

ஆண்டு அறிக்கை

2001 - 2002



தமிழ்நாடு மாசு கட்டுப்பாடு வாரியம்
TAMILNADU POLLUTION CONTROL BOARD



1.1 INTRODUCTION

The Tamilnadu Prevention and Control of Water Pollution Board was constituted by the Government of Tamilnadu on the twenty seventh day of February, nineteen eighty two in pursuance of the Water (Prevention and Control of Pollution) Act, 1974 (Central Act 6 of 1974). The Board was later renamed as the Tamilnadu Pollution Control Board (TNPCB) in the year 1983. It enforces the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Water (Prevention and Control of Pollution) Cess Act 1977, the Air (Prevention and Control of Pollution) Act, 1981, and the rules made under the Environment (Protection) Act, 1986 which includes:

- The Environment (Protection) Rules, 1986.
- The Hazardous Wastes (Management and Handling) Rules, 1989 as amended in 2000.
- The Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in 1994 and 2000.
- The Biomedical Waste (Management and Handling) Rules, 1998 as amended in 2000.
- The Recycled Plastics Manufacture and Usage Rules, 1999.
- The Noise Pollution (Regulation and Control) Rules, 2000.
- The Municipal Solid Wastes (Management and Handling) Rules, 2000.
- The Battery (Management and Handling) Rules, 2001.

1.2 Functions

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

- To plan a comprehensive programme for the prevention, control and abatement of water and air pollution.
- To advise the State Government on any matter concerning the prevention, control or 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 the prevention, control and abatement thereof.
- To collect and disseminate information relating to water and air pollution and the prevention, control or abatement thereof.
- To inspect sewage and trade effluent treatment plants for their effectiveness and review plans, specifications for corrective measures.
- To inspect industrial plants or manufacturing process, any control equipment to give directions to take steps for the prevention, control or abatement of air pollution.
- To inspect air pollution control areas for the purpose of assessment of quality of air therein and take steps for the prevention, control or abatement of air pollution in such areas.
- To lay down, modify or annul effluent standards for sewage and trade effluents and for the emission of air pollutants into the atmosphere from the industrial plants and automobiles or 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 effluents on land.
- To collect samples of sewage, trade effluents and emissions of air pollutants and to analyse the same for specific parameters.
- To collaborate with the 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 and air pollution and to organise mass education programme relating thereto.
- To perform such other functions as may be prescribed by the State Government or the Central Pollution Control Board.

2.1 Constitution of the 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 is given in Annexure - 1.

2.2 Organisational Setup

The TNPCB has established its organization structure with a two-tier system consisting of head-office at Chennai and district offices with total staff strength of 739. There are 25 district offices, of which one is headed by Joint Chief Environmental Engineer, 19 are headed by District Environmental Engineers and 5 offices under the control of Assistant Environmental Engineers. The locations of the district offices are shown in Annexure - 2.

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 Engineer, 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 analysis on samples of sewage, trade effluents, emissions and hazardous wastes.

The organization chart of the Board, staff strength and year wise growth of the Board are furnished in Annexures - 3, 4 and 5.

chapter 3

3.1 ENVIRONMENTAL LEGISLATION

The various environmental legislation with which the TNPCB is concerned are given below. Some legislation 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.
- ☞ The 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 Biomedical 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, 1996
- ☞ 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 from industrial sources has become significant. Industries are required to provide pollution control measures to meet the standards prescribed by the Board. The field officers of the Board periodically inspect industries under their jurisdiction to assess the adequacy of pollution control measures provided by the industries to treat sewage, trade effluent and emissions and to monitor their performance. They also investigate complaints of pollution received from the public, organizations and the Government. For effective monitoring, industries are categorized as Red, Orange and Green according to their pollution potential. Industries are then monitored according to category and size.

3.3 PROCEDURE FOR ISSUE OF CONSENT

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

3.4 WATER POLLUTION CONTROL

The Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 is enacted to prevent and control water pollution and to preserve or maintain or restore the quality of water. As per the provisions of this Act, the local bodies and industries, which discharge sewage / trade effluent are required to apply and obtain consent from the Board. The industries generating trade effluent are required to provide effluent treatment plant to treat their 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 effluent 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 2001-2002, 15,489 samples of sewage/trade effluent from the industries were collected and analysed. The Board has issued 360 'Consent to Establish' orders and 835 'Consent to operate' orders under the Water (Prevention and Control of Pollution) Act, 1974 as amended, during the year 2001-2002.

The Water (Prevention and Control of Pollution) Cess Act, 1977, provides for the levy and collection of cess on water consumed by persons carrying on certain industries and by local authorities with a view to augment the water resources and for the prevention and control of water pollution. The Board collects cess from the specified industries and local bodies and remits to the Ministry of Environment and Forests (MOEF), Government of India (GOI), New Delhi every month. The cess assessed and collected for the financial year 2001-2002 is Rs. 494.06 lakhs and Rs. 283.23 lakhs respectively. The 80% of cess-collected amount is reimbursed by the MOEF, GOI and utilised for awareness programmes, projects and training programmes.

3.5 AIR POLLUTION CONTROL

The Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 is enacted 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 survey / stack emission surveys are conducted in and around the industries regularly to assess the quality of the emissions let out. On the basis of the report of analysis, the industries are instructed to carry out necessary corrective measures. During the year 2001-2002, ambient air quality surveys have been conducted in 574 industries. The Board has issued 359 'Consent to Establish' orders and 821 'Consent to Operate' orders under the Air (Prevention and Control of Pollution) Act, 1981 as amended, during the year 2001-2002.

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 express financial difficulties, lack of space and other reasons that prevent them from putting up required effluent treatment plant. Since a large number of these units are in clusters and also in small scale sector, the Board has launched a massive programme of motivating these industries to set up common effluent treatment plants. The Board assists the units in mobilization of financial resources, acquisition of land and in the technical scrutiny of the proposals for the common effluent treatment plants.

3.6.1 FINANCIAL PATTERN OF CETP SCHEMES

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

3.6.2 STATUS OF COMMON EFFLUENT TREATMENT PLANT:

Common effluent treatment plants are formulated in the following sectors:

Tanneries	24 Schemes
Textile Bleaching & Dyeing Units	25 Schemes
Hotels & Lodges	1 Scheme

Out of 50 CETPs formulated, 32 CETPs are under operation and the remaining is under various stages of implementation. So far 13 CETP schemes for tanneries, 18 CETP schemes for textile dyeing units and 1 CETP scheme for hotels and lodges are under operation. 10 CETP schemes for tanneries and 2 CETP schemes for textile dyeing units are under various stages of implementation. Further, one CETP scheme for tanneries and 5 CETP schemes for textile dyeing units are under initial stages of implementation. During the year 2001-2002, one CETP for textile dyeing units at Perundurai, Erode district has been commissioned. Details of common effluent treatment plant schemes and the subsidies so far received for the CETP schemes from the State and Central Government are furnished in the Annexures 6 and 7.

3.7 MANAGEMENT OF HAZARDOUS WASTES AND CHEMICALS

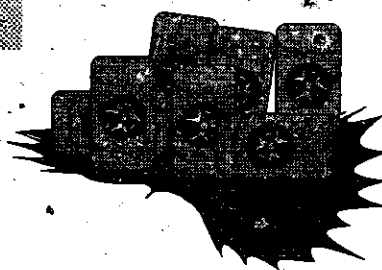
The TNPCB has taken effective measures for the handling and management of hazardous chemicals and the treatment and disposal of hazardous wastes in an environmentally safe manner. The Board has identified 1,516 units that generate hazardous wastes and has also completed identification of hazardous waste streams with respect to existing units as per the Hazardous Wastes (Management and Handling) Rules, 1989 as amended in 2000.

Industries located in Chennai, Kancheepuram and Thiruvallur districts have formed the Industrial Waste Management Association for establishing a common hazardous waste treatment, storage and disposal facility through a private operator. The site at Melakotrāyur village, Chengalpattu taluk, Kancheepuram district has been identified as the site for this facility.

Based on the instructions of the TNPCB, the federations of CETPs at Tiruppur have identified a site at Nallur village, Karupagounderpalayam, Tiruppur taluk, Coimbatore district, for establishing a common hazardous waste, secure landfill facility. The federation of CETPs in Karur have identified a site at Mathagiri village, Krishnarayapuram taluk, Karur district, for establishing a secure landfill facility for the disposal of sludge generated from treatment of textile dyeing effluents.

The TNPCB is promoting a few landfill facilities at strategic locations to ensure that such facilities are properly monitored and the associated environmental problems are effectively managed.

The TNPCB has also identified 25 isolated storages used for storing hazardous chemicals. Due to close monitoring, 73 industries have taken policies under the Public Liability Insurance Act, 1991. During the year 1997-1998, the logistics for the hazardous substances management cell was strengthened at a cost of Rs.12.6 lakhs from the TNPCB's own fund. An ad hoc sanction for the project on hazardous substances management at the cost of Rs.41.95 lakhs has been received from the Ministry of Environment and Forests, Government of India.



3.8 MANAGEMENT OF BIOMEDICAL WASTE

The TNPCB enforces the Biomedical Waste (Management and Handling) Rules, 1998 as amended in 2000. As part of this process, the Board has so far inventorised 317 government hospitals and 1,835 private hospitals. The Board has issued directions to both, government and private hospitals, to take time bound action for identifying sites and setting up common facilities for management of biomedical wastes in coordination with the Indian Medical Association (IMA). So far 10 sites have been identified by the IMA for establishing common biomedical waste treatment and disposal facilities for private healthcare units. The components of a common biomedical waste treatment and



disposal facility are an autoclave, a shredder, a compactor, an incinerator for anatomical waste, a secure landfill facility, laboratory and vehicles for transportation of wastes. For biomedical wastes generated by government hospitals, separate facilities are being envisaged in 6 municipal corporations. For smaller towns, 'on-site' autoclaving and deep burial is to be done. The Board has also conducted training in management of biomedical waste for its own staff, members of the IMA and other medical and paramedical personnel. A common biomedical waste treatment and disposal facility is under construction at Thenmelpakkam village of Chengalpattu taluk in Kancheepuram district and is expected to be commissioned shortly.

3.9 MANAGEMENT OF MUNICIPAL SOLID WASTES

With increasing urbanisation and rising levels of municipal solid wastes, there is an urgent need to evolve scientific approaches to the segregation, handling and disposal of solid wastes in urban areas. In this regard, a project to conduct feasibility studies on solid waste management for the local bodies of Udhagamandalam, Kodaikkanal, Palani, Tiruchendur, Kanyakumari, Rameshwaram, Mammalapuram and Kutralam, which are all tourist centres, has been taken up at a cost of Rs.23.60 lakhs from the Board's fund. Tiruppur municipality has started segregation of waste at source. A private agency is handling composting of the segregated waste for the past one year. Further, 92 other municipalities have started segregation of waste at source and the composting work has begun. 8 sites for composting of municipal solid wastes have been given 'in principle clearance' by the Board.

Workshops on municipal solid waste management were conducted in August, 2001, for all commissioners of municipal corporation and municipalities and in December, 2001, for the executive officers of town panchayats. Various programmes towards achieving zero garbage have been conducted regularly at the district level.



3.10 MANAGEMENT OF PLASTIC WASTES

Realising the environmental problems caused by the indiscriminate use and disposal of plastics, awareness has been created regarding reduction in the use of throwaway plastics through various campaigns. A mobile exhibition, displaying eco friendly alternatives to plastic materials was arranged in Chennai city, which was inaugurated by the Hon'ble Chief Minister of Tamilnadu on 3-8-2001. District level programmes on 'Children Against Plastic' were launched in September, 2001. Financial assistance of Rs.1.25 lakhs was provided to each District Collector to conduct campaigns encouraging the use of eco-friendly alternatives to throwaway plastics in



their districts. Billboards educating people against the use and disposal of throwaway plastics were placed on MTC buses, in Chennai. Awareness campaigns were conducted in the Nilgiris, Kodaikanal, Yercaud, Rameshwaram, Kanyakumari and other tourist towns and cities. Continuous awareness programmes are being conducted for the devotees using the Girivalam path of the Thiruvannamalai temple. The Nilgiris district, Hogenakkal, Kanyakumari, Kodaikanal, Ooty, Rameshwaram, Valparai, Yelagiri, Yercaud, Thirumoorthy Falls, etc., have been declared 'Throwaway Plastic Free' areas.



Action is being taken at the Government level for the cleaning up of National/State Highways and other district roads to make them free of plastic wastes, encroachments and other polluting activities. This would help make a drive through Tamilnadu an aesthetic experience.

chapter 4

MONITORING NETWORK FOR AIR AND WATER QUALITY

4.1 AIR QUALITY MONITORING

With the increased industrial and commercial activities in the vicinity of major cities, the ambient air quality is getting affected by emissions from the industries and from the ever increasing vehicular population. As per the provision of the 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 in Chennai city.

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

- National Air Quality Monitoring Programme (NAMP)
- Chennai Ambient Air Quality Monitoring Programme (CAAQM)

Under NAMP, three ambient air quality monitoring stations are functioning on 24 hours basis, twice a week. The samples collected from NAMP stations are analysed for the suspended particulate matter (SPM), respirable dust particles (RDP) {RDP is a particulate matter less than 10 microns} and gaseous pollutants such as sulphur dioxide (SO_2) and oxides of nitrogen (NO_x).

Under CAAQM, the Tamilnadu Pollution Control Board is operating five monitoring stations on eight hours basis in all working days. The pollutants measured in the CAAQM stations are sulphur dioxide, oxides of nitrogen, respirable dust particles, suspended particulate matter (SPM) and lead (Pb) in all stations.

The eight ambient air quality monitoring stations in Chennai are: -

- | | | |
|-------------------------------|---|---------------------------------------|
| 1. Kathivakkam (NAMP) | - | Industrial area. |
| 2. Manali (NAMP) | - | Industrial area |
| 3. Thiruvottriyur (NAMP) | - | Commercial and industrial mixed area. |
| 4. Kilpauk (CAAQM) | - | Commercial (traffic intersection) |
| 5. Thiyagarayar Nagar (CAAQM) | - | Commercial (traffic intersection) |
| 6. Vallalar Nagar (CAAQM) | - | Commercial (traffic intersection) |
| 7. Anna Nagar (CAAQM) | - | Residential area |
| 8. Adyar (CAAQM) | - | Residential area |

The air quality data collected under NAMP, during the year 2001-2002 indicates that the analysed parameters are found to be well controlled in the industrial area due to the effective monitoring of industrial emissions by the Tamilnadu Pollution Control Board. The average values of pollutants recorded under NAMP during the year 2001-2002 are given in Annexure - 8A.

In Chennai city, the air pollutants such as sulphur dioxide, oxides of nitrogen, suspended particulate matter, respirable dust particles and lead are well within the standards except at traffic intersections, where SPM and RDP levels exceeded the permissible limit mainly due to the heavy vehicular traffic and pedestrians movement. The average values of pollutants recorded under CAAQM during the year 2001-2002 are given in Annexure - 8B.

4.1.2 Ambient Air Quality Monitoring in Thoothukudi, Coimbatore, Salem, Madurai and Trichy.

At Thoothukudi, the ambient air quality monitoring stations are functioning from the year 1988 in the following locations :

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

At Coimbatore, the ambient air quality monitoring stations are functioning from the year 1991 in the following locations :

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

At Salem, the ambient air quality monitoring station has been functioning from July 1996 onwards,

at :

- (a) Sowdeswari College - Mixed zone

At Madurai, the ambient air quality monitoring stations are functioning from July 1996 in the following locations :

- (a) Highway Project Building - Residential zone
(b) Fenner India Ltd., Building - Industrial zone
(c) Kunnathur Chatram - Mixed zone

At Trichy, the ambient air quality monitoring stations are functioning under TAAQM on 8 hours basis on all working days in the following locations :

- (a) Gandhi Market - Commercial zone
(b) Main Guard Gate - Commercial zone
(c) Bishop Heber College - Mixed zone
(d) Ariyamangalam - Residential zone
(e) Central Bus Stand - Commercial zone

The ambient air quality data recorded during the year 2001-2002 indicates that the parameters such as sulphur dioxide, oxides of nitrogen and suspended particulate matter are found to be well controlled at Thoothukudi, Coimbatore and Salem except at Kunnathur chatram, Madurai where the annual average values of SPM, RDP are found to exceed the permissible limits due to heavy commercial activities and traffic flow. The annual average values of pollutants recorded are given in Annexure - 8A

The ambient air quality data collected from the TAAQM stations in Trichy indicates that the average concentration of SO_2 and NO_x values are found well within the prescribed standard and the RDP and SPM values are exceeding the standards prescribed by the Board. This could be attributed due to the increase in number of vehicles and the surface dust generated by vehicular movement. The annual average concentration during the year 2001-2002 is given in Annexure - 8D

4.2 VEHICULAR EMISSION MONITORING

4.2.1 VEHICULAR EMISSION MONITORING IN AND AROUND CHENNAI CITY.

The TNPCB has established three vehicular emission testing centres at Guindy, Vyasarpadi and Ambattur for testing the emissions from goods transport vehicles. The emission testing has been conducted in these centres since 2.5.92. During the year 2001-2002, 27016 vehicles were tested. Among the total vehicles tested, 1811 (6.7%) vehicles did not comply with the emission standards. Vehicles that are not complied with the emission standards are instructed to carry out corrective measures to comply with the emission standards and then only emission under control certificates are issued. In addition, 150 private agencies have been authorised by the Transport Department in Chennai urban agglomeration area to check the emission level of the vehicles.



4.2.2 VEHICULAR EMISSION MONITORING IN THE DISTRICTS

The TNPCB has commissioned two vehicular emission monitoring stations in Nilgiris district at Udhagamandalam on August '96 and Katteri on August '99 and in Dindigul district at Dindigul and Palani on March '97 and one station in Chengalpattu district at Chengalpattu on October '97 for testing and issuing emission under control certificates for transport vehicles. The details of vehicles tested are given in Annexure - 8C.

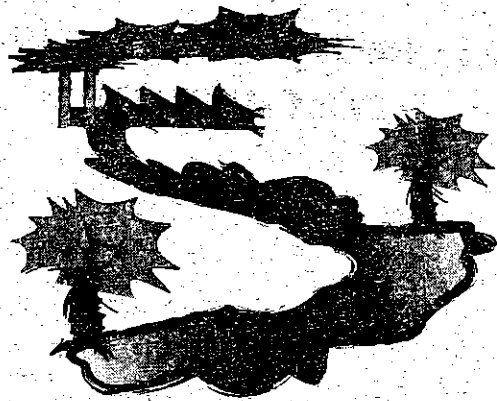
4.2.3 MEASURES TAKEN TO REDUCE VEHICULAR EMISSION

Emission checks have been made mandatory for all the vehicles in Chennai city from 1.1.1998 and for cities like Coimbatore, Madurai, Salem and Trichy from 2000 onwards. Emission checking programme has been extended to other cities/towns of Tamilnadu. Unleaded petrol is made available throughout Tamilnadu from 1.2.2000. Low sulphur fuel (0.05%) is being supplied in Chennai city from 1.1.2002. Oil companies have been asked to take immediate steps to supply 1% benzene (presently 3%) in the petrol bunks in Chennai city and to supply low sulphur fuel (0.05%) in all the major cities of Tamilnadu. They are also asked to ban the sale of loose 2T oils and dispense only pre-mixed fuel with 2T oil to two stroke engine, two wheelers and three wheelers. Registration of new passenger cars is made to conform Bharat Stage -II norms from 1.7.2001 in Chennai and other cities of Tamilnadu. A joint emission check up programme is being done in co-ordination with the Transport Department to improve the maintenance of vehicles and reduce vehicular emission.

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 & GEMS Programmes

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 the GEMS and MINARS programmes, the river Cauvery is being monitored. These programmes are funded by the Central Pollution Control Board, New Delhi.

4.3.1.1 Cauvery river

The Cauvery river is a major river in the State, which drains more than one third of the State. This river has been identified as a major river for studying the impact of pollution caused by various activities of 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. The physicochemical and biological parameters are analysed at each of the monitoring stations. Sampling is done on monthly basis and analysis is done at the Advanced Environmental Laboratory, Salem. The mean values of water quality at various sampling stations are furnished in Annexures - 9A and 9B.

The overall analysis of the data reveals that the faecal contamination of surface water of the river is a common phenomenon due to the unhygienic anthropogenic activities and disposal of either untreated or partially treated municipal waste into the river systems either directly or indirectly. In general, the water quality of the 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 five stretches of the 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, Department of Environment, Chennai.

4.3.12 Thamiraparani river

The water quality of the Thamiraparani river is monitored on a monthly basis at seven stations. The physicochemical parameters and biological parameters are analysed in the Advanced Environmental Laboratory at Madurai and the details are furnished in Annexure - 9C.

The water quality study conducted during the year 2001-02 shows that the level of pH values varied from 6.5 to 8.6 and biochemical oxygen demand (BOD) varied from 5.4 to 7.4 mg/l as against the standards prescribed for pH (6.5 - 8.5) and biochemical oxygen demand (3mg/l). The other parameters analysed meets the standards prescribed for surface water quality under class 'C'.

4.3.13 Palar river

One station viz., Vaniyambadi municipal head works in the Palar river is being monitored every month. The analysis of water samples is done in the Advanced Environmental Laboratory at Chennai for physicochemical and bacteriological parameters. The mean values of water quality data are given in Annexure - 9D. The analysed data revealed that the water quality of the river at the sample point meets the standards prescribed for surface water quality under class 'C'.

4.3.14 Vaigai river

The water quality of the Vaigai river is being monitored by collecting samples once in six months from the collection well of Thirubuvanam head works and analysed at Advanced Environmental Laboratory, Madurai for physicochemical and bacteriological parameters. The water quality of the Vaigai river meets the standards prescribed for surface water quality under class 'C' and the details are given in Annexure - 9D.

4.3.15 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 water quality are furnished in Annexure - 9E.

The total coliform, biochemical oxygen demand, dissolved oxygen and faecal coliform in Udthagamandalam lake is found to exceed the standards prescribed due to the surface run off and sullage discharges into the lake either directly or indirectly. In general the water quality of the lakes meets the standards prescribed for surface water under class 'C'. A scheme for bio-remediation of the lake water in Udthagamandalam and Kodaikanal and sewerage scheme for Kodaikanal has been taken up with the assistance of Government of India under the coordination of the Director, Department of Environment, Chennai.

4.4 MONITORING OF CHENNAI CITY WATERWAYS

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 at industrial outlets as detailed below.

Sl. No	Chennai city waterways	No. of sampling points	
		River	Industrial outlets
1	Adyar	5	8
2	Cooum	11	7
3	Buckingham canal	10	15
4	Otteri nullah	8	6

During the year 2001-2002, 1255 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 level of contamination of the pollutants is relatively high in Buckingham canal followed by Otteri nullah, Cooum river and 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 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 MONITORING OF 17 CATEGORIES OF HIGHLY POLLUTING INDUSTRIES

The TNPCB has a special monitoring cell at its head office, Chennai to monitor the 17 categories of highly polluting industries, specified by Government of India. In Tamilnadu, 175 industries have been identified and these industries have provided pollution control measures. By effective operation of these measures, the pollution load (bio chemical oxygen demand) from industries like sugars, paper & pulp and tanneries have been reduced considerably. Further, with 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 over to double conversion double absorption 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 and persuaded for recycling their treated trade effluent through tertiary treatment system with membrane technology in achieving zero effluent discharge. Details of highly polluting industries are given in Annexure - 10.

4.6. OZONE MONITORING CELL

An Ozone Monitoring Cell has been established in the head office, Chennai as per G.O. Ms. No. 212 dated 29.6.95. The main objectives are :

- To survey, identify and to have an inventory of the industries in the State, producing or consuming Ozone Depleting Substances (ODS).
- 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 industries producing or consuming ozone depleting substances in the State. From the survey, 55 industries in the State have been identified to consume ozone depleting substances. Whenever new industries approach the Board for consent, the consent orders are being issued with a condition that they should not use the ODS. The identified industries have been suggested on the adoption of alternatives with zero ODS depending on the controlled substance used.

4.7 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 effluent are collected periodically and analysed. The details of samples analysed laboratory wise during the year 2001-2002 are shown in Annexures -11, 12 & 13.

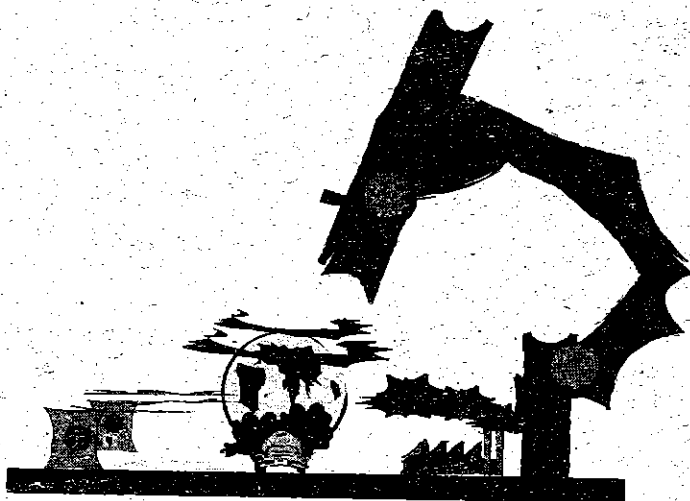
chapter 5

ENVIRONMENTAL STANDARDS

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

The Board has prescribed standards for the discharge of treated sewage/trade effluent 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 its disposal.

Ambient air quality standards and emission standards have been fixed for polluting industries. The Board monitors the industries so that they adhere to the prescribed effluent / emission standards.



6.1 LEGAL ACTIONS

The TNPCB is taking legal actions against the defaulting industries. The Board has so far issued show cause notices to 20,329 industries and closure orders to 3,605 industries for not complying with the conditions prescribed by the Board. During the year 2001-2002, 4013 show cause notices and 395 closure notices have been issued.

6.2 GREEN BENCH

The Hon'ble High Court of Madras has constituted a 'Green Bench' during the year 1996 as per the directions of Hon'ble Supreme Court of India dated 28.8.96 in WP(C) No.914/1991. The Green Bench deals with cases pertaining to industries and other environmental related issues.

6.2.1 Important decisions of Green Bench during the year 2001-2002

1. The Hon'ble Green Bench of the High Court at Chennai have disposed a batch of 47 numbers of writ petitions 20377/98 in its common order dated 30.4.2001 and 21.6.2001 filed by spinning mills in Tamilnadu against the decision of the Hon'ble Appellate Authority upholding the levy of consent fee by the TNPCB with the following directions :
"The petitioner shall move to the Appellate Authority and the Authority shall decide the issue as to whether the petitioner will come within the purview of the Water (Prevention & Control of Pollution) Act, 1974 or the Air (Prevention & Control of Pollution) Act, 1981".
The Hon'ble Appellate Authority have also dismissed the appeals made by the spinning mills vide order dated 27.3.2002 after hearing in details on both sides.
2. The Hon'ble Green Bench of the High court at Chennai have dismissed the WP No.17717/2001 filed by M/s Madanlal Steel & Forgings Ltd, Alandur, Chennai in its order dt 6.12.2001 in favour of the Board with the following directions:
"The petitioner shall be permitted to run the unit at the present place for one year from the date of such consent, but not beyond that and within the said period, the petitioner has to take step to relocate his unit in another permissible area."
3. The Hon'ble Green Bench of Chennai High Court have issued the following orders dated 3.10.2001 in favour of the Board in WP No.11418/2001 filed by Thiru Dharani Kothandapani against M/s Shekinah Assembly, Kilpauk, Chennai for causing noise pollution with music instruments.
"In view of judgement of the Supreme Court of India and the report filed by the TNPCB, the authorities are directed to stop noise pollution with the help of Commissioner of Police, Chennai."

chapter 7

7.1 BOARD MEETINGS

During the period from April 2001 to March 2002, six meetings of the Board were held at the head office, Chennai. These details are listed below:

Sl.No.	No. of subjects placed	Meeting No.	Date
1	13	186	23.04.2001
2	35	187	20.07.2001
3	33	188	17.08.2001
4	21	189	04.12.2001
5	2	190	02.01.2002
6	26	191	06.03.2002

7.2 OTHER INITIATIVES TAKEN DURING THE YEAR 2001-2002

- ☞ The Board approved the proposal for upgradation of the existing vehicular emission monitoring stations at Chennai city, Chengalpattu and Kancheepuram.
- ☞ The Board decided to issue four smoke meters to MTC (Chennai) Ltd, free of cost to facilitate regular checking of emissions from their buses in order to keep the emissions under control.
- ☞ The Board decided to extend environmental awareness through MTC buses regarding ban of plastics.
- ☞ The Board decided to extent the environmental awareness programme (Pasumai Niraintha Ullagathile) through All India Radio.
- ☞ The Board considered the proposal of creating awareness among public and school children on alternatives to plastics.
- ☞ The Board decided to approve the proposal of grants of Rs.1, 00,000 each to all the 30 district collectors to commemorate Anna's birth anniversary for conducting awareness programmes such as 'children against plastics' and by organizing competitions among primary, middle and high school and higher secondary school children in the State.
- ☞ The Board decided to purchase and supply 35 noise level meters to all the district offices to conduct noise level surveys in the districts.
- ☞ The Board approved the proposal of formation of district offices at Theni and Thiruvannamalai.

8.1 ENVIRONMENTAL TRAINING

One of the functions of the State Board as enumerated under the provisions of section 17 of the Water And Air Act is to collaborate with the Central Board in organizing the training of persons engaged or to be engaged in programmes relating to prevention, control or abatement of water and air pollution and to organize mass education programmes relating thereof. Training is important for manpower development and to achieve work efficiency. Senior officers, engineers, scientists and ministerial staff are being given training regularly in various aspects of prevention, abatement and control of pollution.

An Environmental Pavilion has been established inside the premises of the Periyar Science and Technology Centre at Kotturpuram, Chennai to facilitate environmental training. 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.

8.2 ENVIRONMENTAL TRAINING INSTITUTE

An Environmental Training Institute (ETI) has been established with financial assistance from DANIDA, Denmark in the year 1994 at the head office, Guindy, Chennai. It is guided by a steering committee chaired by the Chairperson, TNPCB. An advisory council provides technical support. 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 and advising small, medium and large-scale industries on pollution treatment and prevention techniques suitable to their needs.

Non-governmental organizations, local bodies and personnel from the industries are mobilised/sensitised to the issues of environment on the following aspects :

- Improve awareness at all levels.
- Introduce the holistic approach to the environment & sustainable development.
- Introduce the basic theories, concepts and methodologies of integrated environmental planning and management aiming at sustainable development.
- Promote public awareness and motivation to preserve and protect the environment through Non governmental organisations.
- Create cross-media awareness in industrial and urban sectors and in the public on environmental hazards and their adverse impact on the quality of life.
- Pollution control at source by using cleaner technology and improved processes of material and products.
- Improve the environmental management capacity in the sector of industry and urban development.
- Develop the ability among professionals to communicate effectively.

The Environment Training Institute has developed 23 training modules on water, air, environmental impact assessment, risk assessment techniques etc. During the year 2001-2002, the training institute has conducted 23 programmes and trained 1923 personnel.

ENVIRONMENTAL AWARENESS AND PUBLIC PARTICIPATION

The problem of pollution cannot be controlled just on the basis of legislation only. It requires the involvement of every citizen. To make every citizen involved, awareness on the environment is required. A pollution awareness and assistance cell has been established in the head office, Gundy, Chennai to promote environmental awareness. Various awareness campaigns, workshops, rallies have been conducted regularly to highlight important environmental issues.

June 5th of every year is being observed as World Environmental Day. During the financial year, World Environmental Day was celebrated at the head office, Chennai to spread the message of protection of the environment and prevention of pollution. The programme was inaugurated and presided by the Hon'ble Minister for Environment and Forests.

Realizing the environmental problems caused by indiscriminate use and disposal of plastic, awareness has been created regarding the need to eliminate the use of throwaway plastic items through various campaigns. A mobile exhibition, exhibiting eco friendly alternatives to plastic materials was arranged in Chennai, which was inaugurated by the Hon'ble Chief Minister of Tamilnadu on 3.8.2001. Financial assistance of Rs 1.25 lakhs had been given to each district collector to conduct similar campaigns in the districts. A district level programme on 'Children against plastic' was launched on 15.9.2001. Novel ways of spreading the message were adopted including use of boards behind buses, human chains, rallies, etc.

An environmental awareness programme named, 'Pasumai Niramtha Ulagathille' has been conducted since February 2001, in collaboration with All India Radio and the Tamilnadu Science Forum. Environmental issues such as avoidance of plastic wastes, municipal solid wastes management, vehicular pollution, rain water harvesting etc. are highlighted regularly in this programme. This programme is broadcast on all Sundays, between 3.30pm and 4.00pm. The programme has been extended to cover all the 30 districts in the State with participation of 325 eco clubs.

Noise generated by air horns of transport sectors, indiscriminate use of loud speakers during functions of public meeting and festival days and bursting of high intensity crackers are of serious environmental concerns from the point of view of public annoyance and public health. A workshop on 'Campaign for Abatement of Noise Pollution: Help make Chennai - A Horn Free City' was organized to highlight the noise pollution caused by air horns of transport vehicles. Many private and state transport vehicles have removed the air horns fitted in their vehicles.

A special awareness campaign was launched, monitoring noise levels during Deepavali and air emissions during Bhogi. This campaign was accompanied by large scale awareness drives informing the public about the ill effects of air pollution and the noises of crackers. Noise level monitoring during Deepavali and ambient air quality surveys on pre-Bhogi, Bhogi and post bhogi days showed that the results exceeded the limits prescribed for but were found relatively less when compared to the previous year due to the effort taken by the Police Department and the Tamilnadu Pollution Control Board.

The Board conducted a special emission checkup drive from 27-7-2001 to 3-8-2001 at various places in Chennai city along with the Transport Department and tested 959 vehicles. Surprise emission checks were conducted for the vehicles attached to M/s ONYX & CO.

OTHER IMPORTANT MATTERS DEALT WITH THE BOARD

10.1 PUBLIC HEARING

Some specific categories of industrial projects require environmental clearance from the Ministry of Environment and Forests, Government of India after obtaining No Objection Certificates (NOC) from the State Pollution Control Board. The environmental clearance involves environmental public hearing as per the notification issued by the Ministry of Environment and Forests (MOEF) and the Government of India (GOI). Public hearing panels are constituted to effect public hearing. These panels, after conducting public hearings, inviting suggestions and objections on projects from the public, will send their views to the Board. NOCs are issued to the industries to enable them to approach the Ministry of Environment and Forests, Government of India to get environmental clearance. Public Hearings on various projects are conducted in the respective collectorates, since May 1998. As on 31.3.2002, 196 Public Hearings have been conducted. During 2001-2002, 48 public hearings were conducted.

10.2 GREEN AWARDS

To encourage collectors to play a pro-active role in promoting sustainable development in their districts, the Government of Tamilnadu has instituted green awards for the protection of the environment. The TNPCB has been periodically reminding all the district collectors regarding the works to be done for environment protection in their district.

A committee has been constituted under the Chairmanship of the Secretary, Environment & Forests Department to decide the awards to the collectors for their personal contributions to the promotion of environmental protection and sustainable development. Green awards were given by Hon'ble Chief Minister on World Environmental Day.

10.3 RAIN WATER HARVESTING

Water is a vital and increasingly scarce becoming resource. Rainwater harvesting is an important strategy for conservation of water. In urban areas, residential as well as commercial buildings are being asked to put up rainwater harvesting arrangements. In case of new constructions, rainwater harvesting arrangements are being made a part of the conditions for approval of construction. As a condition for issue of consent, industries have been advised to provide rainwater harvesting arrangements. Already, 418 industries have provided rainwater harvesting arrangements and about 2,000 industries are in the process of providing the same.

10.4 ENVIRONMENTAL STATEMENT

Under rule 14 of Environment Protection Rules 1986, submission of Environmental Statements are made compulsory for every industry covered under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981 or the Hazardous Waste (Management and Handling) Rules, 1989. Industries are required to submit Environmental Statements for the financial year ending 31st March every year in form-V before 30th September to the State Pollution Control Board. Environmental Statements have been obtained from all the 17 categories of highly polluting industries to assess their water & energy consumption and efforts in reducing the pollution levels.

10.5 ENVIRONMENTAL ATLAS

The TNPCB in co-ordination with the Central Pollution Control Board (CPCB) and German Agency for Technical co-operation (GTZ) is implementing the programme of a zoning atlas on environmental features. This programme comes under the World Bank funded environmental management capacity building project. Initially, the zoning atlas was taken up for Thiruvallur and Kancheepuram district at a cost of Rs.6 lakhs. Next, the preparation of district wise zoning atlas for the districts of Coimbatore, Vellore and Thoothukudi with a budget estimate of Rs 8.25 lakhs has been taken up. During the year 2001-2002, the project on Review of Master Plan of urban areas from environmental considerations - Chennai city has been taken up at a cost of Rs.5 lakhs.

10.6 GREEN COVER PROJECT

To mitigate air and noise pollution in urban areas, a major programme for development of green belts in municipal corporation areas of Chennai, Madurai, Coimbatore, Salem and Tirunelveli was launched during the year 2000. The total estimate of the project was Rs. 455.70 lakhs. The assistance from the Centre was Rs. 400 lakhs. 2,94,000 saplings were to be planted by the Forest Department. This programme was extended to all urban and municipal areas with Central assistance of Rs.76.50 lakhs and TNPCB's assistance of Rs. 25.50 lakhs. Industries are also implementing a green belt development covering 25% of their area and so far 73,38,768 tree saplings have been planted by them.



10.7 CLEANER TECHNOLOGIES

The TNPCB has been involved in developing cleaner technologies to minimize 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.

10.8 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. This project is in progress.

10.9 RESEARCH FUND

The TNPCB has established a research fund from the cess fund to grant financial assistance to recognized research institutions and universities for taking up research activities in the field of pollution abatement including reduce/reuse/recycle or any other beneficial use of waste generated with a view to developing cleaner technologies. A committee has been formed to scrutinize and select suitable projects for assistance. So far, nine projects have been sanctioned with a financial outlay of Rs.45.38 lakhs.

10.10 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 lakhs).

The TNPCB with participation from Italian and Spanish agencies inaugurated the Asia-Urbs Écological 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 district and Chennai. The total project cost is EURO 4,95,040 (approximately Rs.214 lakhs).

10.11 COMPLAINT CELL

Due to the increased environmental awareness and awareness on pollution control legalisation, several complaints are being received from individuals / organisations / NGOs etc., regarding water, air, noise and vehicular pollution. To take appropriate action against these complaints, an active 'Complaint cell' is functioning in the head office, Chennai. A separate telephone number- 22353253 has been allotted for receiving complaints and giving guidance. Complaints are handled by calling for reports along with recommendations from the field officers of the Board. Action as required based on the reports have been taken then & there. For attending environmental related complaints especially in Chennai city, a 'Green Squad' under the control of District officer, Chennai has been formed. Two patrolling vehicles and two, two-wheelers have been provided to the Green Squad which attends to the complaint immediately and intimates the facts to the District officer, Chennai for action.

Finance And Accounts of the Board

(Provisional figures subject to audit.)
(Rupees in Lakhs)

Opening Balance	691.41
Receipts	2738.98
Expenditure during the year 2001-2002	1855.14
Closing Balance as on 31.3.2002	1575.25
DETAILS	
RECEIPTS	
Grants from the State Government	Nil
Grants from the Central Government	Nil
Consent fees	1167.57
Analysis charges and other fees	255.88
Cess reimbursement	141.01
Sale of Application Forms & Books	10.20
Others	1164.32
Total	2738.98
EXPENDITURE	
REVENUE:	
Salary and Allowances	893.89
Lab Expenditure	16.55
Office Expenditure (Stationery, Rent, Vehicle, Telephone, Printing, Hospitality)	288.32
Repair & Maintenance of Building & Vehicle	60.59
Fees to consultants & Auditors	12.77
Cess remittance to Govt. of India.	286.48
CAPTIAL	
Fixed Assets	36.32
Other Assets	221.92
Advances to staff	38.30
Total	1855.14



Annexures





Annexure 1

LIST OF BOARD MEMBERS

Sl.No.	Name and address	Position	Period	
			From	To
1.0	Thirumathi. Sheela Rani Chunkath, I. A. S.	Chairperson	03.07.2000	31.03.2002
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	10.11.1999	03.06.2001
2.1	Dr. V. Palanichamy, I.A.S., Secretary to Government, Environment and Forests Department, Fort St. George, Chennai - 9	Member	04.06.2001	09.12.2001
2.2	Thirumathi. Girija Vaidyanathan, I.A.S., Secretary to Government, Environment and Forests Department, Fort St. George, Chennai - 9	Member	10.12.2001	31.03.2002
3.0	Thiru.K.Ramalingam, I.A.S Additional Secretary to Government, Finance Department, Fort St. George, Chennai - 9	Member	09.02.2001	11.06.2001
3.1	Dr. K.Satyagopal, I.A.S., Additional Secretary to Government Finance Department, Fort St. George, Chennai - 9	Member	12.06.2001	31.03.2002
4.0	Dr. S.Gurumurthy, I.A.S., Special Commissioner of Town & Country Planning, 804, Anna Salai, Guindy, Chennai -2	Member	24.02.2000	31.03.2002

5.0	Thiru. K.Ganesan, I.A.S., Director of Municipal Administration, Ezhilagam Annexe Building, VI th floor, Chepauk, Chennai - 5.	Member	05.04.1999	04.06.2001
5.1	Thiru. C.V Shankar, I.A.S., Director of Municipal Administration, Ezhilagam Annexe Building, VI th floor, Chepauk, Chennai - 5	Member	05.06.2001	20.03.2002
5.2	Thiru V.K.Jeyakudi, I.A.S., Director of Municipal Administration, Ezhilagam Annexe Building, VI th floor, Chepauk, Chennai - 5	Member	21.03.2002	31.03.2002
6.0	Dr. P.Krishnamoorthy, M.D., Director of Public Health and Preventive Medicine, Chennai - 6	Member	01.04.2001	31.03.2002

**Non-Official-Members Nominated by the State Government
to represent Agriculture / Fisheries / Industries / Trade**

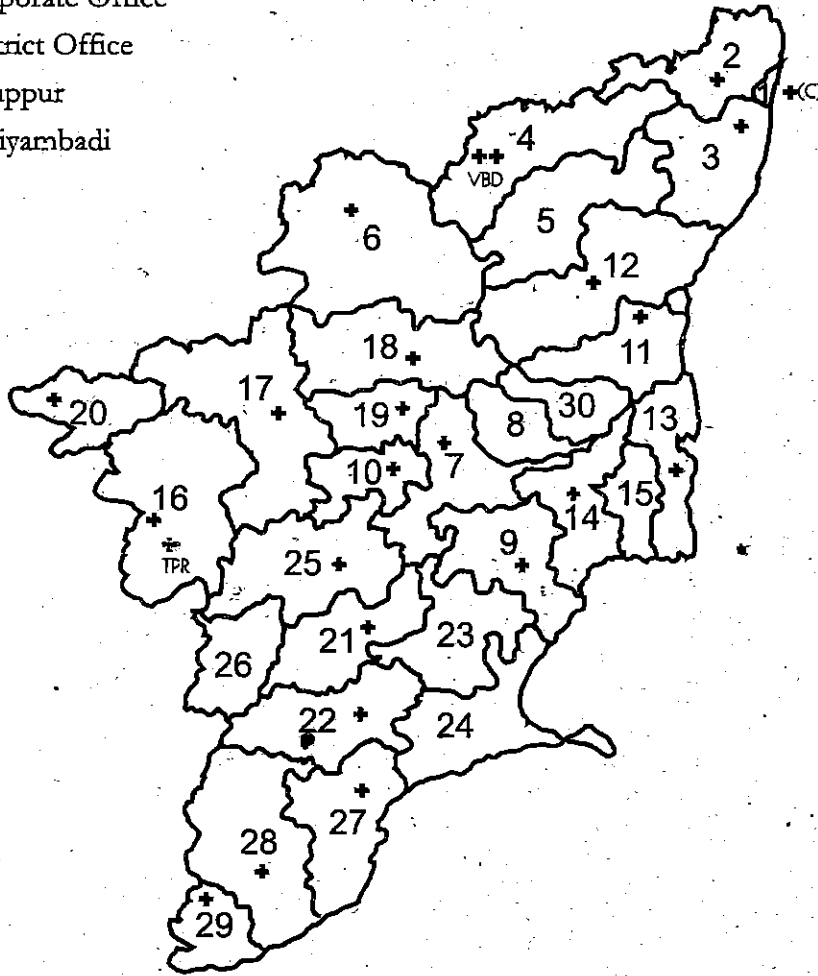
7.0	Thiru. P.Gopal B.Sc., MLA, Mettur Dam, Salem District.	Member	25.02.1998	23.04.2001
8.0	Thiru N. Mohan Srinivas, Regional Chairman (Southern Region), Leather Exports Promotion Council, Race View Towers, 2-B, 71, Mount Road, Guindy, Chennai - 32.	Member	24.11.1999	01.06.2001
8.1	Dr. Zackaria Sait, Regional Chairman, Leather Exports Promotion Council, 476, Kilpauk Garden road, Kilpauk, Chennai - 10.	Member	02.06.2001	31.03.2002
9.0	Tmt. Banumathi Baskaran, State Level Fisheries Wing Organiser, 18, Corporation Colony, 3rd Lane, Tondiarpet, Chennai - 81.	Member	25.02.1998	23.04.2001

Personnel Nominated by the State Government to represent the Companies controlled and managed by the State Government				
10.0	Er.S.Thannimalai, B.E.,M.B.A.,F.I.E., Member (Generation), Tamilnadu Electricity Board, 800, Anna Salai, Chennai - 2.	Member	12.09.2000	31.10.2001
10.1	Er. A. Balasubramanian, B.E, M.I.E, P.G.D.B.A Member (Generation), Tamilnadu Electricity Board, 800, Anna Salai, Chennai - 2.	Member	01.11.2001	31.12.2001
10.2	Er.S.Natarajan, B.E(Engg), M.Sc., Member (Generation), Tamilnadu Electricity Board, 800, Anna Salai, Chennai - 2.	Member	01.01.2002	31.03.2002
11.0	Thiru A.M.Kasi viswanathan, I.A.S., Managing Director, TWAD Board, Chennai-5	Member	01.07.1999	03.06.2001
11.1	Thiru P.Ram Mohan, I.A.S., Managing Director, TWAD Board, Chennai-5	Member	04.06.2001	24.07.2001
11.2	Thiru. K. Deena bandu I.A.S., Managing Director., TWAD Board, Chennai-5	Member	25.07.2001	31.03.2002
12.0	Thiru. T. Meenakshi Sundaram, General Manager, (P.D), SIPCOT, 19 A, Marshalls Road, Egmore, Chennai - 8.	Special Invitee	01.04.2001	31.03.2002
13.0	Dr. S. Balaji, I.F.S, Director Department of Environment, I Floor, Panagal Building, Jones Road, Saidapet, Chennai-5	Special Invitee	24.05.2000	31.03.2002
14.0	Thiru Ramesh Ram Mishra I.A.S., Commissioner of Industries and Commerce, Chennai-5	Special Invitee	18.02.1999	26.06.2001
14.1	Thiru S. Kandan, I.A.S., Commissioner of Industries and Commerce, Chennai-5	Special Invitee	27.06.2001	31.03.2002
15.0	Thiru. K. Sanjeevi, M.E.(PH) Member Secretary, Tamilnadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai - 32.	Member- Secretary	01.12.2000	31.03.2002

Annexure 2

LOCATION OF DISTRICT OFFICES

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



DISTRICTS

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

Annexure 4

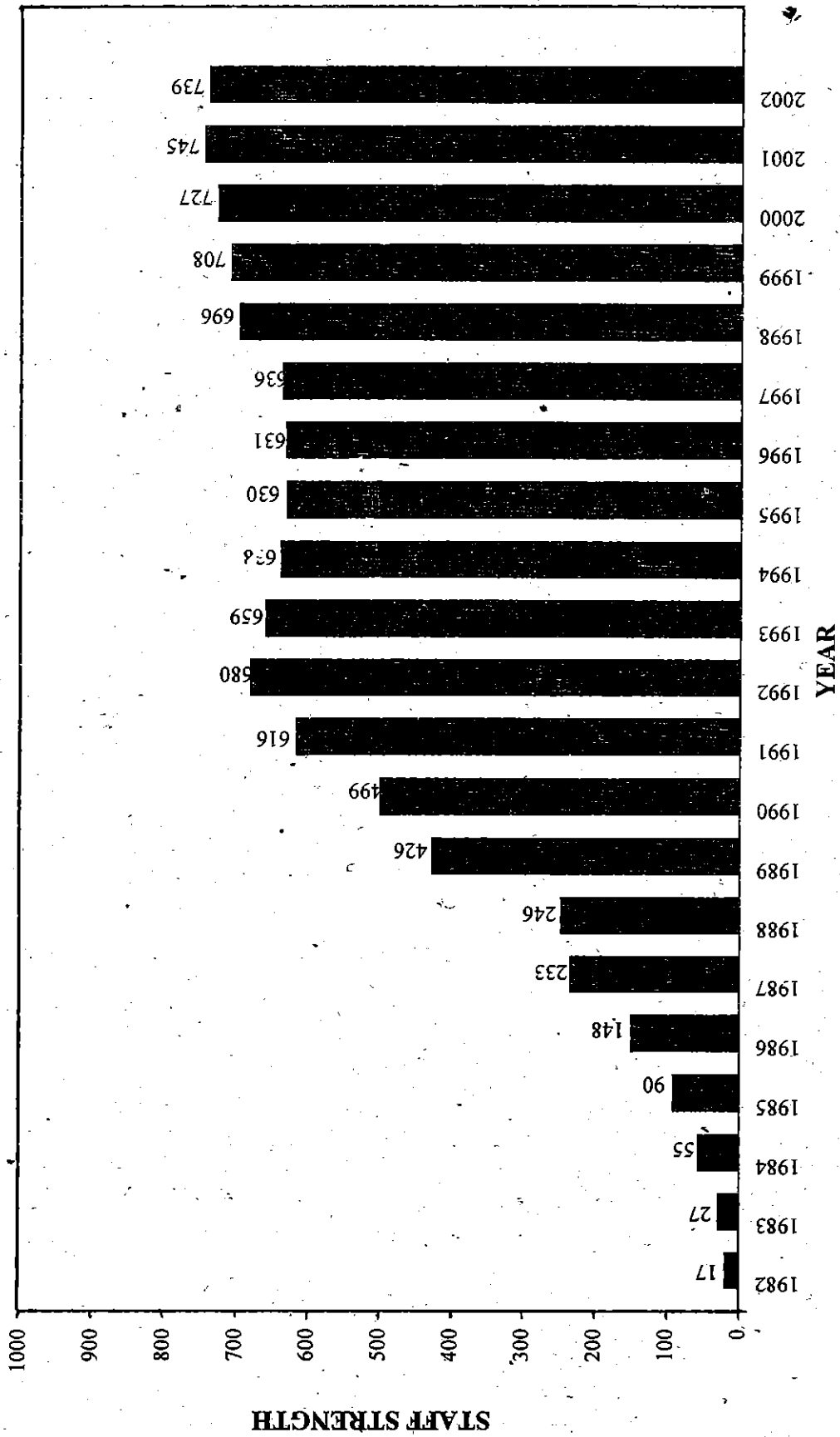
STAFF STRENGTH

NAME OF THE POST	PRESENT STRENGTH
Chairperson	1
Member Secretary	1
Engineering Service	147
Scientific Service	82
Scientific Supporting Staff	89
Personnel/Administration/Accounts/Miscellaneous	419
Total	739
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
District Environmental Engineer(i/c)	17
Assistant Environmental Engineer	10
Assistant Engineer	100
Assistant Engineer(Auto)	1
Assistant Draughtsman	2
Technical Assistant	3
Sub-Total	147
SCIENTIFIC SERVICE:	
Deputy Director (LAB)	1
Assistant Director(LAB)	1
Manager(LAB)	3
Deputy Manager (LAB)	21
Environmental Scientist	43
Senior Meteorologist	1
Meteorologist	2
Junior Environmental Scientist	10
Sub-Total	82
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)	2
Assistant Director	1
Senior Law Officer	1
Manager	2
Additional Manager	4
Deputy Manager	13
Assistant Manager	24
Statistical Officer i/c	1
Programmer	1
General Assistant	95
Data Entry Operator	3
Assistant	40
Steno Typist	31
Typist	57
Librarian	2
Driver	63
Record Clerk	13
Telephone Operator	2
Office Assistant/Watchman	60
Despatch Rider	1
Cleaner	1
Sweeper	1
Sub-Total	419

Annexure - 5

ORGANISATIONAL GROWTH FROM THE YEAR 1982 TO 2002



Annexure 6

DETAILS OF CETP SCHEMES AT VARIOUS PLACES:

SL NO.	LOCATION OF CETP	DISTRICT	NO.OF MEMBER UNITS	QUANTITY OF EFFLUENT (In KLD)	COST OF PROJECT (Rs.in Cr.)
A TANNERIES					
I. Under Operation:					
(1)	(2)	(3)	(4)	(5)	(6)
1	Pammal / Pallavaram	Kancheepuram	142	3000	7.03
2	Madhavaram-TALCO Industrial Estate	Thiruvallur	14	400	1.25
3	SIDCO-Ranipet, SIPCOT	Vellore	84	2500	2.95
4	Melvisharam	Vellore	32	3400	3.63
5	Thuthipet, Ambur	Vellore	40	1590	4.14
6	Ramji Nagar	Tiruchirapalli	4	525	0.60
7	Valayampet sector Vaniyambadi.	Vellore	108	3122	3.37
8	Udayenthiram, Vaniyambadi.	Vellore	10	220	0.7
9	Bakkalapalli, Pernampet.	Vellore	17	891	1.60
10	V.C Mottur, Ranipet	Vellore	75	4000	4.60
11	Dindigul	Dindigul	61	2533	5.00
12	Malligaithopu, Ambur	Vellore	7	1100	2.00
13	SIPCOT- SIDCO Phase - II, Ranipet	Vellore	18	1560	2.52
II. Under Progress:					
14	Melpudupet, Ranipet	Vellore	12	600	1.51
15	Ghettithangal, Ranipet.	Vellore	6	600	1.39
16	Perumalpet, Vaniyambadi.	Vellore	18	4000	11.02
17	Pudur, Vaniyambadi.	Vellore	5	600	1.42
18	Valayampet, Vaniyambadi	Vellore	10	1470	2.00
19	Mittalam, Ambur	Vellore	4	1500	2.59
20	Gundur	Tiruchirapalli	5	1775	2.85
21	Chengalvarayanpattarai, Vaniyambadi	Vellore	6	400	1.80
22	V.Kota Road, Pernampet.	Vellore	47	2500	2.87
23	Sembattu, Trichy.	Tiruchirapalli	14	2400	3.00
III. Under Initial Stages:					
24	SIGC, Perundurai	Erode	25	2000	5.2

(1)	(2)	(3)	(4)	(5)	(6)
B. TEXTILE DYEING UNITS					
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	Veerapandi, Tiruppur.	Coimbatore	75	10000	6.75
9	Manickapurampudur, Tiruppur.	Coimbatore	11	1600	1.27
10	Karruppanpalayam	Karur	15	1300	1.63
11	R.K.Puram	Karur	48	1500	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	1700	1.69
17	Sellandipalayam	Karur	137	2600	2.25
18	Perundurai	Erode	12	3600	6.79
II. Under Progress					
19	Telungupalayam	Coimbatore	45	3710	4.61
20	Ponnaiyarajapuram	Coimbatore	31	3000	4.08
III. Under Initial Stages					
21	Erumappalayam	Salem	27	1017	1.32
22	Vanavil nagar	Salem	24	900	1.26
23	Vanna Nagar	Namakkal	32	1200	1.47
24	Gugai	Salem	24	900	1.35
25	Komarapalayam	Namakkal	57	4959	3.39
C. HOTELS AND LODGES					
I. Under operation					
1	Kodaikanal	Dindigul	90	820	1.30

Annexure 7

FUNDS RECEIVED FOR THE CETP SCHEMES

(Rs.in Lakhs)

SLNO.	NAME OF CET P	FUND RECEIVED FROM		TOTAL
		GOVT. OF INDIA	GOVT. OF TAMILNADU	
YEAR 1991-92				
1	Pammal/Pallavaram	50.00	-	50.00
2	Erode (Tanneries)	50.00	-	50.00
3	Tiruppur	37.50	-	37.50
4	Ayyampet-Muthialpet	22.50	-	22.50
YEAR 1992-93				
1	Pammal/Pallavaram	-	50.00	50.00
2	Erode (Tanneries)	-	50.00	50.00
3	Tiruppur	-	37.50	37.50
4	Ayyampet-Muthialpet	-	22.50	22.50
5	Bhavani	-	7.50	7.50
6	Erode -I (Dyeing) B.P. Agraharam	-	15.00	15.00
7	Erode -II (Dyeing) Kasipalayam	-	17.50	17.50
8	Karur	-	21.14	21.14
YEAR 1995-96				
1	Bhavani	7.50	-	7.50
2	Erode -I (Dyeing) B.P. Agraharam	15.00	-	15.00
3	Erode -II (Dyeing) Kasipalayam	17.50	-	17.50
4	Karur	21.14	-	21.14
5	Ranipet SIDCO	25.00	50.00	75.00
6	Visharam	25.00	50.00	75.00
7	Bakkalapalli, Pernambut.	40.00	-	40.00
YEAR 1996-97				
1	R.K. Puram, Karur	-	48.22	48.22
2	Andankoil, Karur	-	50.00	50.00
3	Amaravathinagar, Karur.	-	50.00	50.00
4	Thiruvai, Karur.	-	50.00	50.00
5	SIPCOT- SIDCO Phase -II, Ranipet	-	50.00	50.00

6	Valayampet, Vaniyambadi.	-	50.00	50.00
7	Kodaikanal	-	32.50	32.50
8	Perumalpet	-	50.00	50.00
9	Madhavaram- TALCO Industrial estate	-	\$ 50.00	50.00
10	Melpudupet, Ranipet.	-	37.78	37.78
11	Ranipet SIDCO	20.00	-	20.00
12	Melvisharam	20.00	-	20.00
YEAR 1998-99				
1	SIPCOT- SIDCO Phase-II	30.00	-	30.00
2	Madhavaram,	25.00	-	25.00
3	Ayyampettai - Muthialpettai	-	13.20	13.20
4	Chettithangal, Melvisharam.	-	34.85	34.85
5	Pernambut (Eruguthi Mullumedu)	-	38.50	38.50
6	Mittalam, Ambur	-	50.00	50.00
7	Pudur, Vaniyambadi.	-	35.50	35.50
8	Maligaithope, Ambur.	-	50.00	50.00
9	M.C. Road, Ambur.	-	50.00	50.00
10	Tarawali, Ambur.	-	50.00	50.00
11	Gundur, Trichy.	-	50.00	50.00
12	Ramji Nagar, Trichy.	-	15.00	15.00
13	Andipalayam ,Tiruppur.	-	50.00	50.00
14	Mannarai, Tiruppur	-	50.00	50.00
15	Manickapurampudur, Tiruppur	-	31.75	31.75
16	Kasipalayam, Tiruppur	-	50.00	50.00
17	Angeripalayam, Tiruppur	-	50.00	50.00
18	Veerapandi, Tiruppur	-	12.50	12.50
19	Chinnakarai, Tiruppur	-	50.00	50.00
20	Kunnangalpalayam, Tiruppur	-	50.00	50.00
21	Light House Area, Karur	-	14.74	14.74
22	Sukkaliyur, Karur	-	42.13	42.13
23	Sellandipalayam ,Karur	-	50.00	50.00
24	Karuppampalayam, Karur	-	27.00	27.00
YEAR 1998-1999				
1	SIPCOT-SIDCO Phase-II:	20.00	-	20.00
2	Andipalayam, Tiruppur	53.75	3.75	57.50
3	Mannarai, Tiruppur	50.00	17.75	67.75

4	Manikapurampudur	25.00	-	25.00
5	Angeripalayam, Tiruppur	50.00	130.00	180.00
6	Veerapandi, Tiruppur	40.00	118.75	158.75
7	Chinnakarai, Tiruppur	50.00	11.25	61.25
8	Kasipalayam, Tiruppur	50.00	5.00	55.00
9	Kunnangalpalayam, Tiruppur	54.00	4.00	58.00
10	R.K.Puram, Karur	-	0.03	0.03
11	Amaravathi nagar, Karur	-	11.00	11.00
12	Tiruvai, Karur	-	2.00	2.00
13	Andankoil, Karur	-	3.59	3.59
14	Karuppampalayam, Karur	27.00	-	27.00
15	Sellandipalayam, Karur	-	6.25	6.25
YEAR 1999-2000				
1	Manikapurmpudur, Tiruppur	6.75	-	6.75
2	Veerapandi, Tiruppur	128.75	-	128.75
3	Angeripalayam, Tiruppur	130.00	-	130.00
4	Kasipalayam, Tiruppur	5.00	-	5.00
5	Chinnakarai, Tiruppur	11.25	-	11.25
6	Mannarai, Tiruppur	17.75	-	17.75
7	Maligaithoppu, Ambur	50.00	-	50.00
8	Light house area, Karur	12.50	-	12.50
9	Perumalpet, Vaniyambadi	50.00	-	50.00
10	R.K.Puram, Karur	0.03	-	0.03
11	Chettithangal, Melvisharam	31.25	-	31.25
12	Melpudupet	1.25	-	1.25
YEAR 2000-2001				
1	Thiruvai, Karur	2.00	-	2.00
2	Pudur, Vaniyambadi	10.00	-	10.00
3	Madavaram	6.25	-	6.25
4	Light-house area, Karur	10.00	-	10.00
5	Karuppampalayam, Karur	-	13.66	13.66
YEAR 2001-2002				
1	Pudur, Vaniyambadi	15.00	-	15.00
2	Light House Area, Karur	10.00	-	10.00

\$ -Rs.18.75 lakhs has been returned to Govt

Annexure - 8A

AMBIENT AIR QUALITY MONITORING UNDER NAMP DURING 2001 - 2002

Sl.No	District	Location	Category	Annual Average Concentration of air pollutants ($\mu\text{g}/\text{m}^3$)				Permissible limit ($\mu\text{g}/\text{m}^3$)			
				SO ₂	NO _x	SPM	RDP	SO ₂	NO _x	SPM	RDP
1	Chennai	(a) Municipal kalyanamandapam, Kathivakkam.	Industrial	26	23	140	88	80	360	120	
		(b) Govt Higher. sec school, Manali	Industrial	24	23	166	100	80	360	120	
		(c) Municipal office, Thiruvottiyur	Mixed Residential	23	21	137	98	60	140	60	
2	Coimbatore	(a) District collectorate office	Mixed Residential	6	46	73	43	60	140	60	
		(b) Saibaba colony.	Residential	4	45	64	40	60	140	60	
		(c) SIDCO building	Industrial	5	41	143	86	80	360	120	
3	Thoothukudi	(a) Regional Testing Laboratory	Industrial	18	25	50	34	80	360	120	
		(b) AVM building	Mixed Residential	17	36	113	54	60	140	60	
		(c) Fisheries college	Industrial	19	29	50	30	80	360	120	
4	Madurai	(a) Fenner (I) ltd	Industrial	9	30	116	39	80	360	120	
		(b) Kunnathur chatram	Mixed Residential	18	42	351	78	60	140	60	
		(c) Highway project building.	Residential	5	22	99	41	60	140	60	
5	Salem	Sowdeswari college	Mixed Residential	4	12	44	30	60	140	60	

Annexure - 8B

AMBIENT AIR QUALITY MONITORING UNDER CAAQM DURING 2001 - 2002

Location	Annual Average Concentration of Air Pollutants ($\mu\text{g}/\text{m}^3$)							
	SO ₂	NOx	RDP	SPM	Pb	CO		
Anna nagar	2.33	17.7	66	105	0.042			
Adayar	1.68	13.96	35.65	51.39	0.018			
Kilpauk	4.93	35.77	121	356	0.041			<1145
Thiyagaraya nagar	4.76	28.6	128	511.1	0.044			<1145
Vallalar nagar	7.87	50.7	112	306	0.09			<1145
Permissible limit	60	60	60	140	0.75			2000

Annexure - 8C

DETAIL OF VEHICLES TESTED AT TNPCB VEM STATIONS DURING 2001-2002

STATION	No. of vehicles tested	Vehicles complied standards	Vehicles exceeded standards during first test	Vehicles complied emission standards after rectification	Vehicles did not comply emission standards
Chennai	27016	18378	8638	6827	1811
Udagamandalam	5537	4480	1057	865	192
Dindugal	6808	5409	1399	1102	297
Palani	3908	2041	1867	1810	57
Chengalpattu	3705	2382	1323	1197	126
Kancheepuram	1815	1700	115	104	11
Katteri	4015	2551	1464	1200	264
TOTAL	52804	36941	15863	13105	2758

Annexure - 8D

AMBIENT AIR QUALITY MONITORING UNDER TAAQM DURING 2001 - 2002

Sl.No	Location	Category	Annual Average Concentration of air pollutants ($\mu\text{g}/\text{m}^3$)					Permissible limit ($\mu\text{g}/\text{m}^3$)					
			SO ₂	NOx	RDP	PM	PM	SO ₂	NOx	RDP	PM		
1	Gandhi Market, Trichy.	Commercial.	4	8	95	230				60	60	60	140
2	Main Guard Gate, Trichy.	Commercial	6	9	91	190				60	60	60	140
3	Bishop Heber college, Trichy.	Mixed residential	4	7	79	134				60	60	60	140
4	Airiyamangalam, Trichy.	Residential	6	11	104	209				60	60	60	140
5	Central Bus Stand, Trichy.	Commercial	6	11	79	182				60	60	60	140

Annexure 9A

RIVER WATER QUALITY - CAUVERY RIVER UNDER MINARS PROGRAMME - 2001-2002

SL. No.	Station	pH	Dissolved Oxygen		Biochemical Oxygen Demand	Chlorides	Sulphates	Total Dissolved Solids	Nitrates	Total Hardness	Faecal Coliform	Total Coliform
			mg/l	mg/l								
1	Pathrakaliamman Koil	6.8-8.9	8.7	0.8	21	3	163	0.21	57	197	417	
2	Trichy U/S	7.6-8.6	7.0	1.0	78	27	429	0.25	182	3368	10750	
3	Grand Anaicut	7.6-8.6	7.4	1.3	100	40	476	0.31	184	255	805	
4	Sirumugai	7.0-8.7	7.9	0.9	38	226	600	0.32	198	296	792	
5	Bhavani	7.5-9.1	5.1	1.0	72	9	359	0.21	179	398	1161	
6	Karathattankudi	8.2-9.1	9.3	1.5	100	23	400	0.22	172	33	103	
7	Madathukulam	6.9-8.5	9.4	1.1	35	17	283	0.2	75	53	189	
8	Erode	7.6-8.1	5.6	2.0	73	39	440	0.3	149	583	1692	
9	Bhavani Sagar	6.6-8.5	6.9	1.1	24	38	202	0.23	65	176	550	
10	R.N. Pudur	7.3-8.9	7.4	0.9	34	31	334	0.21	138	354	1805	
11	P.Velur	7.9-9.2	7.8	0.9	64	18	387	0.31	153	92	257	
12	Mohamur	7.6-8.9	6.9	1.6	55	21	372	0.34	147	81	244	
13	Trichy D/S	7.5-8.3	7.9	2.2	58	26	373	0.2	136	657	1428	
14	Coleroon	8.3-9.2	9.0	1.2	243	56	797	0.12	238	133	378	
15	Pitchavaram	7.4-8.8	4.0	1.5	3123	256	6458	0.26	1125	230	583	
16	Thirumukkudal	7.9-8.5	7.5	1.4	58	22	368	0.15	153	160	480	
	I.S.I. Standard*	6.5 - 8.5	> 4	3.0	600	400	1500	50	-	-	5000	

* Surface water quality standards under Class 'C'

Annexure 9B

RIVER WATER QUALITY - CAUVERY RIVER UNDER GEMS PROGRAMME - 2001 - 2002

SL. No.	Station	pH	Dissolved Oxygen		Biochemical Oxygen Demand		Chlorides		Sulphates		Nitrates		Total Hardness		Faecal Coliform		Total Coliform	
			mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	MPN/100 ml	MPN/100 ml	MPN/100 ml	MPN/100 ml
1	Musiri	7.9-8.5	8.5	1.6	81	24	0.11	165	143	<1	488							
2	Musiri bore well	7.3-7.6	5.4	1.4	258	10	0.06	398	33	99								
3	Mettur	7.8-8.8	6.1	0.7	50	17	0.15	143	408	1349								
4	Pallipalayam	7.4-9.0	6.5	0.9	52	10	0.51	169	-	5000								
	I.S.I. Standards**	6.5 - 8.5	> 4	3.0	600	400	50	-	-	-								

** Surface water quality standards under class 'C'

Annexure 9C

RIVER WATER QUALITY - TAMILNADU UNDER MINARS PROGRAMME - 2001-2002

SL. No.	Station	pH	Dissolved Oxygen	Biochemical Oxygen Demand	Chlorides	Sulphates	Total Dissolved Solids	Nitrates	Total Hardness	Faecal Coliform	Total Coliform
			mg/l								
1	Papanasam	7.2-8.0	6.4	6.1	21	16	86	0.31	19	107	144
2	Ambasamudram	7.3-8.5	6.6	7.4	32	12	107	0.29	27	113	158
3	Thiruvadaimarudur	7.2-8.5	6.7	5.7	30	10	96	0.28	27	116	170
4	Cherannmadevi	7.2-8.1	6.5	6.1	35	14	134	0.37	47	134	210
5	Murappanadu	7.3-8.5	6.5	6.3	66	25	240	0.68	67	180	218
6	Arumuganeri	7.4-8.6	6.5	5.7	130	37	478	0.3	169	143	197
7	Kokirakulam	7.1-8.4	6.5	5.5	37	16	145	0.29	48	160	211
	I.S.I Standards*	6.5 - 8.5	> 4	3.0	600	400	1500	50	-	-	5000

Annexure 9D

RIVER WATER QUALITY - PALAR / VAIGAI UNDER MINARS PROGRAMME - 2001-2002

Ref. No.	River	pH	Dissolved Oxygen	Biochemical Oxygen Demand	Chlorides	Sulphates	Total Dissolved Solids	Nitrates	Total Hardness	Faecal Coliform	Total Coliform
			mg/l								
1p	Palar \$	6.6-8.0	5	3.2	123	34	0.79	438.00	127	248	753
2p	Vaigai #	8.3-8.5	6.9	3.0	207	22	0.55	280	75	100	427
	I.S.I. Standards *	6.5 - 8.5	> 4	3.0	600	400	1500	50	-	-	5000

\$ Vaniyambodi water supply head works, Kodayanchi village

Collection well at Thirupuvanam for Madurai water supply scheme.

* Surface water quality standards under class C

Annexure 9E

LAKE WATER QUALITY UNDER MINARS PROGRAMME - 2001-2002

Ref. No.	Station	pH	Dissolved Oxygen	Biochemical Oxygen Demand	Chlorides	Sulphates	Total Dissolved Solids	Nitrates	Total Hardness	Faecal Coliform	Total Coliform
			mg/l								
1L	Uthagamandalam	6.8-7.6	2.9	5	45	4	256	0.12	107	11556	34367
2L	Kodikanal	6.8-8.5	6.6	5.7	25	10	77	0.17	23	110	165
3L	Yercaud	7.2-8.9	8.9	1.9	30	10	232	0.08	69	292	1056
	I.S.I Standards *	6.5 - 8.5	> 4	3.0	600	400	1500	50	-	-	5000

* Surface water quality standards under class C

Annexure - 10

Details of 17 category of industries in Tamilnadu as on 31.3.2002

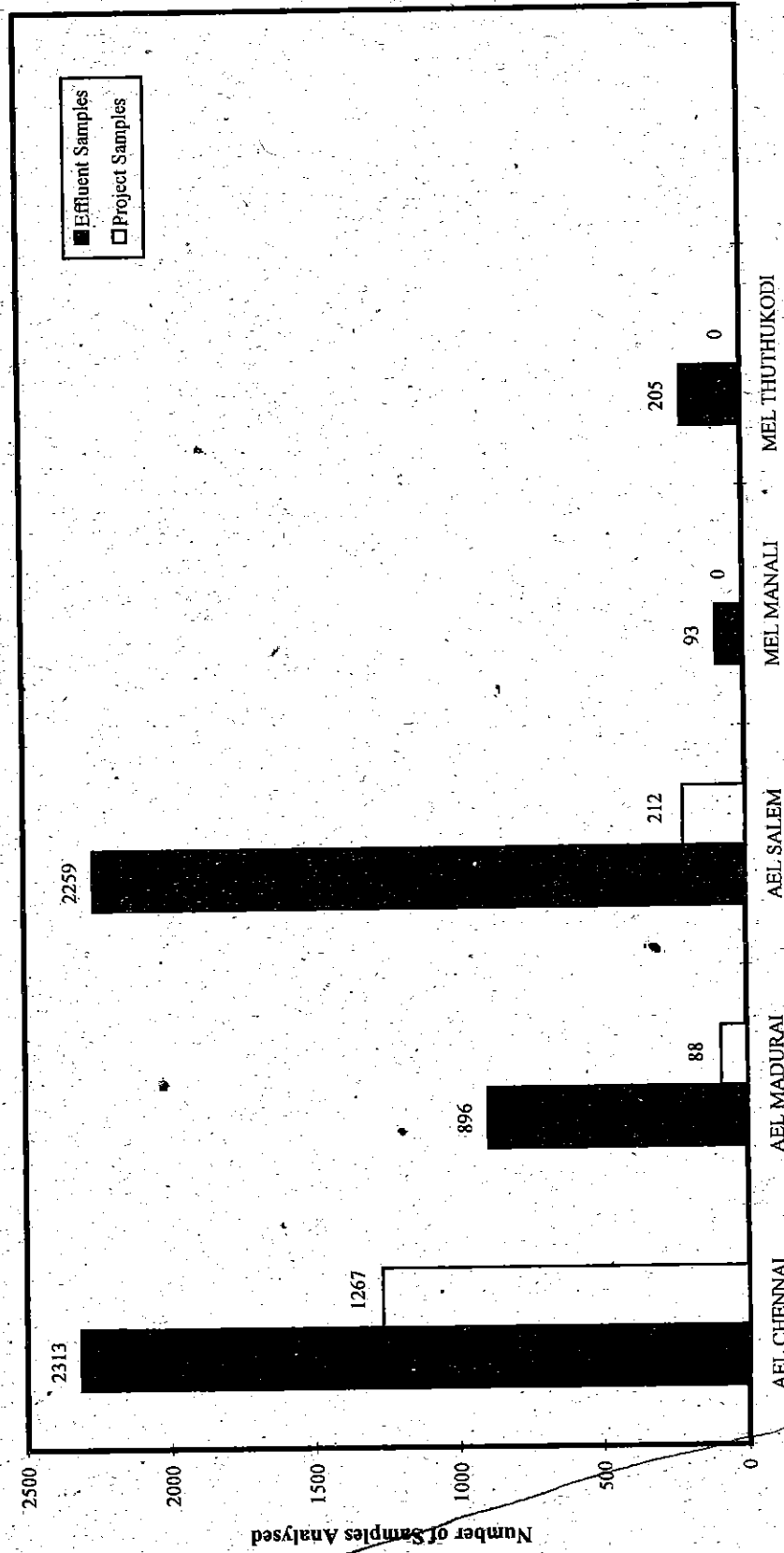
SL.No.	Category	Number of Industries		
		Total No.	Closed as per the direction of the Board	Complying with standards.
1	Aluminium	1	0	1
2	Caustic Soda	3	0	3
3	Cement*	16	0	16
4	Copper Smeller	1	0	1
5	Distillery	15	0	15
6	Dyes & Dye Intermediate	1	0	1
7	Fertilizer	8	0	8
8	Integrated Iron & Steel	1	0	1
9	Tanneries	49	0	49
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	38	0	38
16	Termal Power Plant	12	0	12
17	Zinc Smeller	0	0	0
	Total	175	0	175

* 200 Tpd and above.

** 30 Tpd and above

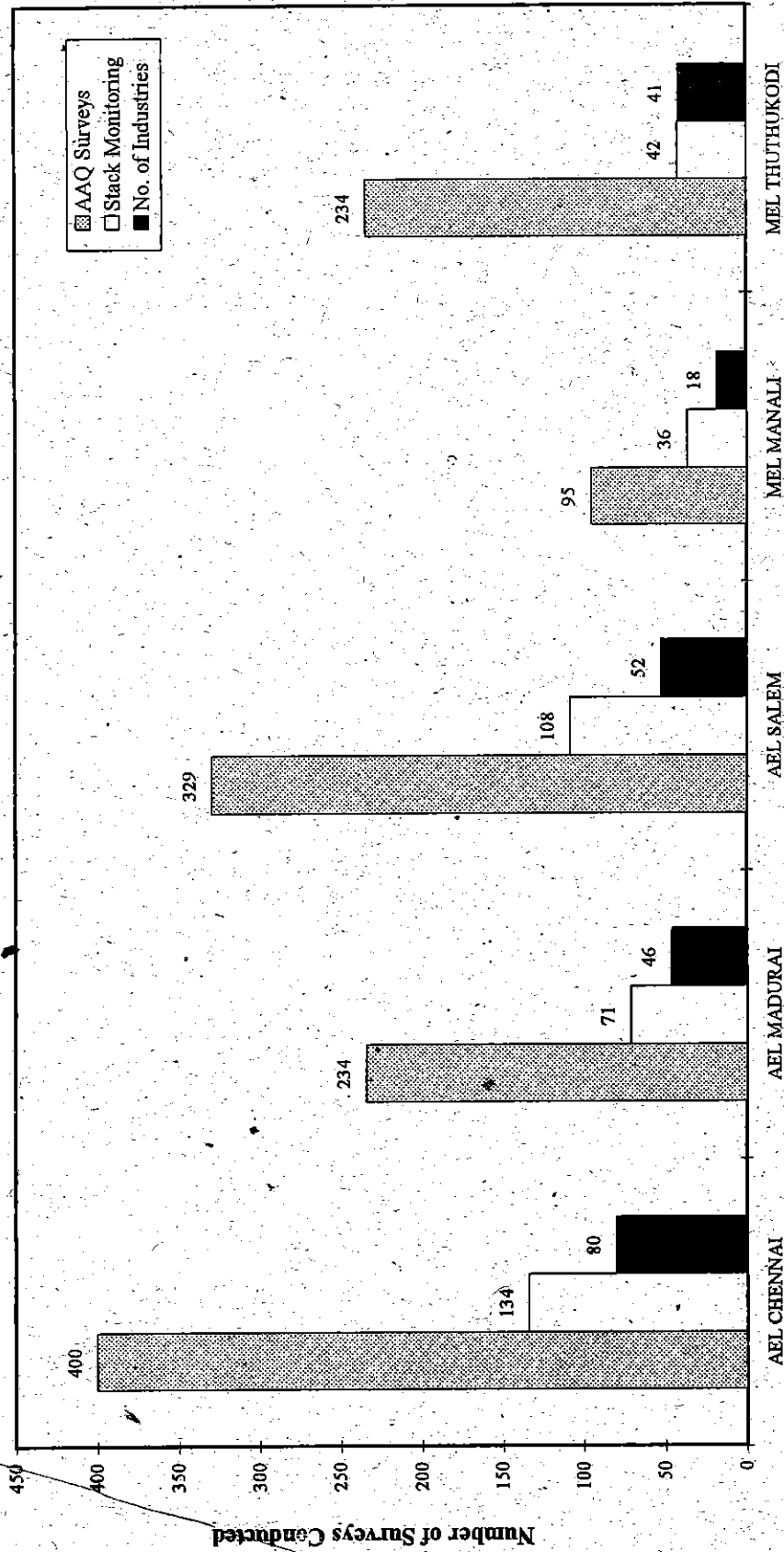
Annexure - 11 (A)

PERFORMANCE OF ADVANCED ENVIRONMENTAL LABORATORIES / MOBILE ENVIRONMENTAL LABORATORIES EFFLUENT / PROJECT - SAMPLES COLLECTED / ANALYSED DURING THE YEAR 2001-2002

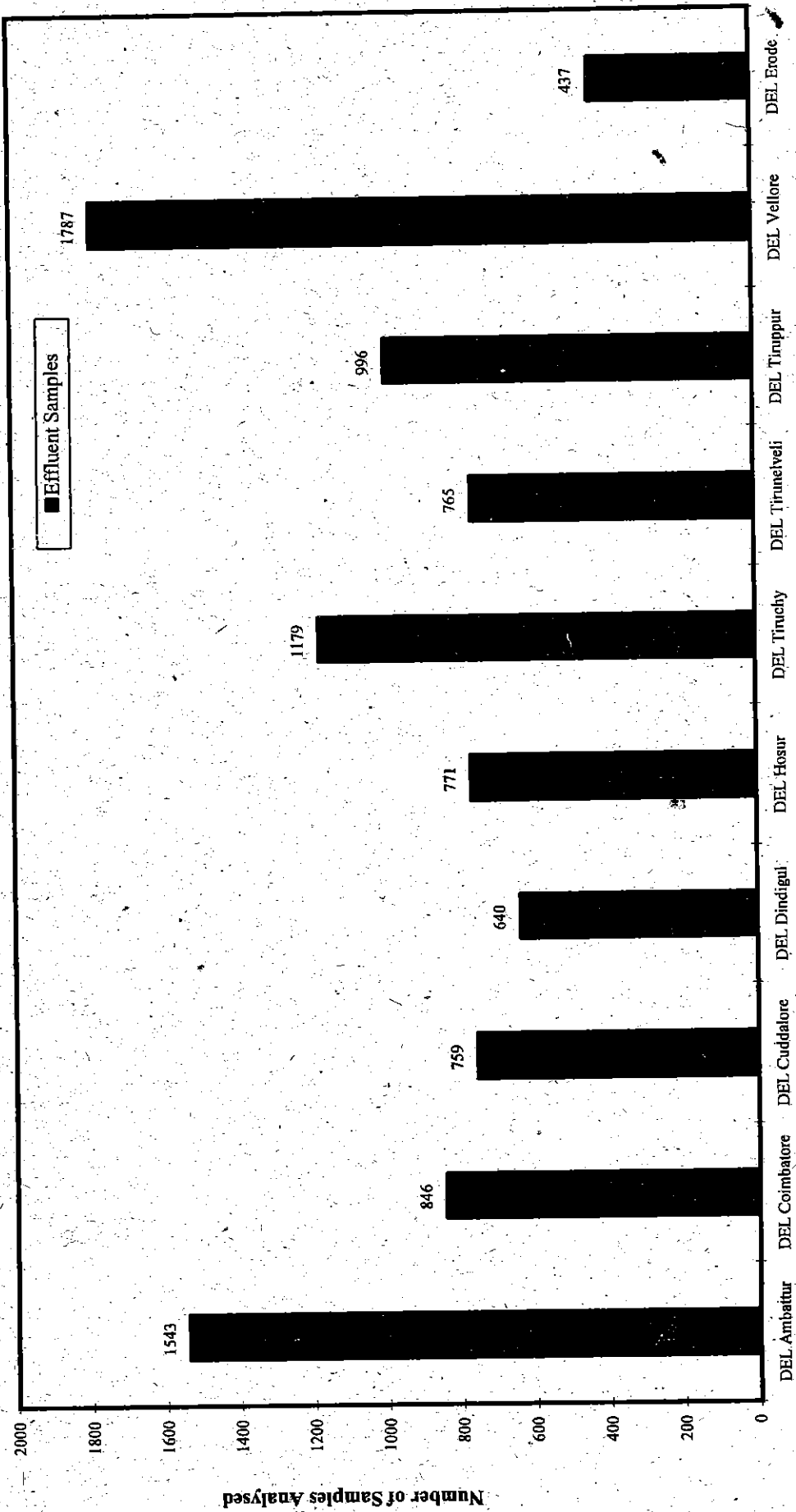


Annexure - 11 (B)

PERFORMANCE OF ADVANCED ENVIRONMENTAL LABORATORIES / MOBILE ENVIRONMENTAL LABORATORIES NUMBER OF AMBIENT AIR QUALITY SURVEYS / STACK MONITORING SURVEYS CONDUCTED DURING THE YEAR 2001-2002

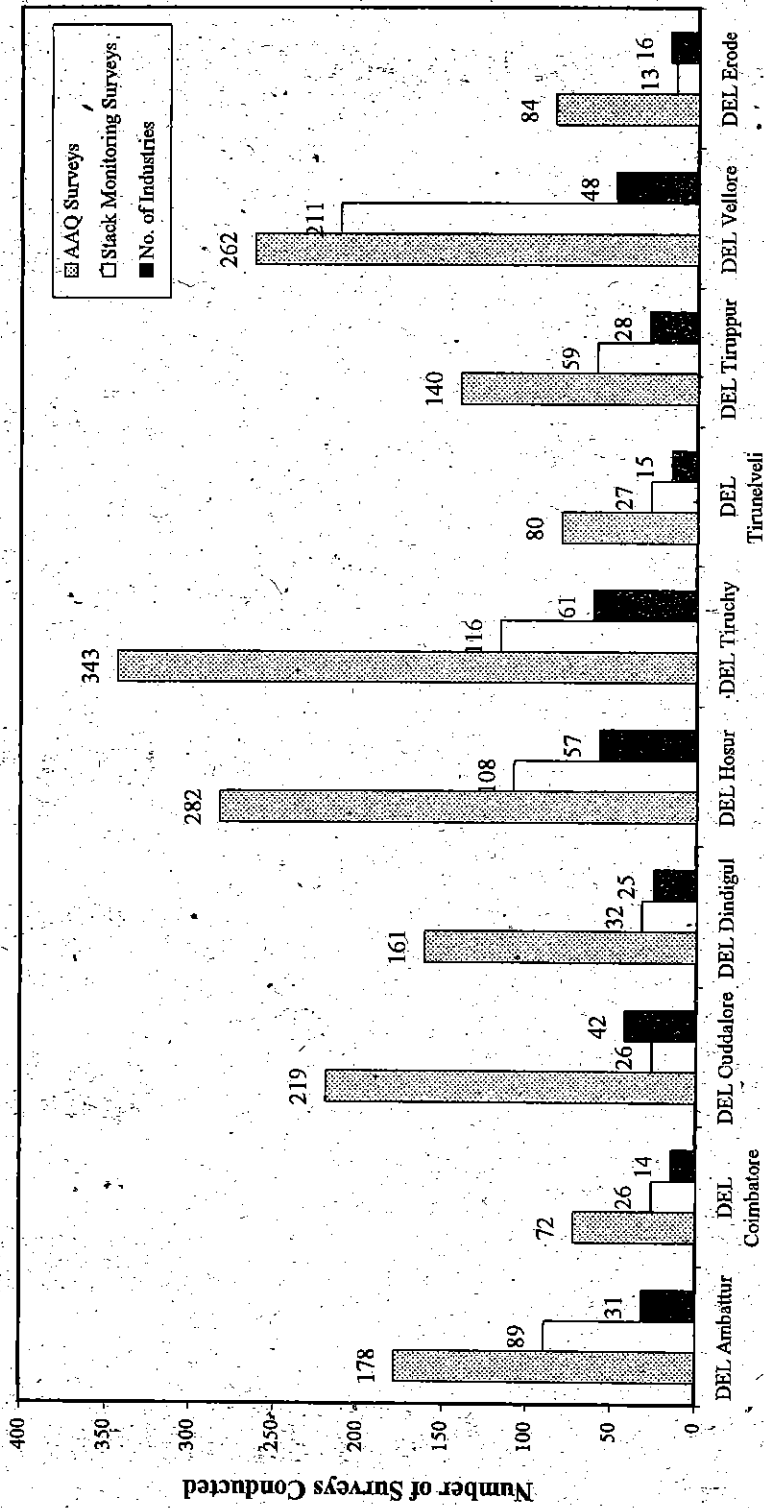


Annexure - 12 (A)
PERFORMANCE OF DISTRICT ENVIRONMENTAL LABORATORIES
EFFLUENT SAMPLES COLLECTED / ANALYSED
DURING THE YEAR 2001-2002



Annexure - 12(B)

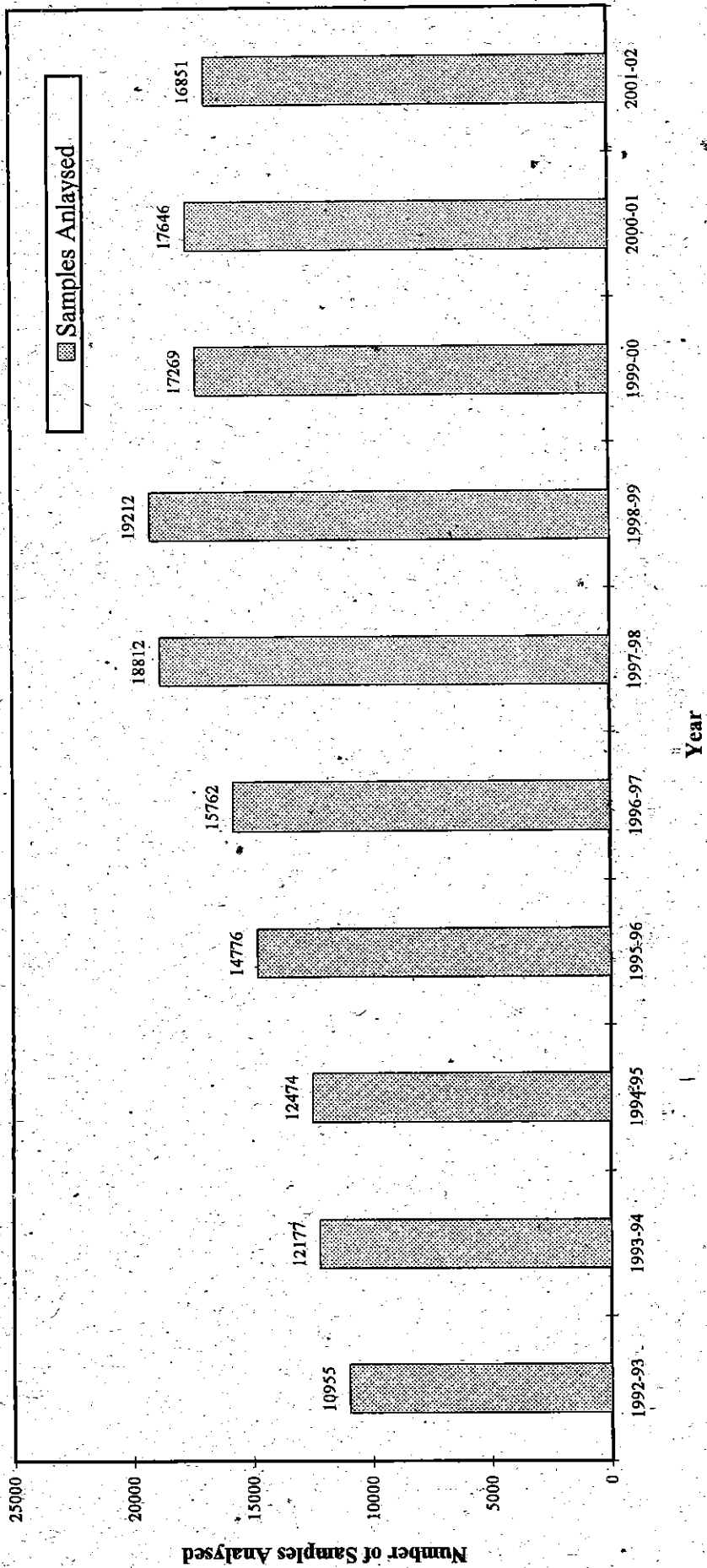
PERFORMANCE OF DISTRICT ENVIRONMENTAL LABORATORIES NUMBER OF AMBIENT AIR QUALITY SURVEYS / STACK MONITORING SURVEYS CONDUCTED DURING THE YEAR 2001-2002



DISTRICT ENVIRONMENTAL LABORATORY

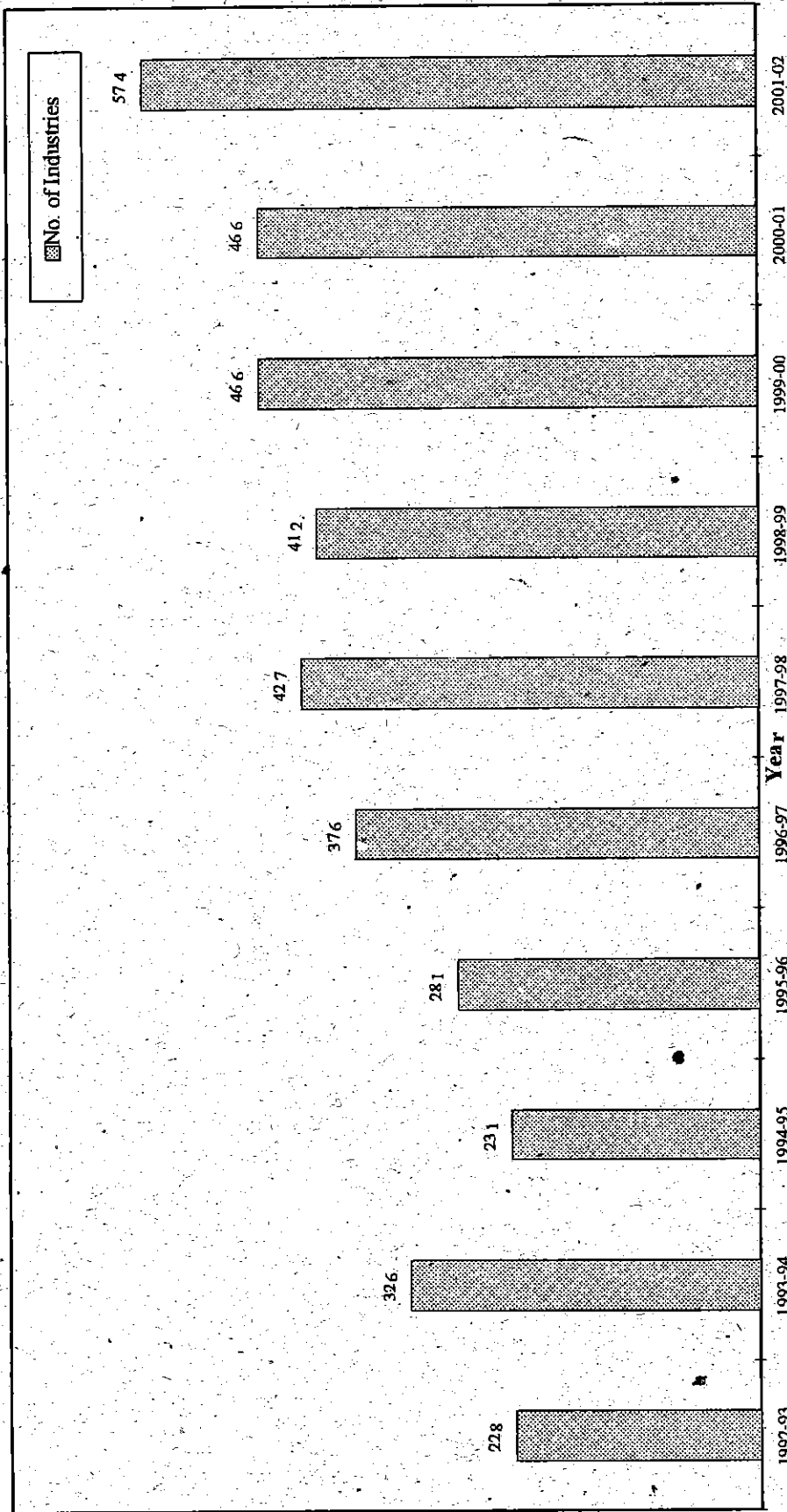
Annexure -13. (A)

PERFORMANCE OF LABORATORIES NUMBER OF SEWAGE / TRADE EFFLUENT / WATER SAMPLES ANALYSED FROM 1992-93 TO 2001-2002



Annexure -13 (B)

PERFORMANCE OF LABORATORIES
AMBIENT AIR QUALITY SURVEYS / STACK MONITORING SURVEYS
CONDUCTED FROM THE YEAR 1992-93 TO 2001-2002



No. of Industries wherein AAQ/SM Surveys conducted

Accounts





**AUDITOR'S REPORT ON THE ACCOUNTS OF
TAMILNADU POLLUTION CONTROL BOARD
FOR THE YEAR ENDED 31ST MARCH 2002.**

We have audited the attached Balance Sheet, the Receipts and Payments Account and the Income and Expenditure Account for the year ended 31st March 2002, of Tamilnadu Pollution Control Board.

These financial statements are the responsibility of entity's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in India. Those standards require that we plan and perform the audit to obtain reasonable assurance whether the financial statements are free of material misstatements. An audit includes examining, on a test check basis, evidence supporting principles used and significant estimates made by the management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

We report as under:-

- a) We have obtained all the 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) The Board has an Internal Audit System. But the internal audit has not been conducted covering all the areas of operations of the Board.
- 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 to Notes (2) and (3) regarding cess receivable, Advance for purchase of land, Advance to suppliers/staff and funds in transit 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 2002,
 - (ii) In the case of Receipts and Payments account, of the total receipts and payments of the Board for the year ended 31st March 2002, 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 2002.

For M/s.ESSVEEYAR,
Chartered Accountants

S.d/-
K.R.T. Krishnamoorthi
Partner

Chennai,
27 December 2002

TAMIL NADU POLLUTION
Receipts and Payments for
See Rules 36 of Tamil Nadu Water

PREVIOUS YEAR		RECEIPTS	TOTAL OF SUB HEAD		TOTAL OF MAJOR HEADS	
Rs.	Ps.		Rs.	Ps.	Rs.	Ps.
		OPENING BALANCE				
34152503.94		a. Bank	64986845.54			
16600.00		b. Cash	22690.00			
5692144.00		c. Funds in Transit	4131945.00			
39861247.94			69141480.54		69141480.54	
		I. GRANTS RECEIVED				
		a. From Government	-			
		b. From other Agencies	-			
		c. Schemes	2382744.00			
			2382744.00		2382744.00	
		II. FEES				
		a. Consultant Registration Fees	-			
740114.00		b. Cost of Application	1027560.00			
88944526.50		c. Consent Fees	93421057.00			
39103893.40		d. Cess Collection	27321664.85			
1752800.00		e. Fees for handling H. Waste	2528000.00			
130541333.90			124298281.85		124298281.85	
		III. Services & Rental Charges (Lab Analysis Charges Sch - A)				
26730645.00					29195271.00	
		IV INTEREST ON INVESTMENT				
44136913.00					52403209.00	
		V. MISCELLANEOUS				
15405902.45		a. Others (Schedule-B)	7905825.25			
37806229.00		b. Cess Re-imburement	14100533.00			
7650000.00		c. CPCB for Green Belt Scheme	250000.00			
60862131.45			22256358.25		22256358.25	
302132271.29		C/o			299677344.64	

CONTROL BOARD, CHENNAI - 600 032
the year ended 31 March 2002.
(Prevention and Control of Pollution) Rules 1983.

PREVIOUS YEAR		PAYMENTS	TOTAL OF SUB HEAD		TOTAL OF MAJOR HEADS	
Rs.	Ps.		Rs.	Ps.	Rs.	Ps.
2665000.00		I. CAPITAL EXPENDITURE				
		a. Asséts - Land Advance and Building Development	4492.00			
2428364.00		b. Laboratory Equipment	445615.00			
-		c. Vehicles				
771364.00		d. Furniture	113894.50			
421904.00		e. Office Appliance	468792.00			
788868.00		f. Library Books	78762.00			
-		g. Schemes	44550.00			
-		h. Security Deposit	-			
183750.00		i. Software Development	-			
4925.00		j. Electrical Installation	-			
576980.00		k. Lab. Chemicals etc.,	598825.00			
7841155.00			1754930.00			1754930.00
		II. REVENUE EXPENDITURE				
		A. ADMINISTRATIVE				
72002856.35		i. Salaries	77582269.10			
4946820.00		ii. Pension & Gratuity Contribution	4892677.00			
-		iii. Contingent Expenditure	-			
3712733.00		iv. Surrender Leave Salary	2756518.00			
1305546.00		v. Bonus	-			
1627909.10		vi. Medical Expenses	1675498.00			
83595864.45			86906962.10			86906962.10
		B. BOARD LABORATORY				
		i. Running Expenses of Lab.				740497.87
132957.50						
91569976.95		C/o				89402389.97

**TAMIL NADU POLLUTION
Receipts and Payments for
See Rules 36 of Tamil Nadu Water**

PREVIOUS YEAR	RECEIPTS	TOTAL OF SUB HEAD	TOTAL OF MAJOR HEADS
Rs. Ps.		Rs. Ps.	Rs. Ps.
302132271.29	B/F		299677344.64
	VI. DEPOSITS & ADVANCES		
131140.00	i. EMD	569465.00	
62551.50	ii. Security Deposit	56999.50	
890706.55	iii. Advance to Staff (Schedule - C)	842402.85	
725144812.00	iv. Short Term Deposit	514900000.00	
-	v. Refundable Performance Guarantee Deposit		
-	vi. Telephone Deposit	18033.00	
10201.00	vii. Rent Advance	33000.00	
-	viii. Electricity Deposit	26702.00	
-	viii. Electricity Deposit		
726239411.05		516446602.35	516446602.35
36004307.00	VII. OTHERS (Schedule - G)		37493718.00
.1064375989.34	Total		853527664.99

Chennai - 600 032
Date : 27/12/2002

S.d/-
R. Devaki B.A.
Fin. Adviser

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

CONTROL BOARD, CHENNAI - 600 032
 he year ended 31 March 2002.
 Prevention and Control of Pollution) Rules 1983.

PREVIOUS YEAR		PAYMENTS	TOTAL OF SUB HEAD		TOTAL OF MAJOR HEADS	
Rs.	Ps.		Rs.	Ps.	Rs.	Ps.
91569976.95		B/F			89402389.97	
3568500.90		C. Running & Maintenance of Vehicle			3795436.55	
		D. MAINTENANCE & REPAIRS				
5118647.60		i. Buildings and land, Rent	4515671.00			
1540.00		ii. Furniture & Fixture	2476.00			
284530.50		iii. Scientific instruments	523611.00			
364869.00		iv. Office Appliance	245817.70			
385310.50		v. Electrical installation	614796.50			
347798.00		vi. Insurance of Assets	468065.00			
12471.00		vii. Other Assets				
6515166.60			6370437.20		6370437.20	
		E. Fees to Consultant and Specialists			799174.00	
15010.00		F. Law Charges			452605.00	
239070.00		G. Expenses for audit			3670.00	
29396.00		H. CPCB for Green Belt Scheme			7583000.00	
32375000.00		Green Belt Sch. paid by Board				
		III MISCELLANEOUS (Schedule-D)			37197762.10	
29066792.35		a. Cess Remittance			28647873.00	
40844221.00						
		IV ADVANCE (Schedule - E)			5223575.75	
4567673.10						
		V Deposits				
759387000.00		a. Short Term Deposits	607400000.00			
27056701.90		b. Others (Schedule - F)	9973902.35			
786443701.90			617373902.35		617373902.35	
		VI CLOSING BALANCE				
64986845.54		Bank	51804323.67			
22690.00		Cash	27295.00			
4131945.00		Funds in Transit	4846220.40			
69141480.54			56677839.07		56677839.07	
1064375989.34		Total			853527664.99	

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

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

S.d/-
 K.R.T. Krishnamoorthi
 Partner

ANNUAL STATEMENT
Income and Expenditure Account
See Rules 36 of Tamil Nadu Water

PREVIOUS YEAR		EXPENDITURE	TOTAL OF SUB HEAD		TOTAL OF MAJOR HEADS	
Rs.	Ps.		Rs.	Ps.	Rs.	Ps.
		REVENUE EXPENDITURE				
		A. ADMINISTRATIVE				
		i. Pay of officers	2193723.00			
2782939.00		ii. Pay of Establishment	47778816.40			
45861648.50		iii. Allowance & Honororia (Sch-H)	36444654.00			
34149741.45		iv. Contribution to Gratuity & Provision for Pension	10024510.00			
10237717.00		v. Surrender Leave Salary	2757038.00		99198741.40	
3701639.00						
		B. Running Expenses of Labs.			2922270.00	
769122.98						
		C. Running and Maintenance of Vehicle (Sch- I)			4304941.10	
3765775.60						
		D. Maintenance and Repairs				
		i. Furniture & Fixtures	2476.00			
3493.50		ii. Lab. Equipments & Instruments	537870.35			
332991.00		iii. Office Appliance	258263.70			
175023.00		iv. Electrical Installation	641199.50			
617325.50		v. Building	1097224.00			
1652456.60		vi. Others	0.00		2537033.55	
12345.00						
		E. Fees to Consultants and Specialists			799174.00	
15010.00						
275649.00		F. Law Charges			708070.00	
10747423.24						
29665367.95		G. Depreciation (Form XV)			9931128.00	
26250.00						
2845289.50		H. Miscellaneous (Sch- J)			33437368.75	
108606173.10		i. Fees for Audit			26250.00	
		J. Prior Period Expenditure			0.00	
		K. Excess of income over Exp.			96044789.53	
		L. Notes to B/S (Sch-T)				
256243379.92		Total			249909766.33	

Chennai - 600 032
Date : 27/12/2002

S.d/-
R. Devaki B.A.
Fin. Adviser.

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

OF ACCOUNTS
for the year ended 31st March 2002.
(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				
120667483.50		II. Fees (Sch -K)				124181573.00
30891035.00		III Services & Rental Charges(Sch-L)				31967572.00
		IV Miscellaneous Receipts				
478275.42		i. Others (Sch - M)	680309.33			14780842.33
37806229.00		ii. Cess Reimbursement	14100533.00			
66400357.00		V Interest on Investment				78197874.00
0.00		VI Prior Period Adj.Account				781905.00
256243379.92		Total				249909766.33

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

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

S.d/-
K.R.T. Krishnamoorthi
Partner

ANNUAL STATEMENT
Balance Sheet as on
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 01.04.2001	50526922.18			
		ii. Grants received from Govt. for capital exp. During the current year and utilised upto 31.3.2002				
		iii. Grants received towards specific schemes from other agencies				50526922.18
		b. Excess of Income over Expenditure				
513864212.73		i. As at 01.04.01	611722962.59			
			611722962.59			
(10747423.24)		ii. Less: Amount transferred to Depreciation Fund	(9931128.00)			
108606173.10		iii. Add: Surplus during the year	601791834.59			697836624.12
			96044789.53			
110989433.40		c. Depreciation Fund				120920561.40
		B. OTHER DEPOSITS				
2364107.83		i. Deposits for supply & works (Schedule -N)	2950582.33			
35427319.05		ii. Refundable Performance Guarantee Deposits	34871319.05			37821901.38
		C. AMOUNT DUE				
554740720.41		i. Cess Payable	607719753.72			606694689.72
(871818.60)		Less: Provision	(1025064.00)			
15326037.44		ii. Others (Schedule -O)				16337327.14
1380225684.30		C/o				1530138025.94

OF ACCOUNTS
31st March 2002.
(Prevention and Control of Pollution) Rules 1983.

PREVIOUS YEAR		ASSETS	TOTAL OF SUB HEAD		TOTAL OF MAJOR HEADS	
Rs.	Ps.		Rs.	Ps.	Rs.	Ps.
8376224.65		I. FIXED ASSETS				
		a. LAND DEVELOPMENT			8376224.65	
		b. Building under Construction				
6180000.00		i. Hosur	6180000.00			
5500000.00		ii. Tirunelveli	5500000.00			
8165000.00		iii. Trichy	8165000.00			
8870000.00		iv. Madurai	8870000.00		28715000.00	
183750.00		c. Software Development			183750.00	
66266792.00		II OTHER ASSETS				
		a. As per Form XV			61006978.00	
		b. Stock in hand				
818277.12		i. Lab Chemicals	959683.78			
948596.40		ii. Glassware	915965.96			
230145.55		iii. Misc. Stores	221498.69			
1078536.58		iv. Filter Paper	370518.12		2467666.55	
		III SUNDRY DEBTORS				
	0.00	i. Zoning Atlas Scheme			1002941.75	
		ii. Cess Receivable				
440443493.25		a. From Industries	469135096.00			
111264570.99		b. From Local Bodies	135877181.70			
			605012277.70			
(871818.60)		Less: Provision for doubtful Debts	(1025064.00)		603987213.70	
		IV. ADVANCES & DEPOSITS				
		a. Misc. amounts recoverable				
101207301.24		(Schedule - Q)	135525183.34			
		b. Others amounts recoverable				
4141006.00		(Schedule - R)	4821186.30			
		c. Deposits				
1622654.40		(Schedule - S)	1679756.40		142026126.04	
764424529.58		C/o			847765900.69	

ANNUAL STATEMENT
Balance Sheet as on
See Rules 36 of Tamil Nadu Water

PREVIOUS YEAR		LIABILITIES	TOTAL OF SUB HEAD		TOTAL OF MAJOR HEADS	
Rs.	Ps.		Rs.	Ps.	Rs.	Ps.
1380225684.30		B/f			1530138025.94	
139956.98		D. Environmental Impact Study			139956.98	
30906402.00		E. Income received in advance (Schedule - P)			34906606.00	
53473500.00		F. Subsidies for common Effluent treatment plants			54973500.00	
1189893.34		G. Environmental Education Fund Reserve			1189893.34	
500000.00		H. Emergency response centre			500000.00	
7825000.00		I. C P C B Green Belt			492000.00	
145764.00		J. Zoning Atlas Scheme			0.00	
76113157.50		K Pension Fund			89684328.50	
0.00		L. Schemes			2338194.00	
1550519358.12		Total			1714362504.76	

Chennai - 600 032
Date : 27/12/2002

S.d/-
R. Devaki B.A.
Fin. Adviser

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

OF ACCOUNTS
31st March 2002.
(Prevention and Control of Pollution) Rules 1983.

PREVIOUS YEAR		ASSETS	TOTAL OF SUB HEAD		TOTAL OF MAJOR HEADS	
Rs.	Ps.		Rs.	Ps.	Rs.	Ps.
	764424529.58	B/f			847765900.69	
		V. CASH				
		a. Deposits				
	76113157.50	1 Pension Fund Investment	89684328.50			
	110989433.40	2 Depreciation Fund Investment	120920561.40			
	35427319.05	3 Refundable Performance Guarantee Deposit Investment	34871319.05			
	447000.00	4 Model ETP for Sago Plant	447000.00			
	493976438.05	5 Other term deposit	563995556.05		809918765.00	
	64986845.54	b. Cash at Bank	51804323.67			
	22690.00	c. Cash in Hand	27295.00			
	4131945.00	d. Cash in Transit	4846220.40		56677839.07	
		Total			1714362504.76	
1550519358.12						

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

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

S.d/-
K.R.T. Krishnamoorthi
 Partner

TAMIL NADU POLLUTION CONTROL BOARD

FORM - XV

ANNUAL STATEMENT OF ACCOUNTS - FIXED ASSETS AS ON 31st MARCH 2002.

See Rules 36 of Tamil Nadu Water (Prevention and control of Pollution) rules 1983.

Sl. No.	Particulars of Assets	Percentage	Opening Balance on 01/04/2001		Additions and sales adjustment during the year		Total	Depreciation		Closing Balance on 31/03/2002		Cumulative Depreciation as on 31/03/2002	
			Rs.		Rs.			Rs.		Rs.	P.	Rs.	P.
1	Building	10.00%	41663736				41663736	4166374		37497362		45429868.60	
2	Library Books	10.00%	2961501	99096		3060597	3060597	306060		2754537		1828478.03	
3	Vehicle	33.33%	2051530	2982609		5034139	5034139	1677879		3356260		12515324.15	
4	Furniture & Fixture	10.00%	8059541	355086		8414627	841463	841463		7573164		7868580.23	
5	Office Appliance	10.00%	4526620	779491		5306111	530611	530611		4775500		4968678.14	
6	Lab Equipment	33.33%	6582103	455032		7037135	7037135	2345477		4691658		47009208.14	
7	Electrical Installations	15.00%	421761			421761	421761	63264		358497		1300424.11	
	Total		66266792	4671314		70938106	70938106	9931128		61006978		120920561.40	

S.d/-
R.Devaki, B.A.,
Fin. Adviser

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

S.d/-
Sheela Raji Chunkath, I.A.S.,
Chairperson

For M/s. ESSVEEYAR Chartered Accountants

Chennai - 600 032
Date : 27/12/02

S.d/-
K.R.T. Krishnamoorthi
Partner

**SCHEDULE OF RECEIPTS AND PAYMENTS ACCOUNT
FOR THE YEAR ENDED 31st MARCH 2002.**

**RECEIPTS
SCHEDULE - A
Services & Rental Charges**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Analysis Charges (Fees)	13505934.00	
2	VEM Test Fees	4960440.00	
3	A.A.Q.S	10434057.00	
4	GEMS	289740.00	
5	NAAQM	3900.00	
6	CESS APPEAL FEES	1200.00	
		29195271.00	

**SCHEDULE - B
MISCELLANEOUS RECEIPTS**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Flag Day Collection	57525.00	
2	Miscellaneous Income	269795.25	
3	Sale of legal Books	164495.00	
4	Public Hearing	5015000.00	
5	Rent (Corporate Office)	150075.00	
6	Interest on Loans / Advance	64875.00	
7	ETI	1045810.00	
8	Zoning Atlas	308000.00	
9	Bio medical	2750.00	
10	Prepaid adj	700000.00	
11	Enlistment fees	127500.00	
		7905825.25	

**SCHEDULE - C
ADVANCE TO STAFF (Receipts)**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Temporary Advance	237312.25	
2	L.T.C. Advance	22294.00	
3	Vehicle Advance	87601.00	
4	Tour Advance	322998.00	
5	Festival Advance	50000.00	
6	Pay Advance	6990.00	
7	Telephone & Telex	76380.60	
8	Marriage Advance	5040.00	
9	Cycle Advance	2013.00	
10	Handloom Advance	7662.00	
11	T T A	2500.00	
12	Furniture Adv	1080.00	
13	DTA	132.00	
14	Personal Computer Adv	20400.00	
		842402.85	

**SCHEDULE OF RECEIPTS AND PAYMENTS ACCOUNT
FOR THE YEAR ENDED 31st MARCH 2002.**

PAYMENT

**SCHEDULE - D
MISCELLANEOUS**

SL.NO	DESCRIPTION	Rs.	Ps.
1.	Advertisement and Publicity	199086.00	
2.	Postage/Telegram	771656.60	
3.	Electricity/Water Charges	4861169.00	
4.	Printing and Stationery	1934684.00	
5.	Telephone and Telex	2461842.00	
6.	Staff Welfare Expenses	652384.40	
7.	Pollution Awareness Expenses	10312571.40	
8.	Training and Seminar	194118.00	
9.	Entertainment	139070.00	
10.	Miscellaneous Expenses	117282.50	
11.	Conveyance	222171.75	
12.	Wages	3648269.20	
13.	Office Expenses	219536.00	
14.	Prior period adjustment account	19404.00	
15.	Travelling expenses	1617283.50	
16.	Trade Fair	134920.00	
17.	Bank interest and commission	193325.10	
18.	LTC Expenses	118808.00	
19.	ETI Expenses	2130807.25	
20.	F.B.F.	171880.00	
21.	Environmental Pavilion Expenses	128637.00	
22.	Honorarium	59206.00	
23.	Public Hearing	866385.00	
24.	Financial Assistance to Proj.	763600.00	
25.	Pay Comm. Arrears	2129.00	
26.	Turn duty and Overtime Allow.	51389.00	
27.	O/s. Expenses	2116974.20	
28.	Zoning Atlas Exp.	1269945.00	
29.	Flag Day Payt.	63675.00	
30.	Newspaper & periodicals	171130.50	
31.	Property tax	570614.00	
32.	TDS	922095.70	
33.	NAQQM	9229.00	
34.	others	82484.00	
	TOTAL	37197762.10	

**SCHEDULE OF RECEIPTS AND PAYMENTS ACCOUNT
FOR THE YEAR ENDED 31st MARCH 2002.
PAYMENT**

**SCHEDULE - E
ADVANCE TO STAFF (PAYMENT)**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Festival Advance	461100.00	
2	Cycle Advance	1500.00	
3	Handloom Advance	97368.00	
4	Marriage Advance	31200.00	
5	Pay Advance	22690.00	
6	Tour Advance	647358.00	
7	Temporary Advance	1985855.75	
8	L.T.C. Advance	180312.00	
9	Imprest to Staff	12052.00	
10	TTA	5001.00	
11	Motor Vehicle Advance	709594.00	
12	S T A	893000.00	
13	D T A	45.00	
14	Personal comp adv.	176500.00	
	TOTAL	5223575.75	

**SCHEDULE - F
DEPOSITS AND ADVANCES (PAID) (OTHERS)**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Advance to Suppliers	7941351.35	
2	Earnest Money Deposit (refund)	150795.00	
3	Rent Advance	196200.00	
4	Retention Money Deposit	15199.00	
5	RPGD	556000.00	
6	Electricity Deposit	9210.00	
7	Security Deposit	46347.00	
8	CETP subsidy released	1000000.00	
9	Telephone & Telex Deposit	38000.00	
10	Enlistment Deposit	11000.00	
11	Sundry Creditor Others	9800.00	
	TOTAL	9973902.35	

**RECEIPTS
SCHEDULE - G
ADVANCES AND DEPOSITS (OTHERS) (RECEIVED)**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Consent Fees received in advance	34275263.00	
2	Cess received in advance	511105.00	
3	Analysis fees received in advance	16140.00	
4	A.A.Q.S received in advance	101210.00	
5	CETP Subsidy Recd.	2500000.00	
	TOTAL	37403718.00	

**SCHEDULE FORMING PART OF INCOME AND EXPENDITURE
ACCOUNT FOR THE YEAR ENDED 31st MARCH - 2002**

**EXPENDITURE
SCHEDULE - H**

ALLOWANCES AND HONORARIA

SL.NO	DESCRIPTION	Rs.	Ps.
1	Allowances	28032691.80	
2	Wages	3726412.20	
3	Traveling Expenses	2555758.00	
4	Medical Reimbursement	1701354.00	
5	Honorarium	18710.00	
6	Bonus		0.00
7	Leave Travel Concession Expenses	323528.00	
8	Payment of Vi Pay Commission Arrears	2129.00	
9	Turn Duty and Overtime Allowances	84071.00	
	TOTAL	36444654.00	

SCHEDULE - I

Running and Maintenance of Vehicles

SL.NO	DESCRIPTION	Rs.	Ps.
1	Repairs	1446753.00	
2	Fuel	2707540.10	
3	Insurance	150648.00	
	TOTAL	4304941.10	

**SCHEDULE FORMING PART OF INCOME AND EXPENDITURE
ACCOUNT FOR THE YEAR ENDED 31st MARCH 2002.**

EXPENDITURE

**SCHEDULE - J
MISCELLANEOUS**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Office Expenses	428842.10	
2	Telephone & Telex	2356514.25	
3	Sundries	226410.95	
4	Entertainment Expenses	303176.25	
5	Printing & Stationery	2414581.90	
6	Electricity & Water Charges	5233428.00	
7	Postage & Telegram	815776.40	
8	Advertisement & Publicity	597362.00	
9	Rent on Buildings	3227722.00	
10	Newspaper and Periodicals	224758.50	
11	Pollution Awareness Expenses	11982980.90	
12	Insurance of lab equipment	317020.00	
13	Family Benefit Fund Contribution	128280.00	
14	Conveyance Expenses	315475.75	
15	Staff Welfare Expenses	691816.60	
16	Training and Seminar Expenses	312912.75	
17	Bank Charges	163818.90	
18	Land Maintenance Expenses	61570.00	
19	Trade Fair Expenses	137955.00	
20	Board Meeting Expenses	44283.00	
21	Environmental Training Institute Expenses	1936801.50	
22	Financial Assistance to Projects	763600.00	
23	Expenses of audit	4857.00	
24	Property Tax and Rates	570614.00	
25	Environmental Pavilion Expenses	138444.00	
26	NAAQM Expenses	10549.00	
27	Insurance of Assets	27818.00	
	TOTAL	33437368.75	

**SCHEDULE FORMING PART OF INCOME AND EXPENDITURE
ACCOUNT FOR THE YEAR ENDED 31st MARCH 2002.**

INCOME

SCHEDULE - K

FEEES

SL.NO	DESCRIPTION	Rs.	Ps.
1	Consent Fees	123154078.00	
2	Consent Forms	1027495.00	
	TOTAL	124181573.00	

SCHEDULE - L

SERVICE AND RENTAL CHARGES

SL.NO	DESCRIPTION	Rs.	Ps.
1	Analysis Charges	13566918.00	
2	AAQS	10389074.00	
3	VEM Test Fees	4960440.00	
4	GEMS	289740.00	
5	Hazardous Waste Management Fees	2757500.00	
6	NAAQM	3900.00	
	TOTAL	31967572.00	

SCHEDULE - M

Miscellaneous

SL.NO	DESCRIPTION	Rs.	Ps.
1	Cess Appeal Fees	1200.00	
2	Miscellaneous Income	240208.33	
3	Sale of Books	164245.00	
4	Interest on Loans & Advance	271906.00	
5	Bio-Medical Waste Management Fees	2750.00	
	TOTAL	680309.33	

**SCHEDULE FORMING PART OF BALANCE SHEET
AS ON 31st MARCH 2002.**

**LIABILITIES
SCHEDULE - N**

OTHER DEPOSITS		Rs.	Ps.
1	Earnest Money Deposit	956946.20	
2	Security Deposits	1026322.65	
3	Enlistment Deposits	254500.00	
4	Retention Money Deposits	289091.48	
5	Miscellaneous Deposits	315000.00	
6	120th Meeting of CPCB	28416.00	
7	Others	80306.00	
TOTAL		2950582.33	

SCHEDULE - O

SUNDRY CREDITORS

SL.NO	DESCRIPTION	Rs.	Ps.
1	Flag Day Collection	11600.00	
2	Pay Roll Liabilities	1168993.30	
3	Outstanding Liability	5268241.74	
4	Tax Deducted at Source (Officers)	7300.00	
5	Tax Deducted at Source (Others)	312.00	
6	Public Hearing Fund	9662005.10	
7	Staff Death/Retirement Claim Payable	202795.00	
8	Others	16080.00	
TOTAL		16337327.14	

SCHEDULE - P

INCOME RECEIVED IN ADVANCE

SL.NO	DESCRIPTION	Rs.	Ps.
1	Consent Fees	34275263.00	
2	Cess Fees	513993.00	
3	Analysis Fees	16140.00	
4	AAQS	101210.00	
TOTAL		34906606.00	

**SCHEDULE FORMING PART OF BALANCE SHEET
AS ON 31st MARCH 2002.**

**ASSETS
SCHEDULE - Q
MISCELLANEOUS ADVANCES**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Advance to Suppliers	6804754.90	
2	Rent Advance	907008.15	
3	Insurance Claim Receivable	43243.00	
4	Land Advance	2881395.00	
5	Staff Welfare Fund	12701.15	
6	Tax Advance to ETI	382784.14	
7	Interest Receivable	124470629.00	
8	Others	22668.00	
	TOTAL	135525183.34	

SCHEDULE - R

ADVANCES TO STAFF

SL.NO	DESCRIPTION	Rs.	Ps.
1	Tour Advance	112452.50	
2	Temporary Advance	68438.00	
3	Marriage Advance	64745.00	
4	Festival Advance	275439.00	
5	Handloom Advance	51609.00	
6	Driver Training Advance	3181.50	
7	Pay Advance	2500.00	
8	Cycle Advance	6089.00	
9	Motor Vehicle Advance	2909268.00	
10	Leave Travel Concession Advance	5172.00	
11	Personal Computer Advance	219280.00	
12	Miscellaneous Advance (P R L)	58297.30	
13	Staff Housing Scheme	12662.00	
14	Transfer Tour Advance	76600.00	
15	Short Term Advance	931000.00	
16	Others (T D S)	24453.00	
	TOTAL	4821186.30	

SCHEDULE - S

DEPOSITS

SL.NO	DESCRIPTION	Rs.	Ps.
1	Telephone & Telex	1051797.00	
2	Electricity Deposit	581167.00	
3	Miscellaneous Deposits	26391.00	
4	Staff Higher Studies Deposit	4928.00	
5	Customs Deposit	3573.40	
6	Gas Deposit	11900.00	
	TOTAL	1679756.40	

SCHEDULE - T

NOTES FORMING PART OF ACCOUNTS FOR THE YEAR ENDED 31ST MARCH 2002.

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.60,39,87,213.70 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	: 16,08,01,486.00
iv.	Local Bodies	: 2,00,45,666.15

b) Provision has been made for doubtful debts Rs. 10,25,064.00 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.7,22,680.00 which are required to be reconciled and adjusted. Revenue impact, if any, on these is not ascertainable.

S.d/-
R.Devaki B.A
Financial Adviser

S.d/-
K. Sanjeevi M.E.(P.H)
Member Secretary

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

Subject to our report of even dated
for M/s.ESSVEEYAR,
Chartered Accountants

Chennai - 32
27-12-2002

S.d/-
K.R. T. Krishnamoorthi
Partner

