an Environmental Pavilion inside the premises of the Periyar Science and Technology Centre at Kotturpuram, Chennai. The pavilion has a permanent exhibition centre and an auditorium with facilities like a public address system, a slide and overhead projector and a 60 mm. projector. Various school children in the state of Tamilnadu have visited the environmental pavilion.

9.2. ENVIRONMENTAL TRAINING INSTITUTE

The TNPCB has established an Environmental Training Institute (ETI) with financial assistance from DANIDA, Denmark in the year 1994 in its head office, Guindy, Chennai. The main objective of the training institute is to impart training to the staff of the board to make them competent and capable of monitoring / advising small, medium and large scale industries on pollution treatment and prevention techniques suitable to their needs. Non-governmental organisations, local bodies and personnel from industries are sensitized to issues of the environment.

E.T.I is guided by a steering committee chaired by the Chairperson, TNPCB. An advisory council provides technical support to E.T.I. It has 88 part time trainers identified from industries, TNPCB, Academic institutions, NGO's and other Government organisations. This training institute has so far developed 22 training modules on Water, Air, Environmental Impact Assessment, Risk Assessment Techniques etc. This year training modules on GIS and its application in Environmental Engineering and Operation and Maintenance of STP were developed. During the year 2000-2001, the Environment Training Institute has conducted 19 programmes and 513 participants were trained.

In addition, training programmes, seminars and awareness programmes on Rain Water Harvesting, Saying No to Plastics, Air Pollution during Bhogi, Vehicular Pollution and Management of Municipal Solid Waste were conducted.



CHAPTER - X

ENVIRONMENTAL AWARENESS AND PUBLIC PARTICIPATION

The TNPCB plays a catalytic role in the creation of environmental awareness among the public, students and participates in seminars and workshops related to environmental issues. The Board presents awards every year on World Environment Day for winners of **Essay Competitions, Elocution Competitions and Drawing / Cartooning / Painting Competitions** conducted on environmental issues during Anna's Birth day, Gandhiji's Birthday and Nehru's Birth day. A quarterly '**Newsletter**' is published by the TNPCB for creating environmental awareness.

The Board conducted seminars and special programmes in commemoration of the 50th year of independence and in celebration of the 25th year of the Water (Prevention and Control of Pollution) Act, 1974. A rally in coordination with a women's environmental club at Thiruvannamalai was organised on 20.12.2000 to highlight the **non-use of throwaway plastic items** among public. An environmental programme named, **Pasumai Niraintha Ulagathille** was launched during February 2001, in collaboration with AIR and the Tamilnadu Science Forum. Environmental issues such as **avoidance of plastic wastes, municipal solid waste management, vehicular pollution, rain water harvesting etc.** are highlighted regularly in this programme.

As part of an awareness programme, **noise level monitoring** was conducted in 13 residential areas, 9 commercial areas and 2 industrial areas in Chennai city during Deepavali- to assess noise level caused due to bursting of crackers. An ambient air quality survey was also conducted on pre-bhogi, bhogi and post boghi days to assess pollution levels. The results exceeded the limits prescribed for but were found to be lesser than the previous year due to efforts taken by the police department and the TNPCB.

The TNPCB conducted an emission clinic for auto rickshaws, government vehicles and multi utility commercial vehicles in coordination with the **Society of Indian Automobile Manufactures (SIAM)** and the **Society of Automotive Fitness and Environment (SAFE)** to inculcate the habit of regular maintenance of vehicles.

A one-day, state level seminar on '**Vehicular emission and Mitigation Measures**' was conducted on 06.02.2001. The Board has also conducted a pulmonary test in coordination with **Institute of Thoracic Medicine, Chetpet** for traffic policemen who are exposed to vehicular emission contamination.

CHAPTER - X I

OTHER IMPORTANT MATTERS DEALT WITH THE BOARD

11.1 MONITORING OF ECOLOGICALLY SENSITIVE AREAS

Ecologically sensitive areas like Pitchavaram Mangrove Forests etc., are nature's gifts and need to be protected. These areas are closely monitored by the Board so as to protect them from any Environmental degradation and highly polluting projects in these areas are generally discouraged.

11.2 IMPLEMENTATION OF PUBLIC LIABILITY INSURANCE ACT, 1991.

This Act provides immediate relief to the persons affected by accidents occurring while handling hazardous substances and for matters connected with or incidents thereto. The implementation of the Public Liability Insurance Act, 1991 is vested with the District Collectors. While issuing consent to the industries handling hazardous chemicals, a condition is imposed to the effect that such units avail insurance policies under Public Liability Insurance Act, 1991. So far 104 industries have taken risk policies under this Act.

11.3. PUBLIC HEARING PANEL

Government of India in its order Ms. No.487/E&F EC-III/Dept. dt. 22.12.97 has constituted Public Hearing Panels as required under schedule IV of E.I.A. Notification 1994 - as amended on 10.04.1997 for 23 districts and subsequently constituted Public Hearing Panels for the remaining 6 districts on 21.03.1998. The constitution of these Public Hearing Panels has been published in leading newspapers. The panels, after conducting public hearings, inviting suggestions and objections on projects from the public, will send its views to the Board so that No Objection Certificates can be issued to the industries by the Board to enable them to approach the Ministry of Environment and Forests, Government of India to get environmental clearance. Public Hearings on various projects are being conducted in the respective Collectorates since May 1998. As on 31.3.2001, 148 Public Hearings have been conducted. During 2000-2001, 8 public hearings were conducted.

11.4. ENVIRONMENTAL STATEMENT

The Ministry of Environment and Forests, Government of India have notified the Environmental Statement Rules, 1993. Environmental Statements have been obtained from all the 17 categories of highly polluting industries to assess their compliance with the standards prescribed by the Board.

11.5. APPLIED RESEARCH AND DEVELOPMENT

The TNPCB has established an Applied Research and Development wing in the Advanced Environmental Laboratory at Chennai with a view to develop cleaner technologies that would reduce the generation of pollution. The wing, in consultation with University of Chennai, has prepared a research project entitled "Bio-Treatment of Tannery Effluent by Microbes" to study the degradation of tannins and other organic and inorganic compounds of tannery effluent. Some tanneries have been identified for implementing the project. This project is in progress.

11.6. RESEARCH FUND

The TNPCB has established a research fund from the cess fund, to grant financial assistance to recognised Research Institutions and Universities

for taking up research activities in the field of pollution abatement including reduction / reuse / recycling or any other beneficial use of waste generated with a view to developing cleaner technologies.

11.7. WORLD BANK ASSISTED PROJECT

The World Bank is providing assistance for institutional strengthening of the selected State Pollution Control Boards in India under an industrial pollution control project through the Ministry of Environment and Forests, Government of India. The Board is one of the state boards provided with assistance to the extent of US \$ 2.517 Million.

This financial assistance is towards the procurement of equipment for institutional strengthening. The Board has so far received Rs. 71.88 lakhs worth of equipment & instruments in phase I and Rs. 707.21 lakhs worth of instruments in phase-II.

A committee has been formed to scrutinize and select suitable projects for assistance. So far nine projects have been sanctioned with financial outlay of Rs.45.38 lakhs.

11.8 EXTERNALLY AIDED PROJECTS

The TNPCB has signed an agreement on 24.11.2000 with the U.S Trade and Development Agency (USTDA) to conduct a feasibility study on industrial waste water recycling and reuse for the tanneries in the Vellore region. The entire project cost is US \$1,80,100 (approximately Rs. 81.00 lakhs).

The TNPCB with participation from Italian and Spanish Agencies, inaugurated the Asia-Urbs Ecological Project on 28.11.2000. This project would provide for mutual exchange of policies, experience and technologies in order to solve the problems related to environmental protection in the areas of Vellore and Chennai. The total project cost is EURO 4,95,040 (approximately Rs. 214 lakhs).

11.9 CUSTOMS / EXCISE DUTY REDUCTION FOR POLLUTION CONTROL EQUIPMENT

Under the notification of the Ministry of Finance, the Ministry of Environment and Forests issues certificates for reduction of rates on customs duty and excise duty to the industries/users for a list of pollution control equipment. The TNPC has issued certificates to the industries for availing the said concession.

11.10 ZONING ATLAS FOR SITING OF INDUSTRIES

The TNPCB in co-ordination with CPCB and German Agency for Technical Cooperation (GTZ) is implementing the programme of a Zoning Atlas on Environmental Features. This programme comes under a world bank funded, environmental management capacity building project. Initially the zoning atlas was taken up for Tiruvallur district and Kancheepuram district at a cost of Rs. 6 lakhs. During 2000-2001, the project on preparation of environmental atlas for Coimbatore, Vellore and Thoothukudi district has been taken up.

11.11. INDUSTRIAL ESTATE PLANNING

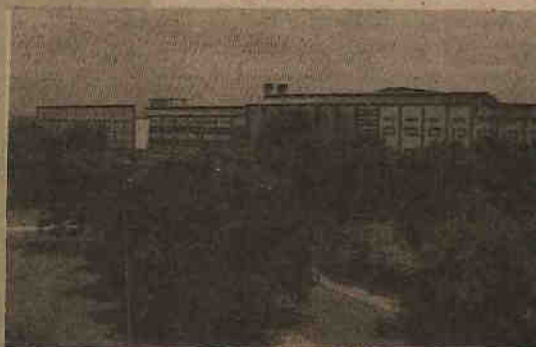
There are 63 industrial estates in Tamilnadu and many other industrial estates are on the anvil. The Board has identified 7 industrial estates to take up the Industrial Estate Planning Study during 2000-2003 and sent a proposal to CPCB, which is under consideration by the MOEF.

11.12. COMPLAINTS CELL

A 'complaints cell' is actively functioning at the TNPCB head office in Chennai. Several complaints are received from various individuals / organisation / NGOs etc., regarding pollution being caused by certain industries. These complaints are attended to by calling for reports along with the exact comments from the field officers of the Board. Action as required, based on the reports, is taken instantly and industries are also directed to provide the necessary pollution control measures.

11.13 GREEN COVER PROJECTS

To mitigate air and noise pollution in urban areas and to enhance the quality of living conditions in urban areas in Tamilnadu, a major programme for development of green belts in municipal corporation areas has been launched with a financial outlay of Rs.455.70 lakhs which includes the Central assistance of Rs.400 lakhs. This programme envisages tree planting of about 2,94,000 saplings in five municipal corporations namely Chennai, Madurai, Coimbatore, Salem and Tirunelveli. Under this programme, 2,39,000 saplings have been planted upto 31.03.2001. This programme has also been extended to all the urban and municipal areas with Central assistance of Rs.76.50 lakhs and Board assistance of Rs.25.50 lakhs. Further, to support this programme, 341 industries have paid Rs.71.20 lakhs for planting of 1,16,089 saplings in all the municipal areas of the state. The programme is being implemented in close coordination with other government departments, local bodies and industrial establishments.



Green Belt
Development
in a sugar factory.

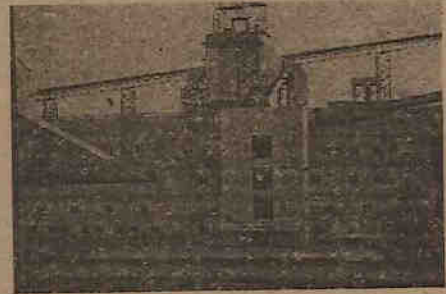
11.14 STATE ENVIRONMENTAL AWARD

The TNPCB has instituted state environmental awards to be given to the industries every year on world environmental day on 5th June to ensure continuous and due attention on the part of industries in the operation and maintenance of pollution control measures and a clean environment. Nine awards (1st, 2nd and 3rd positions each for large, medium and small scale industries) are given every year. A committee has been constituted by the Board to select the awardees and the state environmental awards have been given from the year of 1995-1996 onwards.

11.15 CLEANER TECHNOLOGIES

The TNPCB has been involved in developing cleaner technologies to minimise the generation and impact of pollutants. As a demonstration project, a model effluent treatment plant for a sago industry in Salem district has been installed and a model dust suppression and containment system for a stone crusher unit in Kancheepuram district is being installed. The Board has taken up a proposal with the National Productivity Council to evolve an economical and reliable method for air pollution control measures in cashew industries in Kanyakumari district at a cost of Rs.1.455 lakhs. Industries using mercury and chlorine as a feedstock have been asked to explore cleaner alternate technologies.

Electrostatic precipitator
installed in a cement factory
in Ariyalur district.



CHAPTER XII

FINANCE AND ACCOUNTS OF THE BOARD

(PROVISIONAL FIGURES SUBJECT TO AUDIT)

[Rupees in Lakhs]

Opening Balance	398.61
Receipts	2161.57
Expenditure during the year 2000-2001	1438.47
Closing Balance as on 31.3.2001	1121.71
DETAILS	
RECEIPTS	
Grants from State Government	Nil
Grants from Central Government	Nil
Consent Fees	1131.34
Analysis Charges and other fees	247.86
Cess Reimbursement	378.06
Sale of Application Forms & Books	7.27
Others	397.04
Total	2161.57
EXPENDITURE	
REVENUE:	
Salary and GPF	881.88
Lab Expenditure	13.98
Office Expenditure (Stationery, Rent, Vehicle, Telephone, Printing, Hospitality, etc.)	246.98
Repair & Maintenance of Building & Vehicle	57.84
Fees to Consultants & Auditors	2.97
CAPITAL:	
Fixed Assets	53.12
Other Assets	141.50
Advances to Staff	40.20
Total	1438.47



ANNEXURES



ANNEXURE - I

LIST OF BOARD MEMBERS:

Sl. No.	Name and address	Position	Period	
			From	To
1.0	Thiru. M.Devaraj, I.A.S.	Chairman	1.4.2000	1.5.2000
1.1	Thiru. S. Rajarathinam, I. A. S.	Chairman	2.5.2000	2.7.2000
1.2	Thirumathi. Sheela Rani Chunkath, I. A. S.	Chairperson	3.7.2000	Till date.
Officials Nominated by The State Government				
2.0	Thiru. S. Rajarathinam, I.A.S., Secretary to Government, Environment and Forests Department, Fort St. George, Chennai - 9.	Member	1.4.2000	31.3.2001
3.0	Thiru T. Pitchandi, I.A.S Special Secretary to Government, Finance Department, Fort St. George, Chennai - 9	Member	1.4.2000	12.7.2000
3.1	Thiru Viswanath Shegonger, I.A.S., Additional Secretary to Government, Finance Department, Fort St. George, Chennai - 9	Member	13.7.2000	8.2.2001
3.2	Thiru.K.Ramalingam,I.A.S Additional Secretary to Government, Finance Department, Fort St. George, Chennai - 9	Member	9.2.2001	31.3.2001
4.0	Dr. S.Gurumurthy, I.A.S., Special Commissioner of Town & Country Planning, 804, Anna Salai, Guindy, Chennai -2	Member	1.4.2000	31.3.2001
5.0	Thiru. K.Ganesan, I.A.S., Director of Municipal Administration, Ezhilagam Annexe Building, VI th floor, Chepauk, Chennai - 5	Member	1.4.2000	31.3.2001
6.0	Dr. R.Ayyathurai, M.D., Director of Public Health and Preventive Medicine, Chennai - 6.	Member	1.4.2000	31.3.2001

NON-OFFICIAL-MEMBERS NOMINATED BY THE STATE GOVERNMENT
TO REPRESENT AGRICULTURE /FISHERIES/INDUSTRIES/TRADE

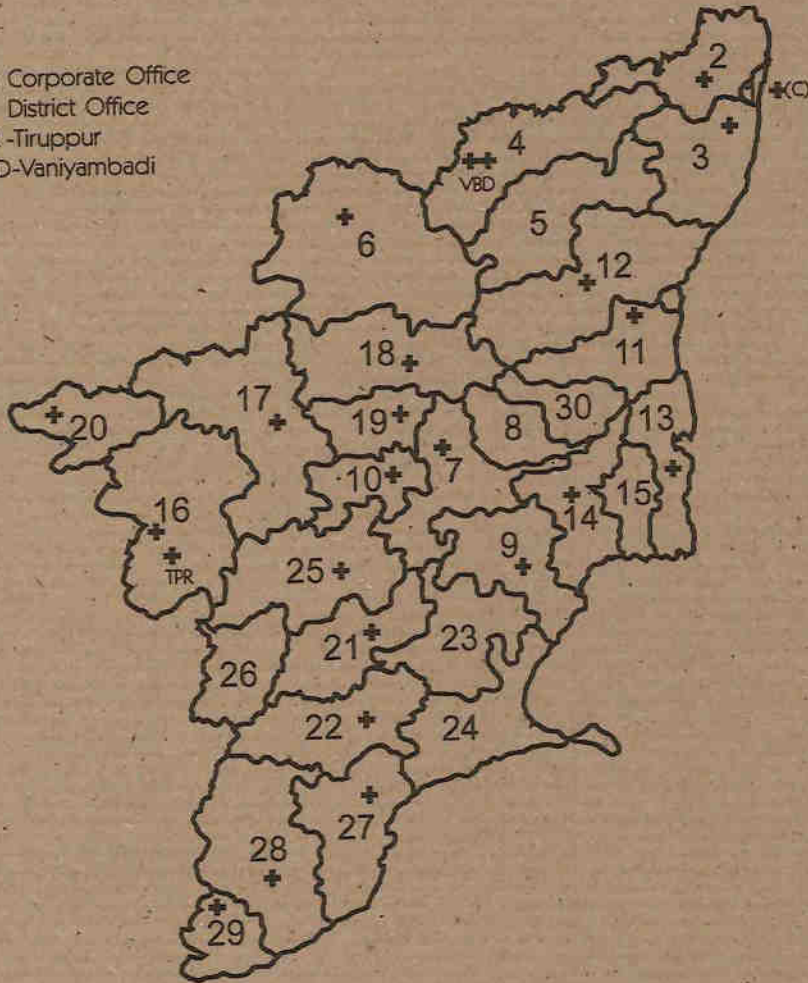
7.0	Thiru. P.Gopal B.Sc., MLA., Mettur Dam, Salem District.	Member	1.4.2000	31.3.2001
8.0	Thiru N. Mohan Srinivas, Regional Chairman (Southern Region), Leather Exports Promotion Council, Race View Towers, 2-B, 71, Mount Road, Guindy, Chennai - 32.	Member	1.4.2000	31.3.2001
9.0	Tmt. Banumathi Baskaran, State Level Fisheries Wing Organiser, 18, Corporation Colony, 3rd Lane, Tondiarpet, Chennai - 81	Member	1.4.2000	31.3.2001

PERSONNEL NOMINATED BY THE STATE GOVERNMENT TO REPRESENT THE COMPANIES CONTROLLED AND MANAGED BY THE STATE GOVERNMENT				
10.0	Er. Justin Paul, M.E., F.I.E., Member (Generation), Tamilnadu Electricity Board, 800, Anna Salai, Chennai - 2.	Member	1.4.2000	11.9.2000
10.1	Er.S.Thannimalai, B.E., M.B.A.F.I.E., Member (Generation), Tamilnadu Electricity Board, 800, Anna Salai, Chennai - 2.	Member	12.9.2000	31.3.2001
11.0	Thiru A.M.Kasi viswanathan, I.A.S., Managing Director, TWAD Board., Chennai-5	Member	1.4.2000	31.3.2001
12.0	Thiru. T. Meenakshi Sundaram , General Manager, (P.F), SIPCOT, 19 A, Marshalls Road, Egmore, Chennai - 8.	Special Invitee	1.4.2000	31.3.2001
13.0.	Dr. T.Sekar, I.F.S, Director Department of Environment, I Floor, Panagal Building, Jones Road, Saidapet, Chennai-5	Special Invitee	1.4.2000	23.5.2000
13.1	Dr. S. Balaji, I.F.S, Director Department of Environment, I Floor, Panagal Building, Jones Road, Saidapet, Chennai-5	Special Invitee	24.5.2000	31.3.2001
14.0	Thiru Ramesh Ram Mishra I.A.S., Commissioner of Industries and Commerce, Chennai-5	Special Invitee	1.4.2000	31.3.2001
15.0	Thiru. G.Rengasamy, Member Secretary, Tamilnadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai - 32.	Member- Secretary	30.7.1991	30.11.2000
16.0	Thiru. K. Sanjeevi, Member Secretary, (i/c) Tamilnadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai - 32.	Member- Secretary	1.12.2000	Till date

ANNEXURE - II

LOCATION OF DISTRICT OFFICES

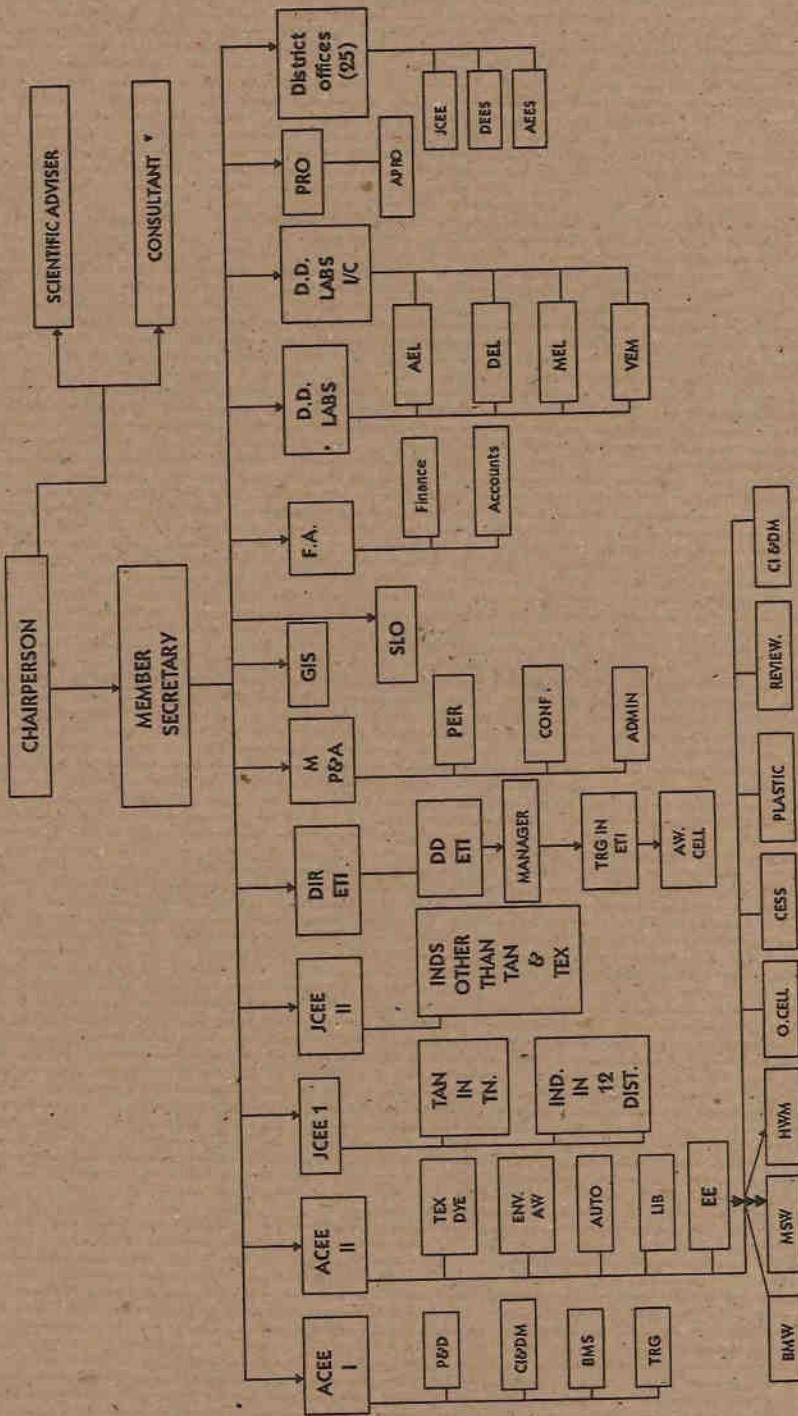
(C) Corporate Office
 + District Office
 TPR - Tiruppur
 VBD - Vaniyambadi



DISTRICTS

- | | | | |
|--------------------|------------------|------------------|-----------------|
| 1. Chennai | 9. Pudukottai | 16. Coimbatore | 23. Sivaganga |
| 2. Tiruvallur | 10. Karur | 17. Erode | 24. Ramnad |
| 3. Kancheepuram | 11. Cuddalore | 18. Salem | 25. Dindigul |
| 4. Vellore | 12. Villupuram | 19. Namakkal | 26. Theni |
| 5. Thiruvannamalai | 13. Nagapattinam | 20. Nilgris | 27. Tuticorin |
| 6. Dharmapuri | 14. Thanjavur | 21. Madurai | 28. Tirunelveli |
| 7. Trichy | 15. Tiruvarur | 22. Virudhunagar | 29. Nagercoil |
| 8. Perambalur | | | 30. Ariyalur |

TAMILNADU POLLUTION CONTROL BOARD-ORGANISATION CHART



Abbreviations

- ACEE Additional Chief Environmental Engineer.
- JCEE Joint Chief Environmental Engineer.
- DIR(ETI) Director (Environmental Training Institute).
- M(P&A) Manager (Personnel and administration).
- GIS Geographic Information System.
- SLO Senior Law Officer.
- FA Financial adviser.
- DD(LAB) Deputy Director (Laboratories).
- PRO Public Relation Officer.
- APRO Assistant Public Relation Officer.
- P&D Projects and Development Section.
- CIDM Centre for Information and Data Management.
- BMS Board Meeting Section.
- TRG Training.
- Tex Dye Textile Dyeing Industries.
- Env. AW Environmental Awareness.
- Auto Automobiles.
- LIB Library.
- BMW Bio Medical Waste Management.
- MSW Municipal Solid Waste Management.
- HWM Hazardous Waste Management.
- O Cell Ozone Cell.
- TAN IN TN Tanneries in Tamil Nadu.
- IND IN 12 DIST Industries in 12 Districts.
- PER Personnel.
- CONF Confidential.
- ADMN Administration.
- AEL Advanced Environmental Laboratory.
- DEL District Environmental Laboratory.
- MEL Mobile Environmental Laboratory.
- VEM Vehicle Emission Monitoring.
- DEES District Environmental Engineers.
- AEES Assistant Environmental Engineers.

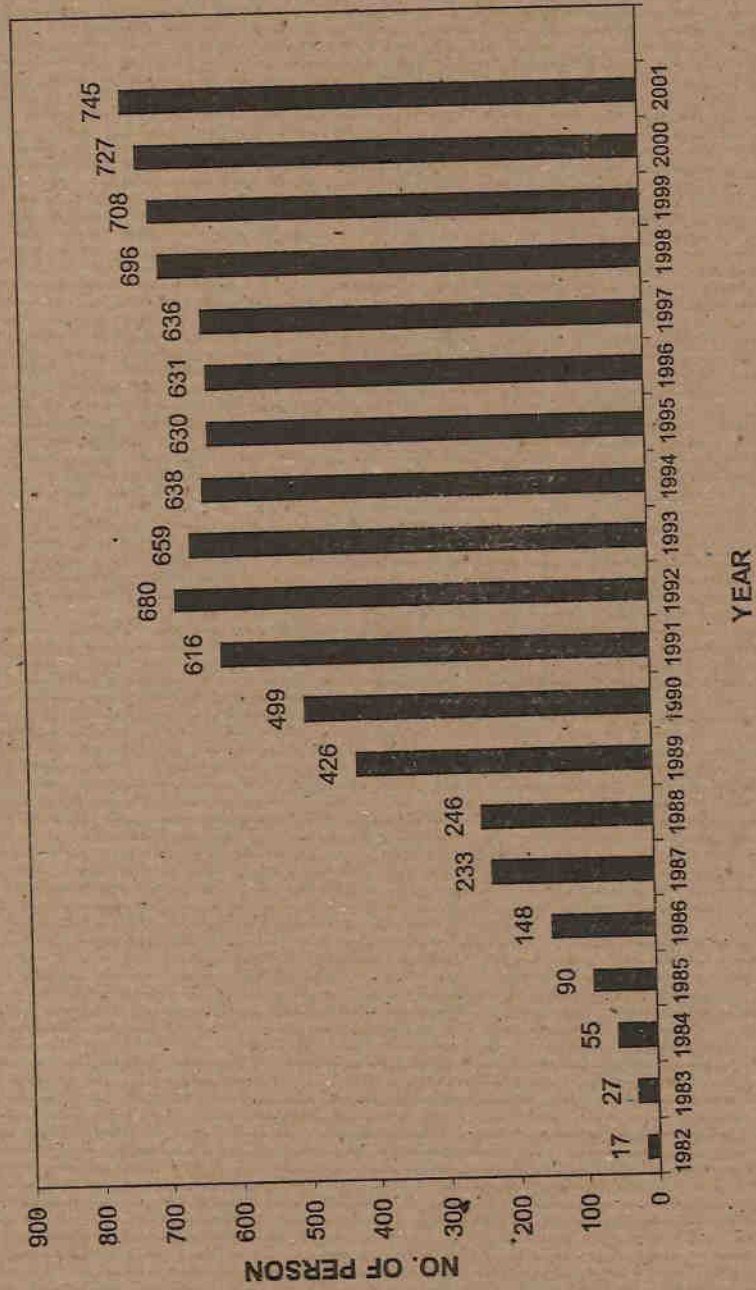
ANNEXURE - IV

STAFF STRENGTH

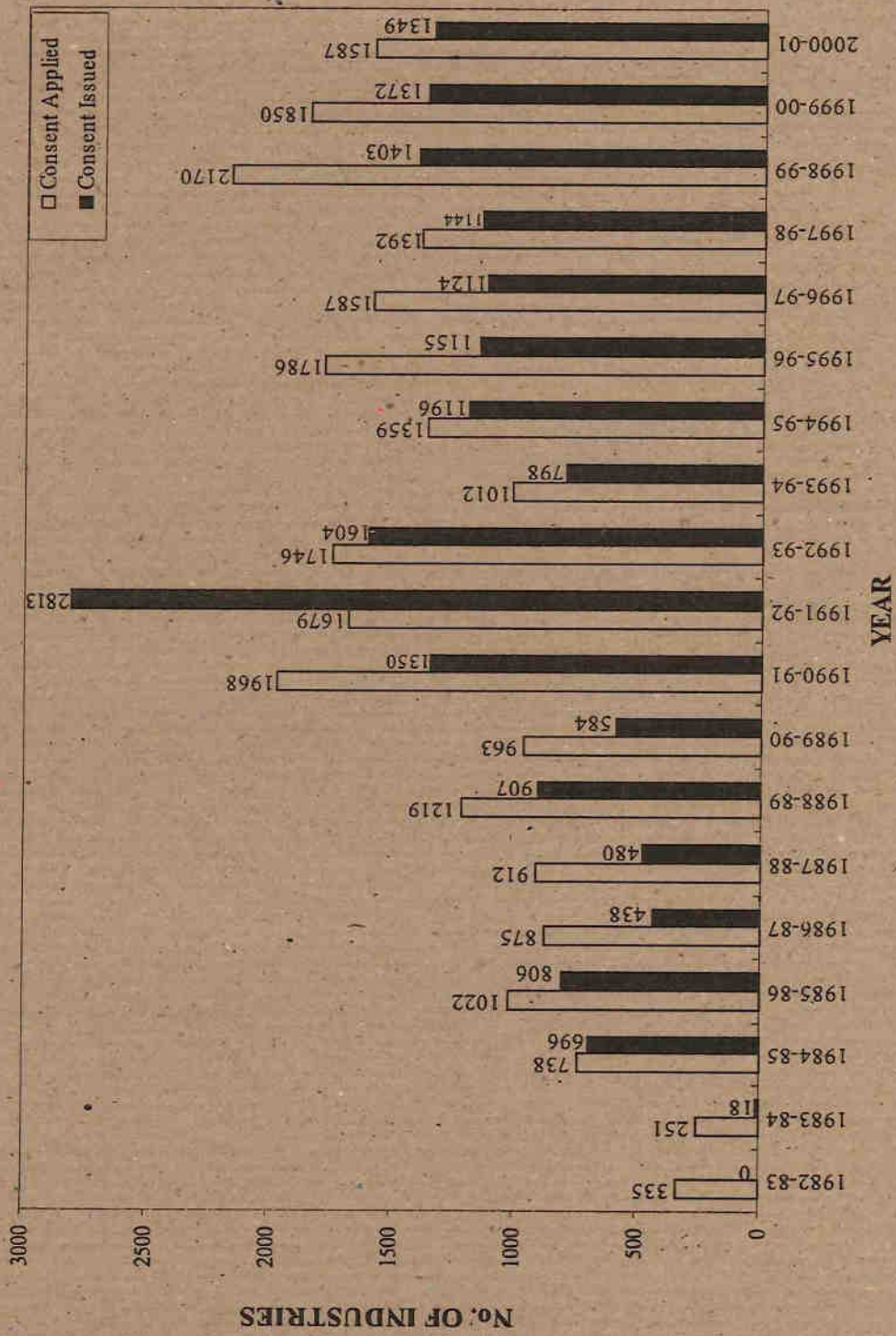
NAME OF THE POST	PRESENT STRENGTH
Chairman	1
Member Secretary(i/c)	1
Engineering Service	151
Scientific Service	83
Scientific Supporting Staff	89
Personnel/Administration/Accounts/Miscellaneous	420
Total	745
ENGINEERING SERVICE	
Additional Chief Environmental Engineer(i/c)	2
Joint Chief Environmental Engineer	4
Joint Chief Environmental Engineer(i/c)	4
District Environmental Engineer	4
Assistant Environmental Engineer	28
Assistant Engineer	103
Assistant Engineer(Auto)	1
Assistant Draughtsman	3
Technical Assistant	2
Sub-Total	151
SCIENTIFIC SERVICE:	
Deputy Director (LAB)	1
Assistant Director(LAB)	2
Manager(LAB)	1
Additional Manager	2
Deputy Manager (LAB)	21
Environmental Scientist	43
Senior Meteorologist	1
Meteorologist	2
Junior Environmental Scientist	10
Sub-Total	83
SCIENTIFIC SUPPORTING STAFF	
Electrical Supervisor	1
Field Assistant	61
Lab. Attendant	21
Electrician	6
Sub-Total	89

NAME OF THE POST	PRESENT STRENGTH
PERSONNEL/ADMINISTRATION/ACCOUNTS/ MISCELLANEOUS	
Financial Advisor	1
Deputy Director (F & A)	1
Assistant Director	1
Senior Law Officer	1
Additional Manager	4
Deputy Manager	13
Assistant Manager	24
Programmer	1
General Assistant	95
Data Entry Operator	4
Assistant	42
Steno Typist	31
Typist	57
Librarian	2
Driver	63
Record Clerk	13
Telephone Operator	2
Office Assistant/Watch man	62
Despatch Rider	1
Cleaner	1
Sweeper	1
Sub-Total	420

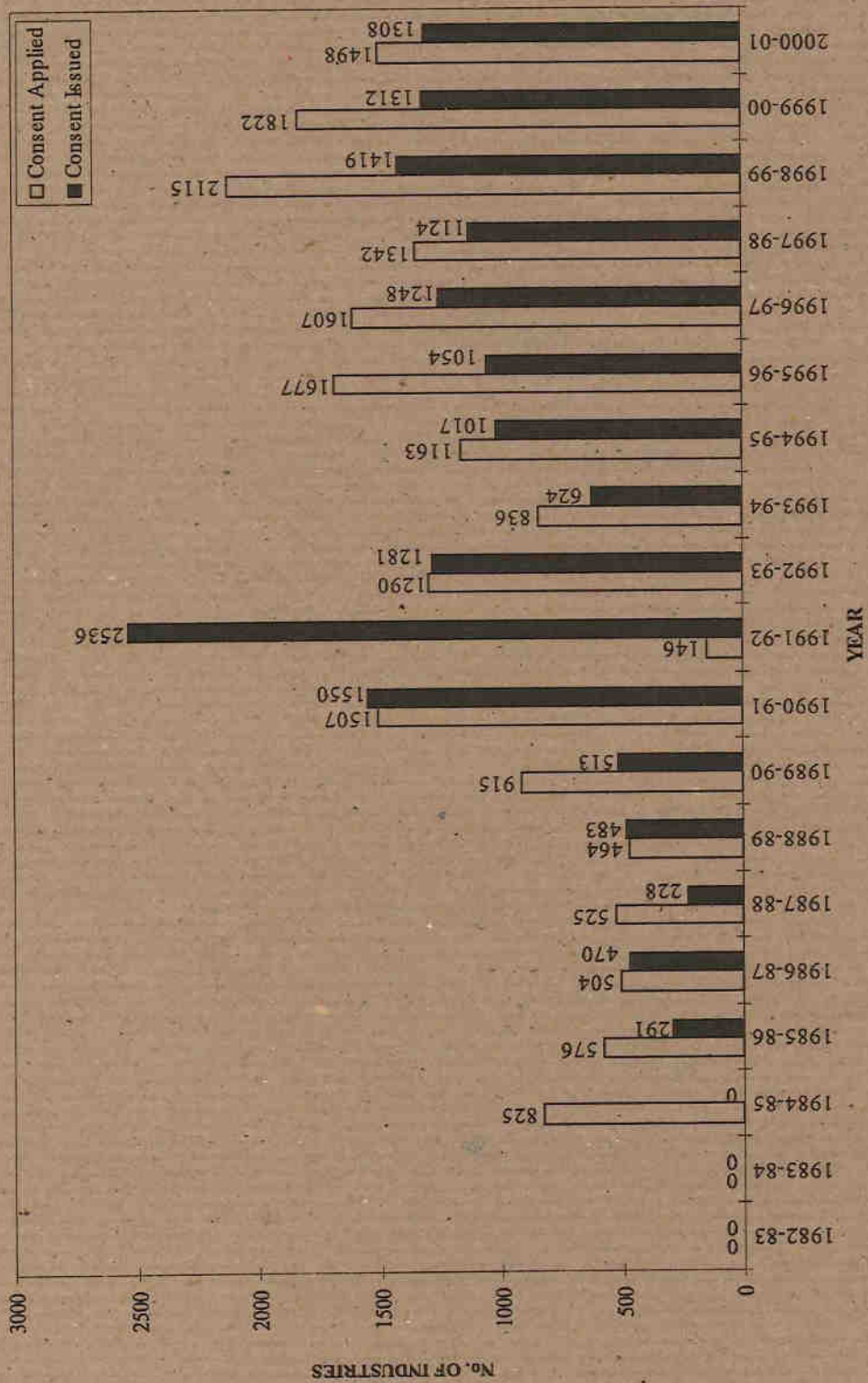
ANNEXURE -I
ORGANISATIONAL GROWTH FROM THE YEAR 1982 TO 2001



ANNEXURE - VI
 CONSENT APPLIED / ISSUED UNDER WATER ACT



ANNEXURE - VII
 CONSENT APPLIED / ISSUE UNDER AIR ACT



ANNEXURE -VIII
DETAILS OF COMMON EFFLUENT TREATMENT PLANT
SCHEMES AT VARIOUS PLACES.

A. TANNERIES.

SL. NO.	LOCATION OF CETP	DISTRICT	NO. OF BENEFICIARY UNITS	QUANTITY OF EFFLUENT (in KLD)	COST OF PROJECT (Rs.in Cr.)
I. Under Operation:					
1	Pammal / Pallavaram	Kancheepuram	142	3000	7.03
2	Madhavaram-TALCO Industrial Estate	Thiruvallur	14	400	1.25
3	Ranipet (SIDCO)	Vellore	84	2500	2.95
4	Melvisharam	Vellore	32	3400	3.63
5	Thuthipet	Vellore	40	2219	4.14
6	Ramji Nagar	Tiruchirapalli	4	525	0.60
7	Valayampet [Vaniyambadi- Talco]	Vellore	108	2948	3.37
8	Udayenthiram	Vellore	10	220	0.7
9	Bakkalapalli	Vellore	17	891	1.60
10	Ranipet	Vellore	75	4000	4.60
11	Dindigul	Dindigul	61	2533	5.00
12	Malligaithopu	Vellore	7	1100	2.00
II. Under Progress:					
13	Melpudupet	Vellore	12	600	1.51
14	Chettithangal	Vellore	6	600	1.39
15	Perumalpet	Vellore	17	4000	11.02
16	Pudur	Vellore	5	600	1.42
17	Valayampet (Vaniyambadi)	Vellore	10	1470	2.00
18	SIDCO & SIPCOT PHASE -II, Ranipet	Vellore	17	1560	2.52
19	Ambur (Mittalam)	Vellore	4	1500	2.59
20	Gundur	Tiruchirapalli	5	1775	2.85
21	Chengalvarayan-pattarai	Vellore	6	400	1.80
22	V.Kota Road	Vellore	47	2475	2.87
23	Sembattu	Tiruchirapalli	14	2400	3.00
III. Schemes dropped					
24	Erode	Erode	-	-	-
25	M.C.Road, Ambur	Vellore	2	450	2.20
26	Tarawali, Ambur	Vellore	5	800	2.75
27	Pemambut (Eruguthimullumedu)	Vellore	2	700	1.54

B. DYEING UNITS:

Sl.No.	Location of CETP	District	No.of Benefi- Ciary Units	Quantity of effluent [in KLD]	Cost of Project [in Crores]
I.Under Operation					
1	Ayyampet -Muthialpet	Kancheepuram	65	1500	1.43
2	Andipalayam (Tiruppur)	Coimbatore	21	4500	2.15
3	Kunnangalpalayam (Tiruppur)	Coimbatore	19	4250	2.16
4	Angeripalayam (Tiruppur)	Coimbatore	80	8500	7.20
5	Chinnakarai (Tiruppur)	Coimbatore	31	5000	2.45
6	Kasipalayam (Tiruppur)	Coimbatore	19	4000	2.20
7	Mannarai (Tiruppur)	Coimbatore	32	4200	2.71
8	Vezrapandi (Tiruppur)	Coimbatore	75	10000	6.75
9	Manickapurampudur	Coimbatore	11	1600	1.27
10	Karuppanpalayam	Karur	15	750	1.63
11	R.K.Puram	Karur	48	1250	1.93
12	Andankoil	Karur	35	1900	2.14
13	Amaravathi Nagar	Karur	48	2400	2.44
14	Light House	Karur	46	1150	1.44
15	Thirumanilaiyur	Karur	57	2100	2.08
16	Sukkaliyur	Karur	66	1400	1.69
17	Sellandipalayam	Karur	137	2600	2.25
18	Vellimalai	Salem	10	98	0.14
II. Under Progress					
19	Erumappalayam	Salem	27	1017	1.32
III Under Initial Stages					
20	Vanavil nagar	Salem	24	900	1.26
21	Vanna Nagar	Salem	32	1200	1.47
22	Gugai	Salem	24	900	1.35
23	Komarapalayam	Namakkal	57	4959	3.39
IV.Schemes Dropped					
24	Seelanaickenpatti	Salem	15	150	1.98
25	Erode -I	Erode	211	1164	1.02
26	Erode -II	Erode	191	725	4.00
27	Bhavani	Erode	62	450	1.06
28	Chennimalai	Erode	81	500	0.95

C.HOTELS

Sl.No.	Location of CETP	District	No.of Beneficiary units	Quantity of effluent [in KLD]	Cost of Project [in Crores]
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I. Under Operation

1	Kodaikanal	Dindigul	90	820	1.30
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D. HOSPITALS

Sl.No.	Location of CETP	District	No.of Beneficiary units	Capacity	Cost of Project [in Crores]
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I. Under Operation

1	Salem	Salem	64	450 kg/hr	0.05
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ANNEXURE -IX
FUNDS SO FAR RECEIVED FOR THE CETP SCHEMES FROM THE STATE AND
CENTRE BY TNPCCB
[RS.IN LAKHS]

SL.NO.	NAME OF CETP	GOVT. OF INDIA	GOVT. OF TAMILNADU	TOTAL
YEAR 1991-92				
1	Pammal/Pallavaram	50.00	50.00	100.00
2	Erode (Tanneries)	*50.00	50.00	100.00
3	Tiruppur	37.50	37.50	* 75.00
4	Ayyampet-Muthialpet	22.50	22.50	45.00
YEAR 1992-93				
5	Bhavani	7.50	7.50	15.00
6	Erode -I (Dyeing) B.P. Agraharam	15.00	15.00	30.00
7	Erode -II (Dyeing) Kasipalayam	17.50	17.50	35.00
8	Karur	21.14	21.14	* 42.28
YEAR 1995-96				
9	Ranipet - SIDCO	45.00	50.00	95.00
10	Visharam	45.00	50.00	95.00
11	Bakkalapalli	40.00	-	40.00
YEAR 1996-97				
12	R.K. Puram (Karur)	**48.22	48.22	96.44
13	Andankoil (Karur)	**50.00	50.00	100.00
14	Amaravathi Nagar	**50.00	50.00	100.00
15	Thiruvai (Karur)	**50.00	50.00	100.00
16	SIPCOT- SIDCO Phase -II (Ranipet)	30.00	50.00	80.00
17	Valayampet (Vaniyambadi)	**22.50	50.00	72.50
18	Kodaikanal	**32.50	32.50	65.00
19	Perumalpet	**25.00	50.00	75.00
20	Madhavaram- TALCO Industrial Estate	25.00	31.25	56.25
21	Melpudupet	-	37.78	37.78

SLNO.	NAME OF CETP	GOVT. OF INDIA	GOVT. OF TAMILNADU	TOTAL
(1)	(2)	(3)	(4)	(5)
YEAR 1997-98				
22	Ayyampettai - Muthialpettai	**13.00	13.20	26.20
23	Chettithangal	-	34.85	34.85
24	Permambut (Eruguthi Mullumedu)	-	38.50	38.50
25	Ambur (Mittalam)	-	50.00	50.00
26	Pudur	-	35.50	35.50
27	Maligaihope	-	50.00	50.00
28	M.C. Road	-	50.00	50.00
29	Tarawali	-	50.00	50.00
30	Gundur	-	50.00	50.00
31	Ramji Nagar	-	15.00	15.00
32	Andipalayam (Tiruppur)	-	50.00	50.00
33	Mannarai(Tiruppur)	-	50.00	50.00
34	Manickapurampudur (Tiruppur)	-	31.75	31.75
35	Kasipalayam (Tiruppur)	-	50.00	70.00
36	Angeripalayam (Tiruppur)	-	50.00	50.00
37	Veerapandi (Tiruppur)	-	12.50	12.50
38	Chinnakarai (Tiruppur)	-	50.00	70.00
39	Kunnangalpalayam (Tiruppur)	-	50.00	50.00
40	Light House (Karur - IV)	-	14.74	14.74
41	Sukkaliyur (Karur - VI)	-	42.13	42.13
42	Sellandipalayam (Karur - VII)	-	50.00	50.00
43	Karuppampalayam (Karur - VIII)	-	27.00	27.00
44	Melpudupet	**30.00	-	30.00
45	Ranipet -SIDCO	** 5.00	-	5.00
46	Visharam	*** 3.25	-	3.25
47	Valayampet (Vaniyambadi)	*** 27.50	-	27.50
48	SIPCOT-SIDCO Phase -II (Ranipet)	** 20.00	-	20.00

YEAR 1998-1999				
49	Andipalayam-Tiruppur	53.75	3.75	57.50
50	Mannarai-Tiruppur	50.00	17.75	67.75
51	Manikapurampudur	25.00	-	25.00
52	Angeripalayam	50.00	130.00	180.00
53	Veerapandi	40.00	118.75	158.75
54	Chinnakarai	50.00	11.25	61.25
55	Kasipalayam	50.00	55.00	105.00
56	Kunnangalpalayam	54.00	4.00	58.00
57	R.K.Puram- Karur	-	0.03	0.03
58	Amaravathi nagar	**11.00	11.00	22.00
59	Tiruvai- Karur	-	2.00	24.00
60	Andankoil	-	3.59	3.59
61	Karuppampalayam	27.00	-	27.00
62	Sellandipalayam	-	6.25	6.25
YEAR 1999-2000				
63	Manikapurmpudur	6.75	-	6.75
64	Veerapandi	128.75	-	128.75
65	Angeripalayam	130.00	-	130.00
66	Kasipalayam	5.00	-	5.00
67	Chinnakarai	11.25	-	11.25
68	Mannarai	17.75	-	17.75
69	Maligaithoppu(Ambur)	50.00	-	50.00
70	Light house area	12.50	-	12.50
71	Perumalpet	50.00	-	50.00
72	R.K.Puram	0.03	-	0.03
73	Chettithangal	31.25	-	31.25
74	Melpudupet	1.25	-	1.25
75	Thiruvai(Karur)	2.00	-	2.00
YEAR 2000-2001				
76	Pudur	10.00	-	10.00
77	Madavaram	2.00	-	2.00
78	Light house area (Karur)	10.00	-	10.00
79	Karuppampalayam(Karur)	-	13.66	13.66

* To be adjusted for other schemes.

** Amount released to IDBI

ANNEXURE-X A

AMBIENT AIR QUALITY MONITORING UNDER NAAQM PROJECT DURING 2000 -2001

Sl.No.	Name of the city	Location	Category	Annual Average Concentration of Air Pollutants ($\mu\text{g}/\text{m}^3$)			Permissible Limit ($\mu\text{g}/\text{m}^3$)		
				SO ₂	SPM	SPM	SO ₂	NO _x	SPM
1	Chennai	a) Muncipal Kalyana Mandapam Kathivakkam	Industrial	20.3	15.8	158	80	80	360
		b) Govt Higher Sec School, Manali	Industrial	16.1	15.9	158	80	80	360
		c) Muncipal office, Thiruvottiyur	Mixed-Residential	14.7	15.1	135	60	60	140
2	Coimbatore	a) District Collector's Office	Mixed-Residential	6.9	42.2	63	60	60	140
		b) Govt Higher Sec School, Manali	Residential	3.3	37.5	53	60	60	140
		c) SIDCO	Industrial	5.1	44.2	58	80	80	360
3	Thuthukudi	a) Chemical Research Station	Industrial	15.5	25.6	59	80	80	360
		b) AVM Building	Mixed-Residential	13.3	34.3	100	60	60	140
		c) Fisheries College	Industrial	14.2	27.8	60	80	80	360
4	Madurai	a) Fennar (I) Ltd	Industrial	5.5	27.4	136	80	80	360
		b) Kunnathur Chatram	Residential	6.4	38	31.3	60	60	140
		c) M.K University	Mixed-Residential	5.3	23.4	127	60	60	140
5	Salem	a) Sowdeswari College	Mixed-Residential	2.3	12.6	88	60	60	140

ANNEXURE - X B

CHENNAI AMBIENT AIR QUALITY DURING THE PERIOD 2000-2001

AREA	ANNUAL AVERAGE CONCENTRATIONS OF AIR POLLUTANTS ($\mu\text{g}/\text{M}^3$)					
	SO ₂	NO _x	RDP	SPM	Pb	CO
AnnaNagar	2.2	16.7	69	120	0.07	-
Adyar	1.7	13.8	52	72	0.03	-
Kilpauk	6.1	33.2	164	421	0.1	<1145
Thiyagaraya Nagar	5.3	28.4	156	541	0.07	<1145
Vallalar Nagar	6.7	49.8	124	312	0.08	<1145
Permissible Limit	60	60	60	140	0.75	2000

Monitoring carried out between 8.00 Hrs and 14.00Hrs on Government Working days

ANNEXURE - X C

DETAILS OF VEHICLE TESTED PARTICULARS AT TNPCB VEM STATIONS DURING 2000-2001

STATION	PETROL DRIVEN VEHICLES			DIESEL DRIVEN VEHICLES		
	No. of vehicles tested	Vehicles comply standards	Vehicles exceed standards	No. of vehicles tested	Vehicles comply standards	Vehicles exceed standards
CHENNAI	116	114	2	23947	17085	6862
UDAGAMWANDALAM	693	667	26	1378	850	528
KATTERI	799	767	32	2073	899	1174
CHENGALPATTU	1051	991	60	2211	1495	716
KANCHIPURAM	1609	1569	40	2660	2245	415
DINDUGUL	1284	1242	42	4405	3075	1330
PALANI	894	709	185	2172	1064	1108

ANNEXURE - XI A

RIVER WATER QUALITY - CAUNERY RIVER
UNDER MINARS PROGRAMME - 2000-2001

Sl. No.	Station	pH Range	DO mg/l	BOD mg/l	Cl mg/l	SO ₄ mg/l	TDS mg/l	NO ₃ mg/l	TH mg/l	FC MPN/100 ml	TC MPN/100 ml
1	Pathrakalamman	6.3 - 8.1	10.3	0.8	24	5	174	0.10	78	181	947
2	Trichy U/S	7.5 - 8.4	6.6	2.0	62	16	407	0.13	198	983	2737
3	Grand Analicut	7.6 - 8.6	6.1	1.0	62	17	437	0.11	204	378	1128
4	Sirumugai	6.7 - 7.8	8.9	0.7	31	159	483	0.11	182	244	916
5	Bhavani	7.7 - 8.3	7.6	1.1	49	14	364	0.12	163	1247	2296
6	Karathattankucl	7.3 - 8.7	8.4	1.7	59	8	378	0.11	168	1246	2474
7	Madathukulam	6.4 - 8.2	9.4	0.7	56	18	311	0.12	123	345	651
8	Erode	7.4 - 8.5	5.2	1.7	61	13	375	0.13	171	1203	2710
9	Bhavani Sagar	7.2 - 8.6	5.9	0.9	26	11	247	0.11	101	359	1065
10	R.N. Puclur	7.6 - 8.6	5.9	0.6	30	8	299	0.9	134	442	820
11	P.Velur	7.6 - 8.2	7.4	0.5	73	17	445	0.10	225	189	291
12	Mohanur	7.8 - 8.3	7.4	0.5	48	13	370	0.09	182	224	825
13	Trichy D/S	7.4 - 8.6	7.3	9.0	44	10	358	0.09	168	314	919
14	Coleroon	7.7 - 8.6	9.0	0.9	76	19	453	0.12	194	1035	2709
15	Pitchavaram	7.3 - 8.5	7.5	1.6	1007	82	1934	0.08	458	1848	3224
16	Thirumukkudal	7.1 - 8.6	8.5	0.7	50	12	361	0.11	164	405	1089
	Standard I.S.I	6.5 - 8.5	> 4	3.0	600	400	1500	50	-	-	5000

ANNEXURE - XI B
RIVER WATER QUALITY - CAUNERY RIVER
UNDER GEIMS PROGRAMME - 2000-2001

Sl. No.	Station	pH Range	DO mg/l	BOD mg/l	Cl mg/l	SO ₄ mg/l	NO ₃ mg/l	TH mg/l	FC MPN/100 ml	TC MPN/100 ml
1	Musiri	7.1-8.6	7.8	0.9	53	11	0.09	167	293	1075
2	Musiri bore well	6.8-8.3	6.1	0.4	231	8	0.12	487	44	155
3	Mettur	7.2-8.4	7.2	0.8	40	9	0.1	157	1618	2506
4	Pallipalayam	6.5-8.5	7.4	1.2	48	10	0.11	167	144	375
	Standard I.S. I**	6.5 - 8.5	> 4	3.0	600	400	50	-	-	5000

DO - Dissolved Oxygen
 BOD - BioChemical Oxygen Demand
 TC - Total Coliform
 FC - Faecal Coliform
 TH - Total Hardness (as Ca CO₃)
 ** - Surface water quality standards under class 'C'

ANNEXURE XI C
RIVER WATER QUALITY -TAMIRAPARANI
UNDER MINARS PROGRAMME - 2000-2001

Sl. No.	Station	pH Range	DO mg/l	BOD mg/l	Cl mg/l	SO ₄ mg/l	NO ₃ mg/l	TH mg/l	FC MPN/100 ml	TC MPN/100 ml
1	Cheranmadevi	6.3 - 7.1	6.8	6.4	17	10	0.38	42	109	154
2	Kokirakulam	6.3 - 7.1	6.8	5.3	22	10	0.23	47	111	159
3	Papanasam	6.5 - 7.8	6.5	6.6	16	23	0.18	23	102	132
4	Murappanadu	6.4 - 7.2	6.8	4.9	23	9	0.19	60	149	191
5	Ambasamudram	6.8 - 7.2	6.9	6.8	17	10	0.20	33	118	147
6	Thiruvadaimanudur	6.4 - 7.1	6.8	6.6	16	10	0.24	28	107	162
7	Anumaganeri	6.6 - 7.7	6.9	5.1	62	20	0.26	111	97	141
	Standard I.S.I	6.5 - 8.5	> 4	3.0	600	400	50	-	-	5000

ANNEXURE XI D
RIVER WATER QUALITY - PALAR / VAIGAI
UNDER MINARS PROGRAMME - 2000-2001

Sl. No.	Station	pH Range	DO mg/l	BOD mg/l	Cl mg/l	SO ₄ mg/l	NO ₃ mg/l	TH mg/l	FC MPN/100 ml	TC MPN/100 ml
1	Palar river basin	6.7 - 8.3	5.2	3.1	69	40	0.48	250	1017	3110
2	Vaigai river basin	6.7-8.1	7	3.8	113	23	0.18	231	113	156
	Standard I.S.I	6.5 - 8.5	> 4	3.0	600	400	50	-	-	5000

DO - Dissolved Oxygen
 FC - Faecal Coliform
 Surface water quality standards under class C
 BOD - BioChemical Oxygen Demand
 TC - Total Coliform
 TH - Total Hardness (as Ca Co 3)
 Cl - Chlorides
 NO₃ - Nitrates
 SO₄ - Sulphates

ANNEXURE - XI E
LAKE WATER QUALITY
UNDER MINARS PROGRAMME - 2000-2001

Sl. No.	Station	pH Range	DO mg/l	BOD mg/l	Cl mg/l	SO ₄ mg/l	NO ₃ mg/l	TH mg/l	FC MPN/100 ml	TC MPN/100 ml
1	Uthagamandalam	6.6-7.3	4.2	8.8	60	10	0.09	125	155240	381778
2	Kodikanal	6.3-7.8	6.7	108	20	5	0.18	35	123	158
3	Yercaud	7.4-8.6	6.7	1.3	37	2	0.08	98	1078	2431
	Standards I.S.I	6.5 - 8.5	> 4	3.0	600	400	50	-	-	5000

DO - Dissolved Oxygen
 BOD - BioChemical Oxygen Demand
 TC - Total Coliform
 FC - Faecal Coliform
 TH - Total Hardness (as Ca Co₃)
 * Surface water quality standards under class C

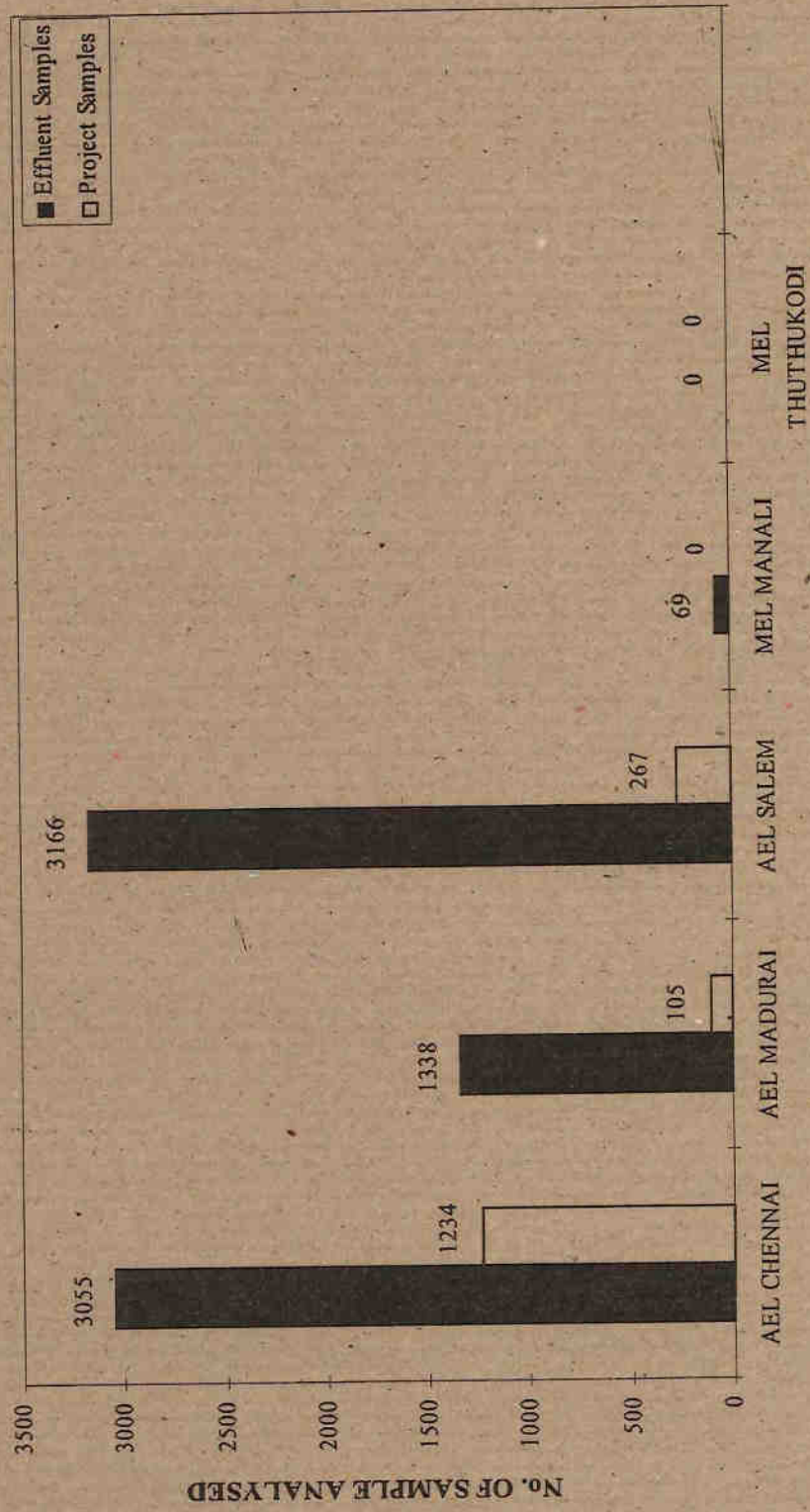
ANNEXURE - XII
SUMMARY OF POLLUTION CONTROL STATUS OF 17 CATEGORIES OF INDUSTRIES
IN TAMILNADU ON 31.03.2001

Sl.No.	Category	Status (No. of Units)		
		Total No. of Units.	Closed as per the direction of the board	Complying with standards.
1	Aluminium Smelter	1	0	1
2	Caustic Soda	3	0	3
3	Cement*	15	0	15
4	Copper Smeller	1	0	1
5	Distillery	16	0	16
6	Dyes & Dye Intermediate	1	0	1
7	Fertilizer	9	0	9
8	Integrated Iron & Steel	1	0	1
9	Tanneries	80	0	80
10	Pesticide	1	0	1
11	Petrochemicals	6	0	6
12	Basic Drugs & Pharmaceutical	16	0	16
13	Pulp & Paper**	5	0	5
14	Oil Refinery	2	0	2
15	Sugar	36	0	36
16	Thermal Power Plant	9	0	9
17	Zinc Smeller	0	0	0
	Total	202	0	202

* 200 Tpd and above.

** 30 Tpd and above

ANNEXURE - XIII (i)
 PERFORMANCE OF ADVANCED ENVIRONMENTAL LABORATORIES / MOBILE ENVIRONMENTAL LABORATORIES
 EFFLUENT / PROJECT SAMPLES - COLLECTED / ANALYSED DURING THE YEAR 2000-2001

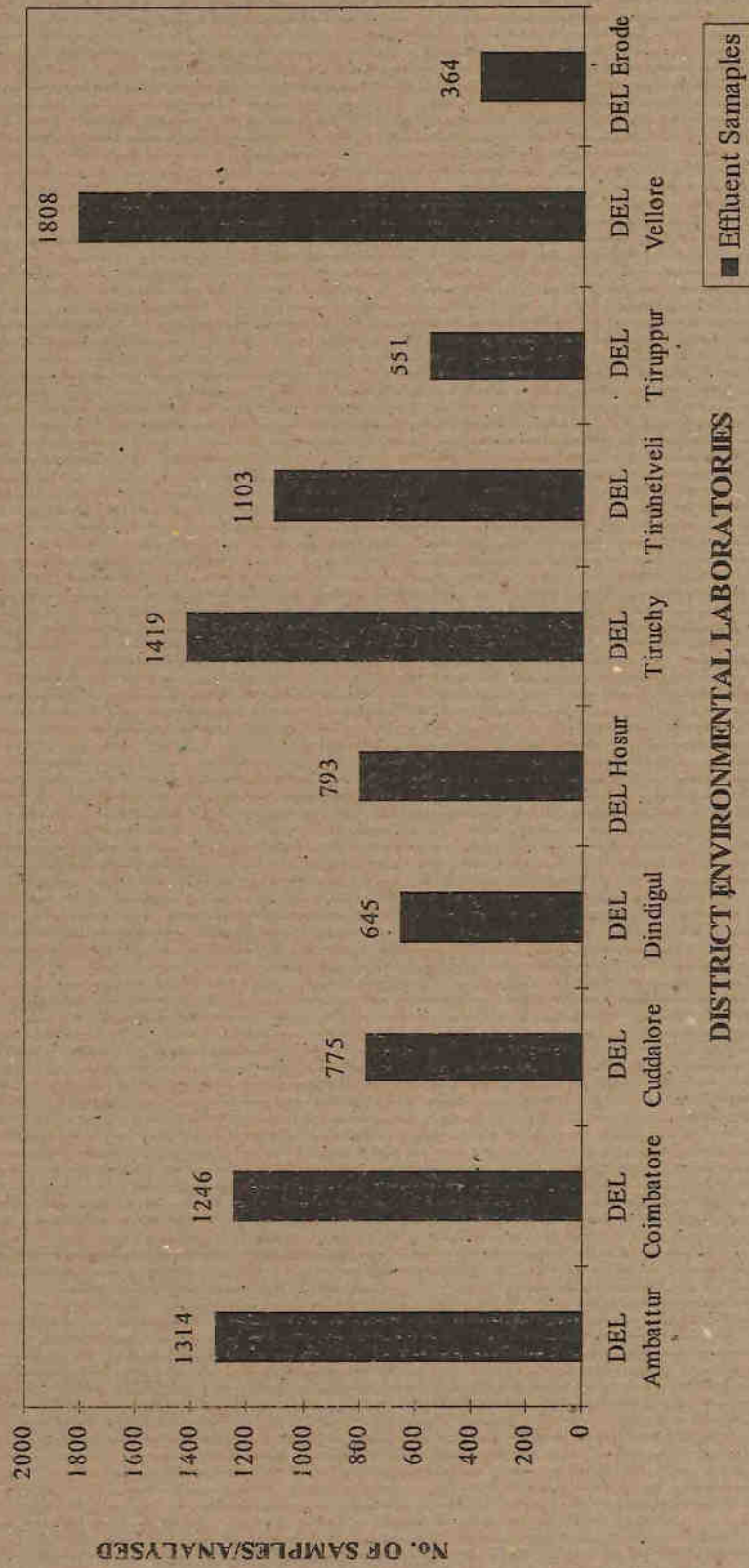


ANNEXURE - XIII (ii)

PERFORMANCE OF ADVANCED ENVIRONMENTAL LABORATORIES / MOBILE ENVIRONMENTAL LABORATORIES
 AMBIENT AIR QUALITY / STACK MONITORING SURVEYS CONDUCTED DURING THE YEAR 2000-2001

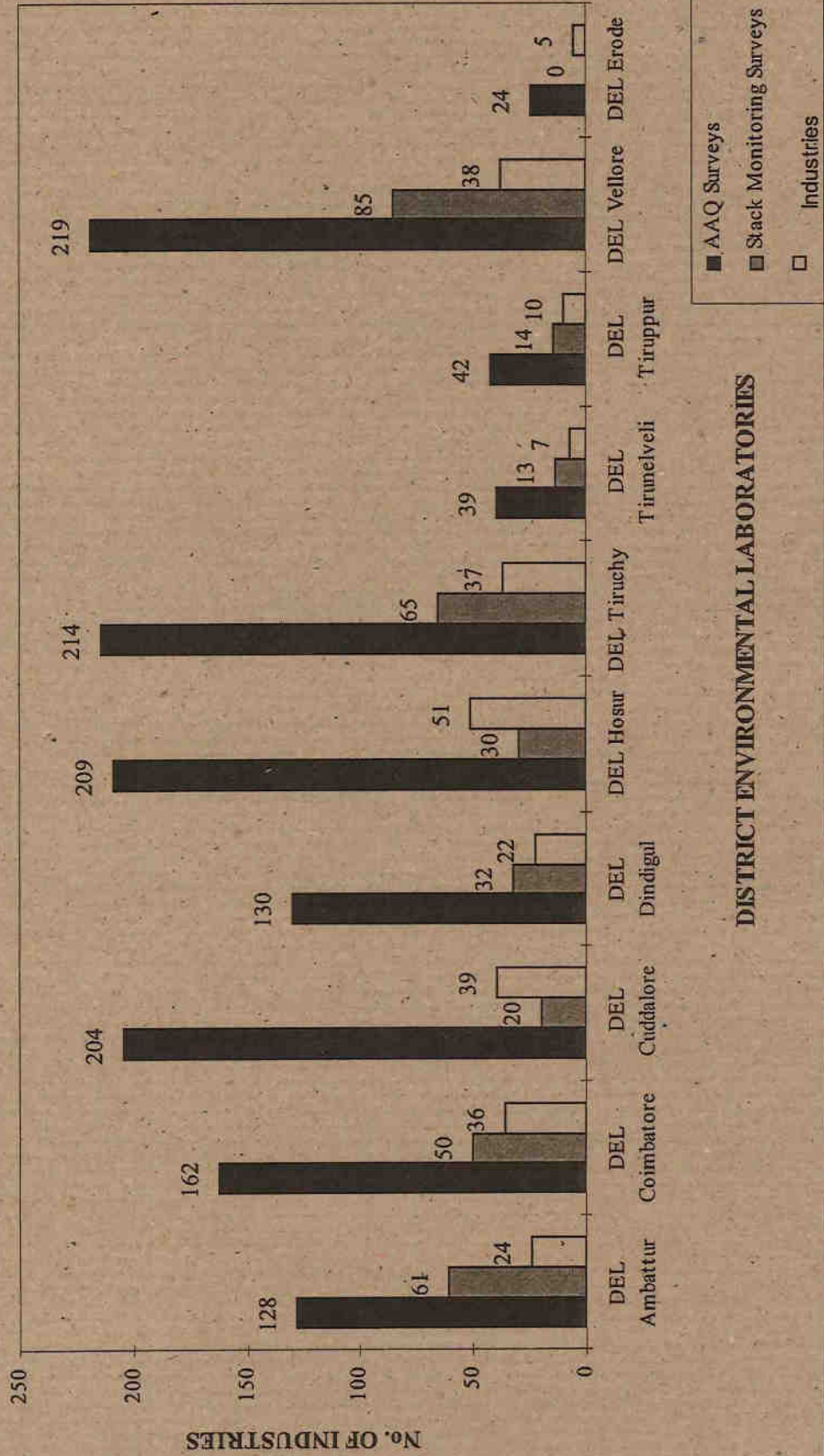


ANNEXURE - XIV - (i)
 PERFORMANCE OF DISTRICT ENVIRONMENTAL LABORATORIES
 EFFLUENT / PROJECT - SAMPLES COLLECTED / ANALYSED
 DURING THE YEAR 2000-2001



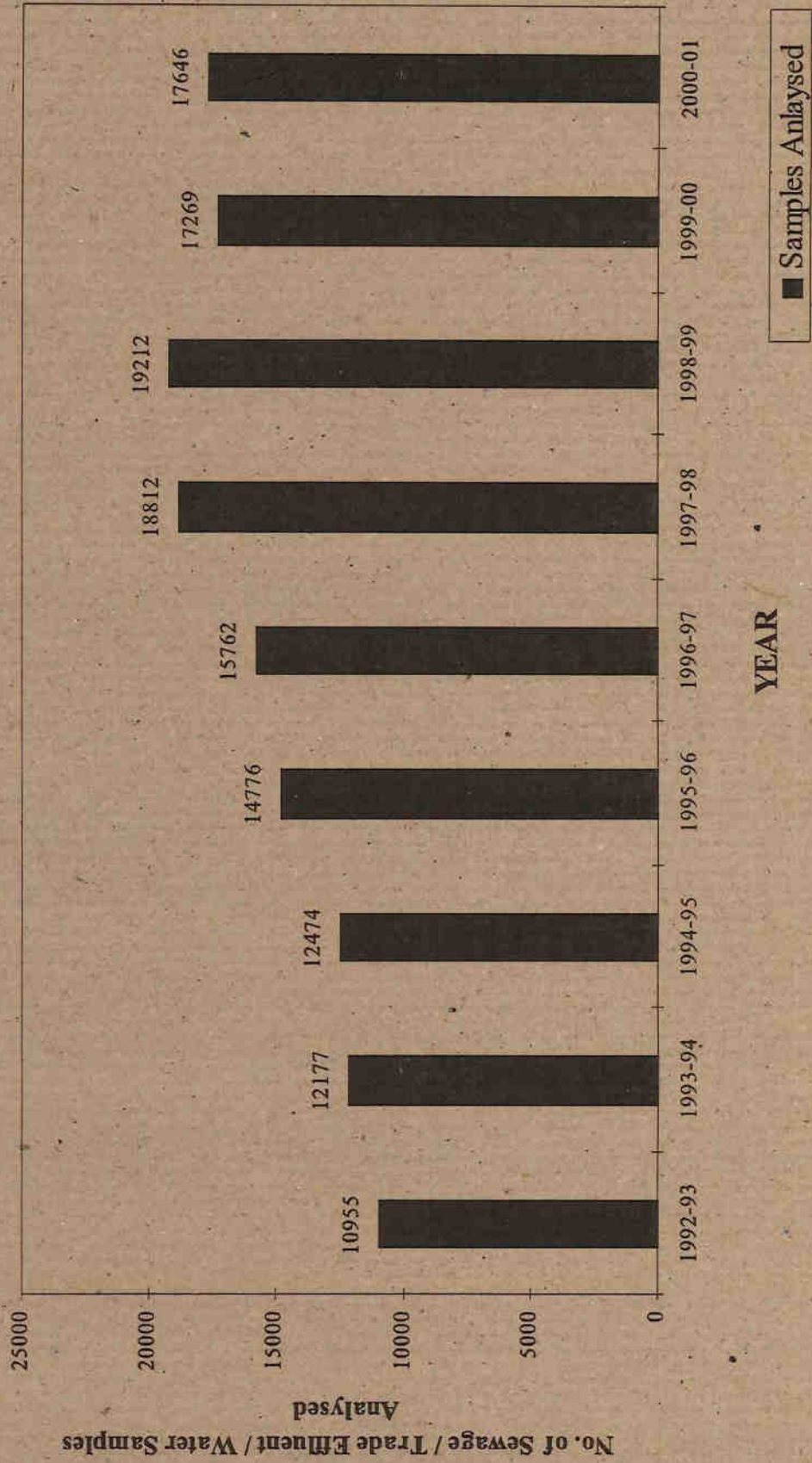
DISTRICT ENVIRONMENTAL LABORATORIES

ANNEXURE - XIV (ii)
 PERFORMANCE OF DISTRICT ENVIRONMENTAL LABORATORIES
 AMBIENT AIR QUALITY / STACK MONITORING SURVEYS
 CONDUCTED DURING THE YEAR 2000-2001

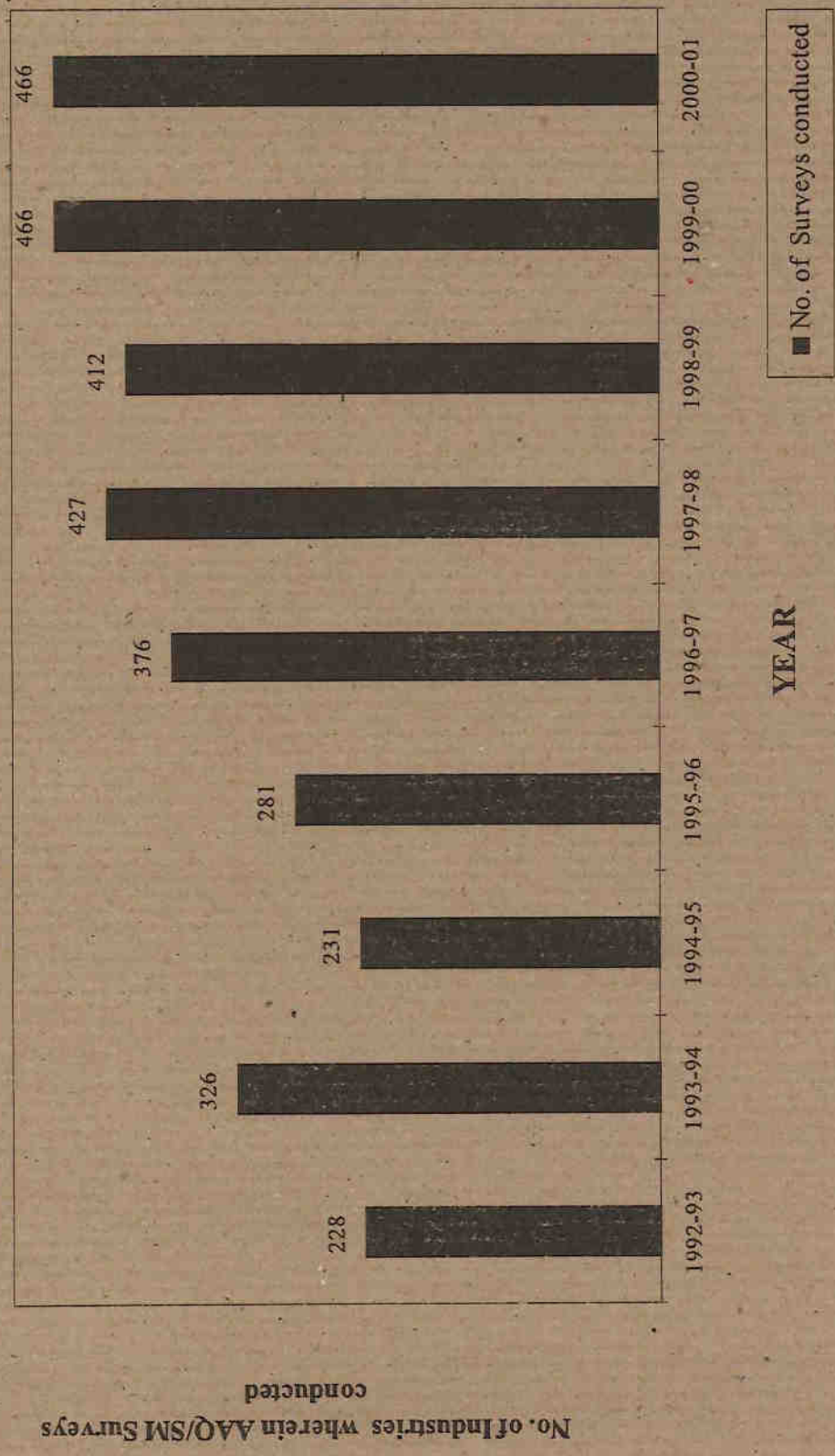


DISTRICT ENVIRONMENTAL LABORATORIES

ANNEXURE -XV (i)
 PERFORMANCE OF LABORATORIES
 SEWAGE / TRADE EFFLUENT / WATER SAMPLES ANALYSED
 FROM THE YEAR 1992-93 TO THE YEAR 2000-01.



ANNEXURE -XV-(ii)
 PERFORMANCE OF LABORATORIES
 AMBIENT AIR QUALITY / STACK MONITORING SURVEYS
 CONDUCTED FROM THE YEAR 1992-93 TO 2000-01



ANNUAL ACCOUNTS

FOR THE YEAR 2000 - 2001

M/s.ESSVEEYAR,
CHARTERED ACCOUNTANTS
Flat No.8 Appavoo Apartments
1 Venus Colony 2nd St.,Alwarpet
Chennai - 600 018.

AUDITOR'S REPORT
ON THE ACCOUNTS OF THE TAMIL NADU POLLUTION CONTROL BOARD FOR THE YEAR ENDED 31ST
MARCH 2001.

We have audited the attached Balance Sheet, the Receipts and Payments Account and the Income and Expenditure Account for the year ended 31st March 2001, of Tamil Nadu Pollution Control Board and signed by us this even date and have to report thereon as under:

- a) We have obtained all information and explanations, which to the best of our knowledge and belief were necessary for the purposes of our audit.
- b) In our opinion, the Board has kept proper books of account, so far as appears from our examination of such books.
- c) The attached Balance Sheet, Receipts and Payments account and Income and Expenditure account which are set out as provided in Rule 36 of the Tamil Nadu Water (Prevention and Control of Pollution) rules, 1983 and dealt with in this report are in agreement with the books of account maintained by the Board.
- d) It is noted that demands regarding "Consent fees" are raised on the basis of fixed Asset values as declared by the applicants in many cases. It was observed that no indication or note was available at Board Office indicating the basis of the levy as to whether fees has been computed on the value of assets indicated by Audited Balance Sheet, valuers' certificates or the Board's assessment's as the case may be. The Board is collecting cess and consent fees, however, necessary information/ data is not available to determine whether all industries to which the provision of the Act applies have paid cess and consent fees. In absence of such information, income from this head has been recognised on the basis of available records. While cess is accounted on accrual basis the consent fees is accounted on receipt basis only.

- e) There is no Internal Audit System during the period under audit:
- f) In our opinion and to the best of our information and according to explanations given to us, the said accounts, read with the Schedules thereto and the notes thereon attached hereto and subject to the remarks contained in para (d) and (e) above, and subject to schedule T note 1 (d) regarding Leave Salary considered on cash basis, Note 2 Cess Receivable, for which confirmation of balances have not been obtained, Note 3 advances towards land , Note 4 Funds in transit and confirmation of balances have not been obtained for advances to suppliers, give the information required by the Tamil Nadu Water (Prevention and Control of Pollution) Rules, 1983 in the manner so required, and give a true and fair view:
- (i) In the case of the Balance Sheet, of the State of affairs of the Board as 31st March 2001,
- (ii) In the case of Receipts and Payments account, of the total receipts and payments of the Board for the year ended 31st March 2001, and
- (iii) In the case of the Income and Expenditure account of the excess of Income over Expenditure of the Board for the Year ended 31st March 2001.

For M/s.ESSVEEYAR,
Chartered Accountants

Sd/-
K.R.T. Krishnamoorthi
Partner

Chennai,
27 December 2001

TAMIL NADU POLLUTION CONTROL
RECEIPTS AND PAYMENTS FOR THE YEAR
SEE RULES 36 OF TAMIL NADU WATER

PREVIOUS YEAR	RECEIPTS	TOTAL OF SUB HEAD	TOTAL OF MAJOR HEADS
	OPENING BALANCE		
54017038.67	a. Bank	34152503.94	
18013.50	b. Cash	16600.00	
6371978.50	c. Funds in Transit	5692144.00	39861247.94
	I. GRANTS RECEIVED		
-	a. From Government	-	
-	b. From other Agencies	-	
	II. FEES		
620000.00	a. Consultant Registration Fees	-	
670915.00	b. Cost of Application	740114.00	
86827766.30	c. Consent Fees	88944526.50	
38840450.15	d. Cess Collection	39103893.40	
-	e. Fees for handling H. Waste	1752800.00	130541333.90
23940406.80	III. Services & Rental Charges (Lab Analysis Charges Sch - A)		26730645.00
52760388.00	IV INTEREST ON INVESTMENT		44136913.00
	V. MISCELLANEOUS		
5891618.03	a. Others (Schedule-B)	15405902.45	
16971686.00	b. Cess Re-imburement	37806229.00	
40000000.00	c. CPCB for Green Belt Scheme	7650000.00	60862131.45
326930260.95	C/o		302132271.29

BOARD, CHENNAI - 600 032

ENDED 31 MARCH 2001.

(PREVENTION AND CONTROL OF POLLUTION) RULES 1983.

PREVIOUS YEAR	PAYMENTS	TOTAL OF SUB HEAD	TOTAL OF MAJOR HEADS
	I. CAPITAL EXPENDITURE		
11530000.00	a. Assets - Land Advance and Building Development	2665000.00	
498208.00	b. Laboratory Equipment	2428364.00	
18090.00	c. Vehicles	-	
370169.00	d. Furniture	771364.00	
437490.00	e. Office Appliance	421904.00	
636935.00	f. Library Books	788868.00	
16650.00	g. Schemes	-	
-	h. Security Deposit	-	
9675.00	i. Software Development	183750.00	
68528.00	j. Electrical Installation	4925.00	
0.00	k. Lab. Chemicals etc.,	576980.00	7841155.00
	II. REVENUE EXPENDITURE		
	A. ADMINISTRATIVE		
40094508.25	i. Salaries	72002856.35	
2200743.00	ii. Pension & Gratuity Contribution	4946820.00	
27178140.80	iii. Contingent Expenditure	-	
2931291.00	iv. Surrender Leave Salary	3712733.00	
1233557.00	v. Bonus	1305546.00	
2020696.50	vi. Medical Expenses	1627909.10	83595864.45
	B. BOARD LABORATORY		
225362.15	i. Running Expenses of Lab.		132957.50
89470043.70	C/o		91569976.95

BOARD, CHENNAI - 600 032

ENDED 31 MARCH 2001.

(PREVENTION AND CONTROL OF POLLUTION) RULES 1983.

PREVIOUS YEAR	PAYMENTS	TOTAL OF SUB HEAD	TOTAL OF MAJOR HEADS
89470043.70	B/F		91569976.95
3309463.32	C. Running & Maintenance of Vehicle		3568500.90
	D. MAINTENANCE & REPAIRS		
4077487.00	i. Buildings and land , Rent	5118647.60	
51068.00	ii. Furniture & Fixture	1540.00	
306756.00	iii. Scientific instruments	284530.50	
449868.50	iv. Office Appliance	364869.00	
525479.60	v. Electrical Installation	385310.50	
85913.00	vi. Insurance of Assets	347798.00	
	vii. Other Assets	12471.00	6515166.60
133387.50	E. Fees to Consultant and Specialists		15010.00
179811.00	F. Law Charges		239070.00
43769.50	G. Expenses for audit.		29396.00
20000000.00	H. CPCB for Green Belt Scheme Green Belt Sch. paid by Board	29825000.00 2550000.00	32375000.00
20741656.30	III MISCELLANEOUS (Schedule-D)		29066792.35
36198342.00	a. Cess Remittance		40844221.00
4505718.30	IV ADVANCE (Schedule - E)		4567673.10
	V Deposits		
967900000.00	a. Short Term Deposits	759387000.00	
61883300.75	b. Others (Schedule - F)	27056701.90	786443701.90
	VI CLOSING BALANCE		
34152503.94	Bank	64986845.54	
16600.00	Cash	22690.00	
5692144.00	Funds in Transit	4131945.00	69141480.54
1249723312.41	Total		1064375989.34

Subject to our report of even date & Schedules + notes attached
For M/s. ESSVEEYAR Chartered Accountants

sd/-

Sheela Rani Chunkath I.A.S.
Chairperson

sd/-

K.R.T. Krishnamoorthi
Partner

ANNUAL STATEMENT
INCOME AND EXPENDITURE ACCOUNT FOR
SEE RULES 36 OF TAMIL NADU WATER

PREVIOUS YEAR	EXPENDITURE	TOTAL OF SUB HEAD		TOTAL OF MAJOR HEADS	
		Rs.	Ps.	Rs.	Ps.
	REVENUE EXPENDITURE				
	A. ADMINISTRATIVE				
2580398.00	i. Pay of officers	2782939.00			
45618050.30	ii. Pay of Establishment	45861648.50			
34037035.00	iii. Allowance & Honororia(Sch-H)	34149741.45			
	iv. Contribution to Gratuity & Provision for Pension	10237717.00			
9719348.00	v. Surrender Leave Salary	3701639.00		96733684.95	
2912972.50					
1368306.27	B. Running Expenses of Labs.			769122.98	
	C. Running and Maintenance of Vehicle (Sch- I)			3765775.60	
3579931.37	D. Maintenance and Repairs				
	i. Furniture & Fixtures	3493.50			
53681.00	ii. Lab. Equipments & Instruments	332991.00			
421421.00	iii. Office Appliance	175023.00			
546072.50	iv. Electrical Installation	617325.50			
1018287.60	v. Building	1652455.60			
1948073.50	vi. Others	12345.00		2793633.60	
	E. Fees to Consultants and Specialists			15010.00	
332354.50	F. Law Charges			275649.00	
279811.00	G. Depreciation (Form XV)			10747423.24	
11625215.00	H. Miscellaneous (Sch - J)			29665367.95	
19125481.95	I. Fees for Audit			26250.00	
27500.00	J. Prior Period Expenditure			2845289.50	
262590.10	K. Excess of income over Exp.			108606173.10	
88235920.98	L. Notes to B/S (Sch-T)				
223692450.57	Total			256243379.92	

Chennai - 600 032
Date: 27/12/2001

sd/-
R. Devaki B.A.
Fin. Adviser

sd/-
K. Sanjeevi M.E.(PH)
Member Secretary

OF ACCOUNT
THE YEAR ENDED 31ST MARCH 2001.
(PREVENTION AND CONTROL OF POLLUTION) RULES 1983.

PREVIOUS YEAR		INCOME	TOTAL OF SUB HEAD		TOTAL OF MAJOR HEADS	
Rs.	Ps.		Rs.	Ps.	Rs.	Ps.
		I. GRANTS RECEIVED				
	-	a. From Government		-		
	-	b. From other Agencies		-		
		Less: Amount utilised for Capital Expenditure		-		
		Net Grant available for Revenue Expenditure		-		
114219408.30		II. Fees (Sch -K)			120667483.50	
26217135.00		III Services & Rental Charges Lab Analysis Charges (Sch -L)			30891035.00	
2124622.27		IV Miscellaneous Receipts				
16971686.00		i. Others (Sch - M)	478275.42			
		ii. Cess Reimbursement	37806229.00		38284504.42	
64159599.00		V Interest on Investment			66400357.00	
223692450.57		Total			256243379.92	

Subject to our report of even date & Schedules + notes attached
For M/s. ESSVEEYAR Chartered Accountants

sd/-
Sheela Rani Chunkath I.A.S.
Chairperson

sd/-
K.R.T. Krishnamoorthi
Partner

ANNUAL STATEMENT
BALANCE SHEET AS
SEE RULES 36 OF TAMIL NADU WATER

PREVIOUS YEAR		LIABILITIES	TOTAL OF SUB HEAD		TOTAL OF MAJOR HEADS	
Rs.	Ps.		Rs.	Ps.	Rs.	Ps.
		A. CAPITAL FUND				
		a. GRANTS				
50526922.18		i. Grants received from Govt. for capital exp. upto 01.04.2000	50526922.18			
		ii. Grants received from Govt. for capital exp. During the current year and utilised upto 31.3.2001				
		iii. Grants received towards specific schemes from other agencies				50526922.18
		b. Excess of Income over Expenditure				
437253506.75		i. As at 01.04.00	513864212.73			
			513864212.73			
(11625215.00)		iii. Less: Amount transferred to Depreciation Fund	(10747423.24)			
88235920.98		iv. Add: Surplus during the year	503116789.49			
			108606173.10			611722962.59
100242010.16		c. Depreciation Fund				110989433.40
		B. OTHER DEPOSITS				
2711839.33		i. Deposits for supply & works (Schedule -N)	2364107.83			
42234319.05		ii. Refundable Performance Guarantee Deposits	35427319.05			37791426.88
		C. AMOUNT DUE				
517312705.23		i. Cess Payable	554740720.41			
(287046.54)		Less: Provision	(871818.60)			
12965049.56		ii. Others (Schedule -O)	553868901.81			
			15326037.44			569194939.25
1239570011.70		C/o				1380225684.30

OF ACCOUNT
ON 31ST MARCH 2001.
(PREVENTION AND CONTROL OF POLLUTION) RULES 1983.

PREVIOUS YEAR		ASSETS	TOTAL OF SUB HEAD		TOTAL OF MAJOR HEADS	
Rs.	Ps.		Rs.	Ps.	Rs.	Ps.
		I. FIXED ASSETS				
	8376224.65	a. LAND DEVELOPMENT				8376224.65
		b. Building under Construction				
	6180000.00	I. Hosur	6180000.00			
	5500000.00	ii. Tirunelveli	5500000.00			
	5500000.00	iii. Trichy	8165000.00			
	8870000.00	iv. Madurai	8870000.00		28715000.00	
		c. Software Development			183750.00	
		OTHER ASSETS				
	71486991.24	a. As per Form XV				66266792.00
		b. Stock in hand				
	1010760.64	I. Lab Chemicals	818277.12			
	1040111.73	ii. Glassware	948596.40			
	240706.96	iii. Misc. Stores	230145.55			
	857674.80	iv. Filter Paper	1078536.58		3075555.65	
		III SUNDRY DEBTORS				
		Cess Receivable				
	410210630.06	a. From Industries	440443493.25			
	102936272.40	b. From Local Bodies	111264570.99			
			551708064.24			
	(287046.54)	Less: Provision for doubtful Debts	(871818.60)		550836245.64	
		IV. ADVANCES & DEPOSITS				
	67116281.34	a. Misc. amounts recoverable (Schedule - Q)	101207301.24			
	4825531.25	b. Others amounts recoverable (Schedule - R)	4141006.00			
	1386495.40	c. Deposits (Schedule - S)	1622654.40		106970961.64	
	695250633.93	C/o			764424529.58	

ANNUAL STATEMENT
BALANCE SHEET AS
SEE RULES 36 OF TAMIL NADU WATER

PREVIOUS YEAR		LIABILITIES	TOTAL OF SUB HEAD		TOTAL OF MAJOR HEADS	
Rs.	Ps.		Rs.	Ps.	Rs.	Ps.
12395700	11.70	B/f			1380225684	30
139956	98	D. Environmental Impact Study			139956	98
32175849	00	E. Income received in advance (Schedule - P)			30906402	00
61392500	00	F. Subsidies for common Effluent treatment plants			53473500	00
1170608	69	G. Environmental Education Fund Reserve			1189893	34
500000	00	H. Emergency response centre			500000	00
20000000	00	I. C P C B Green Belt			7825000	00
0	00	J. Zoning Atlas Scheme			145764	00
63382745	50	K. Pension Fund			76113157	50
1418331671	87	Total			1550519358	12

Chennai - 600 032
Date: 27/12/2001

sd/-
R. Devaki B.A.
Fin. Adviser

sd/-
K. Sanjeevi M.E.(PH)
Member Secretary

OF ACCOUNT
ON 31ST MARCH 2001.
(PREVENTION AND CONTROL OF POLLUTION) RULES 1983.

PREVIOUS YEAR		ASSETS	TOTAL OF SUB HEAD		TOTAL OF MAJOR HEADS	
Rs.	Ps.		Rs.	Ps.	Rs.	Ps.
695250633.93		B/f			764424529.58	
		V. CASH				
		a. Deposits				
63382745.50		1 Pension Fund Investment	76113157.50			
100242010.16		2 Depreciation Fund Investment	110989433.40			
43905819.05		3 Refundable Performance Guarantee Deposit Investment	35427319.05			
447000.00		4 Model ETP for Sago Plant	447000.00			
475242215.29		5 Other term deposit	493976438.05		716953348.00	
34152503.94		b. Cash at Bank	64986845.54			
16600.00		c. Cash in Hand	22690.00			
5692144.00		d. Cash in Transit	4131945.00		69141480.54	
1418331671.87		Total			1550519358.12	

Subject to our report of even date & Schedules + notes attached
For M/s. ESSVEYAR Chartered Accountants

sd/-
Sheela Kani Chunkath I.A.S.
Chairperson

sd/-
K.R.T. Krishnamoortni
Partner

TAMIL NADU POLLUTION CONTROL BOARD
FORM - XV

ANNUAL STATEMENT OF ACCOUNTS - FIXED ASSETS AS ON 31ST MARCH 2001.
SEE RULES 36 OF TAMIL NADU WATER (PREVENTION AND CONTROL OF POLLUTION) RULES 1983.

Sl. No.	Particulars of Assets	Percentage	Opening Balance on 01/04/2000	Additions and sales adjustment during the year	Total	Depreciation	Closing Balance on 31/03/2001	Cumulative Depreciation as on 31/03/2001
1	Building	10.00%	46293039.61		46293039.61	4629303.61	41663736.00	41263494.60
2	Library Books	10.00%	2367817.90	922739.00	3290556.90	329055.90	2961501.00	1522418.03
3	Vehicle	33.33%	2149358.64	927783.00	3077141.64	1025611.64	2051530.00	10837445.15
4	Furniture & Fixture	10.00%	8436918.35	518128.00	8955046.35	895505.35	8059541.00	7027117.23
5	Office Appliance	10.00%	4510139.70	519439.00	5029578.70	502958.70	4526620.00	4438067.14
6	Lab Equipment	33.33%	7238452.09	2634210.00	9872662.09	3290559.09	6582103.00	44663731.14
7	Electrical Installations	15.00%	491264.95	4925.00	496189.95	74428.95	421761.00	1237160.11
	Total		71486991.24	5527224.00	77014215.24	10747423.24	66266792.00	110989433.40

Sd/-
R. Devaki, B.A.,
Fin. Adviser

Sd/-
K. Sanjeevi M.E.(PH)
Member Secretary

Sd/-
Sheela Rani Chankath., I.A.S.,
Chairperson

For M/s. ESSVEEYAR Chartered Accountant

Sd/-
K.R.T. Krishnamoorthi
Partner

Chennai - 600 032
Date: 27/12/01

SCHEDULE OF RECEIPTS AND PAYMENTS ACCOUNT
FOR THE YEAR ENDED ON 31ST MARCH 2001.

RECEIPTS

SCHEDULE - A

Services & Rental Charges

SL.NO	DESCRIPTION	Rs.	Ps.
1	Analysis Charges (Fees)	14600766.00	
2	MINAR	277660.00	
3	VEM Test Fees	4448423.00	
4	A.A.Q.S	6391813.00	
5	GEMS	392115.00	
6	NAAQM	619868.00	
		<u>26730645.00</u>	

SCHEDULE - B

MISCELLANEOUS RECEIPTS

SL.NO	DESCRIPTION	Rs.	Ps.
1	Flag Day Collection	30950.00	
2	Miscellaneous Income	1674002.60	
3	Sale of legal Books	76805.00	
4	Public Hearing	2712887.00	
5	Rent (Corporate Office)	97288.00	
6	Sale of Vehicle	120789.00	
7	ETI	73783.85	
8	Interest on Loans / Advance	19397.00	
9	CPCB Green Belt - Refund Fr. Dept.	10000000.00	
10	Zoning Atlas	600000.00	
	TOTAL	<u>15405902.45</u>	

SCHEDULE - C

ADVANCE TO STAFF (Receipts)

SL.NO	DESCRIPTION	Rs.	Ps.
1	Temporary Advance	337172.30	
2	L.T.C. Advance	31404.00	
3	Vehicle Advance	214619.00	
4	Tour Advance	230465.25	
5	Festival Advance	4600.00	
6	Pay Advance	2000.00	
7	Telephone & Telex	64762.00	
8	PRL	0.00	
9	Marriage Advance	3180.00	
10	Cycle Advance	214.00	
11	Handloom Advance	2290.00	
	Total	<u>890706.55</u>	

SCHEDULE OF RECEIPTS AND PAYMENTS ACCOUNT
FOR THE YEAR ENDED ON 31ST MARCH 2001.

PAYMENT

SCHEDULE - D

MISCELLANEOUS

SL.NO	DESCRIPTION	Rs.	Ps.
1	Advertisement and Publicity	697210.00	
2	Postage/Telegram	694517.50	
3	Electricity/Water Charges	4242255.00	
4	Printing and Stationery	1942729.05	
5	Telephone and Telex	2435959.40	
6	Staff Welfare Expenses	485511.80	
7	Pollution Awareness Expenses	1693175.25	
8	Training and Seminar	2269720.00	
9	Entertainment	133322.15	
10	Miscellaneous Expenses	94408.80	
11	Newspaper and Periodicals	197125.40	
12	Conveyance	113935.50	
13	Wages	2788319.00	
14	Office Expenses	268831.60	
15	Expenses through petty cash	782210.75	
16	Prior period adjustment account	48471.00	
17	Refund of Grant to Govt. of T.N.	3000000.00	
18	Travelling expenses	1147098.50	
19	Trade Fair	391404.00	
20	Land Maintenance expenses	31616.00	
21	Bank interest and commission	215350.90	
22	LTC Expenses	124557.00	
23	ETI Expenses	893829.05	
24	F.B.F.	131720.00	
25	Environmental Pavilion Expenses	77564.80	
26	Board Meeting Expenses	331.00	
27	Honorarium	141101.00	
28	Bio Medical Waste Mgmt. Exp.	35434.00	
29	Public Hearing	360921.00	
30	Financial Assistance to Proj.	996716.00	
31	Pay Comm. Arrears	29664.00	
32	Turn duty and Overtime Allow.	26785.50	
33	O/s. Expenses	2530051.40	
34	Zoning Atlas Exp.	8996.00	
35	Flag Day Payt.	35950.00	
	TOTAL		<u>29066792.35</u>

SCHEDULE OF RECEIPTS AND PAYMENTS ACCOUNT
FOR THE YEAR ENDED ON 31ST MARCH 2001.

PAYMENT

SCHEDULE - E

ADVANCE TO STAFF (PAYMENT)

SL.NO	DESCRIPTION	Rs.	Ps.
1	Festival Advance	507900.00	
2	Furniture Advance	1800.00	
3	Cycle Advance	3000.00	
4	Handloom Advance	104120.00	
5	Marriage Advance	16000.00	
6	Pay Advance	15865.00	
7	Tour Advance	997432.00	
8	Temporary Advance	1945110.35	
9	L.T.C. Advance	349026.00	
10	Imprest to Staff	22226.75	
11	TTA	1000.00	
12	Motor Vehicle Advance	604193.00	
	TOTAL	<u>4567673.10</u>	

SCHEDULE - F

DEPOSITS AND ADVANCES (PAID) (OTHERS)

SL.NO	DESCRIPTION	Rs.	Ps.
1	Advance to Suppliers	6039944.90	
2	Earnest Money Deposit (refund)	230960.00	
3	Rent Advance	7880.00	
4	Retention Money Deposit	15947.00	
5	Miscellaneous Deposit	3591.00	
6	RPGD	6807000.00	
7	Electricity Deposit	144568.00	
8	Security Deposit	376646.00	
9	CETP subsidy released	12110250.00	
10	Pre Paid Expense	3783.00	
11	Telephone & Telex Deposit	23000.00	
12	Enlistment Deposit	15000.00	
13	Sundry Creditor Others	1278132.00	
	TOTAL	<u>27056701.90</u>	

RECEIPTS

SCHEDULE - G

ADVANCES AND DEPOSITS (OTHERS) (RECEIVED)

SL.NO	DESCRIPTION	Rs.	Ps.
1	Consent Fees received in advance	29844921.00	
2	Cess received in advance	993486.00	
3	Analysis fees received in advance	123290.00	
4	A.A.Q.S received in advance	851360.00	
5	CETP Subsidy Recd.	4191250.00	
	TOTAL	<u>36004307.00</u>	

SCHEDULE FORMING PART OF INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED ON 31ST MARCH 2001.

EXPENDITURE

SCHEDULE - H

ALLOWANCES AND HONORARIA

SL.NO	DESCRIPTION	Rs.	Ps.
1	Allowances	25350111.60	
2	Wages	3330723.00	
3	Travelling Expenses	2070800.75	
4	Medical Reimbursement	1618155.10	
5	Honorarium	8640.00	
6	Bonus	1295585.00	
7	LTC Expenses	421113.00	
8	Payment of VI. Pay Commission Arrears	54613.00	
	Total	<u>34149741.45</u>	

SCHEDULE - I

Running and Maintenance of Vehicles

SL.NO	DESCRIPTION	Rs.	Ps.
1	Repairs	1043944.15	
2	Fuel	2544185.45	
3	Insurance	177646.00	
	Total	<u>3765775.60</u>	

SCHEDULE FORMING PART OF INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED ON 31ST MARCH 2001.

EXPENDITURE

SCHEDULE - J

MISCELLANEOUS

SL.NO	DESCRIPTION	Rs.	Ps.
1	Office Expenses		395388.05
2	Telephone & Telex	2483129.55	
3	Sundries	97443.50	
4	Entertainment Expenses	256175.50	
5	Printing & Stationery	3008082.55	
6	Electricity & Water Charges	4589698.00	
7	Postage & Telegram	741016.25	
8	Advertisement & Publicity	721490.00	
9	Rent on Buildings	3356590.00	
10	Newspaper and Periodicals	257970.70	
11	Pollution Awareness Expenses	2190213.10	
12	Insurance of lab equipment	278961.00	
13	Family Benefit Fund Contribution	182780.00	
14	Conveyance Expenses	251123.80	
15	Staff Welfare Expenses	522729.45	
16	Training and Seminar Expenses	2632098.60	
17	Bank Interest	256718.65	
18	Land Maintenance Expenses	31616.00	
19	Trade Fair Expenses	454441.00	
20	Board Meeting Expenses	49234.50	
21	E T I Expenses	1765035.20	
22	Financial Assistance to Projects	1003955.00	
23	Expenses of audit	5678.00	
24	Bio-waste Management Expenses	35434.00	
25	Property Tax	602254.00	
26	Environmental Pavilion Expenses	90448.55	
27	Coastal Monitoring Expenses	6700.00	
28	Insurance of Assets	68963.00	
29	CPCB for Green Belt Scheme	3330000.00	
	TOTAL		<u>29665367.95</u>

SCHEDULE FORMING PART OF INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED ON 31ST MARCH 2001.

INCOME

SCHEDULE - K

FEEs

SL.NO	DESCRIPTION	Rs	Ps
1	Consent Fees	119928969.50	
2	Consent Forms	738514.00	
	TOTAL	<u>120667483.50</u>	

SCHEDULE - L

SEVICE AND RENTAL CHARGES

SL.NO	DESCRIPTION	Rs	Ps
1	Analysis Charges	14675906.00	
2	MINAR	277660.00	
3	AAQS	7582153.00	
4	VEM Test Fees	4469460.00	
5	GEMS	392115.00	
6	Others	2870680.00	
7	NAAQM	623061.00	
	Total	<u>30891035.00</u>	

SCHEDULE - M

Miscellaneous

SL.NO	DESCRIPTION	Rs	Ps
1	Cess Appeal Fees	1150.00	
2	Miscellaneous Income	275139.42	
3	Sale of Books	81380.00	
4	Interest on Loans & Advance	120606.00	
	TOTAL	<u>478275.42</u>	

SCHEDULE FORMING PART OF BALANCE SHEET
AS ON 31ST MARCH 2001.

LIABILITIES

SCHEDULE - N

OTHER DEPOSITS		Rs.	Ps.
1	E.M.D.	537776.20	
2	Security Deposits	945003.15	
3	Enlistment Deposits	265500.00	
4	Retention Money Deposits	300828.48	
5	Miscellaneous Deposits	315000.00	
TOTAL		<u>2364107.83</u>	

SCHEDULE - O

SUNDRY CREDITORS		Rs.	Ps.
SL.NO	DESCRIPTION		
1	Flag Day Collection	16750.00	
2	P.R.L.	889618.80	
3	Outstanding Liability	6251025.84	
4	T D S (Officers)	55326.70	
5	T D S (Others)	4615.00	
6	Public Hearing Fund	7880861.10	
7	Staff Death/Retirement Claim Payable	218040.00	
8	Others	9800.00	
TOTAL		<u>15396037.44</u>	

SCHEDULE - P

INCOME RECEIVED IN ADVANCE		Rs.	Ps.
SL.NO	DESCRIPTION		
1	Consent Fees	29770421.00	
2	Cess Fees	993486.00	
3	Analysis Fees	123290.00	
4	AAQS	19205.00	
TOTAL		<u>30906402.00</u>	

SCHEDULE FORMING PART OF BALANCE SHEET
AS ON 31ST MARCH 2001.

ASSETS

SCHEDULE - Q

MISCELLANEOUS ADVANCES

SL.NO	DESCRIPTION	Rs.	Ps.
1	Advance to Suppliers	5230287.80	
2	Rent Advance	719808.15	
3	Insurance Claim Receivable	43243.00	
4	Land Advance	2881395.00	
5	Prepaid Expenditure	3783.00	
6	Staff Welfare Fund	12701.15	
7	Tax Advance to ETI	382784.14	
8	Interest Receivable	91910631.00	
9	Others	22668.00	
	TOTAL		<u>101207301.24</u>

SCHEDULE - R

ADVANCES TO STAFF

SL.NO	DESCRIPTION	Rs.	Ps.
1	Tour Advance	262449.50	
2	Temporary Advance	45200.00	
3	Marriage Advance	70695.00	
4	Festival Advance	305490.00	
5	Handloom Advance	60602.00	
6	Driver Training Advance	3499.50	
7	Pay Advance	2500.00	
8	Cycle Advance	13790.00	
9	Motor Vehicle Advance	3140598.00	
10	LTC Advance	56500.00	
11	Personal Computer Advance	89480.00	
12	Miscellaneous Advance (P R L)	860.00	
13	Staff Housing Scheme	12662.00	
14	TT Advance	75600.00	
15	Furniture Advance	1080.00	
	TOTAL		<u>4141006.00</u>

SCHEDULE - S

DEPOSITS

SL.NO	DESCRIPTION	Rs.	Ps.
1	Telephone & Telex	1010830.00	
2	T.N.E.B.	582132.00	
3	Miscellaneous Deposits	21191.00	
4	Staff Higher Studies Deposit	4928.00	
5	Others (Customs Deposit)	3573.40	
	TOTAL		<u>1622654.40</u>

SCHEDULE - T

NOTES FORMING PART OF ACCOUNTS FOR THE YEAR ENDED 31ST MARCH 2001.

1. ACCOUNTING POLICIES:

a) Fixed Assets are shown at written down value. Depreciation has been provided at the following rates as decided by the Board, which is being followed consistently. Depreciation in respect of addition during the year has been provided for the full year.

i. Library Books	10.00%
ii. Vehicle	33.33
iii. Furniture & Fixtures	10.00%
iv. Office Appliances	10.00%
v. Lab Equipment	33.33%
vi. Electrical Installation	15.00%
vii. Building	10.00%

b) Stock of Chemicals / Glassware and Consumables are as inventoried as at the close of the year and valued at cost.

c) Except for interest on investments, Other income is accounted on receipt basis.

d) Payment of Gratuity to the employees is covered under LIC's Groups Gratuity Scheme, and pension to employees is being provided on annual accrual basis. Leave salary is considered on cash basis.

2. (a) Cess Receivable Rs.55,03,52,319.99 include disputed amounts from the following industries / local bodies:

i. Ennore Thermal Power Station	:	18,09,81,279.00
ii. North Madras Thermal Power Station	:	12,03,84,218.00
iii. Tuticorin Thermal Power Station	:	13,77,22,252.00
iv. Local Bodies	:	11,12,64,570.99

b) Provision has been made for doubtful debts Rs. 8,71,818.60 in respect of Cess receivable but not collected due to closure.

3. Miscellaneous Advances include Rs.28,81,395 paid towards purchase of lands registered and or pending registration at various places.
4. Funds in Transit include Rs.10,00,069 which are required to be reconciled and adjusted. Revenue impact, if any, on these is not ascertainable.

Sd/-
R.Devaki B.A
Financial Adviser

Sd/-
K. Sanjeevi M.E.(PH)
Member Secretary

Sd/-
Sheela Rani Chunkath., I.A.S.,
Chairperson

Subject to our report of even dated
Ms.ESSVEEYAR,
Chartered Accountants

Sd/-
K.R. T. Krishnamoorthi
Partner