

ANNUAL REPORTS & ANNUAL ACCOUNTS 2013 - 2014



தமிழ்நாடு மாசு கட்டுப்பாடு வாரியம்
TAMILNADU POLLUTION CONTROL BOARD

ANNUAL REPORT

2013 - 2014

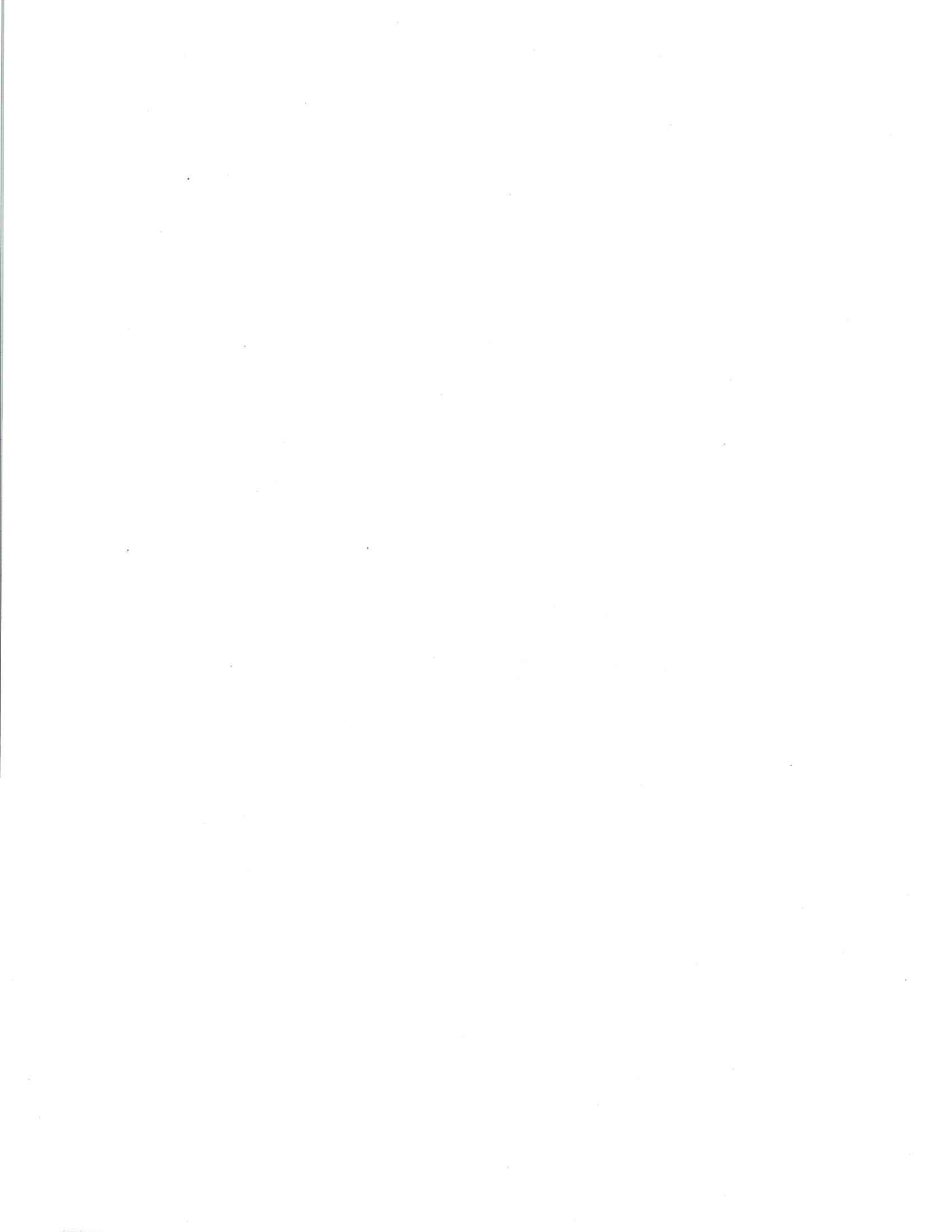


TAMILNADU POLLUTION CONTROL BOARD

76, Mount Salai, Guindy, Chennai - 32

CONTENTS

S.No.	PARTICULARS	Page No.
1.	INTRODUCTION	1
2.	CONSTITUTION OF TNPCB	3
3.	ENVIRONMENTAL LEGISLATIONS	5
4.	MONITORING NETWORK FOR QUALITY OF AMBIENT AIR	17
5.	ENVIRONMENTAL STANDARDS	27
6.	LEGAL ACTION	28
7.	BOARD MEETINGS	30
8.	ENVIRONMENTAL TRAINING INSTITUTE	33
9.	ENVIRONMENTAL AWARENESS AND PUBLIC PARTICIPATION	35
10.	OTHER IMPORTANT MATTERS DEALT IN THE BOARD	36
11.	ANNEXURE	46
12.	FINANCE & ACCOUNTS	64



1.1 INTRODUCTION

The Tamilnadu Prevention and Control of Water Pollution Board (TNPCB) was constituted by the Government of Tamilnadu on twenty seventh day of February, Nineteen eighty two (27-2-1982) in pursuance of the Water (Prevention and Control of Pollution) Act, 1974 (Central Act 6 of 1974). The Board was later renamed as 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, Handling and Transboundary Movement) Rules, 2008.
- ❖ The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 as amended in 1994 and 2000
- ❖ The Biomedical Waste (Management and Handling) Rules, 1998 as amended in 2000 and 2003
- ❖ The Plastics Waste (Management & Handling) Rules, 2011
- ❖ The Noise Pollution (Regulation and Control) Rules, 2000
- ❖ The Municipal Solid Wastes (Management and Handling) Rules, 2000
- ❖ The Battery (Management and Handling) Rules, 2001
- ❖ The e-Waste (Management and Handling) Rules, 2011

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:

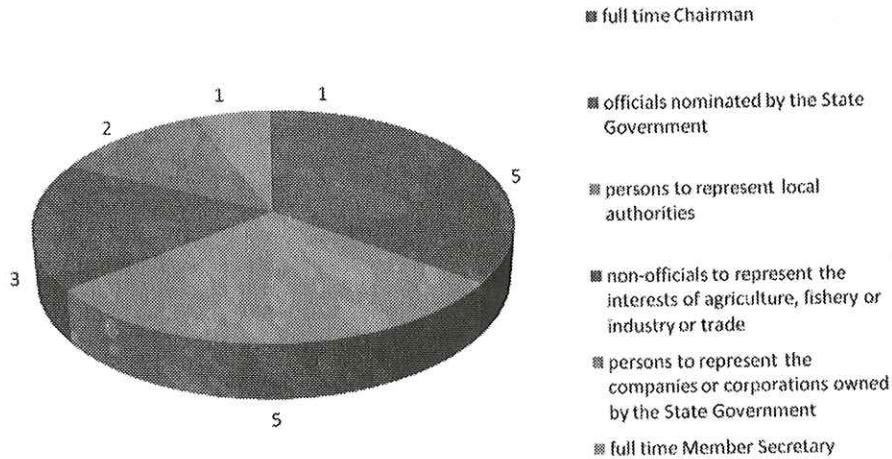
- ❖ To plan a comprehensive programme for the prevention, control and abatement of water and air pollution.
- ❖ To advise the State Government on any matter concerning the prevention, control or abatement of water and air pollution.
- ❖ To collect and disseminate information relating to water and air 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 and 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 to take steps for the prevention, control or abatement of air pollution in such areas.
- ❖ To lay down, modify or annul effluent standards for the sewage and trade effluents and for the emission of air pollutants into the atmosphere from industrial plants and automobiles or for the discharge of any air pollutant into the atmosphere from any other source.
- ❖ To evolve best economically viable treatment technology for sewage and trade effluents.
- ❖ To collect samples of sewage and trade effluents and emissions of air pollutants and to analyze the same for specific parameters.
- ❖ To collaborate with Central Pollution Control Board in organizing the training of persons engaged or to be engaged in programme 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 Central Pollution Control Board.

...

2.1 CONSTITUTION OF TNPCB

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

CONSTITUTION OF TNPCB



2.2 ORGANISATIONAL SET UP

The organization structure of TNPCB is a three-tier system consisting of an Head-office at Chennai, Regional offices and District offices with a total staff strength of 774 besides a separate wing of laboratories are linked to the offices at three levels. The Board has formed 5 Zonal offices headed by Joint Chief Environmental Engineers. Further there are 34 district offices, 32 are headed by District Environmental Engineers and 2 by Assistant Environmental Engineers. Two flying squads are also functioning at Erode and Tiruppur. The locations of district offices are shown in Annexure – II.

To assist the Board in monitoring the industries, 5 Advanced Environmental Laboratories, 10 District Environmental Laboratories are functioning. These laboratories carry out analysis of samples collected of sewage, trade effluents, emissions and hazardous wastes.

In order to dispose of the applications made by industries for the issue of Consent / Authorizations / Registration expeditiously, Board has revised the delegation of Powers in respect of issue of consent orders under the Water (P&CP) Act, 1974, as amended, the air (P&CP) Act, 1981, as amended, issue of authorization etc as detailed below.

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

**POWER DELEGATION FOR THE ISSUE OF CONSENT ORDERS,
RENEWAL OF CONSENT ORDERS, ISSUE OF
AUTHORIZATION AND REGISTRATION**

Sl. No.	Particulars	17 - Category	Red - Large	Red - Medium	Red - Small	Orange - Large	Orange - Medium	Orange - Small & All Green
1	Consent to Establish, Extension & Expansion	TSC	TSC	CCC	ZLCCC	ZLCCC	ZLCCC	DLCCC
2	Consent to Operate & Expansion	CCC	CCC	CCC	ZLCCC	ZLCCC	ZLCCC	DLCCC
3	EIA & CRZ attracted Projects, CTE, Extension & Expansion	TSC	TSC	CCC	CCC	TSC	CCC	CCC
4	EIA & CRZ attracted Projects CTO & Expansion	CCC	CCC	CCC	CCC	CCC	CCC	CCC
5	CRZ alone attracting Projects CTE, Extension & Expansion	TSC	TSC	CCC	ZLCCC	ZLCCC	ZLCCC	DLCCC
6	CRZ alone attracting Projects CTO & Expansion	CCC	CCC	CCC	ZLCCC	ZLCCC	ZLCCC	DO
7	Consent Renewal	Chairman	Chairman	M.S	DO	DO	DO	DO
8	Hazardous / BMW/ MSW Authorization	M.S	M.S	M.S	JCEE (M)	JCEE (M)	JCEE (M)	DO
9	Plastic Registration, E-Waste Authorization / Registration of recyclers	M.S	M.S	M.S	M.S	M.S	M.S	M.S
10	Issue of Amendments (Name change, change in stack details etc.,)	Chairman	Chairman	M.S	ZLCCC	ZLCCC	ZLCCC	DO
11	For any expansion projects of highly polluting industries those are attracting the G.Os 213 & 127, the Issue of Consent will be considered by placing it in TSC in the case of RL, CCC in the Case of RM and ZLCCC in the case of RS followed by recommending the project in Board meeting for obtaining G.O relaxation from Government. After getting the G. O relaxation, CTE will be issued by Chairman in the case of RL, MS in the Case of RM and JCEE (M) of Zonal office in the case of RS.							

Note :

TSC : Technical Sub-Committee

ZLCCC : Zonal Level Consent Clearance Committee

CCC : Consent Clearance Committee

DLCCC : District Level Consent Clearance Committee

MS : Member Secretary

JCEE (M) : Joint Chief Environment Engineer (Monitoring)

DO : District Officer

3.1 ENVIRONMENTAL LEGISLATIONS

The various environmental legislations concerning TNPCB are given below.

1. The Water (Prevention and Control of Pollution) Act, 1974 as amended
2. The Tamilnadu Water (Prevention and Control of Pollution) Rules, 1983.
3. The Water (Prevention and Control of Pollution) Cess Act, 1977
4. The Water (Prevention and Control of Pollution) Cess Rules, 1978
5. The Air (Prevention and Control of Pollution) Act, 1981
6. The Tamilnadu Air (Prevention and Control of Pollution) Rules, 1983.
7. The Environment (Protection) Act, 1986.
8. The Environment (Protection) Rules, 1986
9. The Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008
10. Manufacture, Storage and Import of Hazardous Chemical Rules, 1989
11. The Environment Impact Assessment Notification, 2006
12. The Bio-Medical Waste (Management and Handling) Rules, 1998 as amended.
13. The Plastics Waste (Management & Handling) Rules, 2011.
14. The Municipal Solid Wastes (Management and Handling) Rules, 2000.
15. The Batteries (Management and Handling) Rules, 2001
16. The e-Waste (Management and Handling) Rules, 2011

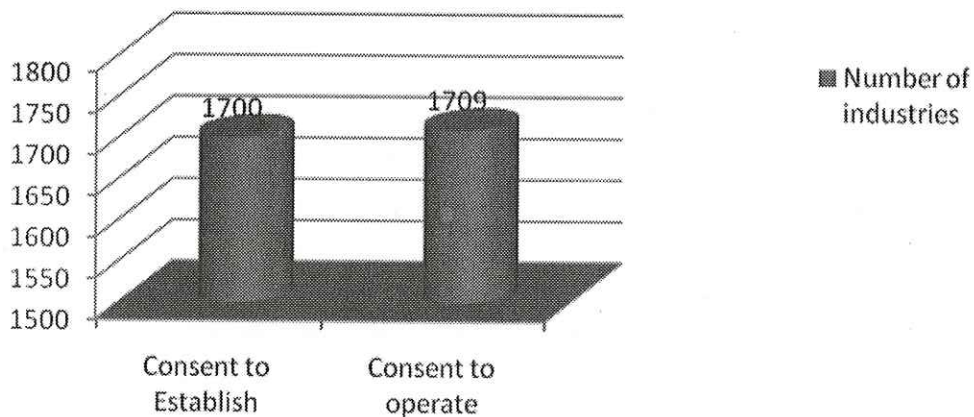
3.2 MONITORING OF INDUSTRIES

With increasing pace of industrialization in Tamilnadu, the need for continuous monitoring of pollution due to industrial sources has become mandatory. Industries are required to provide pollution control measures to meet the standards prescribed by the Board. The field officers of the Board inspect the industries under their jurisdiction periodically to assess the adequacy of pollution control measures provided by the industries to treat sewage, trade effluent and emissions and to monitor their performance. They also investigate complaints of environmental 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. The industries have also been classified in scale of size with Gross Fixed Assets (GFA) more than Rs. 10 crores as Large, GFA more than Rs. 5 crores upto Rs. 10 crores as Medium and GFA less than Rs. 1 crore as Small scale.

3.3 PROCEDURE FOR ISSUE OF CONSENT

Industry have to obtain consent for discharge of sewage / trade effluent into any stream or well or into sewer or land under the Water (Prevention and Control of Pollution) Act, 1974 and to operate them in air pollution control area of entire State of Tamilnadu under the Air (Prevention and Control of Pollution) Act, 1981. The consent is issued to the industries in two stages. 'Consent to Establish' is issued depending upon the suitability of the site before the industry takes up the construction activity. 'Consent to Operate' is issued before commissioning the industrial unit after the compliances of conditions of 'Consent to Establish' as issued. The Board has issued 1700 'Consent to Establish' orders and 1709 'Consent to Operate' orders under both the acts during the year 2013-2014

Consent issued under Water and Air Act



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 wholesomeness of water quality. As per the provisions of this Act, the local bodies and industries, which discharge sewage /trade effluent, are required to apply and obtain the 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 effluents are collected regularly to assess the quality of effluent discharged and also to assess the efficiency of the effluent treatment plants installed. During the year 2013-14, 23895 samples of sewage and trade effluents were collected and analysed.

The Water (Prevention and Control of Pollution) Cess Act, 1977, provides for the levy and collection of Cess on water consumed by any industry and by local authorities with a view to augment the resources of State Board and for the prevention and control of water pollution. The Board collects Cess from the specified industries and local bodies every month and remits to the Ministry of Environment and Forest, Climate change, Government of India, New Delhi.

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 survey are conducted in and around the industries regularly to assess the quality of the emissions let out and on the basis of the report of analysis, the industries are instructed to carry out necessary corrective measures.

3.6 INSPECTIONS OF INDUSTRIAL UNITS AND SAMPLE COLLECTION PERIODICITY

The engineers in the District Office inspect the large scale red category units once in three months. The medium scale red category units are inspected once in four months and the small scale red category units once in a year. Similarly the large and medium scale orange category units are inspected once in six months and the small scale orange category units once in two years. The less polluting green category units are inspected once in two years.

3.7 CARE CENTRE (CENTRAL APPLICATION RECEIVING CENTRE)

To assist industry to obtain consent orders/ authorization by industries in time the Care Centre has been established in the year 2009. In many cases, incomplete applications are received causes delay in processing and issue of consent order. To avoid such delay the Tamil Nadu Pollution Control Board establish a Care Centre in Head office, Chennai to guide the industries in filling up the application and to submit required documents so as to expedite the issue of Consent Order. In the first phase, this Centre caters to the needs of industries / local bodies located in Chennai, Tiruvallur and Kancheepuram District. The Care Centre has simplified and standardized the receipt of applications. It effectively monitors the application

from the time of its receipt to the issue of the consent order. The Centre counsels industries on the rules, it helps them to file the applications, it gives the status of pending applications, and despatches consent orders within specified time limits through the single window. Three officers have been specifically posted to the Care Centre for this purpose.

District Officers have been instructed to issue consent within 30 days for Red category industries, within 15 days for Orange category industries and within 10 days for Green **category industries**. All applicants can access the status of their applications from the TNPCB website. In addition, any clarifications pertaining to filling up of application or ascertaining the status of their application, issue of consent / authorization, can also be obtained over telephone by contacting the Care Centre. Senior officers of the Board regularly review the issue of orders by the Care Centre.

During the year 2013-14, 2430 applications were received by the Care Centre and 1556 consent orders have been issued. Consent fees amount of Rs. 1151 lakhs was collected by the Care Centre.

3.8. COMMON EFFLUENT TREATMENT PLANTS STATUS

The TNPCB plays an important role in the establishment of Common Effluent Treatment Plants (CETPs) for clusters of small-scale industries in various parts of the State. Small-scale industries often express financial difficulties, lack of space and other reasons, which prevent them from putting up required individual effluent treatment plant (ETP). As a large number of small-scale units are in clusters, the Board has launched a massive programme of motivating these industries to set up common effluent treatment plants.

3.8.1 STATUS OF COMMON EFFLUENT TREATMENT PLANTS:

Common effluent treatment plants are formulated in the following sectors:

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

Out of 13 CETP schemes established for tanneries, 11 CETPS are under operation with ZLD system. The remaining two CETP for tannery has opted for dilution of tannery effluent with treated sewage to achieve the standards prescribed by the Board.

ZLD STATUS OF TANNERIES

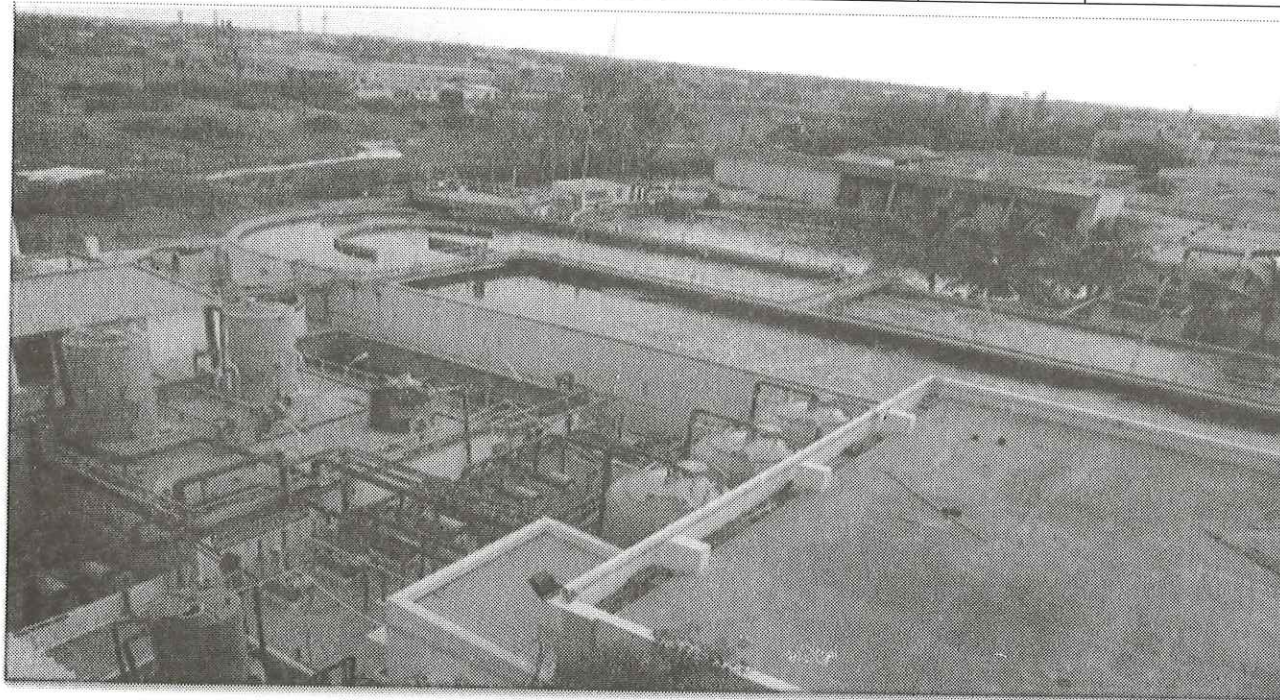
Sector	Total No. of CETPs	Location	ZLD Status			
			Implemented	Nearing Completion	Under Progress	Works to be commended
Tannery	13	Vellore	8	-	-	-
		Erode	1	-	-	-
		Pallavaram	1	-	-	-
		Dindigul	-	-	1	-
		Trichy	-	-	1	-
		Madhavaram	-	-	-	1
		Total (13)	10	-	2	1



Common Effluent Treatment Plant for Tannery Effluent in Vaniyambadi

ZLD STATUS OF TEXTILE DYEING INDUSTRIES

Sector	Total No. of CETPs	Location	ZLD Status			
			Implemented	Nearing Completion	Under Progress	Works to be commended
Textile	30	Tiruppur	18	-	-	2
		Karur	-	-	-	8
		Perundurai	1	-	-	-
		Ayyampettai	-	-	1	-
		Total (30)	19	-	1	10



Common Effluent Treatment Plant for Textile Effluent in Tiruppur

Out of 30 CETPs established for textile dyeing processing units, 19 CETPs have implemented ZLD system. The remaining 11 CETPs, has provided only ETP without ZLD system and now all 11 are under closure.

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

One CETP scheme for hotels and lodges are under operation in Kodaikanal, Dindigul District.

3.9 MANAGEMENT OF MUNICIPAL SOLID WASTE

With increasing urbanisation and rising level of municipal solid waste generation, there is an urgent need to evolve scientific approaches for the management of municipal solid waste, as the enforcing authority for Metropolitan cities are the Commissioner of Municipal Administration and implementing authorities are Municipal Commissioners. Similarly at the District level, the enforcing authorities are the District Collectors and implementing authorities are Municipal Commissioners. Pollution Control Boards have powers to issue authorisation to municipal authorities, for collection, segregation, transportation, treatment and disposal of municipal solid waste, to monitor the compliance of the standards regarding ground water, ambient air, leachate quality and the compost quality including incineration standards for waste processing and disposal facilities. The Board has issued authorisation/ NOC to 5 Corporations, 50 Municipalities and 87 Town Panchayats for composting of municipal solid waste and setting up of waste processing facility. The Board is advocating the concept of segregation of wastes at source, reduction, recycle and reuse of wastes to avoid any environmental issues during handling. TNPCB has imposed conditions to big shopping malls, fish markets, restaurants, residential township who obtained consent, to provide decentralized facility to produce compost from food waste.

Training programmes on source segregation, Energy from the mixed solid waste were conducted at various occasions all over Tamil Nadu. Awareness programme on landfill fire management has been conducted through IIT, Madras.

3.10 MANAGEMENT OF PLASTIC WASTE

The Ministry of Environment, Forests and Climate Change, Government of India vide Notification dated 4.2.2011 notified "The Plastic Waste (Management and Handling) Rules, 2011". As per this notification, no person shall manufacture, stock, distribute or sell any carry bag made of virgin or recycled or compostable plastic, which is less than 40 microns in thickness. Plastic carry bags, multilayered plastic pouch (or) sachet units, recycle plastic carry bags shall obtain registration certificate from Pollution Control Board. Tamilnadu Pollution Control Board is independently carrying out the inspections and enforcement to comply proper

authorization, manufacturing, recycling and disposal as an authority through inventory, consent mechanism and registration, etc.

Tamilnadu Pollution Control Board has been taking many initiatives to deal with the plastic wastes. Many awareness programmes were conducted by TNPCB on the ill effects of plastics and the need to use alternatives to the “use and throw plastic” items to the public/Government body. The Board is conducting plastic waste awareness programme in all districts periodically and meetings with local bodies, Plastic Manufacturer's Association to establish plastic waste collection centres. Chennai Corporation, Madurai Corporation and Dindigul municipalities have established plastic waste collection centres with shredders and these wastes are used for making plastic roads in Corporation maintained roads and local body roads.

TNPCB encourages the units that come up with proposal to establish energy oriented units using plastic waste into oils. The plastic waste collected are being utilised in cement kilns for co-processing as energy resource. The Board has instructed to obtain Registration under Plastic Waste (Management and Handling) Rules, 2011 for the units manufacturing plastic carry bags / multilayered plastics.

Mass Enforcement Program on the implementation of Plastic Waste (Management and Handling) Rules, 2011 was carried out on 24.10.2013 in all districts of Tamil Nadu under the Chairmanship of respective District Collectors along with the co-ordination of TNPCB officials and local body.

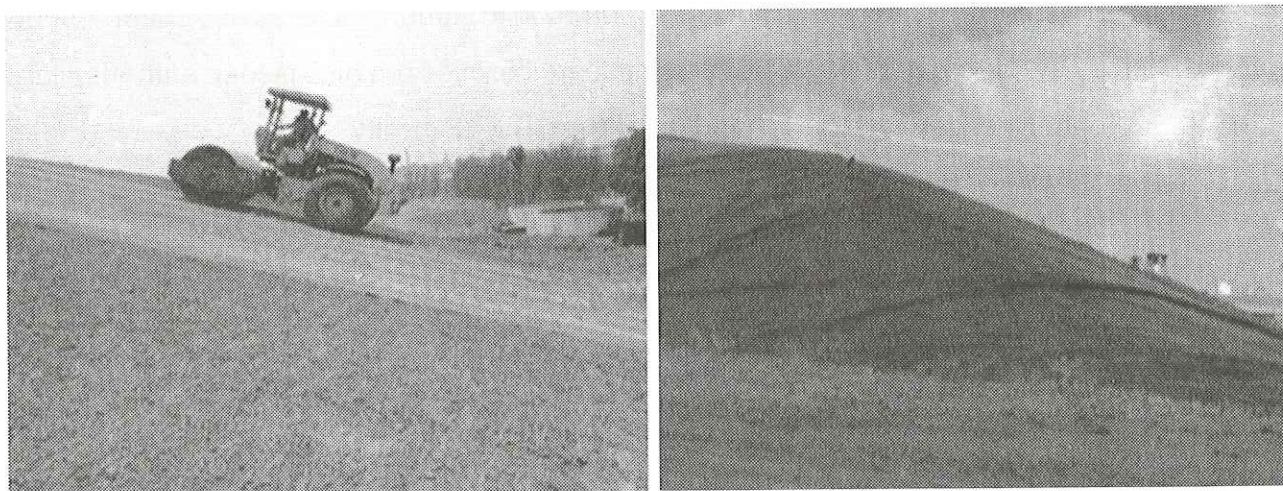
TNPCB has addressed all the District Collectors to carry out the mass enforcement program fortnightly every month for better enforcement on Plastic Waste (Management and Handling) Rules, 2011.

3.11 MANAGEMENT OF HAZARDOUS WASTE

The TNPCB is taking effective steps in handling and management of hazardous waste and its treatment and disposal of hazardous wastes in an environmentally safe manner. The

Board has identified and listed out 3067 units generating hazardous wastes under the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 as on 31.03.2014. A common hazardous waste treatment storage and disposal facility (TSDF) is established at SIPCOT industrial estate, Gummidipoondi and it is in operation. The federation of common effluent treatment plants, Tiruppur, has identified a site at Karupagoundarpalayam, Nallur village, Tiruppur taluk, Tiruppur District and the federation of CETPs & ETPs in Karur have identified a site at Mathagiri Village, Krishnarayapuram Taluk, Karur District to establish a secure landfill facility for disposal of sludge generated from treatment of textile dyeing effluents. Consent to establish has been issued by the Board to these two facilities. To adopt recycling and reuse principles, cement industries are encouraged to utilize the hazardous sludge from various industries like Textile, Engineering, chemical, petroleum etc., Various cement industries are using these hazardous wastes either on trial basis or permanently as raw materials/fuel. Further, action is being taken to establish a common hazardous waste treatment storage and disposal facility at SIPCOT, Perundurai, Erode District and SIPCOT has been addressed to allocate a suitable site in Sriperumpudur, Kancheepuram District. After obtaining Environmental Clearance, a Common Treatment Storage and Disposal facility will be established at Virudhunagar District.

Textile hazardous waste generated from the sludge of ZLD is being used in co-processing of Cement factory, and alternate method of disposal. Prior to it, a detailed study and evaluation was done at a Cement Factory in the presence of CPCB and established the compatibility of textile hazardous waste that can be used in co-processing of Cement Factory.



**Hazardous Waste Treatment Storage & Disposal Facility (TSDF)
in Gummidipoondi**

3.12 MANAGEMENT OF BIOMEDICAL WASTE

The Biomedical Waste (Management & Handling) Rules, 1998 applies to every occupier of an institution generating, collecting, receiving, storing, transporting, treating, disposing and / or any other form of handling of bio-medical waste. As per the Rule authorization of SPCB is required for handling of bio-medical waste (BMW). It is the duty of the occupier of an institution generating biomedical waste to take all steps to ensure that the biomedical waste is handled without any adverse effect to human health and environment. Biomedical waste shall be treated and disposed in accordance with schedule I and in compliance with the standards prescribed in schedule II of the said rules.

The Board has so far inventorized 6246 private hospitals and Government hospitals in the State. All these hospitals have made agreement with the Common Biomedical Waste Treatment Facilities (CBMWTF) for the disposal of the biomedical waste. The CBMWTF consists of autoclave, shredder, incinerator and secured land fill facilities. There are 12 CBMWTFs in Tamil Nadu out of which 11 are in operation and one is under Construction. They are at Thenmelpakkam village and Kinnar village in Kancheepuram district, Kandipedu village in Vellore district, two facilities at Orattukuppai village in Coimbatore district, Sengipatti village in Thanjavur district, Muthuvayal village in Ramanathapuram district, Coonoor in the Nilgiris district, Pappankulam village in Tirunelveli district, Thangayur village in Salem district, Undurmikidakulam village in Virudhunagar district. The facility proposed at Uthukottai in Tiruvallur District is being established. All the 11 common treatment facilities have been issued authorisation by the Board and so far 5679 health care facilities are also issued authorisation. About 38.93 Tonnes per day of BMW is handled by the CBWTF facility.

Bio Medical Waste Segregation



Bio-Medical Waste Collection Vehicle

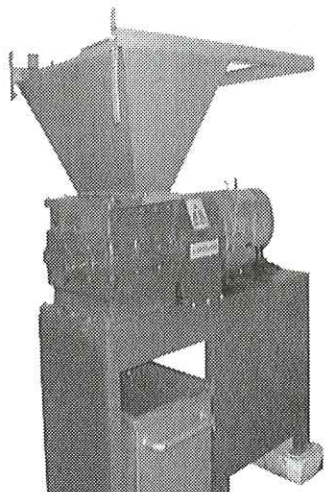


3.12.1 Global Healthcare Waste Project – Tamil Nadu Component

The Global Environment Facility (GEF) an international funding body under the United Nations Development Program (UNDP) identified Tamil Nadu State for funding the project titled 'Demonstrating and promoting best techniques and practices for reducing health care waste to avoid environmental releases of dioxins and mercury'. GEF has granted US \$ 2,58,000 (Approx. Rs. 1.4 crores) and routed the fund through Ministry of Environment and Forests, Government of India. MoU was signed with the stake holders (i.e) Ministry of Environment and Forests, Tamil Nadu Pollution Control Board, Tamil Nadu Health Systems Project and Common Treatment Facility.

Under this project, 14 hospitals with a composition of 6 government hospitals and 8 private hospitals and one common treatment facility (CTF) have been identified for up-gradation and development. The CTF was provided with an autoclave, shredder, online stack monitor and software for waste tracking. The 14 hospitals were provided with needle hub cutters (totally 300 nos.), non-mercury BP apparatus (totally 869 nos.), non-mercury thermometers (totally 1288 nos.) so as to complete elimination of using of mercury devices. In addition, the government hospitals were provided with electronic weighing scales, and consumables. They were also trained on bio-medical waste management, mercury spill management etc. As a part of this project, 79 candidates from hospitals, CTFs and TNPCB were sponsored for six months certification programme on Health care waste management conducted by Indira Gandhi National Open University. Finally, a National level workshop was conducted and the experience gained in this project was disseminated to the other hospitals in the state

Shredder Equipment



Non-Mercury BP Apparatus



3.13 MANAGEMENT OF E- WASTE

TNPCB has been taking several initiatives in the management of E-waste generated in Tamilnadu. A committee consisting of professors of Anna University, representatives of NGOs, an expert from National Metallurgical Laboratory has been formed towards the management of E-Waste generated in Tamilnadu. A workshop on E-waste was held to create awareness among the stakeholders.

MOEF,GOI has published Guidelines for Environmentally Sound Management of E-waste in March 2008 and E-waste(Management & Handling) Rules,2011 was published by MOEF,GOI during 2009-2010 and effective from 1st May 2012 as per the MOEF,GOI Notification dated 12.05.2011.

TNPCB has issued consent to the E-Waste recyclers for Segregation & recovery of PCB, IC, Iron Copper, Rubber, glass from the raw material of mixed computer electronics and Electrical goods scrap and sent for recycling. PCB/IC wastes are exported to foreign countries such as USA, Singapore and Malaysia to recover the heavy metals present in the said wastes and other wastes are disposed through the authorised inland recyclers.

TNPCB has issued Registration under the E-waste (Management & Handling) Rules, 2011 for 16 units and Authorisation under the E-waste (Management & Handling) Rules, 2011 for 23 units.

4.0 MONITORING NETWORK FOR QUALITY OF AMBIENT AIR

4.1 AIR QUALITY MONITORING

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

4.1.1 AMBIENT AIR QUALITY MONITORING PROGRAMME AT CHENNAI

Tamil Nadu Pollution Control Board is operating eight ambient air quality monitoring stations in Chennai under National Air Quality Monitoring Programme (NAMP).

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

- | | | | |
|--------|-------------------|---|------------------------------------|
| (i) | Kathivakkam | - | industrial area |
| (ii) | Manali | - | industrial area |
| (iii) | Thiruvottiyur | - | industrial area |
| (iv) | Kilpauk | - | commercial (traffic inter-section) |
| (v) | Thiyagaraya Nagar | - | commercial (traffic inter-section) |
| (vi) | Vallalar Nagar | - | commercial (traffic inter-section) |
| (vii) | Anna Nagar | - | residential area |
| (viii) | Adyar | - | residential area |

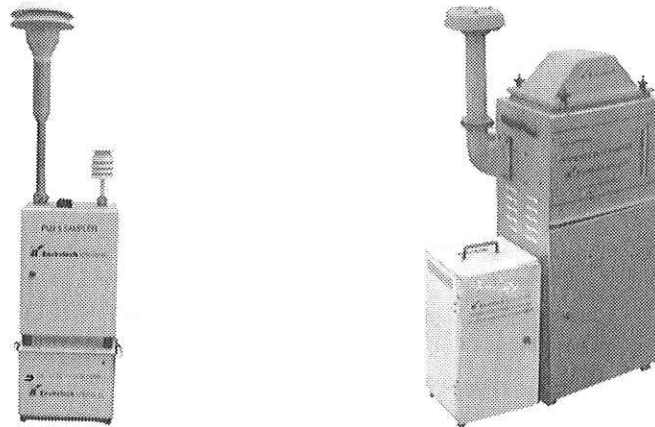
All the above stations are functioning on 24 hours basis, twice a week. The samples collected from NAMP stations are analysed for the Respirable Suspended Particulate Matter (RSPM) (RSPM is particulate matter less than 10 microns) and gaseous pollutants such as Sulphur di oxide (SO₂) and Nitrogen di Oxides (NO₂).

The National Ambient Air Quality Standards prescribed is given below:

Area	Annual average concentrations of pollutants in $\mu\text{g}/\text{m}^3$		
	SO ₂	NO ₂	RSPM
Industrial, Residential, Rural & other areas	50	40	60

The ambient air quality data collected from the above mentioned air quality monitoring stations indicate that the parameters such as sulphur dioxide, nitrogen dioxide are found to be well controlled in Chennai including the industrial area. The average values of Respirable Suspended Particulates levels exceeded the standard in Chennai at Kilpauk, Thiyagarayanagar and Anna Nagar Monitoring stations.

The Respirable Suspended Particulate Matter (RSPM) levels exceeded the permissible limit at few stations in Chennai city mainly due to the Metro Rail work, dust contributed by pipe line, telephone/electrical cable laying activities on the road and also due to the re-suspension of traffic dust generated from automobile emissions and heavy vehicular traffic and pedestrian movement. The average values of pollutants recorded at the above monitoring stations under NAMP programme during the period 2013-2014 are in Annexure –VI.



Air Quality Monitoring Equipments (Particulate Matter)

4.1.2 AMBIENT AIR QUALITY MONITORING IN THOOTHUKUDI, COIMBATORE, SALEM, MADURAI TRICHY, CUDDALORE AND METTUR.

At Thoothukudi, ambient air quality stations have been functioning under NAMP from the year 1988 in the following locations.

- | | | | |
|----|-----------------|---|-----------------|
| a) | Raja Agencies | - | Industrial zone |
| b) | SIPCOT | - | Industrial zone |
| c) | A.V.M. Building | - | Mixed zone |

At Coimbatore, the ambient air quality stations have been functioning under NAMP from the year 1991 in the following locations.

- | | | | |
|----|-----------------------------|---|------------------|
| a) | District Collector's Office | - | Mixed zone |
| b) | Ponniyarajapuram | - | Residential zone |
| c) | SIDCO Building | - | Industrial zone |

At Salem, the ambient air quality station has been functioning under NAMP in the from 1996 in the following location.

- | | | | |
|----|--------------------|---|------------|
| a) | Sowdeswari College | - | Mixed zone |
|----|--------------------|---|------------|

At Madurai, the ambient air quality stations have been functioning under NAMP from 1996 in the following locations.

- | | | | |
|----|-------------------------------------|---|------------------|
| a) | Highways Project Building | - | Residential zone |
| b) | M/s.Susee Cars and trucks Co., Ltd. | - | Industrial zone |
| c) | Madurai Corporation Office (SZ) | - | Mixed zone |

At Trichy, the ambient air quality stations have been functioning under NAMP from 2012 in the following locations.

- | | | | |
|----|----------------------|---|----------------------|
| 1. | Gandhi Market | - | Commercial zone |
| 2. | Main Guard Gate | - | Traffic intersection |
| 3. | Bishop Heber College | - | Mixed zone |
| 4. | Golden rock | - | Residential zone |
| 5. | Central bus stand | - | Traffic intersection |

At Cuddalore, the ambient air quality stations have been functioning under NAMP from 2013 in the following locations.

- | | | | |
|----|-------------------|---|------------------|
| 1. | Echankadu Village | - | Residential Zone |
| 2. | DEE Office | - | Commercial Zone |
| 3. | SIPCOT | - | Industrial Zone |

At Mettur, the ambient air quality stations have been functioning under NAMP from 2013 in the following locations.

- | | | | |
|----|-------------|---|------------------|
| 1. | Raman Nagar | - | Residential Zone |
| 2. | SIDCO | - | Industrial Zone |

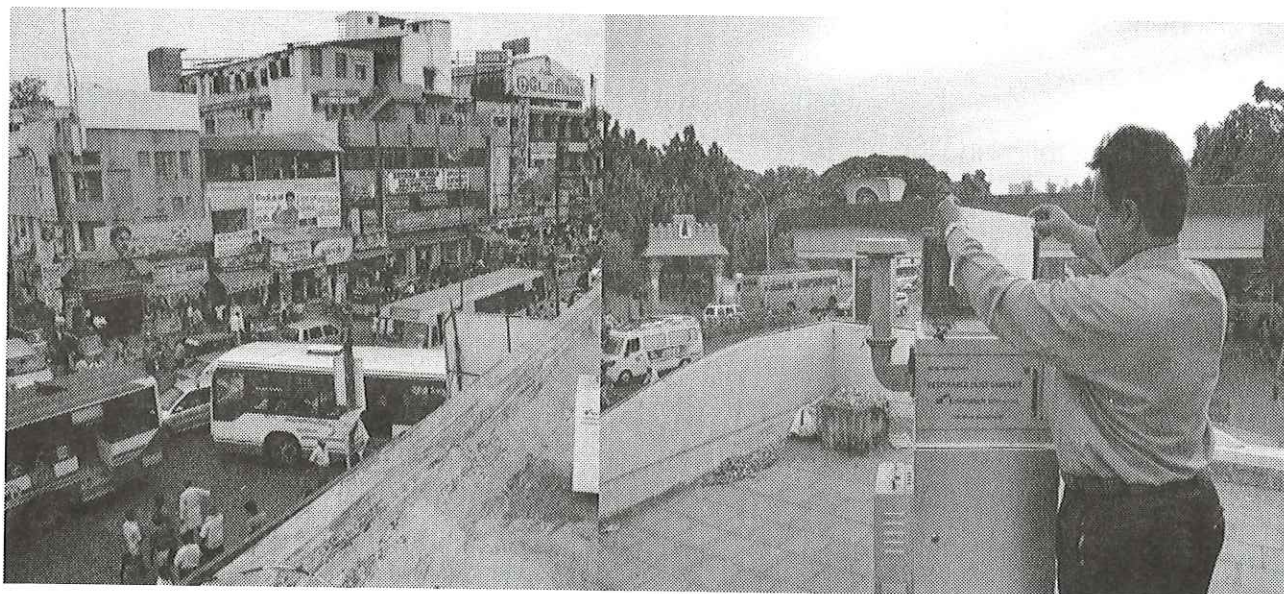
All the above monitoring stations under NAMP are functioning on 24 hours basis, twice a week. The samples collected from NAMP stations are analysed for the Respirable Suspended Particulate Matter (RSPM) (RSPM is particulate matter less than 10 microns) and gaseous pollutants such as Sulphur di oxide (SO₂) and Nitrogen di Oxides (NO₂).

The ambient air quality data recorded during 2013-2014 indicate that the parameters such as sulphur dioxide, nitrogen dioxide are found to be well controlled at Thoothukudi, Madurai, Coimbatore Salem, Trichy, Cuddalore and Mettur.

The annual average values of RSPM are found to exceed the permissible limits at all monitoring stations in Thoothukudi, Madurai and Salem and at SIDCO in Coimbatore and at Gandhi Market, Main Guard Gate and Central Bus Stand in Trichy and at Echankadu village, DEE office premises in Cuddalore and at SIDCO in Mettur.

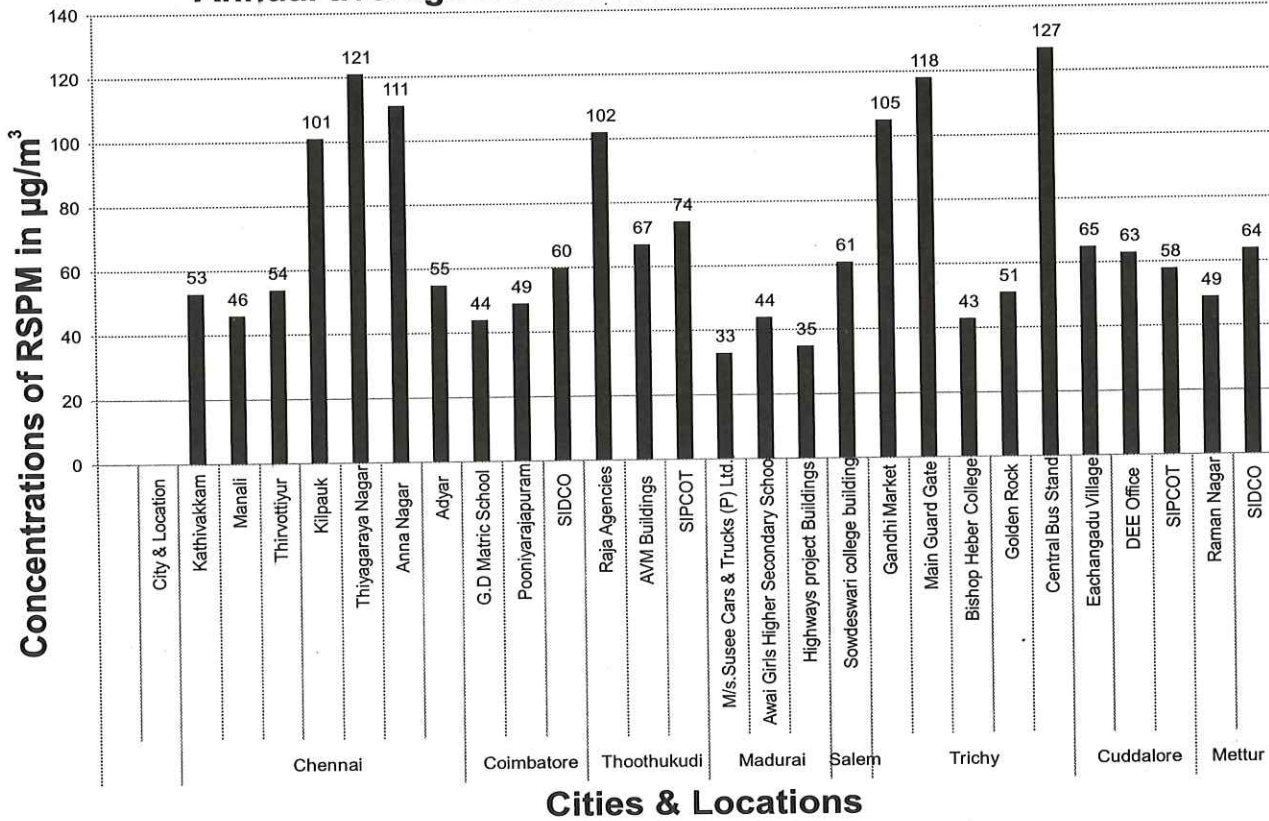
The exceedance of the Respirable Suspended Particulate Matter (RSPM) at above mainly due to the increase in number of vehicles and the surface dust generated by vehicular movement but also due to the digging and laying activities for pipe lines, electrical and telephone cables and due to heavy commercial and industrial activities .

The annual average values of pollutants recorded at the above monitoring stations during the period 2013-2014 are given in Annexure –VI.

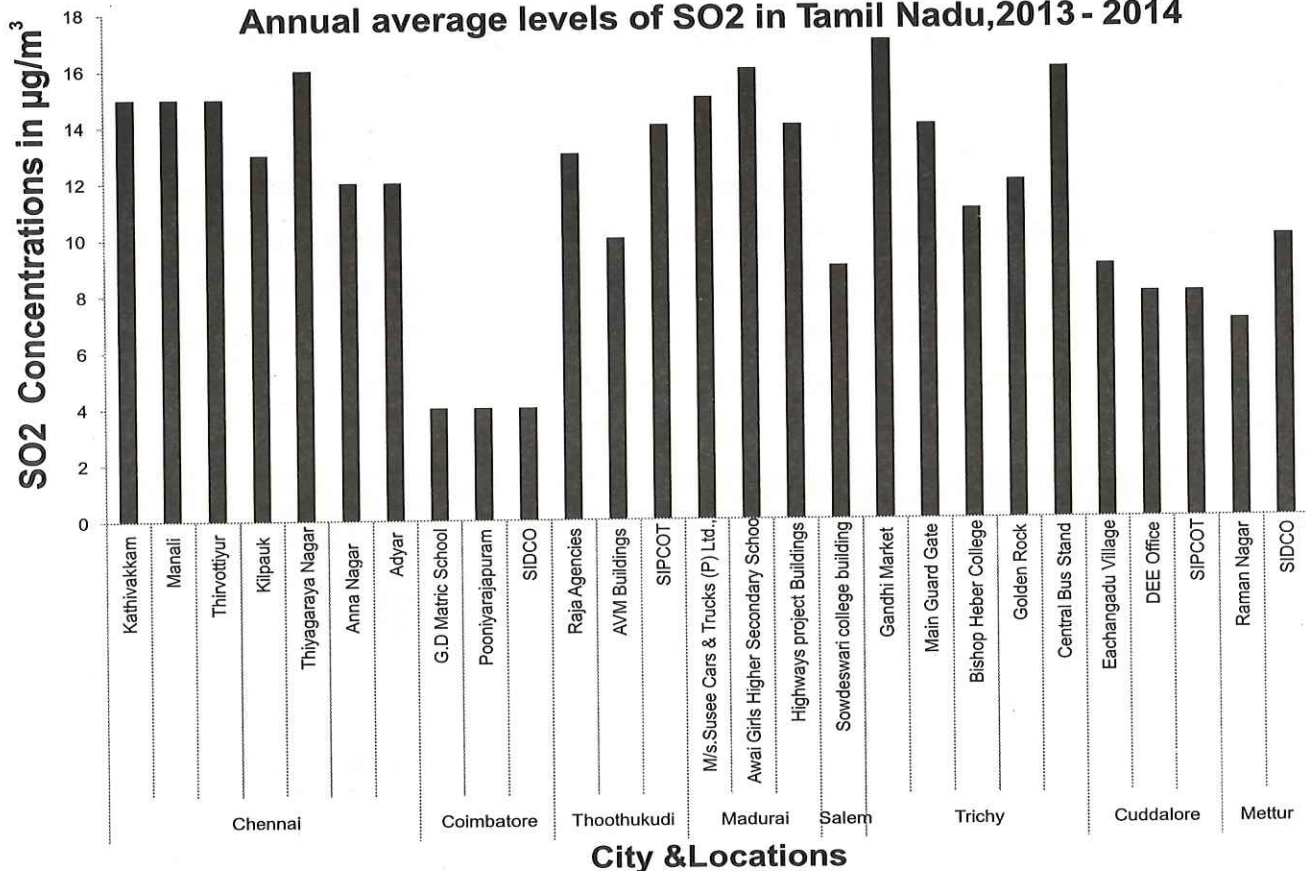


AAQ Survey programme

Annual average levels of RSPM in Tamil Nadu, 2013 - 2014



Annual average levels of SO₂ in Tamil Nadu, 2013 - 2014

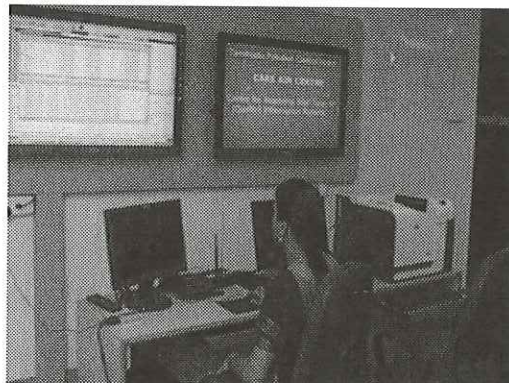
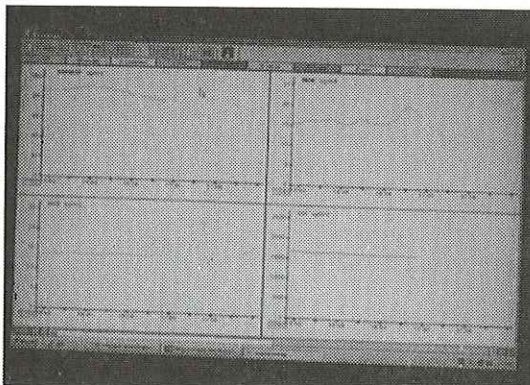


Annual average levels of NOx in Tamil Nadu, 2013 - 2014



4.2 CARE AIR CENTRE

In order to monitor both source emissions and ambient air quality on a real time basis, TNPCB has established a Centre for Accessing Real Time Air (Quality) Information Report (**CARE AIR**) at the Head office of the Board. This is a continuous real time emission monitoring system which is functioning on 24 X 7 basis. This is the first of its kind in the whole country and has been appreciated by the Government of India. When the emission levels exceed the norms, an inbuilt alarm system has been established to inform the concerned industry and the District Environmental Engineer/Member Secretary through automated SMS for remedial action immediately. So far, **227** industries have been connected to the CARE AIR centre and the emissions are monitored continuously. Apart from the above, monitoring of effluent discharge has also been included and monitored at the centre.



Care Air Centre – Online Monitoring

4.3 VEHICULAR EMISSION MONITORING

At present only the 248 private emissions testing centers authorized by Transport Department under rule 116(B) of Tamil Nadu Motor vehicles Rules 1989 are testing and issuing Emission Under Control Certificate (EUCC) for all kind of vehicles in Tamil Nadu.

At present Tamil Nadu Pollution Control Board is not having any vehicle emission checking centers in Tamil Nadu wef 01.11.2010.

Tamil Nadu Pollution Control Board now only conducting training programmer on the operation of emission checking instruments for the persons to be engaged in emission checking centers and issue working performance certificate for the new emission monitoring instruments purchased and to be utilized in the private emission testing centers.

4.4 LABORATORIES

To assist the Board in the monitoring of industries, the Tamil Nadu Pollution Control Board has Established 5 Advanced Environmental Laboratories, 10 District Environmental Laboratories under section 17 (2) of the Water (Prevention and Control of Pollution) Act, 1974 amended in 1978 and 1988, so as to enable the Board to perform its functions efficiently and to cover the industries located in various districts. Samples of effluents are collected periodically and analysed. The details of samples analysed laboratory wise during the year 2013-2014 are shown at Annexure – VII.

4.5 MONITORING OF INDIAN NATIONAL AQUATIC RESOURCES (MINARS) AND GLOBAL ENVIRONMENTAL MONITORING SYSTEM (GEMS)

Tamil Nadu Pollution Control Board is monitoring the inland water quality under two major programmes namely Global Environmental Monitoring System (GEMS) from 1984 and Monitoring of Indian National Aquatic Resources (MINARS) from 1988 at 32 stations along the four major rivers i.e. Cauvery, Tamiraparani, Vaigai and Palar and three lakes i.e. Ooty, Kodaikanal and Yercaurd in Tamil Nadu.

Subsequently, CPCB has sanctioned 23 additional Water Quality Monitoring stations under the 11th plan period during November 2010 and the monitoring was started from December 2010. At present 55 (32 old stations+23 new stations) stations are being monitored by Tamil Nadu Pollution Control Board. The programmes are funded by the Central Pollution Control Board, New Delhi.

Under MINARS programme, the rivers Tamiraparani , Palar and Vaigai and the lakes Udhagamandalam, Kodaikanal , Yercaud ,Veeranam ,Porur ,Poondi, Pulicat and Redhills are being monitored. Under GEMS and MINARS programmes the river Cauvery is being monitored.

4.5.1 The River Cauvery and its Tributaries

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 the domestic and industrial sectors. The quality of cauvery river water is being monitored at thirty three (33) places along the river under GEMS (4 stations) and MINARS (29 stations). These places have been selected on the basis of the location of outlets for the discharge of industrial effluents, municipal and domestic wastes.

The physico-chemical and biological parameters are analysed for all the monitoring stations. Sampling is carried out based on the frequency prescribed by Central Pollution Control Board, New Delhi and analysis is done at the Advanced Environmental Laboratory, Salem. The mean values of water quality at various sampling stations are enclosed in Annexure-VIII-A, VIII-B and VIII-C.

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 and domestic waste into the river systems directly or indirectly. In general, the water quality of the river is categorized under C, D & Below E drinking water source with conventional treatment followed by disinfection (C), Propagation of Wild life and fisheries (D), Below E – Not meeting A, B, C, D, & E criteria. The water quality of Thirumanimuthar, Vasista & Sarabanga river does not meet the water quality criteria (DBU Class) and this may be due to disposal of municipal and domestic waste into the river systems directly in that particular sampling point.

4.5.2 The River Tamiraparani

The water quality of the Tamiraparani river is being monitored on a frequency prescribed by Central Pollution Control Board, New Delhi at 12 places. The physico-chemical parameters and biological parameters are analysed in the District Environmental Laboratory at Tirunelveli and the details are furnished in Annexure – IX

The water quality study conducted during the year 2013-2014 shows that the average level of pH values varied between 6 & 7.06 and the average values of the Bio-chemical oxygen demand (BOD) varied between 2.69 & 4.49 mg/l as against the standards prescribed for pH (6.5 & 8.5) and Bio-chemical oxygen demand (3mg/L) respectively. The parameters analysed meets the standards prescribed for surface water quality under the class 'B' designated best use for outdoor bathing .

4.5.3 The River Palar

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 physico-chemical and biological parameters. The mean values of water quality are furnished in Annexure – X.

The analysed data reveals that the water quality of the river at the sampling point meets the standards prescribed for surface water quality under class 'B' drinking water source with conventional treatment followed by disinfection.

4.5.4 The River Vaigai

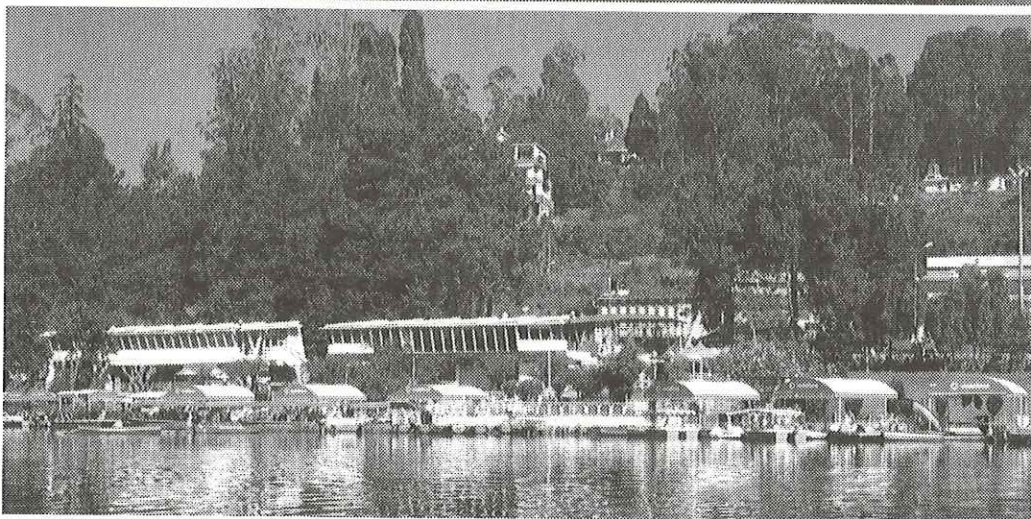
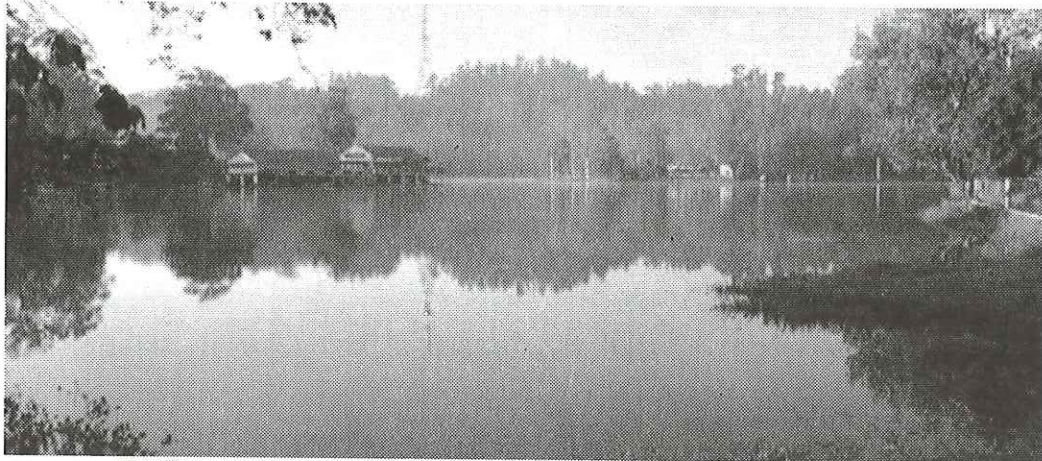
The water quality of the Vaigai river is being monitored by collecting the samples once in six months from the collection well of Thirubuvanam Head works and analysed in the Advanced Environmental Laboratory at Madurai for physico-chemical and bacteriological parameters. The water quality of the Vaigai river (collected from infiltration well) meets the standards prescribed for surface water quality under class 'D' and the details are furnished in the Annexure-X.

4.5.5 LAKES

Under MINARS programme, 8 important lakes of Tamil Nadu at Udthagamandalam, Kodaikanal, Yercaud, Veeranam, Porur, Poondi, Pulicat and Redhills have been identified and monitored by collecting samples on monthly basis. The mean values of water quality are furnished in Annexure – XI.

The Bio-chemical oxygen demand (BOD) & Coliform values in Udthagamandalam lake are found to exceed the standards prescribed due to the surface run off and sullage discharge into lake either directly or indirectly. The water quality of the Udthagamandalam lake does not meet the water quality criteria (DBU Class).D.

The water quality of the Pulicat lake also does not meet the water quality criteria (DBU Class) and this may be due to back water intrusion in that particular sampling point. The water quality criteria of Yercaud lake is Class D, Poondi and Red Hills lakes is Class C (Drinking water source with conventional treatment followed by disinfection.) and Porur lake is Class E. The water quality of Kodaikanal Lake also meets the standards prescribed for surface water quality under class 'D'.



Monitoring of Lakes under MINARS (Kodaikanal, Yercaud & Ooty)

5.1 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 emissions of air pollutants into the atmosphere from the industrial plants or any other source with approval of Government of Tamil Nadu.

The Board has prescribed standards for the discharge of treated sewage / trade effluents depending upon the mode of disposal either into inland surface water, sewer and 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 local bodies, automobile emission so that they adhere to the prescribed effluent / emission standards.

MOEF has issued revised standards during Nov 2009 for the National Ambient Air Quality. All the industries should adhere to the revised emission standards.

6.1 LEGAL ACTION

The TNPCB is taking legal action against the defaulting industries. During the year 2013-2014, 5518 show cause notices were issued and 906 industries were closed for non complying with the consent order conditions.

6.2 GREEN BENCH

The Hon'ble High Court has constituted a "Green Bench" during the year 1996 as per the direction of Hon'ble Supreme Court of India dated 28.8.1996 in W.P.(c) No.914/1991. The Green Bench deals with cases pertaining to Environment related matters. The cases pending as on 3/2014 is 220 number which are under trail.

6.3 Appellate Authority

The Hon'ble Appellate Authority under the Chairmanship of Hon'ble Justice Thiru. T.V.Masilamani, Hon'ble Judge (Retd.) High Court of Madras with two members namely Thiru. G.Rengasamy, formerly Member Secretary, Tamil Nadu Pollution Control Board and Dr. K.Thanasekaran, formerly Director, Centre for Environmental Studies (Retd.), Anna University, Chennai have been constituted, vide G.O.Ms.No.66, Environment and Forests Departments, dated 7.5.2013 and the same is functioning at No.51, Gangadeeswarar Koil Street, Purasaivakkam, Chennai-86. The Hon'ble Appellate Authority entertains and disposes of the appeals preferred by the industries against the order of the Board issued under Section 25/26 and 27 of Water (Prevention and Control of Pollution) Act, 1974, as amended and any orders issued under Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987.

During the year 2013-2014, 58 number of appeals have been filed by the aggrieved unit's in the Appellate Authority. As on 3/2014, 66 number of causes was taken and 24 disposed. The remaining cases 42 number is under trail.

6.4 National Green Tribunal

Under the Chairmanship of Hon'ble Justice Thiru. Lokeswar Singh Pante, the National Green Tribunal (NGT) was established at New Delhi on 18.10.2010, for effective and

expedition disposal of cases relating to Environmental Protection and Forest Conservation. Any person aggrieved by an order or decision of the Board and /Appellate Authority order issued under Section 28, 29 and 33A of the Water (Prevention and Control of Pollution) Act, 1974, under Section 13 of Water (Prevention and Control of Pollution) Cess Act, 1977, under Section 31 of the Air (Prevention and Control of Pollution) Act, 1981 and under Section 5 of the Environmental (Protection) Act, 1986 may apply to NGT within 30 days of the order issued by the Board /Appellate Authority .

National Green Tribunal (NGT) for Southern Zone has been constituted and functioning at Chennai under the Hon'ble Justice. Thiru. M.Chockalingam (Judicial Member) and Hon'ble Dr.R.Nagendran (Expert Member).

During the year 2013-2014, 268 number of cases were filed by aggrieved persons / units. As on 3/2014, 67 number of cases was taken and 69 number disposed. The balance as on 3/2014, 266 number is under trail.

7.1 BOARD MEETINGS

THE DETAILS OF BOARD MEETINGS HELD DURING THE PERIOD FROM APRIL 2013 TO MARCH 2014 ARE DETAILED BELOW:

Sl. No.	Board Meeting Number	No. of Subject placed	Date of Meeting
1	250	38	7.5.2013
2	251	33	31.7.2013
3	252	46	12.2.2014

Major decision taken by the Board

1. The Board resolved to approve the proposal for construction of office building for the District Environmental Engineers Office and Advanced Environmental Laboratory at Sanganoor Village, Coimbatore North Taluk, Coimbatore District at a cost of Rs.321.75 lakhs (approx) from Board's own fund. The construction will be done through Public Works Department.
2. The Board resolved to approve the purchase of 0.26 acre of land on lease at SIPCOT, Oragadam and payment towards plot deposit of Rs. 31.20 lakhs to SIPCOT from Board's own fund for the construction of District Environmental Engineer Office, Sriperumbudur.
3. The Board resolved to approve the construction of office building for District Environmental Engineer/lab at Pudukottai District at a cost of Rs.185 lakhs (approx) from Board's own fund. The construction will be done through Public Works Department.
4. The Board resolved to approve installation of solar panels on the roof top of Corporate Office, Chennai and on the roof tops of office buildings of the District Environmental Engineers office in Arumbakkam, Ambattur, M.M. Nagar, Vellore, Hosur, Trichy, Madurai, Tirunelveli and Thoothukudi at a cost of Rs.301Lakhs (approx.) from Board's own fund.
5. The Board resolved to approve the proposal for the purchase of five ozone analyser at a cost of Rs. 8.00 lakhs (Rupees Eight lakhs only) each for five laboratories of Tamilnadu Pollution Control Board at Chennai, Madurai, Coimbatore, Salem and Cuddalore with a total cost of Rs. 40.00 lakhs (Rupees Forty lakhs only) from Board's own fund.

6. The Board resolved to approve the proposal for the purchase of four Atomic Absorption Spectrometer with Graphite furnace at a cost of Rs. 75.00 lakhs (Rupees Seventy five lakhs only) each for four laboratories of Tamilnadu Pollution Control Board at Chennai, Vellore, Cuddalore and Trichy with a total cost of Rs. 3.00 crores (Rupees Three crores only) (approx) from Board's own funds.
7. The Board resolved to approve the proposal for the establishment of one Stationary Real Time Continuous Ambient Air Quality Monitoring Station (SCAAQMS) at Thoothukudi town for monitoring the pollution levels at a cost of Rs. 87.00 Lakhs (Rupees Eighty seven lakhs only) (approx) from Board's own funds.
8. The Board resolved to approve the proposal for establishment of one Stationary Real Time Continuous Ambient Air Quality Monitoring Station (SCAAQMS) at Gummidipoondi industrial estate for monitoring the pollution levels at a cost of Rs. 87.00 Lakhs (Rupees Eighty seven lakhs only) (approx) from Board's own funds.
9. The Board resolved to approve the proposal for the establishment of 3 Nos. of continuous online water quality monitoring system in river Tamiraparani at total cost of Rs. 40 lakhs (approx) from Board's own funds.
10. The Board resolved to approve the proposal for the construction of District Office cum lab building at Sivaganga, Dindigul, Namakkal and Virudhunagar at a total cost of Rs.12 crores from Board's own fund as announced by the Hon'ble Chief Minister of Tamilnadu under TNLA Rule 110 on the floor of Assembly. The Board also authorized the Chairman to give individual sanction orders for the construction will be executed through Public Works Department.
11. The Board resolved to approve and introduce the scheme of house building advance to the staff of Tamil Nadu Pollution Control Board on par with Govt. servants from the financial year 2013-14 onwards based on the announcement made by the Hon'ble Chief Minister in the Tamil Nadu Legislative Assembly under Rule 110 on 02/05/2013 for the benefit of employees by obtaining prior concurrence of Government in Finance (BPE) Department.
12. The Board resolved to approve the construction of office building for District Environmental Engineer/lab at Villupuram District at a cost of Rs.213 lakhs (approx) from Board's own fund and the construction will be done through Public Works Department.

13. The Board resolved to approve the construction of office building for District Environmental Engineer/lab at Thanjavur District at a cost of Rs.207.60 lakhs (approx) from Board's own fund. The construction will be done through Public Works Department.
14. The Board resolved to approve the purchase of the land at SIDCO Industrial Estates at Vaniyambadi, Erode, Kurichi (Coimbatore), Nagapattinam and Kakkalur Industrial Estates at a total cost of Rs. 345.803 lakhs for construction of District office building.
15. The Board has resolved to approve the G.O Ms.No.10, Labour and Employment Department. Dt. 13.02.2009 for appointing the legal heir of the employees who have retired since they are medically unfit to continue in service.

8.1 ENVIRONMENTAL TRAINING INSTITUTE

ETI is an organizational wing of TNPCB, which was established in 1994 with Danish assistance. It is functioning in the 3rd floor of its corporate office of TNPCB. ETI is guided by a steering committee, chaired by Chairman of TNPCB and its Members are from Government, PCB and CEOs of Industry. An Advisory Council comprising of Members from Industries, NGOs, Academic and government institutions provides technical support to the ETI.

The main objective of the Training institute is to impart training to staff of the Pollution Control Board, Industrial representatives, Executives of Municipalities and Corporations, Line agencies and non-governmental organizations on the following aspects.

- (i) Improve awareness at all levels.
- (ii) Introduce the holistic approach to environment & sustainable development
- (iii) Introduce the basic theories, concepts and methodologies of integrated environmental planning and management aiming a sustainable development
- (iv) Promote public awareness and motivation to preserve and protect the environment through NGOs.
- (v) Create Cross - media awareness in industry, urban sector and the public on Environmental Hazards and adverse impact on quality of life.
- (vi) Pollution Control at source by cleaner technology and improved processes of materials and products. This includes conservation of non-renewable resources, resource recovery, refuse recycling and disposal of minimum waste to the environment.
- (vii) Improve environment management capacity in the sector of industry and urban development.

Develop the ability among professionals to communicate effectively. During the year 2013-2014 this training institute has conducted 17 programmes and trained 859 personnel in total. During the period, the highlights of the ETI Training Programme were to educate Medical College Students, industrial Personnel's and TNPCB officials.

1. 104 Participants have been trained on Phytoremediation Technology for Industrial Hazardous disposal sites using green plants to clean up contaminated Hazardous Waste sites, which are cost effective alternate to high energy, high cost conventional methods in the field of innovative technologies.
2. 87 Participants have been trained on “E-Waste Management, Challenges, Prospects and Strategies. The key objective of this training programme is to know about “E-Waste (Management & Handling) Rules 2011, Stack holder Responsibilities and sector challenges. Dr. Lakshmi Raghupathy, Former Director M/o. Environment & Forests was a nodal person in this training programme.
3. 116 Kilpauk Medical College Students have been trained on “Bio Medical Waste Management” at ETI, TNPCB.

The objective of the training is to train the medical college students to aware about the following sub topics,

- ❖ Categories of Bio-Medical Waste
- ❖ Segregation of waste with colour coding
- ❖ Common Bio medical facility.

9.1 ENVIRONMENTAL AWARENESS AND PUBLIC PARTICIPATION

As a part of the awareness campaign to inform the public about the health effects caused by air & noise pollution, due to bursting crackers continuously, special monitoring programmes were launched by TNPC Board for 2013 - 2014 during festival seasons with monitoring of noise level and air quality level during Deepavali and monitoring of air quality level during Bhogi, 2014. The noise level and the ambient air quality surveys were conducted during Deepavali in important cities of Tamil Nadu viz., Chennai, Trichy, Coimbatore, Madurai, Tirunelveli, Vellore, Salem, Hosur, Tiruppur, Dindigul and Cuddalore.

A special ambient air quality survey on pre-bhogi and bhogi days were conducted in Chennai at 15 places viz., Kathiwakkam, Manali, Thillai Nagar (Kollathur), Tondaiyarpet, Royapuram, Thiru.Vi.Ka.Nagar, Ambattur, Anna Nagar, BeasantNagar, ThiyagarayaNagar, Perungudi, Virugambakkam, Meenambakkam, Kodambakkam and Shozinganallur.



Photos of vehicle campaign conducted during Bhogi in the year 2013-2014

10.0 OTHER IMPORTANT MATTERS DEALT IN THE BOARD

10.1 PUBLIC HEARING

Some specific categories of industrial projects require environmental clearance from the Ministry of Environment & Forests, Government of India and State Environmental Impact Assessment Authority as per the Environmental Impact Assessment Notification, 2006. As per the instruction of the MOEF and State Environment Impact Assessment Authority, the Tamil Nadu Pollution Control Board conducts public hearing headed by the District Collector. After conducting public hearing, inviting opinions from the public, the details of the minutes are sent to the MOEF, Government of India.

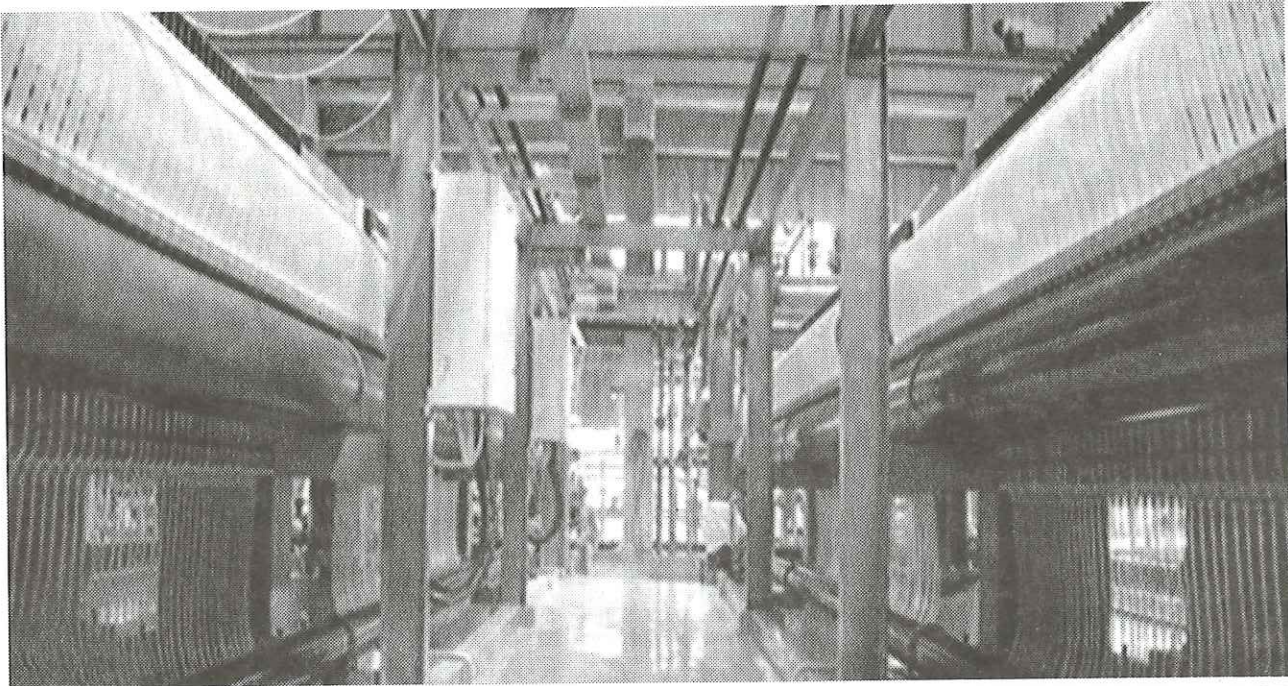
10.2 WATER CONSERVATION

As a water conservation measure, three major industries in Manali and Basin Bridge area are utilising about 25 MLD (million liters per day) of city sewage in their plants after tertiary treatment for cooling purposes. The dyeing units in the State including units at Tiruppur have provided reverse osmosis plants for recovering the process water from the effluent. The recovered water is reused in the process. In sugar industries, water condensate from evaporators is reused. As a condition for issue of consent, industries have been instructed to provide rainwater harvesting arrangements. All the industries have set up rain water harvesting systems. The roof top rainwater harvesting system has also been provided in the offices of the Tamilnadu Pollution Control Board.

10.3 CLEANER TECHNOLOGIES

The TNPCB is involved in promoting a holistic approach of environment protection by cleaner technology options more than mere end-of-pipe treatment. With active support and encouragement from the Board, the industrial units in Tamilnadu have switched over to cleaner technologies such as adoption of membrane cell instead of mercury cell in caustic soda manufacturing, adoption of dry process instead of wet process to reduce air pollution in cement factories, utilization of 25 to 30% of fly ash in PPC cement manufacturing, adoption of double conversion and double absorption technology in sulphuric acid manufacturing, gas carburizing instead of cyanide salt in heat treatment and cyanide free electroplating. Pulp and paper industries are encouraged to go in for elemental chlorine free bleaching to reduce the formation of organo-chlorides including dioxins. Industries consuming ozone-depleting

substances are systematically changing to environment friendly compounds very recently Tamil Nadu Pollution Control Board has initiated for demonstrating best available technologies for MSME through Technology Demonstration Centre established at IIT Madras with the financial support of TNPCB at a cost of Rs. 5 crores.



Adoption of Membrane process in caustic soda instead of mercury process as directed by TNPCB

10.4 WASTE MINIMISATION

With the adoption of cleaner technologies there has been progress in waste recovery and waste minimization. Examples include recovery of materials such as chrome from tannery effluent and ammonia from fertilizers. Distilleries have been insisted to provide zero discharge system and 7 distilleries have gone for biocomposting of their effluents with press mud of sugar factories for achieving zero discharge of trade effluent and 5 distilleries have established concentration cum incineration system to dispose spent wash effluent and achieved zero discharge of trade effluent.

10.5 ENERGY CONSERVATION

As a measure for fuel conservation and recovery, all the distilleries are recovering methane gas from their spent wash through anaerobic digestion. Major sugar factories have installed co-generation power plants. The sago units recover methane gas from their trade effluent through anaerobic digestion. In activated carbon process, the waste heat is recovered and used at boiler section. Other industrial units are encouraged to use less energy and it is being audited through the environmental statements of the unit.

10.6 ENVIRONMENTAL STATEMENT

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

10.7 ENVIRONMENTAL AUDIT

For self auditing of the environmental management systems, all major industrial units have been asked to get the ISO 14001 certifications which are awarded after auditing the environmental management systems by an external agency.

10.8 GREEN AWARDS

10.8.1 – District Administration

As per the announcement made by the Hon'ble Minister for Environment during 2011-12 Green Award is given to those collectors who have taken action for the betterment of environment of their Districts every year.

All the District Collectors were requested to prepare and furnish a detailed report with supporting documents such as photographs etc., regarding the initiatives taken by them and their achievements for the improvement to the environment of their District for the year 2013 – 2014. Nine proposals for Green Award were received from the District Collectors.

The Committee constituted, has gone through the proposals received from the District Collectors and evaluated the proposals.

The details of the District Collectors who are selected for the Green Award are detailed below.

S.No.	Name of the District Collector and District	Rank	Best Practices
1	Tmt. Jayashree Muralidharan, I.A.S. District Collector, Tiruchirappalli District	1st Place	Rain water harvesting Encouraging the manufacture and use of eco-friendly products Green belt development Sewage disposal by urban local bodies
2	Thiru. V. Dakshinamoorthy, I.A.S. District Collector Namakkal District	2nd Place	Demolition of unauthorized dyeing units Cleaning of National Highways, State Highways and other roads Plastic Waste Roads
3	Dr. P. Shankar, I.A.S. District Collector Formerly Vellore District and presently the Nilgiris District	3rd Place	Biomedical and Hazardous Waste Management Cleaning of water bodies Sewage disposal by urban local bodies
4	Dr. Darez Ahamed, I.A.S. District Collector Perambalur District	3rd Place	Awareness programme among rural public about practice of organic farming and composting of organic wastes, Active participation for urban sewage treatment and disposal Green belt development



Green Awards

10.8.2 – Industries

As per the announcement made by the Hon'ble Minister for Environment during 2011-12 the Green Award is given every year to those industries who have taken action for the betterment of environment. Tamilnadu Pollution Control Board has requested to furnish proposals for Green Award for the year 2013-2014 along with supporting documents and regarding the initiatives taken by the industries and their achievements in environmental management. Based on the above, proposals have been received from various industries of Tamilnadu.

Green Award Committee for Industries constituted had evaluated the proposals received from various industries. The following industries are selected for Green Award for the year 2013-2014.

1. M/s. I.T.C. Limited , Unit Kovai
Thekkampatty, Coimbatore District
2. M/s.Brakes India Limited, Foundry Division Unit – I & II,
Sholinghur, Vellore District
3. M/s. Chennai Petroleum Corporation Ltd.,
Panangudi, Nagapattinam District

10.9 TECHNOLOGY DEMONSTRATION CENTRE

Tamilnadu Pollution Control Board on Enforcement and its monitoring encourages cleaner Technology, Waste Minimization Technology, Hazardous substance elimination by alternate process, reuse, and recycle systems, Zero Liquid Discharge and Best Available Technology to promote industrial development within the sustainable development in the State of Tamilnadu. As the growth of the industries in Tamilnadu more than 43, 000 it is challenging for the Enforcement authorities and industries for sustainable development to find a suitable solution to address the Environmental issues. Hence TNPCB has established a new technology demonstration centre through IIT and made an MOU with IIT, Madras and a sum of Rs. 5 crores have been allocated for this purpose. MOU has been signed with IIT in presence of Honourable Minister for Environment on 17.4.2013. The team of Technology Demonstration Centre has conducted treatability studies for rice mills, sago, small scale textile processing units. This centre has conducted awareness programme on Landfill fire management on 2.5.14 among municipal authorities, Fire Department and TNPCB officials. The centre has also conducted technical workshop for sago industries on 12.5.2014 and 13.5.2014 for better

understanding the characteristics of sago waste water, anaerobic treatment and biogas generation, optimizing the process parameters to enhance the composition and quantity of biogas generated.

10.10 BUILDING CONSTRUCTION

Tamil Nadu Pollution Control Board is having own buildings at 9 District offices. The remaining 25 Districts offices are functioning in rented buildings. For the past 3 years Tamil Nadu Pollution Control Board had initiated action for construction of 9 new District office buildings. The construction of new office buildings are in progress in Cuddalore, Villupuram, Thanjavur, Pudukottai, Sivagangai, Dindigul, Virudhunagar, Namakkal and Coimbatore. All these buildings are expected to be completed by April 2015.

10.11 GREEN COVER PROGRAMME

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

MASSIVE TREE PLANTING PROGRAMME

During the year 2012, to commemorate the 64th Birth Anniversary of the Hon'ble Chief Minister, 64 lakh seedlings were planted throughout Tamil Nadu through Forest Department. TNPCB has funded the project and has provided Rs. 28.44 crores to Forest Department.

In the year 2013, the Board has till date granted a sum of Rs. 20 crores to Forest Department for planting 65 lakh seedlings to commemorate 65th Birth Anniversary of Hon'ble Chief Minister.

During the year 2014, Board till date has again granted a sum of Rs. 7.86 crores to Forest Department for planting 66 lakh seedlings in commemoration of 66th Birth Anniversary of Hon'ble Chief Minister.

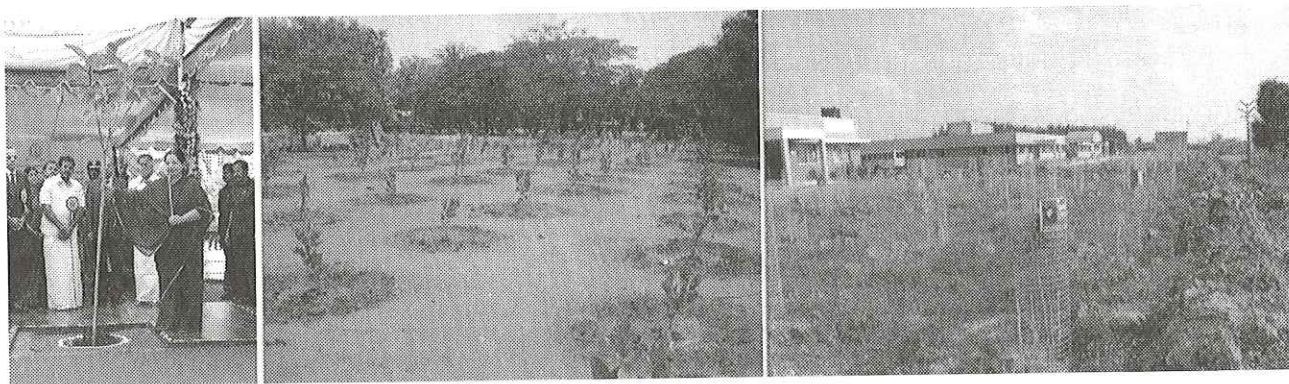


Photo of Massive Tree Programme – Plantation of 65 lakh seedlings in the 32 Districts to improve Green Cover

10.12 APPLIED RESEARCH AND DEVELOPMENT

The Promotion of research and development activities are one of the functions of the Board as per Section 17 of the Water (Prevention and Control of Pollution Act), 1974. Tamilnadu Pollution Control Board has resolved to support research projects relating to Environmental protection out of Cess Funds vide Board Proceedings Ms.No.1/Dated 03.01.1996.

The Board has established the Applied Research and Development Wing as per G.O.Ms.No.199, E&F (ECI) Dept., Dated 23.6.95 in AEL, TNPCB, and Chennai-32 and constituted the AR&D Evaluation Council, to assist the Board in R&D activities.

Subsequently, the Board has reconstituted the AR&D Council as per the Board's Proceeding No.3043/AR&D/2008/Dated 22.02.2010 for its purposes with expert members from the renowned State/Central Government departments/ Research Institutions/, reputed Universities/ industries to make suggestions to the Board.

Also a sub-committee was constituted to evaluate the research proposals submitted and to furnish reports to the AR&D Council for its decision. The Council after careful examination finally makes the decision with comments on the projects/ guidelines to the project proponents and recommends the viable projects for the consideration of the Board for the sanction of financial assistance .

Further the Board vide Proceedings No. 22 / Dated 04/7/2008 revised the "Guidelines of Funding of R&D Projects" and the "Terms and Conditions of funding by Tamil Nadu Pollution Control Board based on the suggestions of the Council. During the year 2012-2013 two projects were sanctioned and financial assistance to the sanctioned two research projects were released based on the recommendations of the AR&D council TNPCB at a cost of 13.54 lakhs.

These two projects sanctioned with the titles, the name of the principal investigator /institutions and the sum sanctioned are mentioned below. The research works are progressive and follow up actions are taken.

SI No	Title of the Projects	Name of the Principal Investigators	Name of the University Department / Institutions	Sanctioned Amount in Rs.
1.	"Study of Genetic Susceptibility and physical Health Effects and Noise Induced Hearing Loss (NIHL) among selected cohorts with occupational noise exposure in Tamilnadu"	Dr.C.R.Srikumari Srisailapathy	IBMS Taramani Chennai-600113	6,37,050.00
2.	"Demonstrating Environmentally sound technologies for management of open dumpsite of municipal Solid wastes and transition towards controlled land filling practices"	Dr.Janardhanan	NITTTTR Taramani Chennai-600113	7,16,950.00
Total				13,54,000.00

The Board has now decided to develop the AR&D activities further under the collaborative research programme vide memo. No.TNPCB/ETI/F.034286/2013 dated 02.01.2014 to further strengthen the research activities in the emerging pollution problems. Clean/ Green Technology is given top priority in the Research area.

10.13 COMPLAINT CELL

Due to increased Environmental awareness and awareness on Pollution Control Legislation several complaints are being received from various individuals / Organisation/ 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 on all working days. For easy access of the Public and others, separate telephone number, 044-22353153, fax 044-22353153 and e-mail- tnpccbcomplaint@gmail.com is allotted for receiving complaints and guidance. The complaints are attended by calling reports along with the recommendations from the field officers of the Board. Action required based on the reports are taken then and there. For attending environmental related complaints especially in Chennai City, a 'Green Squad' under the control of District Environmental Engineer, Tamilnadu Pollution Control Board, Chennai has been formed. Two patrolling vehicles and 2 two-wheelers have been provided to the Green Squad Chennai Districts. Further the Office of District Environmental Engineer, Ambattur and Tambaram at Maraimalai Nagar have also been provided with one Two wheeler for each to the Green Squad. The Green Squad visits the complaint immediately as and when received and intimates the facts to the District Environmental Engineers, Tamilnadu Pollution Control Board for action.

The Board had received 1957 complaints for the year 2013-2014 and have been subsequently disposed.

10.14 RIGHT TO INFORMATION ACT

In pursuance to the directions of Government of Tamil Nadu, Tamil Nadu Pollution Control Board has designated the Member Secretary as State Information Officer (Appellate Authority) and One Public Information Officer in the Corporate Office and 34 District Officers are also designated as Public Information Officers to provide information to the persons requesting for information under the Right to Information Act 2005. The Board has received 3590 applications seeking information, 125 first Appeal petitions and 17 second Appeal applications for the period from 01.04.2013 to 31.03.2014 and all the appeal petitions were disposed during the same period.

10.15 PCB AND YOU

To guide the new entrepreneurs in understanding the various Environmental Legislations and the procedure for obtaining consent of Tamil Nadu Pollution Control Board, the Board has published a book on 'TNPCB and You' during the World Environment Day function. The soft copy of the book is also available in Tamil Nadu Pollution Control Board web site.

10.16 LIBRARY

The TNPC Board Library was established during November 1989. At present library has a collection of above 11,421 Books and Reports. The Collections are classified under Dewey decimal classification.

The collection comprises of documents to the field of Environmental Protection, Air Pollution, Vehicular Pollution, Water Pollution, Noise Pollution, Wastewater Treatment, Municipal Waste Management, Hazardous Waste Management, Biomedical Waste, Environmental Engineering, Industrial pollution, Chemical Technology, Disasters, Soil, Energy, Pesticides, Biotechnology, Environmental Health, Environmental Economics, Environmental Chemistry, Environmental Impact Assessment, Environmental Education, Sustainable Development, Women and Environment, Environmental Law, Forestry.

Library subscribes for 51 Journals, 10 Newspapers, 11 Magazines. Besides this Annual Reports, Newsletters, Bulletins and Reports are received from different institutions (Indian & foreign). Back volumes of the journals are bound and kept for reference in the Periodical Section.

Library is administrated by the Library Committee and Library Purchase Committee chaired by the Member Secretary. The committee consist of Senior Officers of the Board and experts from Anna University and IIT, Madras. Membership is opened to all those who involve in Environmental aspects. Readers are provided photocopying facilities.

Membership Fee:

Student:	Monthly	-	Rs. 30.00
	Annual	-	Rs. 75.00
Individual:	Annual	-	Rs. 100.00

School and College Students, Research Scholars, Lectures & Professors, Professionals, NGOs, Industrialists and other Government Department officials and people involved in environmental aspects used to refer the Library. Readers are not only from Chennai but also from all over Tamil Nadu and Pondicherry and from other States like Karnataka, Andhra Pradesh, Kerala, Maharashtra, Uttar Pradesh and West Bengal also visited the library. From April 2012 to March 2013, 1527 no. of readers utilized the library.

Lib Sys software has been installed for TNPCB Library automation. Data Entry is being done. Through OPAC (Open Access Catalogue) anyone can search the available books and reports and also articles published in the subscribed journals.

10.17 TNPCB Newsletter

TNPCB Newsletter, a Quarterly is published, which brings Board activities, important notifications, research articles and news articles on environment and pollution control.

ANNEXURE - I

List of Board Members from 1/4/2013 to 31/3/2014

Sl. No	BOARD MEMBERS	Position	From	To
1	Dr. D. KARTHIKEYAN, I.A.S., Chairman, Tamilnadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai – 600 032.	Chairman	1.4.2013	31.3.2014
2	Thiru. MOHAN VERGHESE CHUNKATH, I.A.S., Addl. Chief Secretary to Govt., Secretary to Government, Environment and Forests Department, Fort St. George, Secretariat, Chennai – 600 009..	Member	1.4.2013	31.3.2014
3	V. ARUNROY, I.A.S., Joint Secretary to Government., Finance Department, Secretariat, Fort St. George, Chennai – 600 009.	Member	1.4.2013	31.3.2014
4	Thiru. A. KARTHIK, I.A.S., Director of Town and Country Planning, Chengalvarayan Building, IV Floor, 807, Anna Salai, Chennai – 600 002.	Member	1.4.2013	10.2.2014
5	Thiru. R. VENKATESAN, I.A.S., Commissioner of Town and Country Planning, Chengalvarayan Building, IV Floor, 807, Anna Salai, Chennai – 600 002.	Member	11.2.2014	31.3.2014
6	Thiru. K. AYYANU, B.E., Chief Inspector of Factories, 617, Bharathkumar Bhavan, Anna Salai, Chennai- 600006	Member	1.4.2013	31.3.2014
7	Dr. R.T. PORKAIPANDIAN, M.B.B.S., DPH, DIH, DHM, DFN., Director of Public Health and Preventive Medicine, Chennai – 600 006.	Member	1.4.2013	30.6.2013

Sl. No	BOARD MEMBERS	Position	From	To
8	Dr. K. KOLANDASWAMY, M.B.B.S., DPH, DIH,MAE., Director of Public Health and Preventive Medicine, Chennai – 600 006.	Member	1.7.2013	31.3.2014
9	Dr. S. BALAJI, M.E.(PH),Ph.D., Member Secretary, Tamilnadu Pollution Control Board, 76, Mount Salai, Guindy,Chennai – 600 032.	Member	1.4.2013	30.6.2013
10	Thiru. H. MALLESEPPA, I.F.S., Member Secretary, Tamilnadu Pollution Control Board, 76, Mount Salai, Guindy,Chennai – 600 032.	Member	1.7.2013	10.10.2013
11	Thiru A.V. VENKATACHALAM, I.F.S., Member Secretary, Tamilnadu Pollution Control Board, 76, Mount Salai, Guindy,Chennai – 600 032.	Member	11.10.2013	31.3.2014
12	Thiru. P. EKAMBARAM, I.A.S., Managing Director, TWAD Board, Chepauk, Chennai – 600 005.	Member	1.4.2013	31.05.2013
13	Dr. N.SUBBAIYAN, I.A.S., Managing Director, TWAD Board, Chepauk, Chennai – 600 005.	Member	31.5.2013	1.8.2013
14	Thiru. C. VIJAYARAJ KUMAR, I.A.S., Managing Director, TWAD Board, Chepauk, Chennai – 600 005.	Member	1.8.2013	31.03.2014
15	Thiru. N. SANKAR, B.E., Director (Generation) / TANGEDCO., Tamilnadu Electricity Board, Electricity Avenue (NPKRR Maligai), 800, Anna Salai, Chennai – 600 002.	Member	1.4.2013	31.03.2014

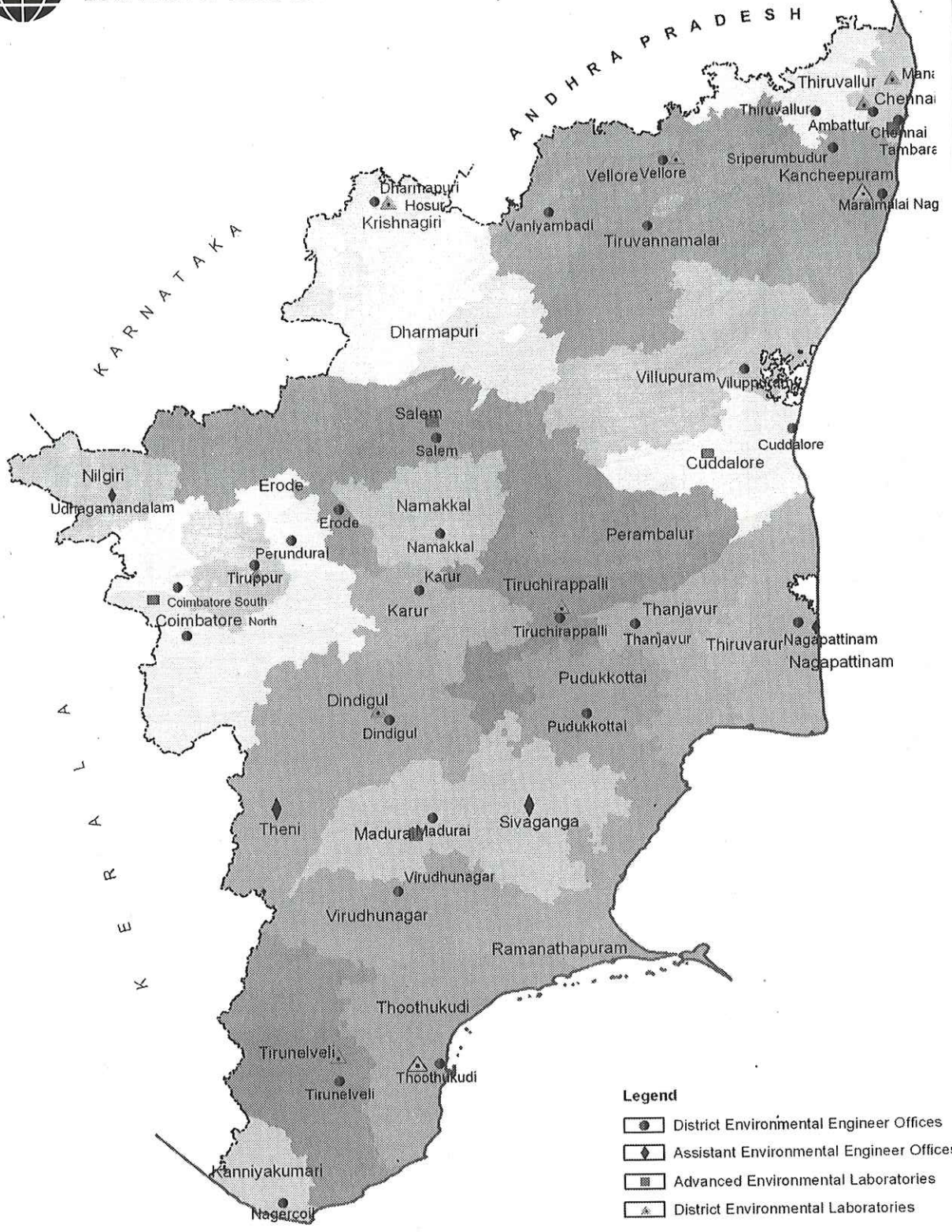
Sl. No	BOARD MEMBERS	Position	From	To
16	Tmt. MADHUMATHI KUMAR, DGM (P&SP) / General Manager (P&R) SIPCOT, 194, Marshall Road, Chennai – 600 008.	Special Invitee	1.4.2013	31.03.2014
17	Thiru. HARMANDAR SINGH, I.A.S., Commissioner of Industries and Commerce, 36, South Canal Bank Road, Mandavelipakkam, R.A. Puram, Chennai – 600 028.	Special Invitee	1.4.2013	1.7.2013
18	Thiru. K. DHANAVEL I.A.S., Commissioner of Industries and Commerce, 36, South Canal Bank Road, Mandavelipakkam, R.A. Puram, Chennai – 600 028.	Special Invitee	2.7.2013	10.10.2013
19	Thiru. SWARAN SINGH, I.A.S., Commissioner of Industries and Commerce, 36, South Canal Bank Road, Mandavelipakkam, R.A. Puram, Chennai – 600 028.	Special Invitee	10.10.2013	31.3.2014
20	Thiru. H. MALLEESAPPA, I.F.S., Director of Environment Department, Ground Floor, Panagal Building, Saidapet, Chennai – 600 015.	Special Invitee	1.4.2013	31.03.2014

ANNEXURE - II



TAMILNADU POLLUTION CONTROL BOARD

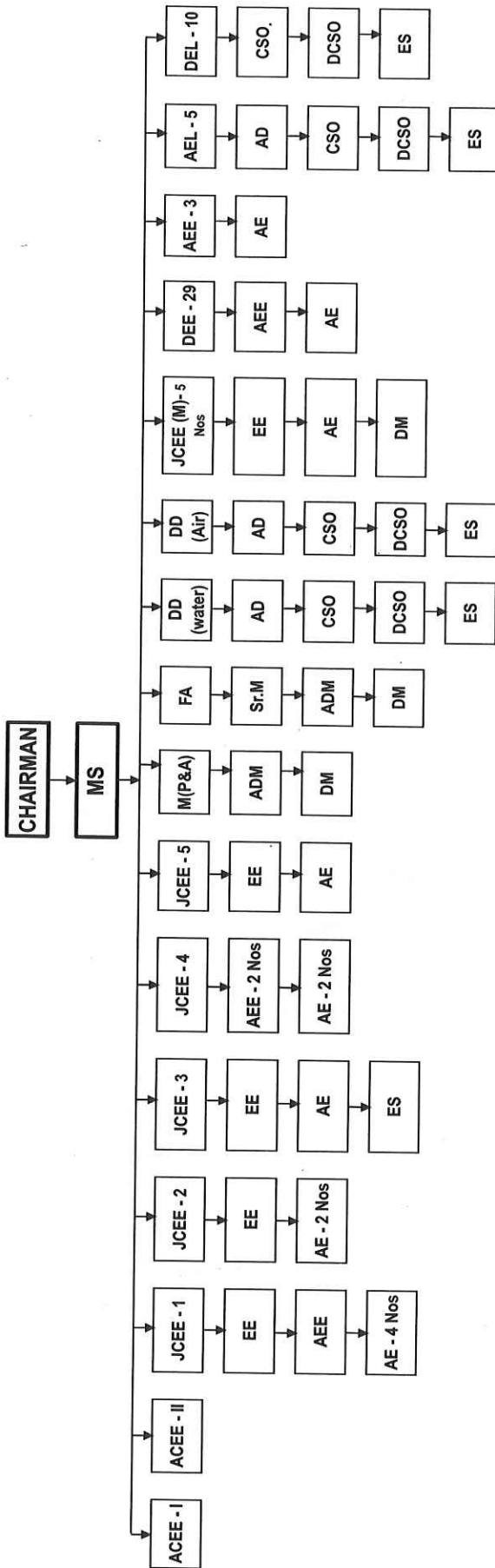
LOCATION OF DISTRICT OFFICES AND LABORATORIES



- Legend**
- District Environmental Engineer Offices
 - ◆ Assistant Environmental Engineer Offices
 - Advanced Environmental Laboratories
 - ▲ District Environmental Laboratories

Annexure - III

ORGANISATION CHART



ACEE's Work Allocation

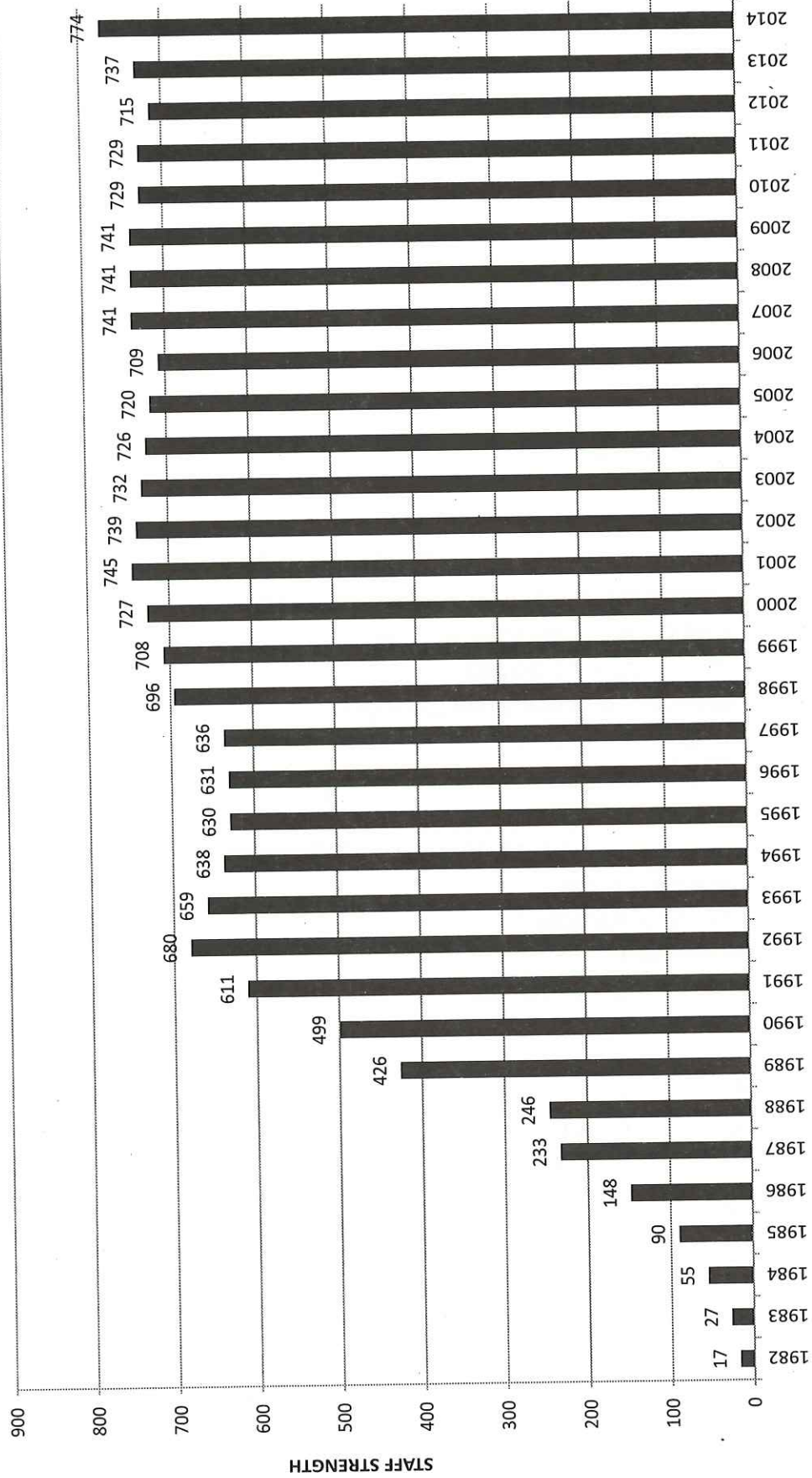
- ACEE - I - Construction, P&D, Care Air, 17 Category
- ACEE - II - Lab, 17 Category, Care Centre

JCEE's Work Allocation

- JCEE - 1 - Tanneries, Textiles, Petrochemical, Power, Sugar, Distillery
- JCEE - 2 - Dairy, Sago, Stone Crushers, BMW, Glass, Paint
- JCEE - 3 - ETI, Pharma, Pesticides, Rubber, Explosives, MSW, Plastics
- JCEE - 4 - Cement, Engg., Foundry, hotels, Industrial Estates, Orange, Chemicals, Pulp & Paper
- JCEE - 5 - P&D, Construction, BMS, Legislative Assembly Questions, Computer Section, Care Air

- ACEE - Additional Chief Environmental Engineer
- JCEE - Joint Chief Environmental Engineer
- JCEE (M) - Joint Chief Environmental Engineer (Monitoring)
- EE - Environmental Engineer
- DEE - District Environmental Engineer
- AEE - Assistant Environmental Engineer
- AE - Assistant Engineer
- FA - Financial Advisor
- Sr.M - Senior Manager
- M(P&A) - Manager (Personnel & Administration)
- DM - Deputy Manager
- ADM - Additional Manager
- DD - Deputy Director
- AD - Assistant Director
- CSO - Chief Scientific Officer
- DSCO - Deputy Chief Scientific Officer
- ES - Environmental Scientist
- AEL - Advanced Environmental Laboratory
- DEL - District Environmental Laboratory

ANNEXURE - IV GROWTH OF TAMIL NADU POLLUTION CONTROL BOARD



ANNEXURE - V
STAFF DETAILS AS ON 31.3.14

Sl.No.	Name of the Post	No. of Staff
1	Chairman	1
2	Member Secretary	1
3	Engineering Service	206
4	Engineering Sub Ordinate Service	11
5	Scientific Service	82
6	Scientific Sub Ordinate Service	102
7	General Service	26
8	General Sub Ordinate Service	293
9	Miscellaneous services	5
10	Basic Service	45
11	Deputation	2
	Total	774
	I. Engineering Service	
1	Additional Chief Environmental Engineer	1
2	Joint Chief Environmental Engineer	10
3	Environmental Engineer	44
4	Assistant Environmental Engineer	43
5	Assistant Engineer	107
6	Assistant Engineer (Auto)	1
	Total	206
	II Engineering Sub Ordinate Service	
1	Junior Engineer	1
2	Technical Assistant	2
3	Electrician	5
4	Assistant Draughts Man	3
	Total	11
	III. Scientific Service	
1	Deputy Director (Labs)	2
2	Assistant Director (L)	7
3	Chief Scientific Officer	8
4	Deputy Chief Scientific Officer	20
5	Environmental Scientist	42
6	Senior Meteorologist	1
7	Meteorologist	2
	Total	82
	IV. Scientific Sub Ordinate Service	
1	Junior Environmental Scientist	9
2	Field Assistant	62

3	Lab Assistant	31
	Total	102
V. General Service		
1	Senior Manager (F & A)	1
2	Manager	2
3	Manager (PR)	1
4	Additional Manager	5
5	Law Officer	1
6	Deputy Manager	16
	Total	26
VI. General Sub Ordinate Service		
1	Assistant Manager	63
2	General Assistant	83
3	Assistant	49
4	Private Secretary	1
5	Steno Typist	26
6	Telephone Operator	2
7	Typist	10
8	Driver	50
9	Motor Cycle Messenger	1
10	Record Clerk	8
	Total	293
VII. Miscellaneous services		
1	Senior Programmer	1
2	Junior Programmer	1
3	Data Entry Operator	1
4	Librarian	1
5	Assistant Statistical Officer	1
	Total	5
VIII. Basic Service		
1	Office Assistant	39
2	Sweeper	5
3	Watchman	1
	Total	45
IX. Deputation		
1	Financial Adviser	1
2	Manager Law	1
	Total	2

ANNEXURE - VI

STATUS OF AIR QUALITY OF IMPORTANT CITIES/ TOWNS OF TAMILNADU-UNDER NATIONAL AIR QUALITY MONITORING PROGRAMME(NAMP), ANNUAL AVERAGE CONCENTRATIONS OF AIR POLLUTANTS, 2013-2014

Sl.No.	City & Location	Category	Annual Average Concentrations of Air Pollutants in µg/m ³								
			SO ₂			NO ₂			RSPM		
			Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
1	CHENNAI										
a)	Kathivakkam	Industrial	18	13	15	19	15	17	75	37	53
b)	Manali	Industrial	18	13	15	19	16	18	71	28	46
c)	Thiruvotiyur	Industrial	17	13	15	19	16	18	78	36	54
d)	Anna Nagar	Residential	17	8	13	36	16	22	159	72	101
e)	Adyar	Residential	16	9	12	30	16	21	69	41	55
f)	Kilipauk	Commercial (Traffic-intersection)	23	16	12	42	18	27	169	80	111
g)	Thiyagarayanagar	Commercial (Traffic-intersection)	26	10	16	42	20	29	189	90	121
h)	Vallalar Nagar	Commercial (Traffic-intersection)									
2	COIMBATORE										
a)	DCO	Mixed	5	4	4	31	22	25	55	29	44
b)	Ponaiyarajapuram	Residential	4	4	4	31	19	23	62	23	49
c)	SIDCO	Industrial	5	4	4	34	23	28	77	45	60
3	THOOTHUKUDI										
a)	Raja Agencies	Industrial	15	11	13	28	19	22	160	58	102
b)	AVM Buildings	Mixed	12	9	10	29	17	13	105	44	67
c)	SIPCOT	Industrial	16	12	14	25	19	22	98	49	74
4	MADURAI										
a)	M/s.Susee Cars & Trucks (P) Ltd.,	Industrial	21	12	15	31	19	23	52	24	33
b)	Madurai Corporation Office(SZ)	Mixed	19	13	16	28	21	24	63	33	44
c)	Highways project Buildings	Residential	17	10	14	28	18	22	41	29	35
5	SALEM										
a)	Sowdeswari college building	Mixed	9	8	9	29	23	25	85	48	61
Prescribed standards(Annual average) for Industrial,Residential,Rural&Other areas			50			40			60		

Temporarily closed due to administrative reasons

Note: SO₂; Sulphur di oxide NO₂; Nitrogen di Oxides

RSPM : Respirable Suspended Particulate Matter (< 10 micron size)

ANNEXURE - VI (Contd..)

STATUS OF AIR QUALITY OF IMPORTANT CITIES/TOWNS OF TAMILNADU-UNDER NATIONAL AIR QUALITY MONITORING PROGRAMME(NAMP) ANNUAL AVERAGE CONCENTRATIONS OF AIR POLLUTANTS, 2013-2014

Sl.No.	City & Location	Category	Annual Average Concentrations of Air Pollutants in $\mu\text{g}/\text{m}^3$														
			SO ₂						NO ₂						RSPM		
			Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg			
6	TRICHY																
a)	Gandhi Market	Commercial	19	14	17	23	19	17	21	120	17	105					
b)	Main Guard Gate	Traffic Inter-Section	19	17	14	24	18	21	131	109	118						
c)	Bishop Heber College	Mixed	12	10	11	16	13	15	50	39	43						
d)	Golden Rock	Residential	15	11	12	17	14	15	95	40	51						
e)	Central Bus Stand	Traffic Inter-Section	18	14	16	22	19	21	224	108	127						
7	CUDDALORE																
a)	Eachangadu Village	Residential	12	7	9	25	13	20	102	29	65						
b)	DEE Office	Commercial	12	6	8	25	13	20	98	27	63						
c)	SIPCOT	Industrial	9	6	8	22	13	19	85	35	58						
8	METTUR																
a)	Raman Nagar	Residential	8	5	7	25	19	21	67	39	49						
b)	SIDCO	Industrial	11	9	10	30	20	27	89	44	64						
Prescribed standards(Annual average) for Industrial,Residential,Rural&Other areas			50			40			60								
Note: SO ₂ : Sulphur di oxide NO ₂ : Nitrogen di Oxides			RSPM : Respirable Suspended Particulate Matter (< 10 micron size)														

ANNEXURE VII

PERFORMANCE OF LABORATORIES (APRIL 2013 TO MARCH 2014)

Sl No.	Name of the Laboratory	Effluent			Water Samples			Total	Air Survey			NAMP	Noise				
		Regular	Complaints/Legal	GEMS	MINARS	CWWM	Sludge/Soil/Fuel/Pri Vate /River Water Samples/Others		No. of Industries	AQS Stations	SM Stations		No. of Industries	Regular	Complaints	No. of Industries	No. of Stations
Advanced Environmental Laboratories																	
1	Chennai	1,990	-	-	115	427	52	2,584	101	580	477	2,626	101	792	4	22	
2	Madurai	1,206	-	-	35	-	1	1,242	62	371	121	1,763	62	525	7	77	
3	Salem	2,450	-	37	384	-	15	2,886	59	338	157	1,356	57	530	5	35	
4	Cuddalore	1,233	-	-	-	-	-	1,233	70	467	246	1,151	70	506	4	33	
5	Coimbatore	1,453	-	-	-	-	-	1,453	87	465	325	1,618	85	715	15	103	
District Environmental Laboratories																	
6	Ambattur	2,259	-	-	-	-	-	2,259	85	505	317	1,700	85	425	3	12	
7	Manali	1,724	-	-	-	-	-	1,724	67	391	213	-	70	381	19	84	
8	Dindigul	952	-	-	19	-	1	972	57	594	99	-	57	372	1	18	
9	Hosur	1,201	-	-	-	-	-	1,201	110	565	270	-	115	823	-	-	
10	Trichy	1,592	-	-	-	-	-	1,592	126	658	382	2,591	122	515	8	100	
11	Tirunelveli	846	-	-	136	-	2	984	-	-	-	-	-	-	-	-	
12	Tiruppur	2,059	-	-	276	-	27	2,362	80	441	162	-	80	439	14	156	
13	Vellore	1,685	-	-	-	-	-	1,685	90	507	513	-	87	545	5	82	
14	Maraimalai Nagar	1,718	-	-	-	-	-	1,718	93	487	248	-	91	588	6	37	
15	Thoothukudi	-	-	-	-	-	-	-	69	622	114	1,668	35	143	7	72	
	Total	22,368	-	37	965	427	98	23,895	1,156	6,991	3,644	14,473	1,117	7,299	98	831	

ANNEXURE-VIII-A

CAUVERY RIVER WATER QUALITY(UNDER GEMS PROGRAMME)2013-2014

S.NO	Name of stations	D.O mg/L	pH	Conductivity in mhos/cm	BOD at 27 C mg/L	Nitrate mg/L	Fecal coliform MPN/100 ml	Total coliform MPN/100 ml	Turbidity NTU	Phenolphthaleine Alkalinity mg/L	Total Alkalinity mg/L	Chloride mg/L	COD mg/L	Total Kjeldahl Nitrogen mg/L	Ammonia-N, as N mg/L	Hardness as CaCO3 mg/L	Calcium as Ca++ mg/L	Magnesium as Mg++ mg/L	Sulphate mg/L	Sodium mg/L	Total Dissolved Solids mg/L	Total Fixed Solids mg/L	Total Suspended Solids mg/L	Phosphate mg/L	Boron mg/L	Potassium mg/L	Fluoride mg/L	DBU Class
1	Mettur	6.0	8.0	323	1.6	0.2	3134	4649	21.2	14.3	123.6	28	36	15.6	0.8	127	28	13.9	14.1	26.6	226.2	203	22.2	<1	<1	3.00	0.2	C
2	Pallipalayam	7.6	8.3	533	2.1	0.2	3720	5755	20.2	17.3	145.167	69	33	3.27	0.77	151	28	19.75	29.33	54.67	343.33	301	8.3	<1	<1	4.58	0.207	D
3	Musiri borewell	6.0	7.8	1139	0.15	0.28	1400	3500	2.0	17.0	208.00	182	32	2.24	0.28	274	93	10.00	24.00	81.00	732.00	586	4.0	<1	<1	9.00	0.26	C
4	Musiri ferrygate	8.0	8.2	556	0.96	0.31	140	5830	7.7	12.9	177.17	66	36	2.47	0.70	168	36	19.00	31.83	60.25	356.33	338	8.7	<1	<1	5.67	0.20	D
	*Tolerance Limit	5.0	6.5 - 8.5		3	-	200	500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	C

*CPCB-GEMS / MINARS Water quality criteria

DBU Class-Designated Best Use

mg/L-milligram per liter

C-Drinking water source after conventional treatment and disinfection

MPN-Most probable number

D-Propagator of wild life and fisheries

ANNEXURE-VIII-B
CAUVERY RIVER WATER QUALITY(UNDER MINARS PROGRAMME)2013-2014

S.NO	Name of stations	D.O mg/L	pH	Conductivity m mhos/cm	BOD at 27 C mg/L	Nitrate mg/L	Fecal coliform MPN/100	Total coliform MPN/100	Turbidity NTU	Phenophthaline Alkalinity mg/L	Total Alkalinity mg/L	Chloride mg/L	COD mg/L	Total Kjeldahl Nitrogen mg/L	Ammonia-N,as N mg/L	Hardness as CaCO3 mg/L	Calcium as Ca++ mg/L	Magnesium as Mg++ mg/L	Sulphate mg/L	Sodium mg/L	Total Dissolved Solids mg/L	Total Fixed Solids mg/L	Total Suspended Solids mg/L	Phosphate mg/L	Boron mg/L	Potassium mg/L	Fluoride mg/L	DBU Class
1	Pathira kallanman koil	11.16	7.82	101.55	0.39	0.27	2910.10	6144.30	10.50	6.00	45.83	11.92	11.33	2.43	0.54	49.50	9.58	6.21	1.90	8.43	77.67	71.50	4.67	<1	<1	1.26	0.20	D
2	Sirumugai	7.76	7.83	191.33	0.59	0.29	10790.00	17144.00	9.50	9.00	56.50	29.83	16.00	2.12	0.51	56.83	14.92	4.89	7.27	26.08	130.33	116.00	6.67	<1	<1	1.88	0.20	D
3	Bhavani sagar	7.30	7.69	145.43	0.83	0.23	2933.27	3762.75	9.00	7.30	58.17	20.33	14.00	2.75	0.63	60.00	15.03	5.17	5.56	11.25	112.33	101.67	4.00	<1	<1	2.67	0.18	C
4	Bhavani	8.81	8.20	601.92	1.31	0.24	7100.08	22102.50	11.88	15.14	191.83	73.08	32.67	3.21	0.79	169.75	37.17	18.67	24.63	58.75	418.67	356.67	5.33	<1	<1	6.50	0.19	D
5	R.N. Pudur	5.90	8.18	384.33	0.89	0.26	3512.00	5561.67	12.57	16.00	146.67	36.33	28.67	3.08	0.93	139.58	29.50	16.83	25.58	33.50	260.67	242.17	4.00	<1	<1	3.69	0.17	D
6	Erode	6.51	8.06	630.36	8.25	0.30	36578.33	10176.00	11.38	12.88	183.64	85.09	34.18	2.90	0.74	163.18	35.82	18.00	29.00	71.82	401.45	355.27	8.73	<1	<1	6.82	0.20	D
7	P. Velur	8.74	8.44	465.00	1.43	0.30	867.40	1743.00	4.67	21.00	151.60	54.30	39.20	3.08	0.64	136.00	31.75	14.00	22.50	44.50	313.90	286.80	8.80	<1	<1	4.60	0.24	C
8	Mohanur	7.95	8.31	483.50	1.59	0.34	758.40	1309.00	9.83	16.86	158.20	55.20	31.20	2.63	0.62	141.60	32.30	14.80	25.30	49.10	313.60	288.80	4.00	<1	<1	4.94	0.18	C
9	Madathukulam	7.46	7.69	245.00	0.40	0.15	4783.33	7420.00	14.14	6.00	84.00	29.38	15.00	2.17	0.80	78.38	20.00	6.63	22.79	20.06	174.50	156.50	7.50	<1	<1	3.08	0.2	D
10	Thirumukkudal	7.68	8.49	500.42	0.90	0.28	1466.67	1995.83	6.57	17.75	155.83	63.33	27.33	2.78	0.58	151.83	29.50	19.00	25.70	52.58	335.33	307.33	4.00	<1	<1	4.50	0.23	C
11	Trichy U/S	7.94	11.6	456.08	0.80	0.23	1579.42	3101.67	15.00	14.00	155.50	52.33	30.00	2.61	0.64	126.91	31.92	14.83	24.67	43.92	303.67	279.33	17	<1	<1	4.38	0.16	C
12	Trichy D/S	5.28	7.82	669.75	3.44	0.20	5389.29	9022.71	17.88	20.00	197.00	81.50	73.00	3.01	0.86	202.88	46.75	21.75	34.75	71.88	442.00	397.00	19.00	<1	<1	10.00	0.22	D
13	Grand Anaicut	7.53	7.99	556.88	3.49	0.21	8667.50	13137.50	21.71	15.20	182.75	67.00	46.00	2.87	0.68	178.13	44.50	16.13	32.50	57.63	368.50	347.50	31.50	<1	<1	7.38	0.21	C
14	Coleroon	7.26	8.36	13441.73	1.46	0.24	1103.88	2112.00	6.86	15.71	147.45	4100.45	90.91	3.60	0.73	1690.73	147.45	321.36	908.18	2692.36	8717.27	8333.82	6.18	<1	<1	78.00	0.23	C
15	Pitchavaram	5.16	8.14	1609.83	1.36	0.25	4011.00	7246.22	9.80	21.50	250.00	343.00	54.67	3.45	0.75	268.75	37.58	42.50	49.17	284.00	1053.33	953.33	7.33	<1	<1	20.58	0.16	D
16	Karunthattankudi	7.63	8.25	589.29	1.22	0.19	926.86	1265.71	16.83	17.00	182.57	80.71	34.29	3.20	0.82	183.14	30.71	26.43	26.37	65.14	382.86	351.43	16.57	<1	<1	6.29	0.22	C
	Tolerance Limit	4.00/6.0-9.0	-	-	3	50	2000	5000	-	-	-	600	-	-	-	-	-	-	400	-	1500	-	-	-	-	-	1.5	C

*CPCB-GEMS /MINARS Water quality criteria

DBU Class-Designated Best Use

B - Outdoor bathing (organised)

C-Drinking water source after conventional treatment and disinfection

D-Propagator of wild life and fisheries

mg/L-milligram per liter

MPN-Most probable number

ANNEXURE-VIII-C
CAUVERY RIVER WATER QUALITY(UNDER MINARS PROGRAMME)/2013-2014

S. NO	Name of stations	D.O mg/L	pH	Conductivity m mhos/cm	BOD at 27 C mg/L	Nitrate mg/L	Fecal coliform MPN/100 ml	Total coliform MPN/100 ml	Turbidity NTU	Phenolphthaleine Alkalinity mg/L	Total Alkalinity as CaCO3 mg/L	Chloride mg/L	COD mg/L	Total Kjeldahl Nitrogen mg/L	Ammonia-N as N mg/L	Hardness as CaCO3 mg/L	Calcium as Ca++ mg/L	Magnesium as Mg++ mg/L	Sulphate mg/L	Sodium mg/L	Total Dissolved Solids mg/L	Total Fixed Solids mg/L	Total Suspended Solids mg/L	Phosphate mg/L	Boron mg/L	Potassium mg/L	Fluoride mg/L	DBU Class	
1	Komarapalayam	8.3	8.193	453.83	2.39	0.53	7385	13320	6.5	13.6	167	45.3333	36	3.827	0.933	148.17	31.67	16.67	20.12	38.17	290	263.33	4	<1	<1	5.083	0.28	D	
2	Urrachikottai	8.4	8.388	342.83	1.24	0.24	2988	6953	6.25	14	141.3333	26.3333	25.33	3.463	0.896	131.83	30.33	13.67	19.17	24.67	238	214	4	<1	<1	2.833	0.16	D	
3	Vairapalayam	6.9	8.167	443.00	1.632	0.29	5235	13127	3	13.6	168	36.6667	28	3.357	0.924	155.67	31.5	18.83	17.81	33.67	284	253.33	4	<1	<1	3.333		D	
4	Pugalur	6.1	8.515	569.50	1	0.35	1512	2880	4.667	15.2	184.6667	65.6667	26.67	2.987	0.723	170.5	33.83	21	49.83	59.33	398.67	365.33	4	<1	<1	4.833	0.23	C	
5	Pettavaithalai	7.8	8.119	538.18	1.627	0.82	2937	4976	16.25	16	176.9091	62.6364	35.64	2.693	0.789	162.91	33.91	18.91	33.91	60.27	358.91	331.64	11.64	<1	<1	5.455	0.2	C	
6	Kumbakonam	7.7	8.23	480.80	1.53	0.10	4044	6452	14.50	16.00	171.60	48.00	30.40	4.14	1.12	144.40	29.40	17.40	25.60	42.40	309.60	283.20	14.40	<1	<1	5.20	0.19	D	
7	Mayiladurai	7.0	7.55	253.00	2.13	0.26	1015	2372	11.00	12.00	100.00	23.40	24.00	2.91	0.45	92.00	23.60	8.20	11.40	21.00	170.40	159.20	4.00	<1	<1	3.00		C	
8	Sathiyamanagalam	9.0	7.711	226.46	0.943	0.18	9638	14959	7.444	10.67	84	27.6667	20.67	2.657	0.653	83.063	20.33	8	10.79	17.42	162.33	148.33	4.333	<1	<1	2.75	0.2	D	
9	Kalingarayan Canal (B5)	5.8	7.822	350.00	0.698	0.25	11872	20987	8	10.5	128.4	25.2	20.8	2.24	0.61	122.2	33.6	9.4	21	21.8	219.2	199.2	4	<1	<1	3.4	0.17	D	
10	Kalingarayan Canal (B10)	7.4	8.077	406.40	1.466	0.34	5181	9558	8.623	13.51	146.8788	40.1003	27.5	3.141	0.789	134.53	29.8	14.68	23.29	35.41	270.12	246.4	6.041	<1	<1	3.988	0.2	D	
11	Thirumanimuthar	9.8	8.1	2781.67	33.69	0.48	258785	402900	23.82	42.33	658.5833	472.417	139	31.18	8.215	527.25	96.25	69.83	77.25	396	1754.3	1592.4	39.67	29.46	6.17	32.67	0.24	<E	
12	Vasista	1.8	7.708	2515.00	200.5	1.07	773750	989500	79.33	78	706	359.333	445	60.25	10.45	505.33	69.83	80.17	94	180	1560.5	1252	133.6	29.90	0.18	112	0.2	<E	
13	Sarabanga	7.2	8.05	780.06	20.74	0.41	90362	123999	15.78	21.28	236.11	102.73	71.58	10.24	2.21	198.16	38.67	24.73	33.68	77.47	501.34	442.37	19.47	<0.005	3.18	15.38	0.21	<E	
	*Tolerance Limit	6.94	6.5-8.5	-	3	-	200	500	-	-	-	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	B	
		6.94	6.0-9.0	-	3	50.00	2000	5000	-	-	-	-	-	-	-	-	-	-	400	-	1500	-	-	-	-	-	-	1.5	C

mg/L-milligram per liter

- DBU Class-Designated Best Use
 C-Drinking water source after conventional treatment and disinfection
 D-Propagator of wild life and fisheries
 E-Irrigation, Industrial cooling, controlled waste disposal
 < E Not meeting A,B,C,D & E Criteria

ANNEXURE-IX

TAMIRAPARANI RIVER WATER QUALITY-(UNDER MINARS PROGRAMME)-2013-2014

S NO	Name of stations	D.O mg/L	pH	Conductivity m mhos/cm	BOD at 27 C mg/L	Nitrate mg/L	Fecal coliform MPN/100 ml	Total coliform MPN/100 ml	Turbidity NTU	Phenolphthaleine Alkalinity mg/L	Total Alkalinity as CaCO3 mg/L	Chloride mg/L	COD mg/L	Total Kjeldahl Nitrogen mg/L	Ammonia-N as N mg/L	Hardness as CaCO3 mg/L	Calcium as Ca++ mg/L	Magnesium as Mg++ mg/L	Sulphate mg/L	Sodium mg/L	Total Dissolved Solids mg/L	Total Fixed Solids mg/L	Total Suspended Solids mg/L	Phosphate mg/L	Boron mg/L	Potassium mg/L	Fluoride mg/L	DBU Class	
1	Papanasam	6.95	8.1	69.78	3.34	0.12	15.33	42.42	8.00	<1	21.58	12.33	20.67	2.83	1.12	12.17	6.32	2.62	7.27	6.83	47.33	35.33	6.17	0.20	<1	1.2	<1	B	
2	Cheranmadevi	6.53	6.4	92.15	3.32	0.16	17.08	56.83	5.33	<1	39.00	14.58	22.00	3.23	2.24	28.42	11.60	4.27	12.07	8.42	64.67	50.00	8.58	0.22	<1	1.5	<1	B	
3	Kokirakulam	6.47	6.5	126.89	3.73	0.19	36.00	110.33	5.25	<1	47.67	17.74	33.08	3.09	2.24	36.75	16.85	6.36	15.81	10.83	87.33	65.67	8.67	0.22	<1	2.0	<1	B	
4	Murapanadu	6.63	6.8	242.44	2.69	0.19	12.91	38.55	6.00	<1	84.18	27.95	24.73	3.02	<1	65.09	35.08	13.42	11.33	12.09	170.55	117.27	9.27	0.18	<1	2.3	<1	B	
5	Thiruvudaimanudur	6.92	6.3	66.91	3.38	0.18	18.73	61.27	4.09	<1	23.64	12.73	23.27	3.21	1.12	17.00	6.77	2.59	7.85	6.27	45.45	31.82	6.00	0.22	<1	1.2	<1	B	
6	Ambasamudram	6.67	6.3	60.94	3.35	0.10	12.75	37.42	3.25	<1	19.92	11.25	21.33	2.79	1.12	12.17	5.73	2.49	6.81	5.58	41.67	29.67	5.75	0.17	<1	1.0	<1	B	
7	Authoroor	7.06	7.2	496.73	3.26	0.06	26.45	80.36	6.36	<1	143.64	60.18	35.64	3.20	-	149.09	60.83	22.94	18.15	33.27	329.64	290.91	11.64	0.15	<1	5.0	<1	B	
8	Eral	6.0	7.1	397.18	3.508	0.183	21.09	61.36	7.82	<1	129.45	60.91	29.45	3.28	<1	123.55	55.40	23.40	16.51	24.18	266.55	233.27	12.36	0.19	<1	4.3	<1	B	
9	Kallidai Kurichi	6.6	6.4	78.63	3.027	0.129	11.82	36.82	5	<1	27.36	12.18	22.00	2.53	1.12	16.36	8.09	4.03	7.945	6.73	56.182	40.18	7.64	0.23	<1	1.4	<1	B	
10	Srivaikuntam	6.7	7.0	422.26	4.489	0.165	16.18	46.00	6.55	<1	106.36	66.91	39.27	3.60	<1	104.18	46.54	23.34	17.85	23.36	288.18	232.55	10.55	0.22	<1	3.9	<1	B	
11	Vellakovil	6.4	6.6	147.40	3.906	0.301	18.83	67.42	4.83	<1	59.45	21.08	32.50	2.59	2.24	43.75	19.90	6.45	17.83	13.08	100.83	78.67	8.83	0.29	<1	2.3	<1	B	
12	Sivalaperi	6.7	6.7	163.59	3.317	0.245	27.5	88.83	6.08	<1	64.33	21.92	34.67	2.92	1.4	49.58	22.78	7.31	19.47	14.50	112.83	88.17	10.00	0.31	<1	2.6	<1	B	
	*Tolerance Limit	5	6.5-8.5	-	3	-	200	500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	B

*CPCB-GEMS / MINARS Water quality criteria

DBU Class-Designated Best Use

B-Outdoor bathing (organised)

mg/L-milligram per liter

MPN-Most probable number

B-Outdoor bathing (Organised)

ANNEXURE-X

PALAR & VAIGAI RIVER WATER QUALITY(UNDER MINARS PROGRAMME)2013-2014

S.NO	Name of stations	D.O mg/L	pH	Conductivity m mhos/cm	BOD at 27 C mg/L	Nitrate mg/L	Fecal coliform MPN/100 ml	Total coliform MPN/100 ml	Turbidity NTU	Phenophthaline Alkalinity mg/L	Total Alkalinity as CaCO ₃ mg/L	Chloride mg/L	COD mg/L	Total Kjeldahl Nitrogen mg/L	Ammonia-N,as N mg/L	Hardness as CaCO ₃ mg/L	Calcium as Ca++ mg/L	Magnesium as Mg++ mg/L	Sulphate mg/L	Sodium mg/L	Total Dissolved Solids mg/L	Total Fixed Solids mg/L	Total Suspended Solids mg/L	Phosphate mg/L	Boron mg/L	Potassium mg/L	Fluoride mg/L	DBU Class
1	Vaigai	6.3	7.59	2050	5.3	0.028	<2	<2	2	<1	-	-	64	-	-	480	88.2	63.2	-	142	1272	588	14	0.84	<0.002	84	0.055	D
2	Palar	7	7.53	1135.42	1.67	0.78	143.75	438.17	1.33	19.89	304.25	138.58	8.00	9.92	3.12	228.33	42.83	28.83	66.00	122.00	743.00	593.50	3.00	0.18	0.31	7.55	0.43	B

Primary water quality criteria for various uses of fresh water (Tolerance Limit)

Designated best use	Class	Criteria
Drinking water source without conventional treatment but after disinfections	A	<ul style="list-style-type: none"> * Total coliform organisms MPN/100mL shall be 50 or less. * pH between 6.5 and 8.5 * Dissolved oxygen 6 mg/l or more * Biochemical oxygen demand 2 mg/l or Less
Outdoor bathing (organised)	B	<ul style="list-style-type: none"> * Total coliform organisms MPN/100mL shall be 500 or less. * pH between 6.5 and 8.5 * Dissolved oxygen 5 mg/l or more * Biochemical oxygen demand 3 mg/l or Less
Drinking water source with conventional treatment followed by disinfection	C	<ul style="list-style-type: none"> * Total coliform organisms MPN/100mL shall be 5000 or less. * pH between 6 and 9 * Dissolved oxygen 4 mg/l or more * Biochemical oxygen demand 3 mg/l or Less
Propagation of wild life, fisheries	D	<ul style="list-style-type: none"> * pH between 6.0 and 8.5 * Dissolved oxygen 4mg/l or more * Free ammonia (as N) 1.2 mg/l or less
Irrigation, industrial cooling, con-trolled waste disposal	E	<ul style="list-style-type: none"> * pH between 6.0 and 8.5 * Electrical conductivity less than 2250 micro mhos/cm * Sodium absorption ratio less than 26 * Boron less than 2mg/l.

Mg/L - Milligram per Liter
MPN - Most Probable Number

ANNEXURE-XI

LAKE WATER QUALITY(UNDER MINARS PROGRAMME)2013-2014

SNO	Name of stations	D.O mg/L	pH	Conductivity m mhos/cm	BOD at 27 C mg/L	Nitrate mg/L	Fecal coliform MPN/100	Total coliform MPN/100	Turbidity NTU	Phenolphthaleine Alkalinity mg/L	Total Alkalinity as CaCO ₃ mg/L	Chloride mg/L	COD mg/L	Total Kjeldahl Nitrogen mg/L	Ammonia-N,as N mg/L	Hardness as CaCO ₃ mg/L	Calcium as Ca++ mg/L	Magnesium as Mg++ mg/L	Sulphate mg/L	Sodium mg/L	Total Dissolved Solids mg/L	Total Fixed Solids mg/L	Total Suspended Solids mg/L	Phosphate mg/L	Boron mg/L	Potassium mg/L	Fluoride mg/L	DBU Class	
1.00	Udhagamandalam	6.44	8.11	353.95	6.89	0.37	15726.61	29891.92	10.94	<1	101.21	41.55	54.55	3.45	0.65	98.92	30.07	5.69	5.61	30.06	225.41	193.41	6.18	<1	<1	11.51	0.18	D	
2.00	Kodaikanal	5.03	7.88	103.41	4.83	0.37	8.88	12.67	3.85	<1	22.78	14.84	47.52	1.31	2.05	32.24	9.33	2.81	9.06	11.73	69.33	58.45	11.11	0.59	<1	4.43	0.34	D	
3.00	Yercaud	5.74	8.00	228.68	5.86	0.37	7867.74	14952.29	7.39	<1	62.00	28.19	51.03	2.38	1.35	65.58	19.70	4.25	7.34	20.90	147.37	125.93	8.65	0.59	<1	7.97	0.26	D	
4.00	Veeranam	8.14	8.43	630.89	2.23	0.25	887.28	1512.22	7.68	14.96	155.22	89.92	43.20	10.31	0.63	147.53	29.78	19.56	36.28	72.44	393.83	360.83	10.78	<1	<1	5.86	0.21	D	
5.00	Poondi	6.46	7.90	739.58	2.08	0.69	1000.00	2465.83	4.00	8.60	145.42	100.92	8.00	11.42	4.08	134.83	31.75	13.42	63.58	114.67	518.17	395.92	7.67	0.12	0.23	7.83	0.57	C	
6.00	Red Hills	6.85	7.91	583.00	1.92	0.70	1158.33	3140.83	6.25	8.75	131.92	98.67	8.00	12.43	4.05	144.08	27.17	18.50	58.67	104.08	400.50	309.08	7.50	0.58	0.29	7.50	0.40	C	
7.00	Ponur	6.44	8.04	439.92	3.97	0.46	4441.47	8662.63	6.69	10.77	103.09	62.35	35.38	6.88	2.14	103.86	24.63	10.70	30.09	58.98	292.44	240.61	8.65	0.47	0.26	7.51	0.33	E	
8.00	Pulicat	5.93	7.75	-	2.45	0.74	263.33	548.33	5.67	15.00	125.82	15883.18	Inter-ference	10.82	3.48	5578.18	782.91	884.45	2645.09	10895.45	33705.55	29085.09	642.09	0.22	0.29	321.78	1.33	<E	
	*Tolerance Limit	5.00	6.5-9.5	-	3.00	-	200.00	500.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.50	B	
		4.00	6.0-9.0	-	3.00	50.00	2000.00	5000.00	-	-	-	600.00	-	-	-	-	-	-	400.00	-	1500.00	-	-	-	-	-	-	1.50	C

*CPCB-GEMS / MINARS Water quality criteria

DBU Class-Designated Best Use

B-Outdoor bathing (organised)

C-Drinking water source after conventional treatment and disinfection

D-Propagation of wild life and fisheries

E-Irrigation,Industrial Cooling, Controlled Waste disposal

< E Not meeting A,B,C,D & E Criteria

mg/L-milligram per liter
MPN-Most probable number

ACCOUNTS

**AUDITOR'S REPORT TO THE MEMBERS OF THE
TAMILNADU POLLUTION CONTROL BOARD
FOR THE YEAR ENDED 31st MARCH 2014**

We have audited the attached Balance Sheet of Tamil Nadu Pollution Control Board as at March 31, 2014 and also the Receipts and payments account and Income and Expenditure Account for the year ended on that date annexed thereto.

These financial statements are the responsibility of the 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 the auditing standards generally accepted in India. Those Standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by the management as well as evaluating the overall financial statements presentation. We believe that our audit provides a reasonable basis for our opinion.

We report that:

1. 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.
2. In our opinion proper books of account as required by law have been kept by the Board so far as it appears from our examination of those books.
3. 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 by this report are in agreement with the books of accounts.
4. In our opinion and to the best of information and according to the explanations given to us, the said accounts read with the schedules thereto and the notes thereon attached hereto subject to the following:

- a. Refer point no II(e) of the notes to accounts with respect to Land advance of Rs.2.49 crores which is outstanding for a long time.
- b. Refer point no. II(f) of the notes to accounts with respect to Advance to suppliers for purchase of fixed assets and other expenditure for an amount of Rs 0.61 Crores is outstanding for more than one year and requires adjustment in the books of accounts.
- c. Refer point no. II (g) of the notes to accounts with respect to non recoverability of cess amounting to Rs.470.50 crores due from Thermal Stations and local bodies in turn to be remitted to the Ministry of Environment and Forest, Government of India.
- d. The Internal Audit wing is not commensurate with the size of this organization. The Internal Audit wing has not furnished the report for the year under audit.
- e. The entity follows cash basis of accounting for Consent Fees and Cess Re-Imbursement. However Consent Fees received in advance of Rs.9.80 crores (net) received during the year has not been treated as income and to that extent the income of the Board has been understated.

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 in conformity with the accounting principles generally accepted in India:

- (a) In the case of Balance Sheet, of the State of affairs of the Board as at March 31, 2014,
- (b) In the case of the Receipts and Payments account of the total receipts and payments of the Board for the year ended 31st March 2014 and
- (c) In the case of the Income and Expenditure account of the excess of Income over Expenditure for the year ended 31st March 2014.

For Velu & Co.
Chartered Accountants
FR.NO : 004589 S

Date: 29-12-2014
Place: Chennai

Partner P.T. Jayakumar
M. No. [M.No. 200239]

New No.145/83, Triplicane High Road, (Near Triplicane Post Office), Triplicane, Chennai-600 005.
Ph:4556 7597, 2851 4248 Cell:9840106280 e-mail : veluandco1965@gmail.com/jayakumarpt@rediffmail.com

ANNUAL STATEMENT
Receipts and Payments for the
See Rules 36 of Tamil Nadu Water

PREVIOUS YEAR	RECEIPTS	TOTAL OF SUB HEAD	TOTAL OF MAJOR HEADS
Rs. Ps.		Rs. Ps.	Rs. Ps.
	A. OPENING BALANCE		
176244977.26	a. Bank	573582901.97	
-	b. Cash	-	
200000.00	c. Funds in Transit	-	573582901.97
	B. GRANTS RECEIVED		
-	a. From Government	-	
-	b. From other Agencies	-	
-	c. Schemes		
	C. FEES		
-	a. Consultant Registration Fees	-	
411350.00	b. Cost of Application	313910.00	
610356740.16	c. Consent Fees	764999940.38	
81995947.00	d. Cess Collection	80385933.00	
-	e. Fees for handling H. Waste	-	845699783.38
102085901.00	D. Services & Rental Charges (Lab Analysis Charges Sch - A)		126678475.00
314006656.92	E. INTEREST ON INVESTMENT		258553680.00
	F. MISCELLANEOUS		
4351676.00	a. Others (Schedule-B)	5030265.00	
0.00	b. Cess Re-imburement	209712721.00	214742986.00
1289653248.34	C/o		2019257826.35

Chennai - 600 032
Date: 29/12/2014

OF ACCOUNT

year ended 31 March 2014.

(Prevention and control of Pollution) rules 1983.

PREVIOUS YEAR		PAYMENTS	TOTAL OF SUB HEAD		TOTAL OF MAJOR HEADS	
Rs.	Ps.		Rs.	Ps.	Rs.	Ps.
		A. CAPITAL EXPENDITURE				
12000000.00		a. Assets - Land and Building	45392516.00			
18384083.00		b. Laboratory Equipment	13565741.00			
277,812.00		c. Vehicles	40800.00			
1882184.00		d. Furniture	2210618.00			
2382158.00		e. Office Appliance	1292231.00			
277813.00		f. Library Books	97115.00			
-		g. Electrical Installation	948,100.00			
581,197.00		h. Computer	132220.00		63679341.00	
		B. REVENUE EXPENDITURE				
		A. ADMINISTRATIVE				
358878375.97		a. Salaries	362980943.40			
43304137.00		b. Pension & Gratuity Contribution	101299001.00			
10789352.00		c. Surrender Leave Salary	11596028.00			
1539545.00		d. Bonus	1599794.00			
1718791.00		e. Medical Expenses	3358613.00		480834379.40	
		B. BOARD LABORATORY				
219029.00		a. Running Expenses of Lab.	483007.00			
815863.00		b. Lab. Chemicals etc.,	3713443.00		4196450.00	
		C. RUNNING & MAINTENANCE OF VEHICLE				
8949704.86					13891153.00	
0.00		D. SCHEME				0.00
462000044.83		C/o			562601323.40	

Subject to our report of even date & Schedules + Notes attached
for **Velu & Co., FR.NO : 004589 S**
Chartered Accountants

ANNUAL STATEMENT
Receipts and Payments for the
See Rules 36 of Tamil Nadu Water

PREVIOUS YEAR	RECEIPTS	TOTAL OF SUB HEAD	TOTAL OF MAJOR HEADS
Rs. Ps. 1289653248.34	B/F G. DEPOSITS & ADVANCES	Rs. Ps.	Rs. Ps. 2019257826.35
1883200.00	a. Earnest Money Deposit	6121804.00	
27600.00	b. Security Deposist	553447.00	
845235.00	c. Advance to Staff (Sch. - C)	738456.00	
3758597573.00	d. Short Term Deposit	4874303567.00	4881717274.00
970312688.81	H. OTHERS (Schedule - D)		564785830.45
-	I. WAYS & MEANS ADVANCE		153279.49
6021319545.15	Total		7465914210.29

Chennai - 600 032
Date: 29/12/2014

Sd/ -
K.Chitra B.Com, MBA, FCA.,
Senior Manager (F&A)

Sd/ -
S. Nazir Hussain, BBA.,
Financial Adviser

Sd/ -
Dr. K. Karthikeyan M. Tech, Ph.D.,
Member Secretary

OF ACCOUNT

year ended 31 March 2014.

(Prevention and control of Pollution) rules 1983.

PREVIOUS YEAR	PAYMENTS	TOTAL OF SUB HEAD	TOTAL OF MAJOR HEADS
Rs. Ps.		Rs. Ps.	Rs. Ps.
462000044.83	B/F		562601323.40
	E. MAINTENANCE & REPAIRS		
3798462.00	a. Buildings	6425975.00	
75405.00	b. Furniture & Fixture	45509.00	
643035.85	c. Scientific instruments	846686.00	
821676.00	d. Office Appliance	1426600.00	
1192558.00	e. Electrical Installation	2128457.00	
44382.00	f. Insurance of Assets	85442.00	
243370.00	g. Other Assets	1260235.00	12218904.00
	F. FEES TO CONSULTANTS & SPECIALISTS		
101210.00			
2306728.00	G. LAW CHARGES		6548008.00
	H. AUDIT FEES		
11563.00			
183040493.50	I. MISCELLANEOUS (Schedule-E)		306035437.25
96739333.00	C. CESS REMITTANCE		90252549.00
9022404.00	D. ADVANCE (Schedule - F)		8927548.00
750000000.00	E. WAYS & MEANS ADVANCE		
	F. DEPOSITS		
3912075763.00	a. Short Term Deposits	5677450000.00	
25619200.00	b. Others (Schedule - G)	46969577.00	5724419577.00
	G. CLOSING BALANCE		
573582901.97	a. Bank	754910863.64	
1015.00	b. Cash	-	
-	c. Funds in Transit		754910863.64
6021319545.15	Total		7465914210.29

Subject to our report of even date & Schedules + Notes attached
for **Velu & Co., FR.NO : 004589 S**
Chartered Accountants

Sd/-
K.Skandan I.A.S.,
Chairman

Sd/-
P.T. Jayakumar [M.No. 200239]
Partner

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

PREVIOUS YEAR		EXPENDITURE	TOTAL OF SUB HEAD		TOTAL OF MAJOR HEADS	
Rs.	Ps.		Rs.	Ps.	Rs.	Ps.
185098420.00		A. Administrative				
194460615.42		a. Pay of officers and Pay of Establishment	180542293.00			
		b. Allowance & Honororia (Schedule-H)	201855257.50			
222487408.00		c. Contribution to Gratuity & Provision for Pension	307537208.00			
27366841.00		d. Surrender Leave Salary	124216063.00			814150821.50
2544830.94		B. Running Expenses of Labs.				5805854.73
9643502.86		C. Running and Maintenance of Vehicle (Schedule-I)				15503771.00
36546.00		D. Maintenance and Repairs				
748411.00		a. Furniture & Fixtures	87043.00			
1223387.00		b. Lab. Equipments & Instruments	619478.00			
1247437.00		c. Office Appliance & Others	1995807.00			
4380554.00		d. Electrical Installation	1378245.00			
		e. Building	6386715.00			10467288.00
108955.00		E. Fees to Consultants and Specialists				221529.00
3417951.00		F. Law Charges				10644139.00
56180.00		G. Fees for Audit				56180.00
185548972.13		H. Miscellaneous (Schedule-J)				290486386.15
14202964.00		I. Depreciation				31610373.23
4054.00		J. Prior Period Adj.Account				35006405.00
661192711.58		K. Excess of income over Exp.trf to B/S				812385427.87
1513769740.93		Total				2026338175.48

Chennai - 600 032
Date: 29/12/2014

Sd/-
K.Chitra B.Com, MBA, FCA.,
Senior Manager (F&A)

Sd/-
S. Nazir Hussain, BBA.,
Financial Adviser

Sd/-
Dr. K. Karthikeyan M. Tech, Ph.D.,
Member Secretary

OF ACCOUNT

ended 31st March 2014.

(Prevention and control of Pollution) rules 1983.

PREVIOUS YEAR	INCOME	TOTAL OF SUB HEAD		TOTAL OF MAJOR HEADS	
		Rs.	Ps.	Rs.	Ps.
	A. Grants received				
	a. From Government		-		
	b. From other Agencies		-		
			-		
	Less: Amount utilised for Capital Expenditure		-		
			-		
	Net Grant available for Revenue Expenditure		-		-
941134787.16	B. Fees (Schedule-K)			1191502797.38	
101238245.00	C. Services & Rental Charges (Schedule-L)			127544691.00	
6787007.00	D. Miscellaneous Receipts				
	a. Others (Schedule-M)	4009152.10			
-	b. Cess Reimbursement	209712721.00		213721873.10	
463736727.00	E. Interest on Investment			493568814.00	
872974.77	F. Prior Period Adj.Account				-
1513769740.93	Total			2026338175.48	

Subject to our report of even date & Schedules + Notes attached
for **Velu & Co., FR.NO : 004589 S**
Chartered Accountants

Sd/-
K.Skandan I.A.S.,
Chairman

Sd/-
P.T. Jayakumar [M.No. 200239]
Partner

OF ACCOUNT

31st March 2014.

(Prevention and control of Pollution) rules 1983.

PREVIOUS YEAR		ASSETS	TOTAL OF SUB HEAD		TOTAL OF MAJOR HEADS	
Rs.	Ps.		Rs.	Ps.	Rs.	Ps.
12149358.65		A. FIXED ASSETS	12306284.65			
64010909.00		a. Land Development	58315000.00		70621284	65
		b. Buildings Under Construction				
77054568.43		B. OTHER ASSETS			116361182.20	
		a. As per Form XV				
1225281.24		b. Stock in hand	1903450.11			
820770.82		i. Lab Chemicals	1002755.19			
205926.27		ii. Glassware	211914.37			
1332925.38		iii. Misc. Stores	3034468.41		6152588.08	
		iv. Filter Paper				
4220260349.14		C. SUNDRY DEBTORS				
1106768958.80		a. Cess Receivable	4730656210.34			
		i. From Industries	1403682773.80			
		ii. From Local Bodies	6134338984.14			
		Less: Cess unrecoverable		-	6134338984.14	
20000.00		b. Amount Receivable - PWD			20000.00	
7112878.00		c. Project Study - Receivable			383845.00	
240905994.99		d. Ways and Means Advance Receivable			240752715.50	
477635324.15		D. ADVANCES & DEPOSITS				
17527176.00		a. Misc. amounts recoverable (Schedule - R)	738439450.15			
2326073.00		b. Advance to Staffs (Schedule - S)	15602436.00			
		c. Deposits (Schedule - T)	2428671.00		756470557.15	
6229356493.87		C/o			7325101156.72	

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.
11784391740.72		B/f			13862734661.59	
	264956.98	E. ENVIRONMENTAL IMPACT STUDY				264956.98
462547788.80		F. INCOME RECEIVED IN ADVANCE (Schedule - Q)			562747254.45	
21498500.00		G. SUBSIDIES FOR COMMON EFFLUENT TREATMENT PLANTS			21498500.00	
1189893.34		H. ENVIRONMENTAL EDUCATION FUND RESERVE			1189893.34	
	500000.00	I. EMERGENCY RESPONSE CENTRE				500000.00
	692000.00	J. C P C B GREEN BELT				692000.00
1930077.00		K. SCHEMES			1930077.00	
	924250.00	L. SPONSORSHIP FOR SCHEMES				12085550.00
12273939206.84		Total			14463642893.36	

Chennai - 600 032
Date: 29/12/2013/

Sd/-
K.Chitra B.Com, MBA, FCA.,
Senior Manager (F&A)

Sd/-
S. Nazir Hussain, BBA.,
Financial Adviser

Sd/-
Dr. K. Karthikeyan M. Tech, Ph.D.,
Member Secretary

OF ACCOUNT

31st March 2014.

(Prevention and control of Pollution) rules 1983.

PREVIOUS YEAR	ASSETS	TOTAL OF SUB HEAD	TOTAL OF MAJOR HEADS
Rs. Ps. 6229356493.87	B/f	Rs. Ps.	Rs. Ps. 7325101156.72
1467869088.00 426564960.18 150538753.00 3363250.00 3422662744.82	E. INVESTMENTS 1. Pension Fund Investment 2. Depreciation Fund Investment 3. EL Encashment Fund Inv. 4. CETP Develop. Fund Investment 5. Other term deposits	1780051345.00 504634404.41 253596267.00 3363250.00 3841985606.59	6383630873.00
573582901.97 1015.00 -	F. CASH & BANK BALANCE a. Balance with Banks b. Cash in Hand c. Funds under Transit	754910863.64 - -	754910863.64
12273939206.84	Total		14463642893.36

Subject to our report of even date & Schedules + Notes attached
for **Velu & Co., FR.NO : 004589 S**
Chartered Accountants

Sd/-
K.Skandan I.A.S.,
Chairman

Sd/-
P.T. Jayakumar [M.No. 200239]
Partner

FORM - XV

ANNUAL STATEMENT OF ACCOUNTS - FIXED ASSETS AS ON 31st MARCH 2014.

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

Sl. No.	Particulars of Assets	Rate of Depreciation	Opening Balance on 01/04/2013		Additions and Adjustment during the year		Total		Depreciation		Closing Balance on 31/03/2014		Cumulative Depreciation on 31/03/2014	
			Rs.	P.	Rs.	P.	Rs.	P.	Rs.	P.	Rs.	P.	Rs.	P.
1	Building	10.00%	19267137.20		51006005.00		70273142.20		25721483.00		44551659.20		132472694.60	
2	Computer	60.00%	6938798.13		4438846.00		11377644.13		5853825.00		5523819.13		33064055.00	
3	Electrical Installations	15.00%	2762360.68		1234400.00		3996760.68		473329.00		3523431.68		7023930.11	
4	Furniture & Fixture	10.00%	7247526.31		4083364.00		11330890.31		895305.00		10435585.31		21987682.23	
5	Lab Equipment	33.33%	22558022.65		21853949.00		44411971.65		13266729.93		31145241.72		113875755.57	
6	Library Books	10.00%	1758791.93		101615.00		1860406.93		182109.00		1678297.93		5798188.03	
7	Office Appliance	10.00%	8773055.08		2650510.00		11423565.08		1120116.00		10303449.08		20052172.14	
8	Vehicle	33.33%	7748876.45		6413471.00		14162347.45		4962649.30		9199698.15		46378505.43	
	Total		77054568.43		91782160.00		168836728.43		52475546.23		116361182.20		380652983.11	

Chennai - 600 032

Date: 29/12/2014

for Velu & Co., FR.NO : 004589 S
Chartered Accountants

Sd/-

K.Chitra B.Com, MBA, FCA.,
Senior Manager (F&A)

Sd/-

S. Nazir Hussain, BBA.,
Financial Adviser

Sd/-

Dr. K. Karthikeyan M. Tech, Ph.D.,
Member Secretary

Sd/-

K.Skandan I.A.S.,
Chairman

Sd/-

P.T. Jayakumar [M.No. 200239]
Partner

**SCHEDULE FORMING PART OF
RECEIPTS AND PAYMENTS ACCOUNT
FOR THE YEAR ENDED ON 31st MARCH 2014.**

RECEIPTS

**SCHEDULE - A
Services & Rental Charges**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Air Ambient Quality Survey	70802242.00	
2	Analysis Charges	48017005.00	
3	Bio Medical Management	1326105.00	
4	Cess Appeal Fees	1500.00	
5	GEMS / MINARS / NAMP	6250323.00	
6	Noise Leavel Measurement	222300.00	
7	Stack Monitoring	59000.00	
	TOTAL	126678475.00	

**SCHEDULE - B
MISCELLANEOUS RECEIPTS**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Environment Training Institute	593026.00	
2	Financial Assistance for projects	191268.00	
3	Interest on Loans & Advance	96343.00	
4	Miscellaneous Income	718017.00	
5	Others	23371.00	
6	Profit on sale os Assets	365629.00	
7	Public Hearing	1131516.00	
8	Rent	1853170.00	
9	Right to Information Fees	38400.00	
10	Sale of legal Books	19525.00	
	TOTAL	5030265.00	

**SCHEDULE FORMING PART OF
RECEIPTS AND PAYMENTS ACCOUNT
FOR THE YEAR ENDED ON 31st MARCH 2014.**

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

SL.NO	DESCRIPTION	Rs.	Ps.
1	Computer Advance	130270.00	
2	Festival Advance	21200.00	
3	Leave Travel Concession		
4	Handloom Advance	16000.00	
5	Marriage Advance	400.00	
6	Temporary Advance	523068.00	
7	Tour Advance	14393.00	
8	Vehicle Advance	33125.00	
	TOTAL	738456.00	

**SCHEDULE - D
ADVANCES AND DEPOSITS**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Cess received in advance	21834383.00	
2	Consent Fees received in advance	524274775.45	
3	Analysis Fees Advance	4062806.00	
4	AAQS Fees Advance	306810.00	
5	Deposits		
6	Others - Court Deposit	147873.00	
7	Miscellaneous Deposit		
	Rent Advance	172000.00	
	Schemes	11161300.00	
8	SEIAA/SEAC		
	Sundry - UNDP	2036600.00	
9	Noyal River Ayacutdars Protection Assn.		
	NGT Receivable	789283.00	
	TOTAL	564785830.45	

**SCHEDULE FORMING PART OF
RECEIPTS AND PAYMENTS ACCOUNT
FOR THE YEAR ENDED ON 31st MARCH 2014.**

**PAYMENT
SCHEDULE - E
MISCELLANEOUS**

SL.NO	DESCRIPTION	Rs.	Ps.
1	AAQS Expenses		382906.00
2	Advertisement & Publicity		839241.00
3	Appellate Authority Expenses		354361.00
4	Bank interest and commission		30603.75
5	Board Meeting Expenses		988204.00
6	Consultant Fees		221529.00
7	Contract Charges / Wages		32204136.00
8	Conveyance		803750.00
9	Electricity / Water Charges		8316566.00
10	Entertainment		533811.00
11	Environmental Pavilion Expenses		13398.00
12	ETI Expenses		374269.00
13	Expenses of Audit		38301.00
14	Family Benefit Fund		9200.00
15	Land Maintenance Expenses		91149.00
16	Leave Travel Concession		88529.00
17	Miscellaneous Expenses		626684.50
18	Newspaper & periodicals		321824.50
19	Office Expenses		2298189.00
20	Outstanding Expenses		6472613.00
21	Petty Cash Expenses		392431.00
22	Pollution Awareness Expenses		211316629.00
23	Postage / Telegram		1881454.00
24	Printing and Stationery		4478534.00
25	Prior Period Expense		3132972.00
26	Property tax		1897290.00
27	Rent		14324317.00
28	Staff Welfare Expenses		2888462.00
29	Telephone and Telex		4174125.00
30	Trade Fair		197887.00
31	Training and Seminar		847424.00
32	Travelling expenses		5423749.50
33	Turn duty and Overtime Allow.		70898.00
	TOTAL		306035437.25

**SCHEDULE FORMING PART OF
RECEIPTS AND PAYMENTS ACCOUNT
FOR THE YEAR ENDED ON 31st MARCH 2014.**

PAYMENT

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

SL.NO	DESCRIPTION	Rs.	Ps.
1.	Festival Advance	2067800.00	
2.	Handloom Advance	211050.00	
3.	Leave Travel Concession	70790.00	
4.	Motor Vehicle Advance	1802023.00	
5.	Personal Computer Advance	351475.00	
6.	Temporary Advance	3688579.00	
7.	Tour Advance	735831.00	
	TOTAL	8927548.00	

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

SL.NO	DESCRIPTION	Rs.	Ps.
1.	Advance to Suppliers	16137538.00	
2.	Land Advance	23573758.00	
3.	Telephone Deposit	3419.00	
4.	Earnest Money Deposit	2024582.00	
5.	Electricity Deposit	60650.00	
6.	Rent Advance	363000.00	
7.	Retention Money Deposit	82235.00	
8.	SEIAA / SEAC	4500000.00	
9.	Security Deposit	224395.00	
	TOTAL	46969577.00	

**SCHEDULE FORMING PART OF
RECEIPTS AND PAYMENTS ACCOUNT
FOR THE YEAR ENDED ON 31st MARCH 2014.**

EXPENDITURE

**SCHEDULE - H
ALLOWANCES AND HONORARIA**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Allowances	188111496.00	
2	Bonus	1591794.00	
3	Contributory Pension Scheme	3476897.00	
4	Family Benefit fund	5000.00	
5	Health Insurance / Family benefit fund exp.	367885.00	
6	Leave Travel Concession Expenses	194871.00	
7	Medical Reimbursement	1742242.00	
8	Special Provident Fund-Board's Contribution	453064.00	
9	Travelling Expenses	5839894.50	
10	Turn Duty and Overtime Allowances	72114.00	
	TOTAL	201855257.50	

**SCHEDULE - I
RUNNING AND MAINTENANCE OF VEHICLES**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Fuel	6876022.00	
2	Hire Charges	6006678.00	
3	Insurance	679516.00	
4	Repairs	1941555.00	
	TOTAL	15503771.00	

**SCHEDULE FORMING PART OF
RECEIPTS AND PAYMENTS ACCOUNT
FOR THE YEAR ENDED ON 31st MARCH 2014.**

EXPENDITURE

**SCHEDULE - J
MISCELLANEOUS**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Air Ambient Quality Survey Expenses		930686.00
2	Advertisement & Publicity		930988.00
3	Appellate Authority Expenses		2107546.00
4	Bank Charges		30213.75
5	Board Meeting / Other meeting Expenses		1777599.00
6	Contract Charges / Wages		33153533.00
7	Conveyance Expenses		1082794.00
8	DEE Legal Sample		8989.00
9	Electricity & Water Charges		9959875.00
10	Entertainment Expenses		639997.00
11	Environmental Pavilion Expenses		13398.00
12	Expenses of audit		40953.00
13	Insurance of Assets		85442.00
14	Land Maintenance Expenses		91149.00
15	Newspaper and Periodicals		363317.50
16	Office Expenses		2491532.00
17	Pollution Awareness Expenses		212184490.00
18	Postage Expenses		1958970.00
19	Printing & Stationery		5015532.00
20	Property Tax and Rates		1897290.00
21	Rent on Buildings		6203180.00
22	Staff Welfare Expenses		3434412.00
23	Sundries		732587.90
24	Telephone Expenses		4343095.00
25	Trade Fair Expenses		128216.00
26	Training and Seminar Expenses		880601.00
	TOTAL		290486386.15

**SCHEDULE FORMING PART OF
RECEIPTS AND PAYMENTS ACCOUNT
FOR THE YEAR ENDED ON 31st MARCH 2014.**

INCOME

**SCHEDULE - K
FEES**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Consent Fees	1191188887.38	
2	Consent Forms	313910.00	
	TOTAL	1191502797.38	

**SCHEDULE - L
SERVICES AND RENTAL CHARGES**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Air Ambient Quality Survey	70871942.00	
2	Analysis Charges	50141126.00	
3	NAAQM / NAMP / GEMS	6250323.00	
4	Noise level survey fees	222300.00	
5	Stack Monitoring	59000.00	
	TOTAL	127544691.00	

**SCHEDULE - M
MISCELLANEOUS**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Bio-Medical Waste Authorisation Fees	1329105.00	
2	Cess Appeal Fees	1500.00	
3	Environmental Training Inst. - Course fees	89957.00	
4	Fees for Right to Information	38400.00	
5	Interest on Loans & Advance	446687.00	
6	Miscellaneous Income	759420.10	
7	Profit on sale of assets	388129.00	
8	Public Hearing	745161.00	
9	Refund of Financial Assistance to Projects	191268.00	
10	Sale of Books	19525.00	
	TOTAL	4009152.10	

**SCHEDULE FORMING PART OF BALANCE SHEET
AS ON 31st MARCH 2014.**

**SCHEDULE-N
EARMARKED FUND**

PENSION FUND ACCOUNT

SL.NO	DESCRIPTION		AMOUNT
1	Opening balance as on 01-04-13		1467869088.00
	Add: Interest @ 6%		88072145.00
			1555941233.00
	Less: Disbursement from fund		
	a) Pension disbursed by Corp. Office	29564581.00	
	b) Pension disbursed by Units	13367725.00	
			42932306.00
	Add: Contribution to the Fund		1513008927.00
	Closing balance as on 31-03-14		267042418.00
			1780051345.00

EARN LEAVE ENCASHMENT FUND

	DESCRIPTION		AMOUNT
2	Opening balance as on 01-04-13		150538753.00
	Add: Interest @ 6%		9032325.00
			159571078.00
	Less: Disbursement from fund		
	a) Disbursement to retirees-Board	11281941.00	
	b) Disbursement to retirees-Units	7398971.00	
			18680912.00
	Add: Contribution to the Fund		140890166.00
	Closing balance as on 31-03-14		112706101.00
			253596267.00

DEPRECIATION FUND ACCOUNT

	DESCRIPTION		AMOUNT
3	Opening balance as on 01-04-13		426564960.18
	Add: Interest @ 6%		25593898.00
			452158858.18
	Add: Current year's Depreciation		52475546.23
	Closing balance as on 31-03-14		504634404.41

**SCHEDULE FORMING PART OF BALANCE SHEET
AS ON 31st MARCH 2014.**

LIABILITIES

**SCHEDULE - O
OTHER DEPOSITS**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Deposit- Court	75557463.23	
2	Earnest Money Deposit	6144762.00	
3	Miscellaneous Deposits	198973.00	
4	Retention Money Deposits	1743669.00	
5	Security Deposits	2379558.00	
	TOTAL	86024425.23	

**SCHEDULE - P
OTHER LIABILITIES**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Others	1966600.00	
2	Outstanding Liability	38199759.00	
3	Pay Roll Liabilities	4008556.00	
4	SEIAA Payable	1184212.00	
5	Staff Claim Payable	201262.00	
6	Tax Deducted at Source (Staffs)	400865.00	
	TOTAL	45961254.00	

**SCHEDULE - Q
INCOME RECEIVED IN ADVANCE**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Air Ambient Quality Services	166565.00	
2	Analysis charges	4896745.00	
3	Cess Fees	23395149.00	
4	Consent Fees	534288795.45	
	TOTAL	562747254.45	

**SCHEDULE FORMING PART OF BALANCE SHEET
AS ON 31st MARCH 2014.**

ASSETS

**SCHEDULE - R
MISCELLANEOUS ADVANCES**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Advance to Suppliers	6147992.00	
2	Interest Receivable	704156028.00	
3	Land Advance	24847753.00	
4	NGT - Receivable	1211805.00	
5	Rent Advance	2075872.15	
	TOTAL	738439450.15	

**SCHEDULE - S
ADVANCES TO STAFF**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Festival Advance	1333500.00	
2	Handloom Advance	115220.00	
3	LTC Advance	3790.00	
4	Marriage Advance	10395.00	
5	Motor Vehicle Advance	9455244.00	
6	Other Advance	920.00	
7	Personal Computer Advance	3792993.00	
8	Temporary Advance	360023.00	
9	Tour Advance	530351.00	
	TOTAL	15602436.00	

**SCHEDULE - T
DEPOSITS**

SL.NO	DESCRIPTION	Rs.	Ps.
1	Customs Deposit	295552.00	
2	Electricity Deposit	1047258.00	
3	Gas Deposit (Miscellaneous deposit)	41529.00	
4	Telephone & Telex Deposit	1044332.00	
	TOTAL	2428671.00	

Notes Forming Part of the Accounts for the year ended 31st March 2014.

I. Significant Accounting Policies and Convention:

(i) The financial statements have been prepared on the assumption of going concern concept.

(ii) Revenue Recognition: Revenues are recognized in the following manner:

a. Consent Fees:

Consent Fees received relating to the period up to which financial statements are drawn is accounted on cash basis and the amount received beyond the date of Balance Sheet is accounted as "consent fees received in advance" and is carried as liability. The consent fees advance has not been segregated yearwise.

Other Fees, Services Charges, Cess reimbursement and other Income:

On Cash basis.

b. Interest on Investments:

On accrual basis.

c. Revenue on Earmarked Funds:

Revenue accrued on earmarked funds is recognized on accrual basis and transferred to the respective fund accounts.

(iii) **Investments:** Investments are stated at the carrying cost.

(iv) **Fixed Assets:** Fixed Assets are stated at written down value.

(v) **Expenses:** On accrual basis.

(vi) Depreciation:

Depreciation is calculated on written down value by applying the following rates:

Building - 10%

Computer - 60%

Electrical Installations - 15%

Furniture and Fixtures - 10%,

Lab Equipments - 33.33%,

Library Books- 10%,

Office Appliances - 10%,

Vehicles - 33.33%.

(vii) Stock on Hand: Stock of Lab chemicals, Glassware, Misc. Stores & Filter papers are valued at cost. Cost is arrived under First in First out method.

(viii) Retirement Benefits:

a) Gratuity: Gratuity is administered by a separate Trust managed by the Life Insurance Corporation of India. The contribution made against the fund is charged to revenue.

b) Pension: Contribution to Pension is provided in the accounts as per Actuarial valuation. Fixed Deposits are earmarked and transferred to separate fund account to meet out the liability.

c) Earn Leave: Contribution to Earned Leave is provided in the accounts as per Actuarial valuation. Fixed Deposits are earmarked and transferred to separate fund account to meet out the liability.

II Notes on Accounts:

a) Consent Fees / Cess

The Board is collecting Cess and consent fees. However necessary information/data is not available to determine whether all industries to which the provisions of the Act apply have paid Cess and consent fees. In the absence of such information, income from this head has been recognized on the basis of available records.

b) Interest accrued on deposits has been adopted as worked out by Board.

c) Internal Audit:

The Board's Internal Audit System needs to be strengthened and internal audit conducted regularly and the Internal Audit Report furnished to audit each year.

d) Fixed Assets:

The fixed assets have been physically verified by independent Officers of the Board. The Fixed Assets are not numbered.

e) Land Advances:

This represents amount paid towards the land cost to SIPCOT amounting to Rs.2,48,48,753/- which is yet to be capitalized pending registration.

f) Advance to suppliers:

Rs 61,47,992/- has been paid as Advance to Suppliers for purchase of assets and other expenditure and is pending adjustment for more than one year.

g) Cess receivable includes disputed amount from the following Thermal stations/ Local Bodies.

	Rs. (in Crores)	
i) Ennore Thermal Power Stations.	90.04	
ii) North Chennai Thermal Power Station	165.72	
iii) Tuticorin Thermal Power Station	214.75	470.51
iv) Local bodies	-----	140.37

h) Income Tax:

No Provision for Income Tax has been made. The Board has applied for exemption u/s 10(46) of the Income Tax Act of 1961 and the notification is awaited.

i) Project Study Receivable:

Rs.3,83,845/- has been paid to various agencies for conducting studies on environment issues. These sums were proposed to be collected from the industries to which the issues related to. However these sums remain to be collected till date.

j) Pension Fund

The assumptions for valuation are as under:

Date of Valuation	31-03-2014
Employee Profile	
Age of Retirement	58 / 60 years
No. of Employees	612
Total monthly relevant salary for pension	2,60,54,596/-
No. of pensioners	130
Total monthly pension	24,26,301/-
No. of family pensioners	51
Total monthly family pension	6,63,826/-

Assumptions as per AS 15R

Discount rates as per Para 78	9.00%
Salary escalation fixed as per Para 83-91 and 120(1)	4.00%
Pension Escalation Rate (DA Increase)	7.00%
Attrition rate fixed	1.00%

Funding mechanism	Earmarked deposits
Present value of obligation	1,78,00,51,345/-

k) Earn Leave Encashment Fund:

The assumptions for valuation are as under:

Date of Valuation	31-03-2014
Employee Profile	
Age of Retirement	58 / 60 years
No. of Employees	768
Total monthly relevant salary for leave encashment	3,08,11,468/-
Average Age	48.20
Average past service	17.60
No. of leave days (EL)	1,84,320.00
No. of Leave days (UEL-PA)	69,12,000.00
Decrement adjusted /estimated future service	9.10

Assumptions as per AS 15R

Discount rates as per Para 78	9.00%
Expected rate of return computer as per Paras 107-109	0.00%
Salary escalation fixed as per Para 83-91 and 120(1)	4.00%
Attrition rate fixed	1.00%
Proportion of leave availment	10.00%
Proportion of encashment during service	10.00%
Proportion of encashment on separation	80.00%

Funding mechanism Earmarked deposits

Present value of obligation for Earned Leave 18,89,86,657/-

Present value of obligation for UEL - PA 6,46,09,610/-

TOTAL 25,35,96,267/-

j) Contingent Liability:

1. A sum of Rs. 7,63,25,790/- as quarterly interest is payable upto 31.03.2013 as per G.O. (Ms).No. 209 Environment and Forests (EC-1) Department dated 31.12.2011. The Board has written to the Government for waiver of interest @ 12.00 % & penal interest @ 2.50%.

k) Previous year figures are regrouped and reclassified wherever considered necessary.

l) **Position on balance outstanding in Ways & Means advance Payable / Receivable** : The sum of Rs. 75.00 crores was received on 31.12.2011 and was disbursed to Noyyal River Acyacutdars Protection Association (NRAPA) Account on 23.01.2012. As per the terms and conditions of the G.O the Board remitted Rs.15.00 crores to the Govt., as part refund on 22.10.2012. On 01.11.2012 the Hon'ble High Court of Madras quashed the G.O. (Ms).No. 209 Environment and Forests (EC-1) Department dated 31.12.2011 and directed the beneficiaries to refund the sum. Consequent to this the balance sum of Rs.50.90 crores in the Account of NRAPA was remitted to Board. The Board has remitted the balance sum Rs.60.00 crores to the Govt.,. A balance of Rs.24.07 crores is due from NRAPA.

III. Events occurring after the date of Balance Sheet:

Nil

**For Velu & Co.
Chartered Accountants
FR.NO : 004589 S**

Date : 29-12-2014

Place : Chennai

**Partner P.T. Jayakumar
M. No. 200239**



தமிழ்நாடு மாசு கட்டுப்பாடு வாரியம்
TAMILNADU POLLUTION CONTROL BOARD

76, Mount Salai, Guindy, Chennai - 600 032.