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REPORT OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA

FOR THE YEAR ENDED 31 MARCH 1999

No. 2

(COMMERCIAL)

GOVERNMENT OF TAMIL NADU

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PREFACE

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Government commercial enterprises, the accounts of which are subject to audit by the Comptroller and Auditor General of India, fall under the following categories.

(i) Government companies,

(ii) Statutory corporations and

(iii) Departmentally managed commercial undertakings.

2. This report deals with the results of audit of Government companies and Statutory corporations including Tamil Nadu Electricity Board and Tamil Nadu Warehousing Corporation and has been prepared for submission to the Government of Tamil Nadu under Section 19-A of the Comptroller and Auditor General's (CAG) (Duties, Powers and Conditions of Service) Act, 1971, as amended from time to time. The results of audit relating to departmentally managed commercial undertakings are included in the Report of the Comptroller and Auditor General of India (Civil) – Government of Tamil Nadu.

3. Audit of the accounts of Government companies is conducted by Comptroller and Auditor General of India under the provisions of Section 619 of the Companies Act, 1956. There are, however, certain companies, which in spite of Government investment are not subject to audit by the Comptroller and Auditor General of India as Government hold less than 51 *per cent* of their share capital. A list of such companies in which Government investment was more than Rs.10 lakh as on 31 March 1999 is given in Annexure-1.

4. In respect of Tamil Nadu Electricity Board, which is Statutory Corporation, the Comptroller and Auditor General of India is the sole auditor. In respect of Tamil Nadu Warehousing Corporation, he has the right to conduct the audit of their accounts in addition to the audit conducted by the Chartered Accountants appointed by the State Government in consultation with CAG. The Audit Reports on the annual accounts of these two corporations are forwarded separately to the State Government.

5. The cases mentioned in this Report are those which came to notice in the course of audit during the year 1998-99 as well as those which came to notice in earlier years but were not dealt with in the previous Reports. Matters relating to the period subsequent to 1998-99 have also been included, wherever necessary.

OVERVIEW

OVERVIEW

1. *GENERAL*

A. *GOVERNMENT COMPANIES*

The State had 82 Government companies (including 6 subsidiaries) with total investment of Rs.4830.24 crore (equity: Rs.1378.02 crore, long term loans: Rs.3452.22 crore) as on 31 March 1999.

(Paragraph 1.2.1)

Of the 82 Government companies, accounts of one Company under liquidation were not due. Of the remaining 81 companies, accounts of 38 companies were not finalised within the time schedule and were in arrears for periods ranging from one to ten years.

(Paragraph 1.5.1)

Out of 43 companies (including Tamil Nadu Graphites Limited and Tidel Park Limited, which had not commenced commercial activities), which finalised their accounts for the year 1998-99 only 16 companies earned profit of Rs.76.50 crore. The dividend declared by 10 companies out of 16 companies during 1998-99 was Rs.10.02 crore which worked out to 0.8 *per cent* of the total equity investment. (Rs.1246.48 crore in 82 Government companies). According to the latest available accounts, the accumulated loss of Rs.1812.33 crore in respect of 43 companies out of 52 loss making companies had far exceeded their paid-up capital of Rs.715.27 crore.

(Paragraphs 1.6.1.1 and 1.6.1.2)

B. *DEEMED GOVERNMENT COMPANIES*

Of the two deemed Government companies in the State under Section 619-B of the Companies Act, 1956, Tamil Nadu Newsprint and Papers Limited, which suffered loss of Rs.3.57 crore during 1997-98 earned a profit of Rs.15.86 crore and declared dividend of Rs.2.93 crore to the State Government during 1998-99. Tamil Nadu Telecommunication earned a profit of Rs.2.12 crore during 1998-99.

(Paragraph 1.10)

C. *STATUTORY CORPORATIONS*

The total investment in two Statutory corporations in the State *viz.*, Tamil Nadu Electricity Board and Tamil Nadu Warehousing Corporation as on 31 March 1999 amounted to Rs.5875.57 crore. Tamil Nadu Electricity Board earned a surplus of Rs.273.64 crore during the year 1997-98 and Tamil Nadu Warehousing

Corporation, which earned a profit of Rs.1.36 crore declared dividend of Rs.0.0 crore during 1997-98.

(Paragraph 1.6.2.

2 REVIEWS

(A) GOVERNMENT COMPANIES

(I) TAMIL NADU FOREST PLANTATION CORPORATION LIMITED

Tamil Nadu Forest Plantation Corporation Limited was set up in June 1974 wit the objective of raising forest plantations, in particular of eucalyptus, cashev casuarina by acquiring forest land on lease from Government.

(Paragraphs 2A.1 and 2A.

Due to regeneration of 4274 hectares of eucalyptus plantation which ha completed only first cycle of felling, there was potential revenue loss of Rs.11.8 crore.

(Paragraph 2A.7.1.

The actual yield of eucalyptus was less than the projected yield by 428127 MT resulting in potential loss of Rs.47.12 crore during the last 5 years.

(Paragraph 2A.7.1.

Due to poor plantation management, effective occupation of cashew tree was lo and the cashew yield was consequently very poor as compared to the State an National Average. The shortfall in yield was 20149 MTs resulting in loss c Rs.56.81 crore.

(Paragraphs 2A.7.2.2 and 2A.7.2.

(II) TAMIL NADU INDUSTRIAL EXPLOSIVES LIMITED

Tamil Nadu Industrial Explosives Limited was incorporated in February 1983 t manufacture and supply industrial explosives and other related accessories.

(Paragraph 2B.

Due to high cost of production, low price realisation and interest burden, th Company suffered loss of Rs.7.39 crore in 1994-95 and Rs.4.63 crore in 1997-9

(Paragraph 2B.6.

Defective project appraisal of Detonator and Detonating Fuse Project led to a lo of Rs.17.23 crore as against the projected profit of Rs.15.94 crore during last fiv years, besides idle investment on the purchase of machinery to the extent of Rs.6.38 crore.

(Paragraph 2B.8)

There was excess deployment of man power as compared to the norms recommended by National Productivity Council resulting in extra expenditure of Rs.3.05 crore during the period from 1995-96 to 1998-99. Further, there was excess consumption of raw material over norms amounting to Rs.2.95 crore in all the three divisions.

(Paragraphs 2B.9 and 2B.11.3)

(III) POOMPUHAR SHIPPING CORPORATION LIMITED – OPERATIONAL EFFICIENCY

Poompuhar Shipping Corporation Limited was set up in April 1974 for organising ocean movement of coal required by Tamil Nadu Electricity Board (TNEB).

(Paragraph 2C.1)

Extension of 5 *per cent* allowance for levy of penalty for short loading had resulted in non-recovery of Rs.1.22 crore for the year 1997-98 test checked in audit.

(Paragraph 2C.3.1)

Additional time taken by Company's own vessels due to lower speed had led to extra expenditure of Rs.4.51 crore during five years ending 1998-99.

(Paragraph 2C.3.2)

Due to poor performance of unloading equipments in the Company's three own vessels, there was extra expenditure of Rs.3.07 crore by way of loss of voyage days.

(Paragraph 2C.5)

(B) STATUTORY CORPORATIONS

TAMIL NADU ELECTRICITY BOARD

(I) TRANSMISSION AND DISTRIBUTION SYSTEM

Lack of synchronisation in establishment of sub-stations and associated transmission lines resulted in sub-stations constructed at a cost of Rs.39.83 crore remaining idle.

{Paragraph 3A.6(i) and (ii)}

Due to inadequacies in the transmission system as a result of delay in completio of Transmission and Distribution Schemes, the Board was unable to draw its sha of power from Central Generating Stations (loss of revenue : Rs.41.35 crore) an also had to reduce generation of power (value : Rs.375.58 crore) from its therm stations.

{Paragraph 3A.6(iv

Delays in completion of sub-stations and associated lines resulted in cost overru of Rs.51.07 crore besides loss of anticipated benefit of 863 MUs (value : Rs.49.1 crore) by way of reduction in line loss and additional sale of power.

(Paragraph 3A.7.1

The transmission and distribution losses ranged between 22.6 *per cent* and 27. *per cent* during the period from 1994-95 to 1997-98 against the norm of 15.5 *pe cent* prescribed by the Central Electricity Authority which resulted in a loss o Rs.2132.36 crore.

(Paragraph 3A.9

(II) PURCHASE OF POWER FROM BASIN BRIDGE DIESEL ENGINE POWE PROJECT

Due to unrealistic planning by assessing an annual growth rate of 10 *per cent* a against 6 *per cent* assumed by CEA, the Board would be left with a surplu capacity of 3547 MUs by the end of the Tenth Five Year Plan (2007).

(Paragraph 3B.3

Fixation of a threshold limit of Plant Load Factor at 68.49 *per cent* fo computation of incentive instead of an achievable and realistic level of 80 *per cen* would result in a higher commitment of Rs.16.99 crore *per annum* to the Boarc

{Paragraph 3B.7.1 (v)

Computation of fuel consumption based on the norm for Station Heat Rate instea of on norms or actuals whichever is less (as subsequently clarified by Governme of India) would result in an extra expenditure of Rs.8.56 crore *per annum* to th Board.

{Paragraph 3B.7.1 (vi)

By allowing creation of excess storage capacity for fuel, without reference t actual requirements, the Board would be put to an avoidable expenditure o Rs.18.41 crore on fuel throughput charges.

{Paragraph 3B.13 (i

(III) PERFORMANCE OF ELECTROSTATIC PRECIPITATORS

Equipment purchased at a cost of Rs.0.28 crore to monitor the emission levels in the three Thermal Power Stations were either not installed or put to effective use after commissioning.

The Tuticorin Thermal Power Station had not been able to bring down the dust concentration in the exhaust flue gases within the norm of 150 mg/Nm^3 prescribed by the Tamil Nadu Pollution Control Board. Expenditure of Rs.1.71 crore on installation of Micro Processor based Integrated Controllers did not result in any improvement and was thus rendered mostly unfruitful.

(Paragraph 3C.4)

3 OTHER TOPICS OF INTEREST

Besides the reviews, a test check of records of Government Companies and Tamil Nadu Electricity Board in general disclosed the following points of interests:

(A) GOVERNMENT COMPANIES

After specific amendment of the Memorandum and Articles of Association for granting assistance to wind farm projects, Tamil Nadu Power Finance and Infrastructure Development Corporation Limited sanctioned loan for an unviable wind farm project of NEPC-Micon disregarding the guidelines of the Board of Directors to safeguard the interest of the Company which resulted in non-recovery of Rs.3.75 crore.

(Paragraph 4A.1)

Release of term loan by Tamil Nadu Industrial Investment Corporation Limited without adequate collateral security and failure to ensure purchase/creation of assets/timely renewal of insurance policy for the assets resulted in non-recovery of Rs.3.71 crore in four cases test checked.

(Paragraphs 4A.2, 3 and 4)

Disbursal of loan by Tamil Nadu Backward Classes and Minorities Development Corporation Limited to individual beneficiaries without any agreement/guarantee/security in violation of Government Directive had resulted in non-recovery of dues amounting to Rs.1.04 crore.

(Paragraph 4A.5)

Improper selection of consultant by Tamil Nadu Cements Corporation Limited, and extension of liberal payment terms in violation of Government guidelines resulted in an infructuous expenditure of Rs.0.31 crore on software besides keeping the hardware purchased at a cost of Rs.0.67 crore without effective use.

(Paragraph 4A.6)

Lack of effective action by Tamil Nadu Civil Supplies Corporation Limited for retrieval of gunny bags from Noon Meal Centres resulted in non-recovery of 24.19 lakh gunny bags valued at Rs.2.68 crore.

(Paragraph 4A.9)

(B) STATUTORY CORPORATIONS

Tamil Nadu Electricity Board incurred avoidable extra expenditure of Rs.15.03 crore on coal handling by awarding the work at higher rates, ignoring the lower offer.

(Paragraph 4B.1)

Extension of irregular tariff concession in contravention of Government Orders resulted in loss of revenue of Rs.2.76 crore to the Tamil Nadu Electricity Board.

(Paragraph 4B.2)

CHAPTER 1

GENERAL VIEW OF GOVERNMENT COMPANIES INCLUDING DEEMED GOVERNMENT COMPANIES AND STATUTORY CORPORATIONS

CHAPTER I

1 General view of Government Companies and Statutory Corporations

1.1 Introduction

As on 31 March 1999 there were 82* Government companies (including 6 Subsidiaries) and 2 Statutory Corporations as against 81 Government Companies (including 6 Subsidiaries) and 2 Statutory Corporations as on 31 March 1998 under the control of the State Government. The accounts of the Government companies (as defined in Section 617 of Companies Act, 1956) are audited by Statutory Auditors appointed by Government of India on the advice of Comptroller and Auditor General of India (CAG) as per provision of Section 619(2) of Companies Act, 1956. These accounts are also subject to supplementary audit conducted by the CAG as per provisions of Section 619 of the Companies Act, 1956. The audit of statutory corporations are conducted under the provisions of the respective Acts as detailed below:

Name of the Corporation	Authority for audit by CAG	Audit arrangement
Tamil Nadu Electricity Board	Section 69 (2) of the Electricity Supply Act, 1948	Sole audit by CAG
Tamil Nadu Warehousing Corporation	Section 31 (8) of the State Warehousing Corporations Act, 1962	Chartered Accountants and supplementary audit

1.2 Investment in Public Sector Undertakings (PSUs)

As on 31 March 1999, the total investment in 84 Public Sector Undertakings (PSUs) (82 Government companies including 6 subsidiaries and 2 Statutory corporations) was Rs.10705.81 crore (equity: Rs.2410.68 crore; long-term loans: Rs.8274.70 crore; and share application money: Rs.20.43 crore) as against a total investment of Rs.9751.34 crore (equity: Rs1938.21 crore; long-term loans: Rs7813.13 crore; and share application money : NIL) in 83 PSUs (81Government companies including 6 subsidiaries and 2 Statutory corporations) as on 31 March 1998. The analysis of investment in PSUs is given in the following paragraphs.

* **Two new companies *viz* Tidel Park Limited and Tanitec Limited were incorporated during 1998-99 and one company *viz* Metropolitan Infrastructure Development Corporation Limited was merged with an existing Government Company.**

1.2.1 Government companies

Total investment in 82 companies (including 6 Subsidiaries) as on 31 March 1999 was Rs.4830.24 crore (equity: Rs.1357.59 crore; long-term loans: Rs.3452.22 crore and share application money: Rs.20.43 crore) as against total investment of Rs.4931.46 crore (equity: Rs.1142.49 crore; long-term loans: Rs.3788.97 crore; and share application money: NIL) as on 31 March 1998 in 81 Government companies (including 6 subsidiaries).

The classification of the Government companies was as under:

(Rupees in crore)

	Status of companies	Number of companies	Investment		Number of companies referred to BIFR
			Paid-up capital	Long term loans	
(a)	Working companies	70 (72)	1358.75 (1132.02)	3414.67 (3775.72)	2[D] (2)
(b)	Non working companies:				
(i)	Under liquidation	1[A] (1)	0.33 (0.33)	---	---
(ii)	Under closure	10[B] (7)	14.94 (6.14)	29.55 (5.25)	---
(iii)	Under merger	1[C] (1)	4.00 (4.00)	8.00 (8.00)	---
(iv)	Others	---	---	---	---
	Total	82 (81)	1378.02 (1142.49)	3452.22 (3788.97)	2 (2)

Figures in brackets are previous year figures.

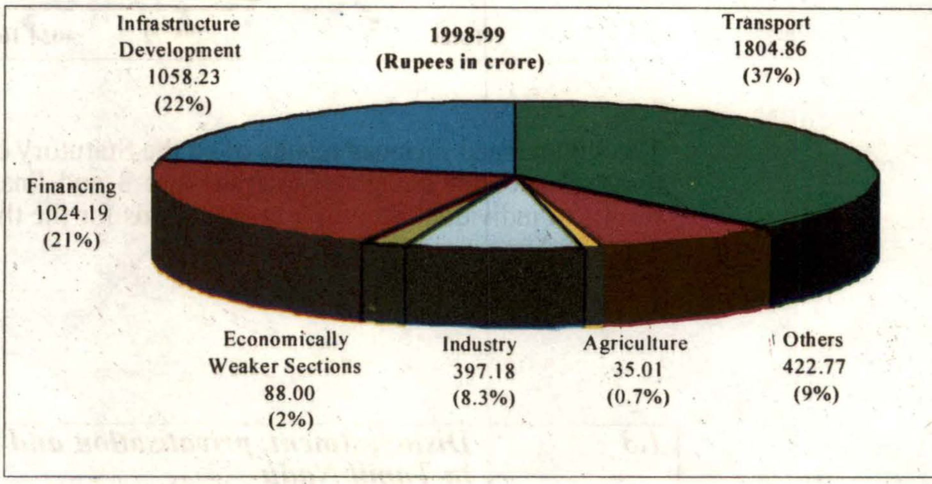
As 12 Companies were non-working or under process of liquidation/closure under Section 560 of Companies Act/merger for 1 to 10 years and substantial investment of Rs.56.82 crore was involved in these companies, effective steps need to be taken for their expeditious liquidation or revival.

The summarised financial results of Government companies are detailed in Annexures 2 and 3. Due to increased financial assistance in the form of equity to companies under transport sector, the debt equity ratio of Government companies as a whole decreased from 3.32:1 in 1997-98 to 2.50:1 in 1998-99.

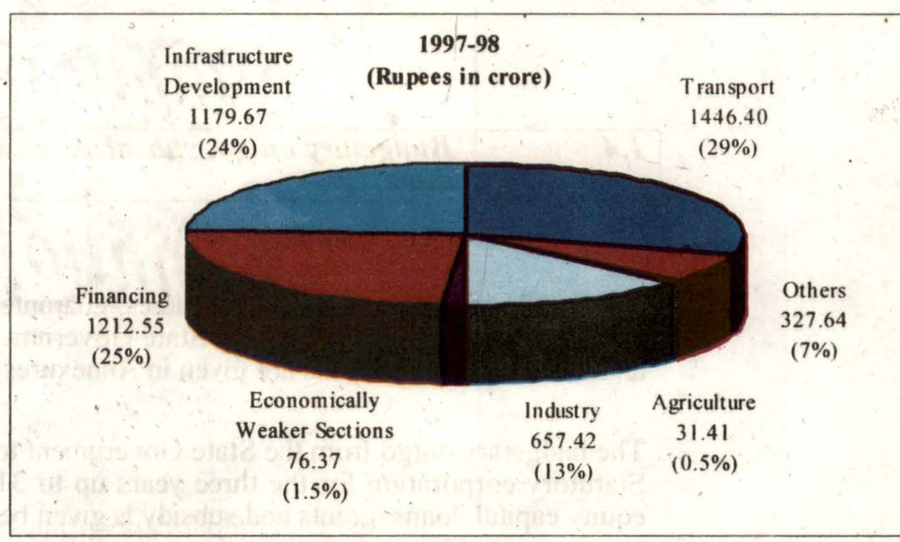
A **Sl.No.62 of Annexure 2 and 3.**
B **Sl.Nos. 1, 2, 4, 6, 7, 11, 16, 24, 48 and 79 of Annexures 2 and 3.**
C **Sl.No.82 of Annexure 2 and 3.**
D **Sl.Nos.10 and 23 of Annexure 2 and 3**

SECTOR-WISE INVESTMENT IN GOVERNMENT COMPANIES

Total Investment – Rs.4830.24 crore



Total investment – Rs.4931.46 crore



As on 31 March 1999, of total investment in Government companies, 29 *per cent* comprised equity capital and 71 *per cent* comprised loans compared to 23 *per cent* and 77 *per cent* respectively as on 31 March 1998.

1.2.2 Statutory corporations

The total investment in 2 Statutory corporations at the end of March 1999 and March 1998 was as follows:

(Rupees in crore)

Name of Corporation	1997-98		1998-99	
	Capital	Loan	Capital	Loan
Tamil Nadu Electricity Board	788.11	4023.82	1045.48	4822.39
Tamil Nadu Warehousing Corporation	7.61	0.34	7.61	0.09
Total	795.72	4024.16	1053.09	4822.48

The summarised financial results of all the Statutory corporations as per the latest finalised account are given in Annexure 3 and financial position and working results of individual Statutory corporations for the three years up to 1998-99 are given in Annexures-5 and 6 respectively.

1.3 Disinvestment, privatisation and restructuring of PSUs in Tamil Nadu

During the year, the State Government has ordered for closure of 3 companies* due to unviable operations and incurring of heavy losses. Total investment in these companies as on 31 March 1999 was Rs.32.98 crore.

1.4 Budgetary outgo, subsidies, guarantees and waiver of dues

The details of budgetary outgo, subsidies, guarantees issued, waiver of dues and conversion of loans into equity by State Government to Government companies and Statutory corporations are given in Annexures 2 and 4.

The budgetary outgo from the State Government to Government companies and Statutory corporation for the three years up to 31 March 1999 in the form of equity capital, loans, grants and subsidy is given below:

* **Sl. Nos.1, 11 and 24 of Annexure 2.**

(Rupees in crore)

	1996-97				1997-98				1998-99			
	Companies		Corporations		Companies		Corporations		Companies		Corporations	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
Equity capital	10	55.56	1	365.69	28	154.80	1	22.42	28	235.53	1	257.37
Loans	14	217.19	1	35.00	5	21.21	---	---	2	1.22	---	---
Grants	---	---	1	19.56	---	---	1	9.41	---	---	1	23.87
Subsidy towards												
(i) Projects/programmes/schemes	1	73.44	1	0.07	1	23.81	1	0.05	2	60.54	---	---
(ii) Other subsidy	20	1096.26	1	586.44	23	1057.78	1	570.01	25	591.36	1	250.00
Total subsidy (i + ii)	21	1169.70	1	586.51	24	1081.59	1	570.06	27	651.90	1	250.00
Total outgo	*32	1442.45	*1	1006.76	*38	1257.60	*1	601.89	*36	888.65	*1	531.24

* These are the actual number of companies/corporations which have received budgetary support in the form of equity, loans, grants and subsidy from the State Government during the respective years.

2/34—7

During the year 1998-99, the Government had guaranteed the loans aggregating Rs.1628.24 crore obtained by 32 Government companies (Rs.379.80 crore) and 1 Statutory corporation (Rs.1248.44 crore). At the end of the year guarantees amounting to Rs.3935.06 crore against 32 Government companies (Rs1375.44 crore) and 1 Statutory Corporation (Rs.2559.62 crore) were outstanding. Government had foregone Rs.1.22 crore by way of loans written off in respect of one company. Moratorium on loan repayment was granted to one company (Rs.30.50 crore) during 1998-99. The guarantee commission paid was Rs.0.53 crore by Government Companies and that payable by Government companies and Statutory corporations (from 1991 onwards) as on 31 March 1999 was Rs.0.74 crore and Rs.66.74 crore respectively.

1.5 *Finalisation of accounts by PSUs*

1.5.1 The accounts of the companies for every financial year are required to be finalised within six months from the end of relevant financial year under Section 166, 210, 230, 619 and 619 B of the Companies Act, 1956 read with Section 19 of Comptroller and Auditor General's (Duties, Power and Conditions of Service) Act, 1971. They are also to be laid before the Legislature within nine months from the end of financial year. Similarly in case of Statutory corporations their accounts are finalised, audited and presented to the Legislature as per the provisions of their respective Acts.

However, as could be noticed from Annexure-3, out of 81 Government companies (excluding the accounts of one Company under liquidation *viz.*, Tamil Nadu Goods Transport Corporation Limited which were not due) only 43 companies finalised their accounts and out of 2 Statutory corporations, neither had finalised their accounts for the year within the stipulated period. During the period from October 1998 to September 1999, 69 Government companies finalised their accounts for the year 1998-99 or previous years (27 accounts for previous years by 26 Companies and 43 accounts for 1998-99 by 43 companies). Similarly during this period, 2 Statutory corporations finalised their accounts for the year 1997-98. The accounts of the other 38 Government companies and 2 Statutory corporations were in arrears for periods ranging from one year to 10 years as on 30 September 1999 as detailed below:

Sl. No.	Year from which accounts are in arrears	Number of years for which accounts are in arrears	Number of Companies/Corporations		Reference to Serial Number of Annexure 3	
			Government companies	Statutory corporations	Government companies	Statutory corporations
1.	1998-99	1	29	2	♠	83, 84
2.	1997-98	2	5		1, 24, 41, 44 and 45	
3.	1996-97	3	2		6, 42	
4.	1993-94	6	1		7	
5.	1989-90	10	1		79	
	Total		38	2		

Of the above 38 Government companies, whose accounts were in arrears, 8 companies were non-working companies (Serial Number 1, 2, 6, 7, 11, 24, 48, 79 of Annexure-3).

The administrative departments have to oversee and ensure that the accounts are finalised and adopted by the PSUs within prescribed period. Though the concerned administrative departments and officials of the Government were apprised quarterly by the Audit regarding arrears in finalisation of accounts, no effective measures had been taken by the Government and as a result, the investments made in these PSUs could not be assessed in audit.

1.5.2 Status of placement of Separate Audit Reports of Statutory corporations in Legislature

The following table indicates the status of placement of various Separate Audit Reports (SARs) on the accounts of Statutory Corporations issued by the Comptroller and Auditor General of India in the Legislature by the Government.

Sl. No.	Name of Statutory Corporation	Year up to which SARs placed in Legislature	Years for which SARs not placed in Legislature		
			Year of SAR	Date of issue to the Government	Reasons for delay in placement in Legislature
1.	Tamil Nadu Electricity Board	1997-98	1998-99	---	Accounts are under audit
2.	Tamil Nadu Warehousing Corporation	1997-98	1998-99	---	Accounts received after 30 September 1999 and are under audit

♠ **Serial Numbers 2, 3, 8, 9, 10, 11, 13, 14, 15, 23, 27, 28, 34, 37, 38, 39, 40, 43, 46, 48, 50, 59, 63, 65, 73, 75, 77, 78 and 80 referred to in Annexure-3.**

1.6 Working results of PSUs

According to latest finalised accounts of 77 Government companies (excluding Tamil Nadu Goods Transport Corporation Limited, which is under liquidation, Tamil Nadu Civil Supplies Corporation Limited, which runs on no profit and no loss basis, Tanitec Limited*, which had not finalised its first accounts and two companies (Tamil Nadu Graphites Limited and Tidel Park Limited) which are under pre-operative stage), 47 companies had incurred an aggregate loss of Rs.533.63 crore and the remaining 30 companies and two Statutory Corporations earned an aggregate profit of Rs.122.86 crore and Rs.275 crore respectively.

The summarised financial results of Government companies and Statutory corporations as per latest financial accounts are given in Annexure-3. Besides, working results of individual corporations for the latest three years for which accounts are finalised are given in Annexure-6.

1.6.1 Government companies

1.6.1.1 Profit earning companies and dividend

Out of 43 companies (including three subsidiaries), which finalised their accounts for 1998-99 by September 1999, 16 companies earned an aggregate profit of Rs.76.50 crore and only 10 companies (Serial Number 5, 17, 29, 32, 33, 35, 36, 51, 68 and 81of Annexure-3) declared dividend aggregating Rs.10.02 crore. The dividend as percentage of share capital in the above 10 profit making companies worked out to 19.8 *per cent*. The remaining 6 profit making companies did not declare any dividend. The total return by way of dividend of Rs.10.02 crore, worked out to 0.80 *per cent* in 1998-99 on total equity investment of Rs.1246.48 crore by the State Government in all Government companies as against 1.5 *per cent* in the previous year.

Similarly, out of 38 companies, which finalised their accounts for previous years by September 1999, 14 companies earned an aggregate profit of Rs.46.36 crore and only 9 companies earned profit for two or more successive years.

1.6.1.2 Loss incurring companies

Of the 52 companies which had accumulated losses as per the latest finalised accounts, 43 companies had accumulated losses aggregating Rs.1812.33 crore, which had far exceeded their aggregate paid up capital of Rs.715.27 crore.

In spite of poor performance leading to complete erosion of paid up capital, the State Government continued to provide financial support to these companies in the form of contribution towards equity, further grant of loans, conversion of loans into equity, subsidy, *etc.* According to available information, the total financial support so provided by the State Government by way of equity, loan and

*** A new Government Company incorporated on 20 February 1998**

subsidy during 1998-99 to 22 companies out of these 43 companies amounted to Rs.339.76 crore.

1.6.1.3 Operational performance of transport companies

The operational performance of transport companies is given in Annexure-7.

As seen from the Annexure 7, against the average expenditure of Rs.11.32 per Km operated, the average earnings per Km was only Rs.9.46 during 1998-99. The number of employee per vehicle which ranged between 6.1 to 8.8 in 1997-98 increased to 6.2 to 9.8 in 1998-99. The percentage of dead kilometres increased from 2.2 in 1997-98 to 2.3 in 1998-99.

1.6.2 Statutory corporations

1.6.2.1 Profit earning Statutory corporations and dividend

Two Statutory corporations had finalised the accounts for 1997-98. Tamil Nadu Electricity Board and Tamil Nadu Warehousing Corporation earned a profit of Rs.273.64 crore and Rs.1.36 crore, respectively. Of them, Tamil Nadu Warehousing Corporation alone declared dividend of Rs.0.08 crore for the year 1997-98.

1.6.2.2 Operational performance of Statutory Corporations

The operational performance of the Statutory Corporations is given in Annexure-7.

As seen from Annexure 7, as against the profit of eight paise earned per KWH during 1997-98, the Tamil Nadu Electricity Board suffered a loss of eight paise per KWH (provisional) during 1998-99. In view of the decline in power generation from 23067 MUs during 1997-98 to 22141 MUs (provisional) during 1998-99, the percentage of load factor decreased from 68 to 65.6 and from 31 to 28.6 in respect of thermal and hydel power stations respectively during the same period.

The capacity utilisation of warehouses in Tamil Nadu Warehousing Corporation decreased from 92 *per cent* in 1997-98 to 82 *per cent* (provisional) in 1998-99.

1.7 *Return on capital employed*

According to latest finalised accounts, the capital employed♣ worked out to Rs.5234.20 crore in 82 companies and total return* thereon amounted to Rs.243.03 crore which is 4.64 *per cent* as compared to total return of Rs.543.47 crore (7.4 *per cent*) in 1997-98. According to the latest finalised accounts, the capital employed worked out to Rs.8683.46 crore in two Statutory Corporations and total return thereon amounted to Rs.687.03 crore which is 7.9 *per cent* as compared to total return of Rs.712.77 crore (8.6 *per cent*) in 1997-98. The details of capital employed and total return on capital employed in case of Government companies and Statutory corporations are given in Annexure-3.

1.8 *Results of audit by Comptroller and Auditor General of India*

The summarised financial results of all the 82 Government companies and 2 Statutory corporations based on the latest available accounts are given in Annexure-3. During the period from October 1998 to September 1999, the audit of accounts of 53 companies and 2 corporations were selected for review. As a result of the observations made by CAG, 20 companies and 1 Statutory corporation revised their accounts as detailed below:

Sl.No.	Name of the Company	Year of accounts
1.	Tamil Nadu Tea Plantation Corporation Limited	1998-99
2.	Arasu Rubber Corporation Limited	1998-99
3.	Tidel Park Limited	1998-99
4.	Tamil Nadu Textile Corporation Limited	1997-98
5.	Tamil Nadu Forest Plantation Corporation Limited	1998-99
6.	Tamil Nadu Sugar Corporation Limited	1997-98
7.	Perambalur Sugar Mills Limited	1997-98
8.	Tamil Nadu Civil Supplies Corporation Limited	1997-98
9.	Tamil Nadu Urban Finance and Infrastructure Development Corporation Limited	1997-98

♣ **Capital employed represents net fixed assets (including capital works-in-progress) PLUS working capital except in finance companies and corporations where it represents a mean of aggregate of opening and closing balances of paid-up capital, free reserves and borrowings (including refinance).**

* **For calculating total return on capital employed, interest on borrowed funds is added to net profit/subtracted from the loss as disclosed in the profit and loss account.**

Sl.No.	Name of the Company	Year of accounts
10.	Tamil Nadu State Transport Corporation (Madurai – Division I) Limited	1998-99
11.	Tamil Nadu State Transport Corporation (Coimbatore – Division I) Limited	1998-99
12.	Tamil Nadu State Transport Corporation (Kumbakonam – Division I) Limited	1998-99
13.	Tamil Nadu State Transport Corporation (Madurai – Division III) Limited	1998-99
14.	Tamil Nadu State Transport Corporation (Salem – Division I) Limited	1998-99
15.	Tamil Nadu State Transport Corporation (Kumbakonam – Division III) Limited	1998-99
16.	Tamil Nadu State Transport Corporation (Coimbatore – Division II) Limited	1998-99
17.	Tamil Nadu State Transport Corporation (Kumbakonam – Division II) Limited	1998-99
18.	Tamil Nadu State Transport Corporation (Kumbakonam – Division IV) Limited	1997-98
19.	Tamil Nadu Transport Development Finance Corporation Limited	1998-99
20.	Poompuhar Shipping Corporation Limited	1997-98
	Statutory Corporations	
21.	Tamil Nadu Electricity Board	1997-98

In addition, the net impact of the important audit observations as a result of review of the remaining PSUs was as follows:

Sl. No.	Details	Number of accounts		Amount (Rupees in crore)	
		Government companies	Statutory corporations	Government companies	Statutory corporations
(i)	Decrease in profit	2	1	9.77	80.33
(ii)	Errors of classification	1	—	0.30	—

Some of the major errors and omissions noticed in the course of review of annual accounts of some of the above companies and corporations are mentioned below:

(A) Errors and omissions in case of Government companies

Tamil Nadu Industrial Development Corporation Limited

Profit for the year 1997 –98 was overstated by Rs.8.84 crore due to non-writing off of the expenditure incurred on nitric acid plant project, which had already been abandoned.

State Industries Promotion Corporation of Tamil Nadu Limited

Profit for the year 1997-98 was overstated by Rs.0.48 crore due to non-writing off of the expenditure incurred on sick units relating to the previous year.

(B) Errors and omissions noticed in case of Statutory corporations

Some of the important comments on the accounts of Tamil Nadu Electricity Board noticed during the audit conducted and included in annual accounts for 1997-98 were given below:

Sl.No.	Irregularities/omissions	Amount (Rupees in crore)
1.	Under provision of bad and doubtful debts	0.59
2.	Overstatement of surplus due to non-inclusion of guarantee commission payable to Government	66.74
3.	Overstatement of stock and stores due to non-provision towards obsolete non-moving stores	12.52
4.	Other omissions	0.48

(B) (i) Audit assessment of the working results of Tamil Nadu Electricity Board

Based on the audit assessment of the working results of TNEB for three years up to 1998-99 and taking into consideration, the major irregularities and omissions pointed out in the SARs on the annual account of the TNEB and not taking into account the subsidy/subventions receivable from the State Government, the net surplus/deficit and the percentage of return on capital employed of the TNEB will be as given below:

(Amount - Rupees in crore)

Sl. No.	Particulars	1996-97	1997-98	1998-99 (Provisional)
1.	Net surplus(+)/deficit(-) as per books of accounts	329.63	273.64	(-)514.63
2.	Subsidy from the State Government	586.51	570.06	250.17
3.	Net surplus(+)/deficit(-) before subsidy from the State Government (1) – (2)	(-)256.88	(-)296.42	(-)764.80
4.	Net increase/decrease in net surplus (+)/ deficit(-) on account of audit comments on the annual accounts of TNEB	(-)254.27	(-)80.33	Accounts under audit
5.	Net surplus(+)/deficit(-) after taking into account the impact of audit comments but before subsidy from the State Government (3) – (4)	(-)511.15	(-)376.75	---

Sl. No.	Particulars	1996-97	1997-98	1998-99 (Provisional)
6.	Total return on capital employed*	(-)130.48	35.2	---
7.	Percentage of total return on capital employed	---	0.4	---

(C) Persistent irregularities and system deficiencies in financial matters of PSUs

The following persistent irregularities and system deficiencies in the financial matters of PSUs had been repeatedly pointed out during the course of audit of their accounts but no corrective action taken by these PSUs so far:

Statutory corporations

Tamil Nadu Electricity Board

No provision has been made to cover the loss arising out of the technological obsolescence to the extent such loss has been determined in respect of various assets under use by the Board amounting to Rs.12.53 crore in 1996-97 and Rs.12.52 crore in 1997-98 resulting in overstatement of surplus.

The Board had not provided for guarantee commission of Rs.66.74 crore as on 31 March 1998 payable to Government from 1991 onwards resulting in understatement of current liabilities.

All inter unit balances are to be matched and brought to NIL. However, due to non-reconciliation and non-adjustment, inter unit accounts showed heavy balances amounting to Rs.249.90 crore and Rs.355.30 crore at the end of 1996-97 and 1997-98 respectively. Consequently, the working results of the Board are vitiated.

1.9 Position of discussion of Audit Reports (Commercial) by the Committee on Public Undertakings

The following table indicates the details regarding number of reviews and paras pending discussion at the end of 31 March 1999:

* Total return on capital employed represents Net surplus/deficit Plus Total Interest charged to Profit and Loss account (Less : Interest capitalised).

Period of Audit Report	Total number of Reviews and Paragraphs			
	As appeared in the Audit Report		Pending for discussion	
	Reviews	Paragraphs	Reviews	Paragraphs
1993-94	5	17	3	7
1994-95	4	12	3	9
1995-96	4	24	4	24
1996-97	5	24	5	24

While the recommendations in respect of 44 Reviews/Paragraphs discussed by COPU are yet to be received, 262 recommendations made by COPU were pending final settlement as at the end of 31 March 1999.

1.10 619 - B Companies

There were 2 Companies covered under Section 619-B of the Companies Act, 1956. The table given below indicates the details of paid-up capital and working results of these companies based on the latest available accounts.

(Rupees in crore)

Name of Company	Year of accounts	Paid-up capital	Investment by			Profit(+)/ Loss(-)	Accumulated loss
			State Government	Government companies	Others		
Tamil Nadu Newsprint and Papers Limited	1998-99	68.75	24.44	2.81	41.50	15.86	---
Tamil Nadu Telecommunications Limited	1998-99	22.67	---	13.63	9.04	2.12	---

The Tamil Nadu Newsprint and Papers Limited which suffered a loss of Rs.3.57 crore during 1997-98, earned a profit of Rs.15.86 crore and declared a dividend of Rs.2.93 crore to the State Government during 1998-99.

1.11 Companies not subject to audit by CAG

The State Government had invested Rs.1.43 crore in 3 companies which were not subject to audit by CAG as the aggregate amount of investment made by the State Government was less than 51 *per cent* of the share capital of respective companies. The particulars of such companies in which the investment of State Government by way of share capital was more than Rs.10 lakh in each case as on 31 March 1999 are given in Annexure-1.

1.12 Readiness of PSUs for facing Y2K problem

While 24 working companies had confirmed their readiness for facing Y2K problem, the remaining 46 working companies had, however, not taken adequate measures to be Y2K compliant (October 1999).

CHAPTER 2

REVIEWS IN RESPECT OF GOVERNMENT COMPANIES

SECTION 2A:	**TAMIL NADU FOREST PLANTATION CORPORATION LIMITED**
SECTION 2B:	**TAMIL NADU INDUSTRIAL EXPLOSIVES LIMITED**
SECTION 2C:	**POOMPUHAR SHIPPING CORPORATION LIMITED – OPERATIONAL EFFICIENCY**

SECTION 2A

TAMIL NADU FOREST PLANTATION CORPORATION LIMITED

HIGHLIGHTS

Tamil Nadu Forest Plantation Corporation Limited was set up in June 1974 with the objective of raising forest plantations, in particular of eucalyptus, cashew and casuarina by acquiring forest land on lease from Government.

(Paragraphs 2A.1 and 2A.2)

The Company regenerated 4274 hectares of eucalyptus plantation *i.e.*, 34.21 *per cent* of the total planted area which had completed only the first cycle of felling resulting in a potential revenue loss of Rs.11.83 crore. Besides, due to delay in felling, the Company had to postpone the revenue realisation which resulted in loss of interest of Rs.0.19 crore.

(Paragraph 2A.7.1.2)

Compared to the projected yield of eucalyptus, the actual yield was much less and the deficit during 1994-95 to 1998-99 worked out to 428127 MTs with a potential revenue loss of Rs.47.12 crore.

(Paragraph 2A.7.1.3)

Due to poor plantation management, the effective occupation of cashew trees per hectare was 52 to 56 only indicating the under utilisation of land and consequent revenue loss of Rs.17.31 crore. Cashew yield continues to be very low compared to the State and National average. The shortfall in yield compared with the State average worked out to 20149 MTs valued at Rs.56.81 crore.

(Paragraphs 2A.7.2.2 and 2A.7.2.3)

Test check in 13 units of Pudukottai region revealed that 80344 numbers of casuarina trees planted, 8 to 10 years back were not available and potential revenue loss amounted to Rs.0.19 crore.

(Paragraph 2A.7.3.1)

Tissue culture laboratory established at a cost of Rs.0.26 crore for production of eucalyptus plantlets remained underutilised and objective of setting up the laboratory was not achieved.

(Paragraph 2A.7.4)

2A.1 Introduction

Tamil Nadu Forest Plantation Corporation Limited was incorporated as a wholly owned Government Company in June 1974.

2A.2 Objectives and Activities

The following are the main objectives of the Company:

- to acquire on lease Government forest lands for raising forest plantations, in particular of Eucalyptus, Cashew, Casuarina or other suitable species for the purpose of development of

industries based on their produce and to meet the needs of the public in regard to fuel wood and other forest produce.

- **to plant, grow, cultivate, produce and raise plantations of all kinds or varieties of forest plants, trees and crops.**

- **to carry on the business of planters, cultivators, sellers and dealers in timber, plywood, pulpwood, matchwood *etc*.**

The activities of the Company are presently confined to management of plantations of Eucalyptus, Cashew, Casuarina *etc*., in an area of 71013 hectares, besides maintaining nurseries in Vridhachalam and Pudukottai to develop grafted Cashew seedlings and Eucalyptus plantations and a tissue culture laboratory at Pudukottai to produce plantlets of Eucalyptus.

2A.3 Organisational set-up

The Company was managed by a Board consisting of seven directors as at 31 March 1999. The day-to-day management is being looked after by the Managing Director who is assisted by a General Manager and a Chief Accounts Officer. The activities of the Company are coordinated through seven Regional Offices each headed by a Regional Officer.

2A.4 Scope of Audit

The performance of the Company was last reviewed and included in the Report of the Comptroller and Auditor General of India for the year ended 31 March 1983. The working of the Company was reviewed Suo-motu by COPU during October 1997-April 1998 and their recommendations are contained in 64th Report presented to the State Legislature on 29 May 1998. Report of Action taken on the recommendation of COPU was still awaited. The current review conducted during the period from December 1998 to April 1999 covers the general performance of the Company during the five years up to 1998-99. Findings of the review are discussed in the succeeding paragraphs.

2A.5 Funding

2A.5.1 Share Capital and Borrowing

The authorised share capital of the Company as on 31 March 1999 was Rs.1000.00 lakh against which the paid up capital as on that date stood as Rs.300 lakh, wholly contributed by the State Government.

The Company had also been mobilising resources by way of loans from banks. The loans raised by the company through banks and interest thereon outstanding as at 31 March 1999 amounted to Rs.115 lakh.

2A.6 Financial Position and Working Results

The financial position and working results of the Company for the last five years up to 1998-99 are given in Annexures 8 and 9.

It was observed by Audit that during 1995-96 and 1997-98, major portion of cashew yield was obtained through collection by the Company, which had not contributed to the revenues of the Company as expected (Paragraph 2A.7.2.4). This accounted for the sharp decline in profits.

2A.7 Implementation of Plantation Schemes

2A.7.1 Eucalyptus Plantation

2A.7.1.1 Shortfall in achieving physical target

The Company in order to meet pulpwood demand of the wood based industries in the State as also to increase the productivity of plantation with improved technology, embarked upon a project of raising high yielding eucalyptus plantation in 30000 hectares over a period of 6 years commencing from 1991-92 with refinance facility from NABARD. But the area covered under the high yielding pulpwood plantation during the period up to 1997-98 was only 26100 hectares resulting in a shortfall of 3900 hectares and consequent loss of Rs.23.66 lakh on idle rent. The Company attributed the lower achievement of physical target to the failure of monsoon in 1995-96 and non-availability of felled area in time during 1996-97. It was, however, noticed that the average rainfall in the plantation area was reasonable in 1995-96 and making available the felled areas was within the control of management. It was also noticed in Audit that the Company could achieve the targets till 1993-94 when NABARD was monitoring the project for refinancing. But thereafter when NABARD's monitoring ceased, the target could not be achieved, which reflected lack of adequate efforts on the part of the Company.

2A.7.1.2 Felling and re-planting operations

The Company re-generated 4273.83 hectares of eucalyptus plantation which had completed first cycle only resulting in a potential revenue loss of Rs.11.83 crore.

According to the felling cycle normally adopted for Eucalyptus plantations, the plantations were expected to come under first extraction in the 7th year of planting followed by second and third extractions in the 14th and 21st year. Thereafter the area was to be cleared for regeneration. However, during the five years ending 31 March 1999, it was observed in Audit that after the completion of first cycle of felling itself, the Company resorted to regeneration in 4273.83 hectares of eucalyptus plantations without allowing them to continue for the second and third cycles resulting in potential revenue loss of Rs.1183.11 lakh. The reasons for not going in for 2nd and 3rd felling and large scale failures in these plantations which constituted 34.21 *per cent* of total planted area of 12491 hectares were not analysed.

Eucalyptus plantations in an area of 230 hectares during 1987-88 and 1988-89 were not available for felling resulting in loss of revenue of Rs.0.16 crore and also making the development expenditure of Rs.0.13 crore infructuous.

An attempt was made in Audit to link the plantation development expenditure (Rs.156.41 lakh) incurred for the plantation raised during 1987-88 with the fellings made during 1994-95 and it was noticed that the areas entered in the Register of Plantation Development Expenditure did not exactly match with the felling list. It was noticed that an area of 192.76 hectares raised in 1987-88 and 37.28 hectares raised in 1988-89 and due for felling in 1994-95 and 1995-96 were neither felled during these years nor were available in the subsequent felling lists up to 1998-99 which implied that some of these plantations might not really exist leading to potential loss of revenue of Rs.16.37 lakh apart from the infructuous expenditure of Rs.13.17 lakh on development. Besides, in certain cases where areas for which Plantation Development Expenditure was incurred and fellings made subsequently could be matched, it was noticed that plantations were left unfelled for a considerable period ranging from 1 to 5 years as noted below:

Year of felling	Area (Hectare)	Delay in felling (Years)
1994-95	441.74	1 to 3
1995-96	787.56	1 to 4
1996-97	428.80	1 to 3
1997-98	981.08	1 to 4
1998-99	505.12	1 to 5

Due to delay in felling, the Company had to postpone revenue realisation which resulted in a loss of interest of Rs.18.67 lakh besides the pay-back period getting extended much beyond the normal period coupled with the abnormally low level of yield (dealt with in Paragraph 2A.7.1.3). Thus, the Eucalyptus project implemented by the Company failed to meet the desired objective of improving the productivity of the areas and meeting the quantitative target (30000 hectares) within the given time. The Company's reply (April 1999) that the delay in felling was due to delay in allotment of quota for sale of pulpwood by Government is not acceptable in as much as the allotment by the Government is based only on the projections furnished by the Company.

2A.7.1.3 Productivity of Eucalyptus plantation- Yield

The Eucalyptus plantations raised during the period 1987-88 to 1991-92 underwent their first felling during 1994-95 to 1998-99. The Company while projecting the viability of the plantations had predicted an yield of a minimum of 30 tonnes per hectare on first extraction. As against this, the felled plantations turned out to be so poor that the average yield per hectare was only 14.094 tonnes in 1994-95, 12.575 tonnes in 1995-96, 16.086 tonnes in 1996-97, 13.251 tonnes in 1997-98 and 14.301 tonnes in 1998-99. The region-wise performance for five years ending 1998-99 is given in the Annexure-10.

The Company could achieve an average yield of 13.957 MTs only as compared to projected yield of 30 MTs resulting in a potential revenue loss of Rs.47.12 crore

While analysing the poor yield of eucalyptus pointed out in the earlier Report of the Comptroller and Auditor General of India, COPU noted in their 18th Report (June 1987) that the preparation of defective project reports rendered the plantations uneconomical and stressed the need for utmost care in preparation and scrutiny of project report. However, the Company had prepared a project report in 1987 projecting the yield at 30 MTs per hectare and informed (April 1999) Audit that the projections were for purposes of availing of bank loans. Again in another project report prepared in 1991, though a theoretical yield of 200 MTs per hectare was projected, the possible yield was restricted to 80 MTs. The actual average yield of 13.957 MTs, however, reveal the continued defects in projections and lack of monitoring.

Considering the projected yield of 30 tonnes per hectare, the deficit during 1994-95 to 1998-99 worked out to 428126.59 tonnes with a potential revenue loss to the extent of Rs.4711.93 lakh.

2A.7.2 Cashew Plantations

2A.7.2.1 Age-wise Analysis

The Company possessed Cashew plantations over an area of 17556 hectares as on 31 March 1999 as against 21203 hectares taken over from the forest department at the time of formation of the Company. The Company subsequently converted certain Cashew area into Eucalyptus plantations. Out of 17635 hectares available on 31 August 1998 under cashew plantation, plantations in an area of 4415.26 hectares were raised during the period from 1974-75 to 1997-98. The details indicating age-wise analysis of the area under cashew plantations in the five regions of the Company are given in Annexure-11.

Potential high yielding cashew trees occupied only 36.3 per cent of the available area. In the absence of action plan for replacement of older cashew plantations, the yield continued to be poor.

According to the yield pattern estimated by the Directorate of Cashew and Cocoa Development and National Research Centre for Cashew, cashew trees start yielding from the 4th/5th year of planting. The maximum potential yield period of the trees is considered to be between the 10th and 30th year under normal climatic conditions. It was, however, observed that the potential high yielding category trees (*i.e.* trees aged between 10 and 30 years) occupied only 6398.3 hectares (36.3 *per cent*) and trees above 30 years occupied 8105.02 hectares (45.9 *per cent*) of the total Cashew plantation in the Company. This was the main reason for the continued poor yield of the plantations as detailed subsequently in Paragraph 2A.7.2.3. Eventhough, the management stated (April 1999) that effective action had been taken to replace the old cashew areas in a phased manner, the area occupied by trees with poor yield continued to be substantial. Out of 17556 hectares available for cashew plantation as on March 1999, only 4925 hectares (28.05 *per cent*) were re-planted after formation of the Company. In the absence of specific action plan for replacement of older plantations, poor yielding trees continue to occupy substantial area leading to recurring loss of revenue.

2A.7.2.2 Plantation management

The Directorate of Cashew and Cocoa Development, Government of India recommended (1995-96) high density planting for enhancing the production of cashew. This involved planting more number of grafts per unit area at a spacing of 4m x 4m in square system initially and thinning them out at later stages. By this method 625 plants per hectare could be planted and when the plants attain full growth, the spacing between the plants would be the optimum and the bonus yield during the early years would be substantial.

Adoption of different espacement for cashew plants and failure to evolve long term plan for plantation management resulted in poor yield and consequent loss of revenue of Rs.17.31 crore.

However, the Company adopted various espacement norm like 7m x 7m, 8m x 8m, 9m x 9m, 10m x 5m and 10m x 10m from time to time and the effective occupation of cashew trees per hectare ranged only between 52 to 56 with a high casualty rate. The Company did not evolve any long term corporate plan either to replace the low density areas or to adopt gap filling techniques to raise fresh plantation to increase the per hectare population of cashew trees. As a result, the number of yielding trees per hectare during the five years up to 1998-99 was very low which indicated under utilisation of land. The loss of revenue due to lower stack per hectare than that of the norms of espacement adopted by the Company amounted to Rs.1730.93 lakh.

2A.7.2.3 Comparative Analysis of yield per hectare

Based on the comments of the Comptroller and Auditor General of India in the earlier Audit Report (1982-83) on comparative poor yield of cashew, the COPU recommended for effective steps to improve the yield and Government also directed (November 1992) the Company to step up the cashew yields.

The table below indicates the comparative analysis of the Cashew yield in the Company's plantations with that of the National/State average and of the average of the neighbouring States during the five years ending 1998-99.

Year	Total production (in MTs.)	National average	Kerala average	Andhra Pradesh average	Karnataka average	Tamil Nadu average	Company's average
		(Kgs. per hectare)					
1994-1995	321640	631	781	880	400	232	90
1995-1996	417830	720	1000	1000	550	330	65
1996-1997	430000	835	1140	830	690	390	110
1997-1998	360000	514	833	403	402	372	96
1998-1999	350000	478	850	600	360	330	74

The shortfall in yield of cashew during last five years was 20148.798 MTs valued at Rs.56.81 crore.

As against the total area of 17556 hectares/83500 hectares of cashew cultivation under the control of Company/Tamil Nadu State respectively, the production of cashew was 1187 MTs by the Company and 25000 MTs by various producers in the State for the year 1998-99. It would be seen that the average per hectare production of Cashew obtained by the Company when compared to the State average was very low. This was mainly because of the low stack per hectare as outlined earlier and the absence of phased replanting programme. It is pertinent to note here that the Company is the single largest owner of cashew plantation in the State holding about 21.03 *per cent* of the total yielding area but accounting for only 4.74 *per cent* of the total cashew earnings of the State in 1998-99. It was also noticed that the productivity of cashew was very low as compared to the average yield of all Southern States and National average. The value of shortfall in yield computed with reference to the State average worked out to 20148.798 MTs valued at Rs.5680.69 lakh during the period from 1994-95 to 1998-99.

2A.7.2.4 Collection of cashew by Company

The Company holds tender-cum-auction every year for the sale of the right to Cashew collections. If the offers received do not match with the fair price fixed, collection is undertaken by the Company. The details of collection of cashew usufructs* by the Company during the period from 1994-95 to 1998-99 were as under:

Cashew season	Area in hectares	No of trees	Anticipated yield	Actual nuts collected	Yield per hectare	Shortfall	Value of shortfall (Rupees.)
				(In KGs)			
1994-95	216.13	13970	20700	18444	85.337	2256	50422
1995-96	3522.93	230077	375673	46695	13.255	328978	8555506
1996-97	496.54	59937	NA	12833	25.844	NA	NA
1997-98	1224.89	68566	154120	16155	13.189	137965	4276915
1998-99	2142.94	123148	281247	206277	96.259	74970	3073770

The following audit observations are made:

1. The areas retained for collection by the Company were of clonal cashew plantation and therefore the yield from the plantation should have been as high as 400 Kgs. per hectare. As against this, the yield actually obtained was abysmally low ranging from 13 Kgs. to 96 Kgs. In spite of getting poor yield, the reasons were not analysed and reported to the Board/Government.

During 1995-96, the Company spent Rs.0.32 crore to collect cashew, which was sold for Rs.0.12 crore.

2. As the year 1995-96 was particularly distressing, an analysis was made in Audit to find out the effect of collection by the Company on its working results. It was noticed that as against expenses incurred (Rs.32.35 lakh) towards lease rent, engaging labour and other overheads for collection, the revenue realised amounted only to Rs.12.25 lakh, leaving thereby an amount of Rs.20.10 lakh as unrecovered.

3. During 1995-96, in Karaikudi region open offers were received for 30 units out of a total of 47 units in the region, for a value of Rs.22.04 lakh. The offers were however not accepted and collection was undertaken by the Company in all the 47 units and the net revenue realised was only Rs.4.02 lakh.

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* Cashew apple and cashew nuts.

2A.7.3 Casuarina Plantations

2A.7.3.1 Missing Casuarina trees – Loss of Rs.18.91 lakh

The Company raises Casuarina trees in Aranthangi and Pudukottai regions. The felling cycle of the trees is considered as between the 9th and 10th year. A test check by audit of the list of Casuarina Plantations in 13 units of the Pudukottai region revealed that 80344 number of Casuarina trees, planted 8 to 10 years back with a potential revenue of Rs.18.91 lakh were missing between 8th and 10th year and not available for felling. The Company admitted the possibility of pilferage to some extent and stated that the trees in the open lands cannot be put "under lock and key". Audit observed that the exact reasons for the shortage were not analysed by the Company with a view to take corrective action.

2A.7.4 Tissue Culture Laboratory

As a participating agency for the project work on Technology transfer, Bio-technological evaluation and clonal multiplication of eucalyptus and bamboo, the company entered into a tripartite agreement (June 1990) with NABARD and National Chemical Laboratory, Pune for establishing a tissue culture laboratory and conducting Field Verificatory Trial/Progeny Testing. As per the agreement, NABARD would provide funds by way of grant amounting to Rs.28 lakh over a five year period. The Company accordingly received Rs.14 lakh and established a tissue culture laboratory at Pudukottai in May 1994.

Tissue culture laboratory established at a cost of Rs.0.26 crore remained under-utilised

As per projections, the laboratory had to produce 50000 plantlets *per annum*. However, it produced only 2000 plantlets in 1996-97, 8224 plantlets in 1997-98 and 7373 plantlets in 1998-99, which accounted for 4 *per cent*, 16.4 *per cent* and 14.74 *per cent* respectively of the targetted production. The reasons attributed by the Management for the poor performance of the laboratory among others were lack of aseptic condition of the laboratory and lack of frequent supply of water. Due to these problems the laboratory established at a cost of Rs.26.24 lakh (including Rs.14 lakh received from NABARD) remained under-utilised besides failure of the Company to achieve the desired objective of increasing the bio-mass production per unit area and obtaining disease resistance plants.

2A.7.5 Other topics of interest

2A.7.5.1 Non-accounting of polythene bags

The Company utilised polythene bags for raising Eucalyptus seedlings. An analysis in Audit of the extent of utilisation of the bags during 1994-95 to 1997-98 revealed that as against the total number of 253.41 lakh of bags issued during the period, only 220.45 lakh were utilised and there was an unaccounted shortage of 32.96 lakh bags valued at Rs.5.77 lakh.

2A.7.5.2 Avoidable remittance of compounding fees etc., to the Government

The Company had been receiving certain incidental incomes like compounding and registration fees, land rent and interest on Fixed Deposit. Pending a decision regarding the treatment of this as agricultural income for income tax purposes, the Company had been exhibiting the amount as a liability to the Government, which enabled them to avoid tax on such non-agricultural income. The amount so collected and kept up to 1995-96 worked out to Rs.60.08 lakh. The Company obtained a favourable decision exempting the income from Income Tax Department. However, the Company instead of writing back the liability created up to 1995-96, remitted the amount to Government in May 1997, even though there was no obligation on its part to do so. The contention of the Company (April 1999) that it was paid with the approval of the Board is not acceptable as it went against the interest of the Company as a Commercial organisation.

The above observations were reported to the Company and the Government in June 1999; their replies had not been received (October 1999).

2A.8 Conclusion

The performance of the Company was unsatisfactory considering the poor yield from eucalyptus and cashew plantations and absence of strategies for improvement. In view of the investment exceeding Rs.20 crore in the plantations and holding of 71013 hectares of land, effective action is needed to streamline the objectives, introduce advanced techniques for increase in yield and make optimum use of the available resources.

SECTION 2B

TAMIL NADU INDUSTRIAL EXPLOSIVES LIMITED

HIGHLIGHTS

Tamil Nadu Industrial Explosives Limited was incorporated in February 1983 to manufacture and supply industrial explosives and other related accessories.

(Paragraph 2B.1)

Due to high cost of production, low price realisation and interest burden, the Company suffered loss of Rs.7.39 crore in 1994-95 and Rs.4.63 crore in 1997-98.

(Paragraph 2B.6.2)

The capacity utilisation of nitroglycerine explosives plant ranged from 45.2 *per cent* to 60.4 *per cent*. The continued under utilisation of the plant capacity was due to poor market for the Company's product.

(Paragraph 2B.7.2.1)

Defective project appraisal of Detonator and Detonating Fuse project led to a loss of Rs.17.23 crore during the last five years.

(Paragraph 2B.8)

The excess consumption of raw material over norms in all the three divisions was Rs.2.95 crore. No effective action was taken to control this trend.

(Paragraph 2B.9)

Due to lack of proper assessment before purchase, machinery imported at a cost of Rs.9.71 crore remained idle.

(Paragraph 2B.11.1)

There was excess deployment of manpower as compared to the norms recommended by National Productivity Council resulting in extra expenditure of Rs.3.05 crore during the period from 1995-96 to 1998-99.

(Paragraph 2B.11.3)

Failure to observe the terms and conditions of supply order resulted in loss of Rs.0.45 crore.

(Paragraph 2B.12.1)

2B.1 Introduction

The Tamil Nadu Industrial Explosives Limited was incorporated in February 1983 to manufacture and supply industrial explosives and other related accessories required by the coal mines and other industries.

2B.2 Objectives and activities

The main objectives of the Company are:

- To manufacture industrial and civil explosives of all kinds, accessories, nitroglycerine, dynamite, detonators, detonating fuses.
- To trade/manufacture blasting and ballistic and pyro-technical apparatus and other articles.
- To fix atmospheric nitrogen by synthetic ammonia or other process and manufacture its derivatives.
- To manufacture, trade export/import of all kinds of explosive cartridges, fuses, *etc*.

The Company at present manufactures and sells Nitroglycerine (NG) based and slurry explosives, Detonators (comprising mainly ordinary and electric detonators) and Detonating Fuses (DDF). However, the management had not drawn any long term plan for achievement of the objectives.

2B.3 Scope of Audit

The performance of the Company was last reviewed and included in the Report of the Comptroller and Auditor General of India for the year ended 31 March 1989 – No.3 (Commercial). Based on this, the Committee on Public Undertakings (COPU) presented its recommendations to the State Legislature on 29 April 1993. The activities of the Company during the period from 1994-95 to 1998-99 and adequacy or otherwise of the action taken on the recommendations of COPU were reviewed in Audit between December 1998 and March 1999. The results of Audit are discussed in succeeding paragraphs:-

2B.4 Organisational set up

The Management of the Company is vested with a Board of Directors. Out of eight Directors in the Board as on 31 March 1999, four Directors including the Chairman and Managing Director were nominated by the holding Company *viz.*, Tamil Nadu Industrial Development Corporation Limited (TIDCO).

2B.5 Funding

2B.5.1 Share capital and borrowings

Against the authorised share capital of Rs.5500 lakh, the paid-up capital as on 31 March 1999 was Rs.2695.68 lakh; of which the holding Company TIDCO holds a share capital of Rs.2214.14 lakh (82.13 *per cent*) and the balance share capital is held by financial institutions, public and others.

Owing to adverse financial position, the Company had to borrow funds from various sources, which aggregated Rs.6637 lakh as on 31 March 1998. In January 1999 by availing the relief package extended by the financial institutions under the rehabilitation scheme of Board for Industrial Finance and Reconstruction (BIFR), the Company made one time settlement of loan with waiver of interest dues. Consequently, as on 31 March 1999, the outstanding loan was reduced to Rs.4118.48 lakh, of which Rs.3353.41 lakh was due to Government of Tamil Nadu for which interest was neither claimed nor provided for in the accounts.

2B.6 Financial position and Working results

2B.6.1 Financial position

The financial position of the Company for the last five years up to 1998-99 is given in Annexure-12.

The accumulated loss as on 31 March 1999 was Rs.15.54 crore.

It was observed that the accumulated loss of Rs.4751.85 lakh as on 31 March 1998 was reduced to Rs.1554.22 lakh in 1998-99 due to the relief package in the form of waiver of interest granted by the financial institutions.

2B.6.2 Working results

The working results of the Company for the five years up to 1998-99 is given in Annexure-13.

Audit analysis of the working results revealed the following:

(i) The loss of Rs.738.86 lakh in 1994-95 and Rs.462.67 lakh in 1997-98 was due to low price realisation, high cost of production, increase in overheads and interest burden.

(ii) The Company had not provided depreciation on certain machinery *viz*., sleevex, B1-15, automatic and semi-automatic winding machines, *etc*., to the extent of Rs.134.87 lakh as they have not been put to use. While on certain other machinery, it had under-provided depreciation to the extent of Rs.819.32 lakh on account of extra shift allowance/foreign exchange fluctuation.

(iii) Consequent on the relief package extended by the financial institutions, interest amounting to Rs.3875.39 lakh was waived, which contributed for the substantial profit of Rs.3197.63 lakh in 1998-99.

(iv) In 1995-96 and 1996-97, the Company earned profit due to increase in sale of NG explosives. This increase was on account of closure of 50 *per cent* of the plant capacity by one of the competitors and occurrence of accident in the plant of another competitor.

(v) Further, analysis of the working results revealed that Slurry Explosives Division earned profit in all the years under review except 1997-98 (loss : Rs.20.19 lakh), while the DDF division suffered a loss (Rs.1723.21 lakh) in all the years and the NG Division suffered a loss (Rs.1317.00 lakh) in all the years except 1995-96.

2B.7 Production performance

2B.7.1 Production facilities

The Company initially set up a plant for manufacture of NG based explosives in 1986. The plants for DDF were installed in 1989 and the plant for slurry explosives was added in 1991. The performance of the three divisions are discussed in succeeding paragraphs.

2B.7.2 Capacity utilisation

2B.7.2.1 NG explosive division

The table below indicates the capacity utilisation of the plant during the period from 1994-95 to 1998-99.

Year	Installed capacity	Actual production	Percentage of capacity utilisation
	(In MTs.)		
1994-95	12500	5647.787	45.2
1995-96	12500	7547.261	60.4
1996-97	12500	6794.901	54.4
1997-98	12500	6354.960	50.8
1998-99	9000 (revised)	6135.990	68.2

(i) During the years from 1994-95 to 1997-98, the capacity utilisation of the plant varied from 45.2 *per cent* to 60.4 *per cent*.

(ii) The increase in production during 1995-96 and 1996-97 was due to increase in demand because of partial closure of explosives plant of a competitor and occurrence of accident in explosive plant of another competitor.

(iii) The continued under-utilisation of the plant capacity was due to poor market for Company's products owing to high prices.

(iv) The Company de-rated the installed capacity to 9000 tonnes in 1998-99 and hence with lesser production, the capacity utilisation rose to 68.2 *per cent*.

2B.7.2.2 DDF division

(A) Detonators

The installed capacity of the plant for production of detonators was fixed at 45 million numbers comprising ordinary detonators (20 million numbers) and electric detonators (25 million numbers) based on the agreement with collaborators by adopting 280 working days with two shifts. As against this, the actual production capacity was worked out by Audit for 300 working days of 3 shifts each at 63 million numbers (*viz.*, ordinary detonators: 25 million numbers and electric detonators: 38 million numbers) based on the individual capacities of machines furnished by the Company. However, the Company fixed lower targets (except 1996-97) than the actual capacity. The following table indicates the actual production as against the budgeted production during the period from 1994-95 to 1998-99.

Year	Budgeted quantity	Actual production	Percentage of actual to target
	(In Million numbers)		
1994-95	43.10	34.08	79.1
1995-96	62.00	58.31	94.0
1996-97	64.00	43.68	68.3
1997-98	60.00	48.79	81.3
1998-99	55.00	34.32	62.4

(i) The steep fall in production during 1998-99 was due to low off-take of Company's products. Even after allowing hefty discount on sale, the Company could not achieve the budgeted target.

Excess capacity was created in electric detonators production unit resulting in idle investment of Rs.0.86 crore.

(ii) As compared to the production capacity of 38 million numbers in electric detonators production unit, excess capacity was created in related sub-units for crimping, injection moulding, fusehead making, *etc.*, leading to imbalance in capacities and idle investment of Rs.85.85 lakh (on injection moulding machine) since 1989.

(B) Detonating fuse

The installed capacity was fixed at 5 million metres up to March 1992 and was increased to 9 million metres from 1992-93 to 1996-97. During 1997-98, it was increased to 11 million metres. However, the Company had fixed budgeted quantity every year based on demand. The Company can produce more by increasing the days/shifts. The actual production against the budgeted quantity during the period from 1994-95 to 1998-99 is tabulated below:

Year	Budgeted quantity	Actual production	Percentage of actual to target
	(In Million Metres)		
1994-95	10.80	8.47	78.4
1995-96	11.50	12.03	104.6
1996-97	15.00	11.94	79.6
1997-98	12.50	14.73	117.8
1998-99	15.00	12.55	83.7

Though the capacity utilisation of this plant was satisfactory, the division suffered loss due to high incidence of interest on heavy capital investment on imported machinery acquired with foreign loan which are idle as discussed in Paragraph 2B.11.1. (Sl. Nos. 1 to 4).

2B.7.2.3 Slurry explosives division

Slurry explosives are manufactured by a simple process of mixing main raw material ammonium nitrate to water heated to required temperature and then other chemicals like sodium nitrate, urea, sulphur, *etc.*, are added. Budgeted quantities were fixed based on the demand for slurry products. Though production facilities were created for 7000 tonnes, the installed capacity of the plant for slurry explosives was determined at 3500 tonnes *per annum* up to 1997-98 and refixed at 6000 tonnes in 1998-99. The actual production during the period from 1994-95 to 1998-99 in comparison with the budgeted quantity is given below:

Year	Budgeted quantity	Actual production	Percentage of actual to target
	(In MTs.)		
1994-95	4800	4193	87.4
1995-96	7170	5338	74.4
1996-97	6500	5608	86.3
1997-98	5600	6467	115.5
1998-99	6740	5460	81.0

This division has been earning profit since inception except in 1997-98, when it sustained loss, which was due to extending heavy discount on sale. It was noticed in Audit that in spite of achieving the highest production during the year 1997-98, the division suffered loss mainly on account of quoting for a product which was yet to be developed and consequently supplying higher strength products involving higher costs and invocation of fall clause* by Coal India and Singareni Collieries Limited (vide Para 2B.12.1 *infra*).

* **In the event of the Company accepting lower prices to any other Company, the lower prices are applicable to CIL/SCCL.**

2B.8 Defective project appraisal

The Company suffered a loss of Rs.17.23 crore during last five years under detonators and detonating fuses project due to defective appraisal.

Even though, DDF project was conceived originally in 1984, the execution was delayed and production commenced only in 1989. The project report for DDF projected a profit of Rs.1594.30 lakh during the period from sixth to tenth year of operation. However, the Company suffered loss of Rs.1723.21 lakh during this period *viz.*, 1994-95 to 1998-99, which is attributable to:

(i) High capital investment of Rs.5227 lakh as compared to the original projection of Rs.2056 lakh.

(ii) As compared to the interest outgo of Rs.224.42 lakh projected at the time of obtaining foreign currency loan, the Company had to pay Rs.733.12 lakh due to fluctuation of interest rates.

(iii) Procurement of machinery worth Rs.637.70 lakh for the project without proper assessment of requirement and consequent idle investment as discussed in Paragraph 2B.11.1 (Sl. Nos. 1 to 4).

2B.9 Consumption of raw material

The value of excess consumption of raw materials in all the three divisions amounted to Rs.2.95 crore.

In order to introduce standard costing system and norms for consumption of raw materials such as Ammonium nitrate, glycol, sulphuric acid, *etc.*, the Company appointed consultants in June 1993. The norms fixed by the consultants after detailed study were not however, implemented by the Company. It was stated that varying quality of raw materials influence the consumption and rigid norms could not be laid down for explosive industries. However, no norms were specified by the Company; only budgetary norms were drawn for computing the cost of production, which are not approved by the Board.

A comparative study of the actual consumption with budgetary norms revealed that there had been excess consumption of input materials. The value of such excess consumption during the period from 1995-96 to 1998-99 worked out to Rs.156.31 lakh in NG division, Rs.68.64 lakh in DDF division and Rs.70.52 lakh in Slurry Explosive division. Though the quantum and value of excess consumption are reported to the management, no effective action was taken to control this trend.

2B.10 Excess consumption of power

Excess consumption of power over the standards prescribed by consultants amounted to Rs.0.86 crore.

The consultants appointed by the Company recommended in December 1994 certain standards for consumption of utilities for production, *viz.*, power, steam, *etc.*, which was not implemented by the Company. Since the Company had not adopted standards/budgetary norms, an attempt was made in Audit to link the actual consumption of power with the standards prescribed by the consultants. It was noticed that excess consumption of power in respect of NG explosives unit during the period from 1995-96 to 1998-99 amounted to Rs.85.74 lakh.

Similarly, excess consumption of power for auxiliary facilities was worked out with reference to the best average annual consumption during the period 1995-96 to 1998-99, which amounted to Rs.34.24 lakh. The Company informed in March 1999 that no proper norm could be fixed for consumption proportionate to production.

2B.11 Machine and manpower utilisation

In the absence of records to indicate the availability of machine hours/man hours and reasons for idleness, the effective utilisation of machinery and men could not be assessed. However, the following points were noticed:

2B.11.1 Idle machinery

Improper purchase of machinery resulted in idle investment of Rs.9.71 crore.

A table showing machinery which were kept idle is given below:

Sl.No	Name of the machinery	Year from which idle	Original cost (Rupees in lakh)	Reasons for idleness
(1)	(2)	(3)	(4)	(5)
1.	Vertical Press B_1 15 drawing machine	1990	210.74	Frequent occurrence of press fire in Unit III.
2.	Automatic coil winding machine	1989	346.33	These machines require more workers than manual operation leading to uneconomic operation.
3.	Hand winding machine	1989	42.92	
4.	Nuclear radiation equipment	1990	37.71	Emission of radio active rays which is harmful to human health

(1)	(2)	(3)	(4)	(5)
5.	**Sleevex machine**	**Grossly under-utilised from 1986**	**198.44**	**Commented in the earlier Audit Report 1989. Based on COPU's recommendation, the Company informed that the machine would be used in future. Further scrutiny in Audit revealed that major parts remained idle. Only 303 tonnes produced during four years against the capacity of 5000 tonnes per annum.**
6.	**LDEX machine**	**Grossly under-utilised from 1986**	**134.49**	**Due to reduction in demand for large dia explosives, the machine remained under-utilised. Only mechanical portion of the machine is in operation and other parts remained idle. Only 976 MTs produced during the four years.**
	Total		**970.63**	

While machinery referred to in Sl. Nos. 1 to 4 remained idle since inception (1989), the other two machines were grossly under-utilised. The Company's efforts to dispose them off proved futile and the investment of Rs.970.63 lakh remained idle.

2B.11.2 Avoidable purchase of machinery

Ill-conceived purchase of machinery resulted in idle investment of Rs.0.37 crore.

As discussed earlier, in 1995-96, the Company could sell increased volume of detonators due to partial closure of a competitor's plant and accident in the plant of another competitor. Though this spurt in sales volume was a temporary phenomenon, the Company decided to increase the production of detonators from 63 to 78 million numbers *per annum*. For this purpose, a purchase order was placed on Deep Explo Equipment (Private) Limited, Aligarh in February 1996 for supply of cup and shell making machine at a cost of Rs.28.03 lakh. The machinery was received in November 1997. At this juncture, the Company realised that the production of detonators would not increase beyond 60 million numbers *per annum* and no useful purpose would be served by adding the new machinery. Hence, the Company asked the supplier to take back the machinery and repay the advance money. As the supplier did not agree to the above proposal, the machinery was installed in March 1998 and it is yet to be commissioned (March 1999).

In this connection, it was noticed that even before the release of purchase orders for the above machinery, the Company was aware that empty shells could be procured from other sources to meet the additional demand. Instead of availing of the safe option, the Company resorted to unwarranted purchase of the machinery.

Similarly, the Company purchased and installed six units of final crimping device at a cost of Rs.9.34 lakh in September 1996, which resulted in creation of excess capacity, which was not warranted.

Thus, the ill-conceived purchase of the above machinery resulted in infructuous investment of Rs.37.37 lakh.

2B.11.3 Deployment of excess manpower

Due to excess manpower, the Company incurred an extra expenditure of Rs.3.05 crore.

In 1994, the Company engaged the services of National Productivity Council (NPC) to review its organisation structure and assess the manpower requirement in all the departments, keeping in view, the then level of manufacture and anticipated growth in the next ten years. The NPC recommended (June 1995) a strength of 149 staff/operators and 563 workmen at different levels of production. Since NPC had not specified the requirement of officers, number of officers required was computed by Audit as 44 on the basis of organisation chart recommended by NPC.

Eventhough, the level of production decreased subsequent to 1995-96, the strength of the officers increased gradually from 57 in 1995-96 to 100 in 1998-99. While the strength of staff/operators ranged between 178 and 208, the strength of workmen ranged between 636 and 659 during 1995-96 to 1998-99. Due to excess manpower as compared to the norms recommended by NPC, the Company had to incur extra expenditure of Rs.305.30 lakh on salaries/wages during the years from 1995-96 to 1998-99.

2B.11.4 Payment of overtime wages

The NPC in their report observed (June 1995) that the existing manpower employed in various departments were under-utilised. Despite this, the Company paid overtime wages to the extent of Rs.203.11 lakh during the period from 1996 to 1998.

2B.12 Sales performance

The details of sales in respect of explosives, detonators and fuses during the five years ending with 1998-99 are tabulated below:

(Amount – Rupees in lakh)

Year	Explosives		Detonators		Detonating fuse	
	Quantity (Tonnes)	Value	Quantity (Million numbers)	Value	Quantity (Million metres)	Value
1994-95	9626	1726	34.39	850	9.14	236
1995-96	13388	3055	61.93	1606	13.25	367
1996-97	12365	3132	39.36	1762	10.87	318
1997-98	12750	2846	47.77	1775	15.32	511
1998-99	11667	2804	37.63	1316	12.43	453

The following observations are made:

In 1996-97, the Company's market share in the country constituted 6.31 *per cent* in respect of explosives, 13.21 *per cent* in respect of detonators and 9.85 *per cent* for fuses.

(ii) The fall in sales during 1998-99 was reportedly due to lower prices offered by the competitors. The competitors in private sector with lesser capital investment could offer their products at lesser price. In order to improve the sales performance, heavy discounts were allowed on sale, which only added to losses.

While fixing the rates for supply of explosives to northern region, heavy discounts ranging from Rs.3897 to Rs.6188 per tonne were offered as compared to the discount of Rs.206 offered for Karnataka. Considering the sale of explosives at loss *ab initio*, extension of discounts contributed to further loss.

The grant of higher discounts had led to increase in sales volume for northern region, whereas the sales volume for the southern region had decreased, vide details given below:

Year	Sales volume (In tonnes)	
	Northern Region	Southern Region
1996-97	851	3500
1997-98	1697	3247
1998-99	1671	2507

As such the existing price structure discourages off-take for southern region. The wide variation in the discounts allowed might also act as an incentive for diversion of products from one region to another defeating the objective of improving sales performance in respective regions and also causing loss to the Company. Therefore, the existing pricing policy needs to be reviewed. After being pointed out (March 1999) in Audit, it was noticed in July 1999, the Company detected a case of diversion of products, which were billed for Rajasthan but were sold in Tamil Nadu.

2B.12.1 Loss due to offer of lower selling price

The Company suffered a loss of Rs.0.45 crore due to offer of explosives at lower prices.

The Company agreed to supply explosives to Coal India Limited (CIL) and Singareni Collieries Company Limited (SCCL) during 1996-97 and 1997-98 at specified rates, with a fall clause. Accordingly, the Company had to accept reduced rate from CIL, if the same product is supplied to other buyer at lower prices. Even knowing that the sale at a lower price to any other company would adversely affect the contract with CIL, the Company sold the same product to Neyveli Lignite Corporation (NLC) at a lower price.

It was replied (October 1999) by the Company that based on the requirement of NLC for explosives with lesser strength, a new product at a cheaper cost was proposed to be developed and accordingly, the Company offered lower prices to NLC. Subsequently, due to delay in development, the Company supplied higher strength products at the agreed rates and thereby attracting the provisions of fall clause. Thus, before developing a product, the Company quoted for it and due to delay in development, the Company had to meet the claims of CIL and SCCL leading to a loss of Rs.45.43 lakh to the Company during 1996-97 and 1997-98.

2B.12.2 Rejections

Though, the products are sold after approval of the Quality Control Department, rejection of the products by customers for quality defects were noticed throughout the period under review. It was stated that the defects in the returned goods were either rectified and supplied or resold to other customers requiring products of lesser strength. During 1994-95 and 1995-96 rejected products valued at Rs.11.86 lakh, which could not be further sold were destroyed. Since the dealers in the explosive industry are selling the products of competitors also, defective supplies made by the Company forced the dealers to opt for other competitors' products. It was also recorded by the Company that the supply of poor quality products affected the business of the Company and reputation in the market. As on 31 March 1999, Company's funds to the extent of Rs.22.04 lakh were locked up on goods rejected by customers during 1992-93 to 1998-99.

2B.13 Other points of interest

2B.13.1 Delay in commissioning of air dryer

The existing arrangement for drying the air required for feeding ammonium nitrate was carried through a refrigeration system and it was costing Rs.7.40 lakh *per annum* towards power charges. With the objective of saving the above cost, the

Company procured an air dryer at a cost of Rs.4.21 lakh in October 1994. As some of the valves and switches were not received, the machinery was not installed. Since the supplier did not respond to the request for supply of the above items, the Company purchased the same locally for Rs.0.11 lakh and commissioned the air dryer in November 1996. It was noticed that the Company did not obtain suitable bank guarantee from the supplier to protect its interest. The failure of the Company to commission the system early by resorting to local purchase resulted in loss of envisaged savings in power charges to the extent of Rs.14.80 lakh.

The above observations were reported to the Company and the Government in August 1999; their reply had not been received (October 1999).

2B.14 Conclusion

The performance of the Company was found to be poor due to high capital investment, under-utilisation of capacity, men, machine and other resources, defective project appraisal, *etc*. Owing to high cost of operation and low price realisation in the competitive market, the Company suffered losses. Concerted action is therefore needed to improve the productivity and reduce the cost of operation and enlarge the market share by doing survey on realistic basis.

SECTION 2C

POOMPUHAR SHIPPING CORPORATION LIMITED

REVIEW ON OPERATIONAL EFFICIENCY

HIGHLIGHTS

Poompuhar Shipping Corporation Limited was set up in April 1974 for organising ocean movement of coal required by Tamil Nadu Electricity Board (TNEB).

(Paragraph 2C.1)

Extension of 5 *per cent* allowance for levy of penalty for short loading had resulted in non-recovery of Rs.1.22 crore for the year 1997-98 test checked in Audit.

(Paragraph 2C.3.1)

Prescribing standard sailing time between different ports adopting 12.5 Knots (Nautical Miles) per hour as the standard speed as against 13 Knots per hour declared by the ship owners had led to extension of undue benefit of Rs.0.58 crore in respect of four vessels operated during 1997-98.

(Paragraph 2C.3.2)

Company's own vessels took prolonged additional voyage time compared with the standard speed of 12.5 Knots adopted for chartered vessels. This has resulted in extra expenditure of Rs.4.51 crore during the five years ending 1998-99.

(Paragraph 2C.3.2)

Engagement of spot charter vessels at the time when there was congestion at discharge ports resulted in avoidable payment of charter hire charges of Rs.1.36 crore.

(Paragraph 2C.4.2)

Slow performance and intermittent stoppage of cranes and other equipments in the Company's three own vessels during the four years ending 1997-98 resulted in extra expenditure of Rs.3.07 crore by way of loss of voyage days.

(Paragraph 2C.5)

Periodical non-reconciliation of accounts with agents and eventual non-charging of interest for excess advances released to them led to revenue loss of Rs.0.25 crore.

(Paragraph 2C.7)

2C.1 Introduction

Poompuhar Shipping Corporation was incorporated in April 1974 with the main objective of organising ocean movement of coal required by thermal power stations of Tamil Nadu Electricity Board (TNEB) from three load ports at Haldia, Paradip and Visakhapatnam to discharge ports at Chennai and Tuticorin.

2C.2 Scope of Audit

The present sectional review conducted during the period from December 1998 to May 1999 covers the operational efficiency of the Company in the transportation of coal for the period of five years ending March 1999.

2C.3 Operation pattern

The Company operated three own vessels and also took on hire 15 to 20 private vessels on time charter[1] and also on spot charter[2] basis depending upon the need. The ship movements were decided based on the draft restrictions (depth of the port). Accordingly, the disport (discharge port) Tutitcorin was linked to Haldia. The Chennai disport was linked to Visakhapatnam and Paradip. The freight rate for the transportation of coal by own ships was as per agreement between the Company and TNEB. The freight for chartered ship was paid on daily basis and TNEB reimbursed the actual expenditure incurred. The optimum utilisation of the vessels depended on loading of the ships to its full loadable capacity, minimisation of preberthing delay, maintenance of declared speed of the vessel, avoidance of delays in discharge operation, *etc*. The findings of Audit in these areas are discussed in the succeeding paragraphs.

2C.3.1 Short loading of coal

Extension of initial allowance of 5 per cent for short loading before effecting recovery resulted in unintended benefit of Rs.1.22 crore to ship owners.

In order to ensure more economical transportation of coal, it is imperative to ensure that the vessels are loaded to the full "Loadable Capacity". Otherwise it involves payment of "Dead Freight".

The loadable capacity of each vessel is based on lesser of the drafts at the load or discharge port. However, the Company till 1996-97, did not ascertain the maximum loadable quantity at different drafts from ship owners. Consequently, it could not be ensured whether the ships carried the "Optimum Quantity".

Only after it was pointed out by Audit (July 1997) that the Company initiated steps to get the declaration from ship owners about the loadable quantities for different drafts. Based on such declaration the Company started penalising the ship owners for short loading after giving an allowance of 5 *per cent* of declared quantity from January 1998, with retrospective effect from 1996-97.

1 **Time Charter – Hiring of ships for fixed period of time (Say a year).**

2 **Spot Charter – Hiring of ships for specified number of voyages.**

The practice of allowing 5 *per cent* allowance, (on the basis of opinion obtained from a private company) was not justified as the ship owners themselves gave an explicit undertaking about the quantity that could be loaded. This 5 *per cent* allowance deprived the Company, recovery to the extent of Rs.121.58 lakh in respect of 12 vessels operated during 1997-98 test checked in Audit.

The Company replied that cargo loadable depends on various factors such as maximum permissible draft at load port and disport, density of water, weight of bunkers, fresh water, unpumpable ballast, *etc*. The reply was silent regarding specific observations made in Audit.

2C.3.2 Failure to monitor the speed of the chartered vessels

Non-fixation of standard sailing time based on the speed declared by the ship owners resulted in extension of undue benefit to them to the extent of Rs.0.58 crore.

As per clause 40 of the Charter Party Agreement entered into by the Company with the ship owners, the performance levels declared by the owners in the relevant tender documents shall be efficiently maintained by the ship owners throughout the Charter period. One such performance level was the speed of the vessel which was declared by the owners as "Capable of steaming fully laden under good weather conditions about 13 Knots".

Though the speed was so declared by the ship owners, there was no system in the Company till December 1997, to ensure compliance of the same. It was only after being pointed by Audit (July 1997) that the Company began to monitor (January 1998) the speed of the Chartered Vessels by prescribing standard sailing time between different ports adopting 12.5 Knots (Nautical Miles) per hour as the standard speed against 13 Knots per hour declared by the ship owners. The charter hire charges for excess sailing time were recovered from the payments due to the ship owners retrospectively only from the year 1996-97.

Reduction of speed from 13 to 12.5 Knots in contravention of Charter Party terms had led to extension of undue benefit of Rs.57.58 lakh in respect of four vessels operated during the year 1997-98 test checked in Audit.

Similarly, for the voyages performed during the period from 1994-95 to 1998-99, the Company's own vessels took prolonged additional time of 95 days and 21 hours due to non-fixing and consequent non-monitoring of sailing time based on the adopted standard speed of 12.5 Knots. Considering the charter hire charges paid to a similar vessel in the same sector, the delay had caused an avoidable expenditure of Rs.451.45 lakh.

2C.3.3 Fuel consumption

Excess consumption of fuel over norms mainly due to excess sailing time resulted in additional expenditure of Rs.2.23 crore

The Company had fixed norms of 25 MT of Heavy Oil (HO) and one MT of Diesel Oil (DO) per day of sailing. A test check of records on fuel consumption in respect of two of the three vessels owned by the Company revealed excess consumption of heavy oil and diesel oil over norms involving an additional expenditure of Rs.223.10 lakh during the period of five years ending with 1998-99. The excess consumption of fuel was mainly due to excess sailing time. The Management had not taken any action on this excess consumption.

2C.4 Pre-berthing delay

Excess pre-berthing delays resulted in payment of idle hire charges of Rs.36.22 crore.

Pre-berthing delay is the time gap between the time of arrival of ship in the outer harbour of a port and the time it is berthed. Since the ship remained idle during this period, it was pertinent for the Company/TNEB to analyse such delays and reduce them to the extent possible to avoid loss in the form of idle charter hire charges. The details of pre-berthing delays suffered by the vessels engaged by the Company (including own vessels) during the five year period ending 1998-99 are as follows:

	Pre-berthing delay (In number of days)				
Port	**1994-95**	**1995-96**	**1996-97**	**1997-98**	**1998-99**
Haldia	**189.49**	**144.22**	**97.86**	**145.30**	**120.40**
Paradip	**109.02**	**177.57**	**61.00**	**85.15**	**50.54**
Visakhapatnam	**70.34**	**128.42**	**100.94**	**104.67**	**49.88**
Chennai	**138.36**	**242.63**	**461.27**	**468.79**	**790.71**
Tuticorin	**232.21**	**280.77**	**215.09**	**216.52**	**271.72**
Total	**739.42**	**973.61**	**936.16**	**1020.43**	**1283.25**
Normal time allowed	**692.00**	**680.00**	**786.00**	**924.00**	**836.00**
Excess delay	**47.42**	**293.61**	**150.16**	**96.43**	**447.25**

Based on the average charter hire rates of Rs.3.50 lakh per day, the pre-berthing delay had cost the Company a huge amount of Rs.3622.05 lakh without any corresponding shipping activity.

During a test check of records in Audit relating to pre-berthing delay, the following points emerged:

2C.4.1 In November 1998, coal discharge operations at Tuticorin were badly affected due to non-running of conveyor belts because of piling of huge coal stock at Tuticorin Thermal Power Station (TTPS) stock yard. This resulted in lower discharge rate at Tuticorin port and consequently, the Company's own ship (Tamil Periyar) which arrived there on 19 November 1998 was held up for five days.

At this juncture, two more ships were allowed to proceed to Tuticorin from Haldia after loading. As the Company was well aware of the berthing delays at Tuticorin, the ships could have been diverted to Chennai port in which case the pre-berthing delays of 5.1 days and 8.25 days suffered by these vessels could have been avoided. This had resulted in avoidable expenditure of Rs.114.63 lakh by way of idle hire charges (Rs.90.70 lakh) and additional fuel consumption (Rs.23.93 lakh).

2C.4.2 Improper engagement of spot-chartered vessels

Hiring vessels on spot charter basis at the time when there was congestion at Ports resulted in avoidable payment of idle hire charges of Rs.1.36 crore.

The Company engaged private vessels for a shorter period or for specific number of trips also, to meet urgent requirement. For these spot-chartered vessels, hire charges were paid on "per day" basis. Hence, it was imperative that such vessels were put to optimum use.

In April 1996, while the Chennai port was facing congestion due to arrival of ships with imported coal, the Tuticorin port also experienced the same due to diversion of Chennai bound vessels. Under these circumstances, the Company engaged three vessels on spot-charter basis and these ships suffered inordinate berthing delays involving avoidable charter hire charges of Rs.135.85 lakh.

It was replied that spot-charter was resorted to clear coal stock at load ports and to replace two time charter vessels to be released for dry docking. The reply was not tenable since decision for the spot-chartering of vessel had to be taken keeping in view the port conditions at that time.

2C.5 Delay in discharge operations

Loss of voyage days due to faulty operation of ship's equipments led to extra expenditure of Rs.3.07 crore.

The Company also handled the discharge of coal from ships to hopper at coal Jetty I in Tuticorin port. For efficient operation of this activity, it was necessary that reporting ship's equipments like cranes, grabs, *etc.* should be fully operational. An analysis of discharge operations at Tuticorin revealed that slow performance and intermittent stoppages of cranes and other equipments in the Company's three own vessels resulted in loss of 64.48 voyage days during the four years ending 1997-98. Considering that the voyage days so lost had to be compensated by chartering a private ship, the Company incurred an avoidable expenditure of Rs.306.72 lakh.

2C.6 Poor maintenance of stevedoring equipments

Loss of Rs.7.28 crore due to insufficient stevedoring equipments.

The Company employed front end loaders to form heaps of coal so that the crane/grab of the ship could be effectively utilised in the unloading/discharge operation. If sufficient number of front end loaders were not employed, it would affect the speed of the discharge operation. A test check of records in this regard revealed that the Company had employed less number of front end loaders than required. This had resulted in loss of 166 voyage days and consequent extra expenditure of Rs.728.11 lakh during the four years ending with 1997-98.

2C.7 Unintended benefit extended to the shipping agents

The Company was utilising the services of shipping agents to co-ordinate various activities in connection with the receipt and despatch of coal vessels at the loading/disports. Periodical advances were released by the Company at the request of agents to enable them to make payments like port charges, berth hire charges, pilotage charges, *etc*. These advances were required to be adjusted as and when the bills were rendered by the agents for the expenses incurred by them on behalf of the Company.

Delays in recovery of advances and consequent undue benefit to the shipping agents to the extent of Rs.0.25 crore.

M/s Shaw Wallace, who were acting as Company's agents at Chennai and Calcutta port, were paid advances regularly but the accounts were never reconciled with actual expenditure. Subsequent to the transfer of business of M/s Shaw Wallace to M/s Sea Tech Services in April 1996, the Company attempted reconciliation of accounts in January 1998 and found that a huge sum of Rs.47.27 lakh was due from them. Though the Company realised the amount in June 1998, no interest was, however, charged on the same.

Since the Company paid interest at 17 *per cent* for adhoc advances released by TNEB for meeting such expenses, periodical non-reconciliation of accounts with agent and eventual non-charging of interest for excess advances so released had resulted in unintended benefit to the agent and revenue loss of Rs.25.28 lakh to the Company.

2C.8 Other topics of interest

2C.8.1 Failure to invoke provisions of charter party agreement

As per Clause-47 of the Charter Party Agreement, if the winch/crane/grab of the ship remains disabled or unable to perform continuously at declared level of efficiency, the Company (charterers) can recover proportionate hire charges for the first 24 hours. If the deficiency continues, the Company can off-hire* the ship totally after giving 24 hour notice.

It was noticed in Audit that one crane (Crane No.3) of the ship MV Surya Kripa, which arrived in Chennai port on 25 August 1996 was under repair from 27 August 1996, till the completion of discharge on 31 August 1996. As per the above clause, the ship should have been fully off-hired after giving 24 hour notice. The Company, however, did not do so but recovered only an amount of Rs.5.52

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* **Off-hire : The period of exclusion for payment of hire charges.**

lakh as off-hire charges for the non-performance of one crane as against Rs.17.52 lakh to be recovered as per Clause-47.

Thus, failure of the Company to invoke provisions of charter party resulted in foregoing of recovery of revenue to the extent of Rs.12 lakh.

2C.8.2 Faulty design of launch – Excess fuel consumption

The Company for augmenting its operation of ferry service between the main land and the Vivekananda Rock Memorial in Kanyakumari, purchased (April 1992) a new ferry MC Vivekananda at a cost of Rs.39.07 lakh. A review of utilisation of launch revealed that due to improper designing and higher capacity engine there was higher fuel consumption and consequent under utilisation of the launch. The operation of the launch resulted in an avoidable expenditure of Rs.2.74 lakh towards excess fuel consumption during the five years ending with 1998-99. The structural modification carried (July 1998) out at a cost of Rs.6.34 lakh did not also yield desired results.

Thus, construction of a launch with a faulty design had resulted in the ineffective usage of launch valued at Rs.39.07 lakh besides leading to an avoidable expenditure of Rs.9.08 lakh.

The above observations were reported to the Company and the Government in June 1999; their replies had not been received (October 1999).

2C.9 Conclusion

Thus, ineffective monitoring of ship movements and failure to ensure achievement of optimum performance parameters had resulted in poor operational efficiency of the Company. The Company should monitor and take steps to reduce pre-berthing delays and ensure proper loading and speed of vessels to improve operational efficiency particularly in view of reimbursement of entire operational expenses by TNEB.

CHAPTER 3

REVIEWS IN RESPECT OF STATUTORY CORPORATION

TAMIL NADU ELECTRICITY BOARD

SECTION 3A:	**TRANSMISSION AND DISTRIBUTION SYSTEM**
SECTION 3B:	**PURCHASE OF POWER FROM BASIN BRIDGE DIESEL ENGINE POWER PROJECT**
SECTION 3C:	**PERFORMANCE OF ELECTROSTATIC PRECIPITATORS**

SECTION 3A

TAMIL NADU ELECTRICITY BOARD

TRANSMISSION AND DISTRIBUTION SYSTEM

HIGHLIGHTS

There was lack of synchronisation in establishment of sub-stations and associated transmission lines resulting in 27 sub-stations (estimated cost: Rs.38.80 crore) being kept idle for 3 to 25 months after completion and one sub-station (estimated cost: Rs.1.03 crore) was yet to be commissioned.

{Paragraph 3A.6(i) and (ii)}

Inadequacies in the transmission system continued to exist due to delay in completion of transmission and distribution schemes. Consequently, the Board was unable to draw its share of power from Central Generating Stations to the extent of 1500.59 MUs (loss of revenue: Rs.41.35 crore) and also had to reduce generation of power to the tune of 2026.51 MUs (value: Rs.375.58 crore) from its thermal stations.

{(Paragraph 3A.6(iv)}

Poor estimation of procurement of materials resulted in increase in stock holding from 7 to 13.6 months' consumption during 1993-94 to 1997-98.

{Paragraph 3A.7(iii)}

Purchase of cables of higher capacity than required resulted in avoidable expenditure of Rs.4.07 crore.

{Paragraph 3A.7(iv)}

Delays in completion of sub-stations and associated lines resulted in cost overrun of Rs.51.07 crore besides loss of anticipated benefit of 863 MUs (value: Rs.49.15 crore) by way of reduction in line loss and additional sale of power.

{Paragraphs 3A.7.1}

Expenditure of Rs.0.90 crore incurred on the construction of a transmission line remain unfruitful for over 4 ½ years as further works were stopped in October 1994.

{Paragraph 3A.7.2(i)}

Twelve urban distribution improvement schemes estimated to cost Rs.156.19 crore remained incomplete even after lapse of 27 to 64 months.

{Paragraph 3A.8.2(iii)}

The transmission and distribution losses ranged between 22.6 *per cent* and 27.8 *per cent* during the period from 1994-95 to 1997-98 against the norm of 15.5 *per cent* prescribed by the Central Electricity Authority which resulted in a loss of Rs.2132.36 crore.

(Paragraph 3A.9)

3A.1 Introduction

The transmission and distribution (T&D) system is an important and essential link between the power generating station and the ultimate consumer. It enables evacuation of power from the new generating stations that are constantly being added to the grid and at the same time curtail/reduce/prevent the loss of power during transmission. The transmission and distribution network comprised 782 sub-stations, 0.19 lakh circuit kilometres of transmission and sub-transmission lines and 5.15 lakh circuit kilometres of distribution network (March 1998).

3A.2 Organisational set up

The overall planning and execution of T&D system is looked after by the Chief Engineers of Planning and Transmission under the supervision of Member (Generation) and Member (Distribution) at the apex level. The schemes for transmission are evolved by the Chief Engineer (Planning), and the Chief Engineer (Transmission) is responsible for the overall design, construction, supervision and monitoring of transmission projects.

3A.3 Scope of Audit

A review of the T&D system was included in the Report of the Comptroller and Auditor General of India (Commercial) for the year ended March 1985. The recommendations of the Committee on Public Undertakings (COPU) on this Report are contained in its 132nd Report presented to the State Legislature on 29 April 1993. The present review conducted between December 1998 and June 1999 covers in particular (i) the construction of new sub-stations including upgradation of existing sub-stations along with laying of associated transmission lines, (ii) execution of urban improvement schemes and (iii) T&D loss during the last five years from 1994-95 to 1998-99. The findings of Audit are discussed in the succeeding paragraphs.

3A.4 Planning

The Board has been preparing master plans each covering a period of five years coinciding with the National Five Year Plans estimating the requirement of transmission facilities without including the requirement of distribution system in physical terms.

3A.5 Funding

The T&D schemes are funded through plan outlay and loans from Power Finance Corporation (PFC). The estimated requirement of funds for T&D schemes, utilisation of funds through plan outlay and loan from PFC during the last four years ending March 1998 are given in the Annexure-14.

It would be seen from the Annexure that in all the years (except under transmission in 1996-97), the funds utilised were much more than estimated. Despite this, there was considerable delay in completion of schemes resulting in locking up of funds in stock/stores (inventories) and work-in-progress as discussed in Paragraph 3A.7.

3A.6 Performance under transmission system

The Board has been drawing up T&D programme fixing the physical target for the establishment of new sub-stations and laying of transmission lines. However, no physical target was fixed for the enhancement of transformer capacity in the existing sub-stations. The actual performance of the Board is as detailed below:

		1994-95	1995-96	1996-97	1997-98	1998-99
A.	**Target**					
i)	**Number of substations (230/110/66/33 KV)**	**38**	**100**	**67**	**61**	**81**
ii)	**Laying of transmission lines (ckt. Kms)**	**636**	**1144**	**1815**	**1250**	**1613**
B.	**Achievement**					
i)	**Number of substations**	**39**	**106**	**43**	**60**	**61**
ii)	**Laying of transmission lines (ckt. Kms.)**	**363**	**394**	**624**	**581**	**751**
C.	**Percentage of achievement to target**					
i)	**Substations**	**103**	**106**	**64**	**98**	**75**
ii)	**Laying of transmission lines**	**57**	**34**	**34**	**46**	**47**

Note: Details of physical target for the establishment of new sub-stations and laying of transmission lines ratio-wise are given in the Annexure-15.

Analysis in Audit indicated the following:

(i) There was lack of synchronisation in establishment of sub-stations and erection of transmission lines as the achievement in respect of laying transmission lines varied from 34 to 57 *per cent* of target only as compared to the achievement of 64 to 106 *per cent* of target in setting up of sub-station.

27 sub-stations (estimated cost: Rs.38.80 crore) remained idle for 3 to 25 months after completion and one sub-station (estimated cost: Rs.1.03 crore) yet to be commissioned as associated transmission lines were not completed.

(ii) Though 106 sub-stations were shown as commissioned as against the target of 100 sub-stations in 1995-96, it was observed that 28 sub-stations (estimated cost: Rs.39.83 crore) had only been charged with reverse flow, since the associated lines had not been completed. Of these 27 were commissioned only after 3 to 25 months, while one 110 KV sub-station at Manmangalam was yet to be completed. Further, 19 line tap sub-stations (which did not have protective equipment as in regular sub-station) had been established only as a short term measure and did not form part of the T&D programme. As such, the achievement in 1995-96 was only 59 *per cent* of the target.

(iii) Although 230 KV sub-stations along with associated lines form the back-bone of the transmission system (since they would meet the power needs of the sub-transmission system through 110 KV and 33 KV sub-stations) only 10 were commissioned against the 19 targetted.

Inadequacies in the transmission system had resulted in under drawal of Board's share of power from Central Generating Stations to the extent of 1500.59 MUs (loss of revenue: Rs.41.35 crore) and reduction of generation of power to the tune of 2026.51 MUs (value: Rs.375.58 crore) in its thermal stations

(iv) Due to difficulties in meeting the grid demand on account of deficit estimated at 16161 MUs. between supply and demand for power during 1995-96 to 1998-99, the Board resorted to grouping restrictions in the supply to agricultural loads and urban load shedding. It was, however, observed that there was under-drawal of Board's share of power from Central Generating Stations to the extent of 1500.59 MUs (value: Rs.41.35 crore) and the Board had also reduced generation in its thermal stations by 2026.51 MUs (value: Rs.375.58 crore) during the same period in order to avail its share of Central power, and on account of transmission constraints and grid disturbances. In order to overcome constraints in utilisation of power from Neyveli Lignite Corporation (NLC) Station II, establishment of 230 KV sub-stations at Cuddalore (the expeditious construction of which was also recommended (November 1995) by the Anna University in their study report), Thanjavur and Pudukottai were included in the master plan (1990-95). However, the Cuddalore 230 KV sub-station was commissioned only in February 1998 after a delay of two years and 8 months, but drew supply from the existing NLC Station I to Villupuram feeder (which was already overloaded) as the connected line works were not completed (June 1999). Hence, it did not serve the intended purpose. The sub-stations at Thanjavur and Pudukottai completed in March 1998 were yet to be commissioned (May 1999). Had the planned T&D schemes, which aimed at meeting increased demand and reducing line loss been completed in time, the under-drawal of power and reduction of generation could have been avoided to the extent of 2045.75 MUs (value: Rs.319.06 crore) in respect of the schemes test checked in Audit (vide Paragraphs 3A.7.1 and 3A.8.2).

(v) The Board was also aware (April 1994) of the inadequacy in the transmission network and the constraints in drawal of power from the existing lines. However, scrutiny by Audit showed that, 892 circuit Kilometres (33 *per cent*) of the 2713 circuit kilometres of transmission lines energised during the five years ending March 1999, draw power from existing lines which increased the loading of the existing system only instead of improving the grid conditions.

3A.7 Cost and time overrun

The following table gives the details of expenditure on transmission schemes, amount transferred to asset account in respect of completed schemes and the investment on the incomplete schemes at the end of each year during the last five years up to 1997-98:

(Rupees in crore)

Year	Capital expenditure during the year	Amount transferred to asset account on completed schemes	Work-in-progress on incomplete schemes at the end of March
1993-94	127.89	101.54	156.01
1994-95	133.66	120.74	168.94
1995-96	200.79	156.61	213.12
1996-97	259.30	160.47	311.94
1997-98	286.01	162.44	435.51

In this connection, the following observations are made:

(i) Work in progress has been on the increasing trend year after year mainly due to delay in completion of schemes. The Board had introduced (May 1989) a system for regular monitoring and control of the schemes. COPU had recommended (April 1993) that the Board should make a full and thorough evaluation of setting up sub-stations in all respects beforehand so that no time is lost unnecessarily during execution. Despite this, there was no effective monitoring and control, nor were the causes for delays and cost overrun analysed in order to initiate remedial measures as discussed in Paragraphs 3A.7.1 and 3A.8.2.

(ii) As per the annual T&D programme, 164 schemes for establishment of 230 KV and 110 KV sub-stations and associated lines costing Rs.994.74 crore (*i.e.*, 81.5 *per cent*) of the total budgeted cost of Rs.1220.70 crore were taken up during 1994-95 to 1998-99. Of these, 59 schemes were carried forward for the periods ranging from 3 to 5 years, indicating that there were delays of 1 to 3 years in the completion of schemes, though 230 KV sub-stations and 110 KV sub-stations (with associated lines) are to be completed within 18 and 15 months respectively. A test check made by Audit revealed that the delays were generally due to lack of perspective planning and non-synchronisation of related activities resulting in a cost overrun of Rs.51.07 crore vide Paragraph 3A.7.1.

Delay in completion of schemes led to accumulation of materials from Rs.49.34 crore in 1993-94 to Rs.222.13 crore in 1997-98.

(iii) The delay in completion of schemes led to accumulation of materials procured in advance based on the transmission programme evolved for each year resulting in increase in stock levels from 7 months' consumption in 1993-94 to 13.6 months' in 1997-98 involving amounts ranging from Rs.49.34 crore to Rs.222.13 crore.

Purchase of cables of higher current carrying capacity than required resulted in avoidable expenditure of Rs.4.07 crore.

(iv) 3X400 Sq.mm UG cables with current carrying capacity of 405 amperes were normally used in Chennai Development Circle (CDC) for the 33 KV sub-transmission network. Approval was accorded (November 1994) by the Chairman for introduction of 1 X 630 Sq.mm. UG cables having higher current carrying capacity of 575 amperes based on the proposal initiated by the Chief Engineer (Distribution) without consulting the Chief Engineer (Planning), who was responsible for evolving transmission schemes based on load forecast, availability of power, capacity of sub-stations, *etc.* The change in specification was made without a proper study and approval of the Board standing committee was also not obtained as required under the Board's Tender Regulations. A quantity of 1.03 KMs were also used in Madurai to link the 110 KV Villapuram sub-station to the First point 33 KV sub-station, though only 400 Sq.mm XLPE cable was required for the projected load of 280 amperes by 2005. The decision to use higher capacity cables thus, lacked justification and resulted in avoidable extra expenditure of Rs.4.07 crore on the quantity of 132.6 KMs (value: Rs.17.81 crore) of cables purchased between January 1996 and November 1996.

Further, the CDC had indented (April 1995) 161 KMs of cables for 18 schemes, though only 7 schemes requiring 75 KMs of cables were included in the T&D programme for 1995-96. Only 87.7 KMs of cables were drawn up to 31 March 1999 and 10 out of 18 schemes were completed leaving a balance of 48.97 KMs including stock at Madurai. The purchase of cables far in advance of requirement resulted in locking up of funds to the extent of Rs.6.57 crore for over two years.

3A.7.1 Delay in execution of schemes

Delayed execution of schemes resulted in cost overrun of Rs.51.07 crore besides non-realisation of anticipated benefits (Rs.49.15 crore).

In fourteen schemes for the construction of sub-stations and associated lines, delays in execution were noticed in Audit as indicated in the Annexure-16. Due to delays, there was a cost overrun of Rs.51.07 crore, besides the loss of potential revenue on sale of additional energy and reduction in line loss to the extent of 862.74 MUs (value: Rs.49.15 crore).

Audit observed instances of delays in completing route survey/approval of line profile, calling for and finalising the tender, awarding/commencing works, non-availability of materials, subsequent changes in site, *etc.*, as detailed below:

(i) The Board decided (January 1994) to take up the four associated line works for the three 230 KV sub-stations at Cuddalore, Thanjavur and Pudukottai through erection contracts in order to expedite their completion. Tenders were called for only in February 1995 and the contract was awarded (September 1995) to K.S.Construction, after a delay of 20 months. The works scheduled to be completed by September 1996 were further delayed due to:

(a) Non-commencement of work on the Neyveli Thermal Station II to Cuddalore sub-station line till July 1996, due to delay in deciding whether to redo the survey already done in 1991.

(b) Non-availability of stubs and towers to be supplied by the Board.

(c) Delay by the Board in making payments for works completed.

The contractor completed only one line in February 1998 *viz.*, Neyveli Thermal Station to Cuddalore. The Board terminated (February 1998) the contract for Pudukottai - Karaikudi line work and decided to execute it departmentally at the risk and cost of the contractor, but he was allowed to continue work on the Alundur – Thanjavur and Alundur – Pudukottai line despite not completing it even within the extended period (August 1997) for completion. These three works were yet (June 1999) to be completed.

(ii) The land for Shenbagaramanpudur 230 KV sub-station was taken possession in September 1994 and work for the sub-station was commenced in March 1995. Out of two 230 KV and four 110 KV lines envisaged, contracts for laying the 230 KV lines were awarded between March and December 1997 as the rates quoted in the tender called for (July 1995) were found to be high and it was decided (January 1997) to execute them departmentally. The detailed route survey **completed in July 1995 did not take into account the clearance required from Forest authorities and the Indian Space Research Organisation for laying 110 KV** line through their land and alternative routes were approved only in June 1998. **The sub-station was commissioned in June 1998 with only one of the two 230 KV** incoming lines and one out of four outgoing 110 KV lines.

(iii) Though it was proposed (July 1991) to establish a 230 KV sub-station at **Sembatty and Government notification for acquisition of land was issued (May 1992), it was decided (June 1993) to establish the sub-station at Tamaraipadi as** an HT consumer offered land free of cost there. The Board, however, did not **take possession of the land, the reasons for which were not on record and instead decided (August 1994) to establish it at Sembatty itself by dismantling the existing** 110 KV sub-station.

To draw power from Sembatty 230 KV sub-station, upgradation of existing 66 KV sub-stations at Vedasandur, Natham and V.Kurumbapatty to 110 KV, **approved in August 1994, was scheduled to be commissioned by June 1996. The** works were awarded between September 1994 and July 1995, but were completed **after a delay ranging between 12 and 28 months, the reasons for which could not be ascertained.**

(iv) Though land for the Thiruvannamalai 230 KV sub-station was taken **possession in June 1993, the contract for construction of the sub-station was** awarded only in June 1995 and the contracts for laying lines were awarded over a period of 3 ½ years (June 1994 to October 1997).

(v) **Though the Board approved the proposal for single circuit line for Harur** 110 KV sub-station in July 1994, the route was finalised only in May 1995. **Line works, commenced in August 1995 were held up by stay granted by the Court (October 1995) due to objection from two land owners to erection of towers in** their lands. The Board did not obtain orders from the Collector under Section 16 **(1) of the Indian Telegraph Act, 1885, to vacate the stay as was done in other cases. As the petitioners decided to withdraw the case, the Court dismissed (July** 1996) the petitions. However, the work was resumed only in March 1997 and **completed in January 1998, whereas the sub-station had already been completed in February 1996. Line works for Manmangalam 110KV sub-station taken up in March 1994 were similarly stayed, but the Board had not obtained vacation of stay by taking recourse to the provisions of Indian Telegraph Act, 1885.**

(vi) Due to lack of proper planning and monitoring, the work on the EHT lines **for Kallakurichy 110 KV sub-station was commenced only in December 1995 and on the link lines between October 1995 and February 1998. The sub-station had** been completed in January 1996 itself along with two of the five link lines, but **commissioned only in August 1997 after completion of the EHT lines. The other link lines were completed only by December 1998.**

(vii) Though the Tiruchitrambalam 110 KV sub-station was completed in **January 1996, the EHT lines and two link lines were completed only by March 1998. Two more link lines were completed by July 1998 while the remaining lines were yet to be completed (March 1999). The delay was due to non-supply of** towers **in full shape by the Mettur Workshop of the Board.**

(viii) The Board sanctioned (June 1991) the establishment of 230 KV sub-**station at Gobichettipalayam, which would draw power from Mettur Thermal** Power Station (MTPS) through a 230 KV line estimated to cost Rs.623.20 lakh. Anticipating difficulty in getting clearance for this line, it was decided to draw power initially from the existing 230 KV Salem – Arasur line and the sub-station was commissioned (March 1995). Erection of the line from the sub-station to MTPS as originally planned was cleared (September 1993) but remained incomplete (June 1999) due to delays in approval of route map and profile, deciding on the type of contract and taking a decision to award the work. As a result, the estimated cost of the scheme on which Rs.338.43 lakh was spent till December 1998 had increased by Rs.340 lakh.

3A.7.2 Unproductive expenditure on incomplete lines

Expenditure of Rs.0.90 crore incurred on the construction of a transmission line remained unfruitful for over 4 ½ years.

(i) For the proposed 110 KV sub-station at Kelambakkam, the Board approved (November 1992) a line route of 33 KMs. Subsequently, the Board decided (December 1992) to take supply from the existing nearby Singaperumalkoil – Velacherry 110 KV DC line, due to availability of load in this line and the sub-station was commissioned in May 1993. It was noticed in Audit that a sum of Rs.2.50 lakh was incurred on earthwork excavation, stub setting, *etc*., even before the approval by the Board. The Board had ordered in December 1992 to stop the work on the original route. However, Construction Circle awarded the contracts for stub setting, tower erection between December 1992 and March 1993 in 148 locations and the erection in 46 locations were completed by October 1994 at a cost of Rs.87.10 lakh after which the work was stopped. Though it was decided to complete these line so as to have alternate source of supply, the contractors refused to resume to work at the original rates. The investment of Rs.89.60 lakh has thus remained unfruitful for over 4 ½ years.

Avoidable expenditure of Rs.0.22 crore was incurred on the erection of a transmission line due to non-compliance of the direction of Railways.

(ii) As a portion of the transmission line from Tondiarpet to Mylapore for the 230 KV sub-station at Mylapore crossed the railway line, the Board decided (June 1992) to erect overhead lines and obtained approval of the Railways in August 1992. The work of stub setting for towers was completed in all 23 locations by July 1993 but thereafter, no work was carried out. Subsequently, the Railways had informed (December 1996) the Board to obtain fresh approval before erection of towers as major development works had been carried out by them in their site, but the Board, without doing so, completed the erection of towers in March 1997. As a consequence, the Board had to convert the low tension overhead lighting feeders of the railways with underground cable and erect new high mast lighting tower at the railway site at a cost of Rs.22.07 lakh. Thus, non-compliance with the direction of the Railways resulted in avoidable expenditure of Rs.22.07 lakh.

(iii) The Board approved (January – May 1992) erection of transmission line for route length of 47.5 KMs. on selected reaches to have an alternative source to 230 KV Mylapore sub-station. Subsequently, the Board approved (April 1993) establishment of a 230 KV sub-station at Taramani and a portion of the lines was made use of for Taramani 230 KV sub-station. The works that were carried out till March 1995 in the remaining portion at a cost of Rs.17.83 lakh were discontinued thus, rendering the investment infructuous. Alternative source of supply to Mylapore 230 KV sub-station as envisaged has also not materialised.

3A.8 Urban distribution improvement schemes

3A.8.1 The Board has been implementing urban distribution improvement scheme in 23 cities/towns mainly to (i) overcome the existing distribution constraints in order to improve the voltage profile and reduce line loss, (ii) cater to the anticipated additional load growth and (iii) ensure reliable uninterrupted power supply. The PFC sanctions loans to the extent of 60 *per cent* of the scheme cost covering cost of materials.

3A.8.2 Implementation of the schemes

The table below presents the details of the urban distribution improvement schemes approved during the period 1994-95 or earlier, scheduled to be completed between 1994-95 and 1998-99, schemes actually completed and ongoing schemes as at 31 March 1999.

(Rupees in crore)

Particulars	Number	Estimated cost	Amount of loan		Anticipated benefits (MUs)	
			Sanctioned by PFC	Availed	Savings in line loss	Additional sale of energy
i) Schemes scheduled to be completed by 1998-99	19	224.11	157.39	62.20	118.52	1644.62
ii) Schemes completed	3	14.68	9.89	8.53	2.57	139.03
iii) Schemes ongoing						
a) Progress of work in respect of schemes for which details were available	12	♣45.29	110.90	41.54	101.98	1057.97
b) Schemes for which no details are available	4	NA	36.60	12.13	13.98	447.62

Audit analysis revealed the following:

(i) Based on their suo motu offer, the Board had appointed (June 1992) Esquire Engineers and Consultants Limited as consultants for evolving urban distribution improvement schemes for Trichy and subsequently (December 1994) for Madurai, Salem (Phase II) and Coimbatore at a fee of Rs.19.50 lakh. Since the Board had itself prepared such reports including for Salem Phase I with its own expertise available (which involved the same scope of work) both prior to and after June 1992, the appointment of consultants lacked justification.

(ii) Three schemes (Sivakasi, Nagercoil and Cuddalore) were completed during the period March 1997 to January 1999 with delays ranging from 9 to 39 months. The Board had not evaluated whether the benefits *viz.*, the anticipated saving in line loss (2.57 MUs.) and additional sale of energy (139.03 MUs.)had actually been realised. In the absence of details of actual cost, voltage profile and actual additional sale of energy, Audit could not arrive at the cost overrun and evaluate the extent of achievement of anticipated benefits.

Twelve urban distribution improvement schemes remained incomplete even after a lapse of 27 to 64 months.

(iii) The progress of work made in 12 schemes (estimated cost: Rs.156.19 crore) of the 16 incomplete schemes varied between 8 and 89 *per cent*. Even the land for three sub-stations for Tiruppur, Coimbatore and Thanjavur schemes though evolved between February and December 1996 had not been acquired (May 1999). As against the normal time of 2 years prescribed by PFC for completion, the schemes were incomplete (March 1999) even after 27 to 64 months. The Board had neither monitored the progress of the schemes and analysed the reasons for the abnormal time taken in executing them nor taken steps to speed up the work. Due to poor progress of the schemes, the PFC had pre-closed the loans amounting to Rs.57.10 crore sanctioned in respect of 6

♣ **Value of the work computed based on estimated cost.**

incomplete schemes (estimated cost: Rs.77.46 crore) in which the undrawn loan amounted to Rs.35.84 crore as on March 1999. Delay in completion of the schemes has resulted in non-realisation of the anticipated savings in line loss (101.98 MUs) and additional sale of energy (1057.97 MUs).

Cables (cost: Rs.0.63 crore) and conductors (cost: Rs.1.53 crore) remained unutilised for periods ranging from 22 to 35 months.

(iv) (a) Underground LT and HT cables purchased for Trichy (September – November 1995) and Madurai (July 1997) at a cost of Rs.63.20 lakh and Rs.35.94 lakh respectively could not be used as the consultant's report did not indicate the specific areas in which they were to be used and also due to field conditions like existence of telephone cables and drainage system, which the Board had not assessed beforehand. The cables procured for Trichy were diverted (November – December 1998) ultimately to Chennai region, while cables at Madurai still remained in stock (May 1999). (b) In Coimbatore out of 67 KMs of Racoon conductors for HT lines and 407 KMs of Weasel conductors procured between May and November 1997 at a cost of Rs.59.06 lakh, 18 KMs of Racoon conductors and 152 KMs of Weasel conductors only were used up to March 1999. (c) In Tirunelveli, Salem and Trichy Circles 424 KMs. of ACSR dog conductors procured between June 1995 and July 1996 at a cost of Rs.152.93 lakh remained unutilised for periods ranging between 22 to 35 months. Thus, improper planning in the purchase of conductors resulted in the investment remaining idle, while at the same time laying 259 KMs. of 11 KV HT line in ten schemes could not be completed.

(v) As part of Madurai scheme, a 16 MVA power transformer was installed in July 1998 in the existing Tirupalai Industrial Estate 110 KV sub-station at a cost of Rs.118.71 lakh for supplying power to the proposed 33 KV sub-station in Anna Bus Stand. However, it was noticed that the land for the 33 KV sub-station was acquired only in January 1999 resulting in blocking of Rs.118.71 lakh since July 1998.

Indecisiveness in selection of site for establishment of a sub-station resulted in avoidable expenditure of Rs.0.24 crore towards increase in cost of land.

(vi) Since the site offered (April 1993) by the Tamil Nadu Housing Board (TNHB) for the proposed 110 KV sub-station at Villapuram under Madurai scheme did not suit its requirement, the Board selected (April 1994) an alternative site in the same complex. As the TNHB did not agree, the Board decided (December 1995) to acquire land from private parties in nearby areas but could not identify a suitable site. The Board finally selected (December 1996) another site within the same TNHB complex and purchased it (July 1997) at a cost of Rs.59.50 lakh. The delay of 4 years and 4 months resulted in avoidable payment of Rs.24.15 lakh being the increase in cost over the original land price and also resulted in delay in execution of the project.

(vii) Though the cost of land in the estimate for the proposed 110 KV sub-station at Sandaipettai was only Rs.0.50 crore, the Board paid (September 1998) Rs.2.73 crore as determined (March 1997) by Tiruppur Municipality which owned the land. Selection of land at high cost which was more than 574 *per cent* of the estimated cost without trying for alternative land in that area and also without assessing the impact on the financial viability of the scheme, lacked justification.

3A.9 *Transmission and distribution (T&D) loss*

While carrying energy from the generating stations to the consumer through the transmission and distribution network a portion is lost on account of (i) inherent characteristic of the equipment and the conductors used for transmitting and distributing power and (ii) pilferage of energy, defective meters, unmetered supply, *etc*. In May 1992, Central Electricity Authority had prescribed a norm of a maximum of 15.5 *per cent* as T&D loss. However, the overall T&D losses as worked out by the Board during the five years up to 1997-98 ranged from 16.90 to 17.25 *per cent*. Reckoned with reference to CEA norm of 15.5 *per cent*, the excess T&D loss during the period from 1993-94 to 1997-98 worked out to 2264 MUs. (value: Rs.373.05 crore).

Overestimation of energy consumption by agricultural services to the extent of 10275 MUs resulted in underestimation of T&D loss. The excess T&D loss with reference to CEA norms worked out to Rs.2132.36 crore.

Energy sold included the computed consumption of energy by agricultural and hut services, which were unmetered. It was observed in Audit that the Board had issued instructions in August 1992 to provide meters in 3 *per cent* of the agricultural services in each revenue unit and to compute the agricultural consumption based on the actual recorded consumption in these services. Test check made in Audit disclosed that out of 33 Distribution Circles, in 15 Distribution Circles, where agricultural services were predominant revealed that 4 Distribution Circles did not follow the instructions issued by the Board. The total agricultural consumption computed in Audit based on the metered consumption in the other 11 Distribution Circles was much lower than that worked out by the Board (on the basis of supply of power for 6 hours per day for 270 days) in all the four years from 1994-95 to 1997-98 as shown in the Annexure-17.

Based on the agricultural consumption as computed above in Audit, the T&D losses worked out to 22.6 *per cent* in 1994-95, 24.9 *per cent* in 1995-96, 26.2 *per cent* in 1996-97 and 27.8 *per cent* in 1997-98 and the excess T&D loss with reference to CEA norm of 15.5 *per cent* worked out to 12053 MUs. (value: Rs.2132.36 crore).

3A.9.1 Energy Audit

The objective of identifying the areas of leakage of power in the transmission and distribution system through Energy Audit has not been achieved even seven years after issuance of guidelines by CEA.

Energy Audit enables identification of the areas of leakage, wastage or inefficient use of power by accounting for the energy available for sale and the consumption by various categories of consumers. Though CEA had issued guidelines in May 1992, it was only in February 1998 that the Board, after availing a loan of Rs.1.50 crore from PFC, implemented a scheme to install high accuracy meters in the area fed by Hosur 230 KV sub-station to conduct energy Audit in a scientific manner. Although the readings had been taken from June 1998, the results were not made use of since they were considered as neither consistent nor realistic.

It was also observed that instructions issued by the Board (January 1998) to all 34 Distribution Circles to introduce energy accounting on a monthly basis was not followed in any of the 13 circles test checked in Audit. Three Distribution Circles had expressed (June 1998) certain reservations and sought for clarification, which had not yet been issued by the Board so far (June 1999).

Thus, the objective of identifying the line loss in various stages of the T&D network through energy Audit, so as to take effective remedial measures was not achieved.

3A.10 Other topics of interest

3A.10.1 Fire accident in 230 KV sub-station at Trichy

In January 1997, one of the two 100 MVA power transformers of Crompton Greaves Limited (CGL) make in 230 KV sub-station, Trichy caught fire and was completely burnt and an 80 MVA power transformer released from service (May 1996) and kept within the sub-station was also partially burnt. There was complete shut down of the sub-station for two days (13 to 15 January 1997) and supply was resumed with the other power transformer by re-laying the burnt cables at a cost of Rs.15.58 lakh. The Board also put into service the 80 MVA transformer on 30 January 1997 after repairing it at a cost of Rs.4.58 lakh.

Failure to adopt protective measures resulted in revenue loss of Rs.1.43 crore besides avoidable expenditure of Rs.0.20 crore on cost of damages due to a fire accident in Trichy sub-station.

CGL agreed (May 1997) for free replacement which was received in January 1998 but did not agree to reimburse the cost of damages to cables, *etc*., on the ground that these could have been contained if there had been adequate fire protection measures. It was observed in Audit that protective measures required as per Indian Electricity Rules, 1956 to prevent spread of fire had not been provided in the sub-station, though the Board had issued instructions as early as in May 1988 after a similar fire accident in Singaperumalkoil 230 KV sub-station to adopt certain preventive measures. The failure in this regard resulted in revenue loss of Rs.1.43 crore (approximately) and avoidable expenditure of Rs.20.16 lakh towards cost of damages.

3A.10.2 Locking up of funds

The Board proposed (August 1983) to acquire 8.9 acres of land for expansion of 230 KV sub-station and constructing staff quarters, at Annathanapatty near Salem. Though it was aware of pending writ petition filed (December 1985) by the land owners against the acquisition of their land (3.5 acres), the Board deposited (June 1989) an amount of Rs.4.22 lakh with Revenue Department and did not pursue the matter thereafter. The action of the Board in making payment for the land in respect of which Court case was pending resulted in blocking of Board's funds of Rs.4.22 lakh for more than nine years and nine months with consequent interest loss of Rs.7.40 lakh computed at 18 *per cent per annum*.

The above observations were reported to the Board and the Government in September 1999; their replies had not been received (October 1999).

3A.11 Conclusion

In view of the considerable delays in the completion of T&D schemes, the Board has to ensure that they are closely monitored and completed as per schedule. The Board should also take effective steps to reduce the high transmission and distribution losses which increased from 22.6 *per cent* in 1994-95 to 27.8 *per cent* in 1997-98, as against the norm of maximum of 15.5 *per cent* prescribed by the CEA.

SECTION 3B

TAMIL NADU ELECTRICITY BOARD

PURCHASE OF POWER FROM BASIN BRIDGE

DIESEL ENGINE POWER PROJECT

HIGHLIGHTS

Due to unrealistic planning to add 13965 MW of generating capacity by the end of the Tenth Five Year Plan (2007) by assuming an annual growth rate of 10 *per cent* against 6 *per cent* assumed by CEA, the Board would be left with a huge surplus capacity of 3547 MW. With a commitment to take power from the private projects, the Board would have no option but to either sell the high cost power to needy States, or back down its own generating stations.

(Paragraph 3B.3)

By agreeing to pay Return on Equity monthly on a pro-rata basis instead of annually, the Board extended additional benefit of Rs.2.66 crore *per annum* to the Promoter.

{Paragraph 3B.7.1 (i)}

Incorrect computation of working capital, resulted in extra liability of Rs.7.15 crore *per annum* to the Board towards interest on working capital.

{Paragraph 3B.7.1 (ii)}

Computation of incentive payable with reference to equity, instead of return on equity resulted in extra expenditure of Rs.20.47 crore *per annum.*

{Paragraph 3B.7.1 (iv)}

Fixation of a threshold limit of Plant Load Factor at 68.49 *per cent* for computation of incentive instead of an achievable and realistic level of 80 *per cent* would result in a higher commitment of Rs.16.99 crore *per annum* to the Board.

{Paragraph 3B.7.1 (v)}

Computation of fuel consumption based on the norm for Station Heat Rate instead of on norms or actuals whichever is less (as subsequently clarified by Government of India) would result in an extra expenditure of Rs.8.56 crore *per annum* to the Board.

{Paragraph 3B.7.1 (vi)}

By allowing creation of excess storage capacity for fuel, without reference to actual requirements, the Board would be put to an avoidable extra expenditure of Rs.18.41 crore on fuel throughput charges.

{Paragraph 3B.13 (i)}

Delay in completion of a substation and lines for evacuation of power resulted in the Board having to make alternative arrangements to evacuate power at an extra cost of Rs.0.98 crore, besides losing revenue of Rs.1.16 crore due to inability to take power to the full extent from the project.

(Paragraph 3B.14)

3B.1 Introduction

In order to meet the future requirements of power estimated at 8020 MW by the end of the IX Five Year Plan (*i.e.*, 2001-2002) the State Government, in consonance with the policy of the Central Government, decided to meet a large part of the requirements (3402.46 MW) through Power Projects to be set up in the private sector. The Basin Bridge Diesel Engine Power Project (BBDEPP), with a capacity of 200 MW which was one of the proposals identified by Tamil Nadu Electricity Board (Board) was the first project to be commissioned in stages between December 1998 and February 1999 to meet the growing demand for power in Chennai.

3B.2 Scope of Audit

The planning of additional capacity to meet the power requirements of the State and matters relating to the purchase of power from the BBDEPP set up by GMR-Vasavi Power Corporation Limited (Promoter) were reviewed by Audit during the period November 1998 to April 1999.

3B.3 Demand/Supply projections and capacity addition planning

The 15th Electric Power Survey (EPS) Report (July 1995) of the Central Electricity Authority (CEA) estimated the peak load power requirement of the State at 6598 MW by the end of the IX plan (2001-2002). However, in the IX plan the State Government assessed the requirement at 8020 MW (subsequently estimated at 7388 MW by the Board) by the end of 2001-2002, based on sustained peak demand, assuming a growth rate of 10 *per cent* against 6 *per cent* assumed by the CEA, and it was planned by the Board to add capacity of 3795 MW, of which 74 *per cent* would be through private sector, to the existing capacity of 6908 MW, which would result in availability of 7585 MW (based on capacity utilisation of generating stations, *etc*.,) by 2001-2002, leaving a small surplus of 197 MW. Similarly, the requirement of power by the end of the X plan was assessed by the Board at 11899 MW (as against 8509 MW estimated by CEA) and it planned to add 10170 MW, of which 65 *per cent* would be through private sector, by 2006-2007, which would result in availability of 15446 MW, leaving a huge surplus of 3547 MW.

The capacity addition planned is likely to face the Board to back down its own generating stations.

Thus, the planning of additions to capacity was unrealistic. This is also substantiated by the fact that the actual sustained peak demand in 1998-99 was only 5196 MW as against 5551 MW estimated by the Board. If the capacity addition as planned is achieved, in view of the commitment of the Board to take specified quantum of power from the private projects, a situation would arise where it would have to try and sell the high cost power to other needy states or back down its own generating stations.

3B.4 Selection of promoter

The Board received 31 proposals through press advertisements and after evaluation short listed 8 Promoters considering their financial standing and capacity, technical competence and access to appropriate technology *etc*, and not on the basis of the lowest technically acceptable offer for the project/tariff payable. Out of the shortlist, the State Government selected (January 1995) GMR Vasavi Industries, Hyderabad to execute the project. The other 7 offers were not considered by Government on the following grounds (1) two promoters were not suitable, as they lacked experience, were not financially sound, or had not furnished full details, (2) three promoters were either executing projects elsewhere or could be considered for larger projects, and (3) two promoters, being equipment manufacturer/supplier may not go in for competitive bidding in selection of equipment.

Rejection of offers on grounds (2) and (3) above lacked justification since execution of other projects would not affect their ability to execute this project and it was possible to ensure that the promoters obtained equipment only after competitive bidding.

The Board did not insist on selection of equipment supplier through International Competitive Bidding.

In fact the Board did not insist on the selected Promoter to procure equipment for the project only after competitive bidding, and instead accepted (February 1996) their explanation that the equipment supplier was selected after discussions with several reputed manufacturers. Even after Government of India (GOI) issued instructions (June 1996) that all projects which had not finalised their Engineering, Procurement and Construction (EPC) contract should be required to go in for International Competitive Bidding (ICB), the Board did not insist on this point again, though the Promoter entered into the EPC contract only in November 1996. Thus, the Board could not obtain the most competitive offers for both the project and equipment.

3B.5 Project Cost

Against the project of 200 MW capacity at a cost of Rs.756.778 crore cleared by CEA, the PPA was entered into for a project of 196 MW capacity at the same cost.

Based on the discussions with the Promoter and the Central Electricity Authority (CEA), the project cost of Rs.747 crore as per the Detailed Project Report submitted by the Promoter, was reduced to Rs.718.3 crore (at an exchange rate of Rs.31.40 per US $). While according Techno-Economic Clearance (TEC) (July 1996), the CEA (based on the tentative financial package) fixed the capital cost at Rs.756.778 crore (at the exchange rate of Rs.34 per US $ for the foreign currency component) subject to change due to exchange rate variation, customs duties, taxes *etc* during execution. The firm financial package due for submission by the Promoter to the CEA in January 1997 was actually submitted only in September 1998 (up to which extension was given by CEA) and was still (September 1999) pending approval of CEA.

The project was scheduled to be completed in two stages, *viz.*, Unit I in 22 months and units II, III & IV in 23 months after the financial closure, which occurred on 18 June 1997. The project was commissioned ahead of schedule. Units I and II were commissioned on 31 December 1998, Unit III on 30 January 1999, and Unit IV on 15 February 1999. The promoter had indicated (February 1999) the completed project cost as Rs.877.433 crore (based on the average foreign exchange rate of Rs.42.04 per US $).

It was observed that while the capacity of the project as per TEC of CEA was 200 MW (4 units of 50 MW) at a capital cost of Rs.756.778 crore, in the PPA the capacity was indicated as 196 MW (4 units of 49 MW each) at the same capital cost. The CEA had raised (August 1999) the issue as to how the capacity of the plant was indicated in the PPA as 196 MW as against 200 MW as per its TEC and stated that this may require pro-rata reduction in capital cost. The CEA had asked the promoter to submit the performance guarantee tests to show the capacity of the plant of 200 MW. During performance guarantee tests conducted (September 1999) the rated capacity of the plant was established as 196.17 MW. The final decision of the CEA regarding pro-rata reduction in capital cost is awaited.

Based on the capital cost of Rs.718.3 crore, the tariff was worked out at Rs.2.52 per unit, with the levelised tariff at Rs.2.46 per unit for the agreement period of 15 years. The tariff projections based on the final project cost, and the firm financial package can be arrived at only after approval by the CEA. Based on the details of capital cost, financial package, fuel cost, *etc.*, as per the Tariff invoice for February 1999, (the first month of commercial operation) the tariff for the first year would work out to Rs.2.89 per unit. Taking into account the transmission and distribution loss of 17 *per cent*, the actual cost to the Board would be Rs.3.48 per unit, against the average realisation of only Rs.2.02 per unit realised in 1998-99.

3B.6 Execution of Power Purchase Agreement

The PPA was entered into on 12 September 1996 setting out the terms and conditions under which the Board would purchase the entire power generated by the BBDEPP. This was modified (26 February 1999) incorporating suitably GOI notifications amending the earlier norms for operation of Diesel Engine Generating Stations.

3B.7 Deficiencies in the Power Purchase Agreement

A review of the PPA, revealed some deficiencies in certain provisions which were not in the best interest of the Board, as discussed below.

3B.7.1 Tariff

The tariff which is payable monthly comprises of fixed charge, variable charge, incentive payment, foreign exchange adjustment and change in law adjustment. The fixed charge consists of interest on debt, depreciation, return on equity (ROE), operation and maintenance (O&M) and insurance expenses, interest on working capital, income taxes and other taxes. These are determined prospectively for each tariff year, and proportionate amounts paid each month. The variable charges represent the cost of fuel and lubricants consumed per unit of energy generated. The basis for computation of some of these items were defective, as indicated below:-

(i) Payment of Return on Equity

Payment of ROE monthly at 16 per cent works out to 17.17 per cent per annum resulting in gain of Rs.2.66 crore per annum to the promoter.

Payment of ROE to investors is normally an annual feature and hence the Board need not have agreed to pay it monthly on a pro-rata basis. Cumulative payment on a monthly pro-rata basis works out to 17.17 *per cent per annum*, as against 16 *per cent per annum* as per GOI notification, resulting in a gain of Rs.2.66 crore every year to the Promoter on an equity of Rs.227.11 crore (as per TEC of CEA).

(ii) Incorrect Computation of Working Capital

Formula adopted for computation of working capital was defective, resulting in an extra expenditure of Rs.7.15 crore per annum to the Board.

Interest on Working Capital is one of the items of fixed charge based on which tariff is determined. As per the terms of the PPA, working capital consists of the value of actual fuel stocks maintained (limited to 30 days consumption), stock of lubricating oil (60 days consumption), O&M and Insurance expenses (one month), value of spares maintained (subject to certain limits) and receivables equal to two months average billing. Receivables included inter-alia depreciation, ROE, interest on debt, O&M and insurance expenses, interest on working capital and incentive payment. Inclusion of items like depreciation (a non-cash item), incentive payments and return on equity for which no working capital is required, interest on debt which is being recovered pro-rata on a monthly basis in advance of actual date of payment by the Promoter for computation of working capital was incorrect. Likewise, including O&M and insurance expenses under both working capital computation, as well as under receivables, and interest on working capital, which amounts to allowing interest on interest, as part of working capital was also incorrect. On account of inclusion of these items in the computation of working capital, the extra liability to the Board towards interest on working capital amounts to Rs.715 lakh *per annum*.

(iii) Payment of Income Tax

The monthly payment towards fixed charges includes the estimated liability of the promoter towards Income Tax, which is payable in quarterly instalments commencing from June every year. The Board need not have agreed to make monthly payments, which would result in unnecessary payment of interest on its borrowings for working capital. The mode of payment could have been on the basis of actual payment under the provision of reimbursement clause.

(iv) Adoption of incorrect formula for computation of incentive

Computation of incentive on equity instead of ROE results in extra expenditure of Rs.20.47 crore per annum at 85 per cent PLF to the Board.

As per the GOI notification dated 30 March 1992, incentive was payable at 0.7 *per cent* of return on equity for each percentage point increase in Plant Load Factor (PLF) above 68.49 *per cent*. This rate was the maximum payable, and could be negotiated by the Board to a lower level. Though the incentive payable as per the PPA was only between 0.65 *per cent* to 0.99 *per cent* for various ranges of Plant Load Factor (PLF) between 68.49 *per cent* and above 95 *per cent*, it was agreed to be paid on equity instead of on ROE, as per the GOI orders. Since the project is to work at a minimum PLF of 85 *per cent* the incentive payable when calculated on equity of Rs.227.11 crore would amount to Rs.24.37 crore *per annum*, as compared to the incentive of only Rs.3.90 crore *per annum* payable if calculated on ROE, thus resulting in an extra expenditure of Rs.20.47 crore *per annum* to the Board.

(v) Fixation of PLF for computation of incentive

Incentive of Rs.16.99 crore per annum could have been avoided if PLF for computation of incentive had been fixed at a realistic level of 80 per cent instead of 68.49 per cent.

The threshold level of PLF at 68.49 *per cent* for computation of incentive was low in view of the fact that (i) even for the two of the Board's coal based Thermal Plants at Tuticorin and Mettur, PLF ranged between 84.52 *per cent* and 80.53 *per cent* respectively (ii) with improved technology, the present day plants could achieve a PLF of above 90 *per cent*, while the Board had committed itself to take power at 85 *per cent* PLF and (iii) in the PPA's initialled by the Board for short gestation multi fuel projects, incentive was payable only for PLF above 80 *per cent* and (iv) the GOI guidelines did not distinguish between diesel engine and coal based generating stations, while fixing the parameter for PLF.

Had the Board fixed the PLF level for payment of incentive at 80 *per cent* instead of 68.49 *per cent*, it could have avoided payment of incentive amounting to Rs.16.99 crore *per annum*.

(vi) Station Heat Rate

Fixation of SHR at a norm instead of norms or actual, whichever is lower, resulted in extra expenditure of Rs.8.56 crore per annum to the Board.

The Station Heat Rate (SHR) which is the basis for arriving at the quantity of fuel used, was determined by the CEA at 1906 Kcal/Kwhr, as per site condition based on the norm of 1900 Kcal/Kwhr fixed (November 1995) by the GOI. The PPA was based on the GOI notification dated 30 March 1992 as amended up to 14 December 1995. Article 17.1 (b) of the PPA provides that if any amendment to the notification came into effect after the date of the PPA, *viz.*, 12 September 1996, then the PPA shall be amended at the option of the promoter to reflect such change. Though GOI subsequently modified their orders that fuel consumption should be arrived at on the basis of the norm or actuals, whichever is lower, the promoter did not agree to amend the PPA accordingly. It was observed that the EPC contractor had guaranteed an SHR of 1860 Kcal/Kwhr, and the actual SHR as observed by the Board during the performance test of Unit III was only 1799 Kcal/kwhr. On this basis allowing computation of fuel consumption as per norms instead of actuals would result in an extra-expenditure of Rs.855.88 lakh *per annum* to the Board.

3B.8 Defective Rebate clause for timely payment

Due to absence of rebate clause for timely payment, the Board is liable to lose a benefit of Rs.0.36 crore per month.

As per the GOI Notification dated 30 March 1992, the Board is entitled to a rebate of 2.5 *per cent* if the tariff invoices are paid within 5 days, and 1 *per cent*, if payment is made within one month. The PPA, however, provided only for rebate of 2.5 *per cent* for payments made within 5 days. In the absence of provision for rebate of 1 *per cent* for payment made within one month, the Board is liable to lose a benefit of Rs.35.81 lakh (approximately) per month, based on the projected monthly bill of Rs.3581 lakh, if invoices are paid after 5 days, but within one month.

3B.9 Acceptance of Fuel Supply Risks

As per the GOI Notification dated 6 November 1995, the responsibility for arranging either indigenous or imported fuel would be that of the promoter, and any fuel supply risk would have to be shared between the promoter/fuel supplier, with no risk to the Board. However, the Board has undertaken, under certain circumstances, to pay deemed generation*, or permit the Promoter to issue a Buy Out notice requiring the Board to buy the project, and pay full

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* **Deemed generation means the energy the project was in a position to generate and deliver to the Board, but did not generate as a result of reasons specified in the PPA.**

fixed charges till the Buy out price is paid due to non-availability, or insufficiency of fuel beyond certain specified periods. This was not only violative of the GOI order but detrimental to the Board's financial interests.

3B.10 *Insurance*

As per the PPA, the Board has to pay as part of fixed charges O&M and insurance charges at 2.5 *per cent* of the Capital cost of the project, subject to annual escalation. Though, the promoter is required to obtain by financial closing date, and maintain insurance policies covering various kinds of risks, the PPA did not make it obligatory on the promoter to produce proof of having obtained and continuing to maintain such insurance policies, nor has the Board sought for proof in this regard.

3B.11 *Security for payment of invoices*

According to the terms of PPA, as security for payment of the monthly tariff invoices, the Board has to (i) open a letter of credit {vide Article 8.3 (b)}, (ii) establish an Escrow Account into which revenues of the Board in respect of specific circles shall be deposited {vide Article 8.4 (a)} and (iii) furnish a guarantee from the Government of Tamil Nadu as additional support for the Board's payment obligations {vide Article 8.4 (c)}. The creation of three different kinds of securities was not only redundant, but would cause avoidable burden to the Board in payment of bank commission and other charges.

3B.12 *Deemed generation*

As per Article 7.1 (a) of the PPA, deemed generation would be added to the actual generation (to the extent required to enable the project achieve a PLF level of 68.49 *per cent*) and would have to be paid for by the Board. As per the GOI guidelines, the shortfall in generation due to backing down ordered by the Board alone would count towards deemed generation, However, the PPA widened the scope to include events like grid emergencies/defects, Board's failure to approve in time proposals for making alternative arrangements for fuel whenever necessary, and political force majeure. This deviation not only was detrimental to the Board's interests but also contravened GOI guidelines.

3B.13	***Fuel Supply Agreement***

The Promoter entered into a Fuel Supply Agreement (FSA) with Hindustan Petroleum Corporation Limited (HPCL) on 4 December 1996, for supply of a maximum of 3.70 lakh MT of Fuel (LSHS/Furnace Oil) *per annum* as allotted by the GOI. The FSA was approved by the Board on 19 July 1997. The following points were noticed in Audit :-

Creation of excess fuel storage capacity resulted in extra expenditure of Rs.18.41 crore to the Board.

(i) Under the agreement HPCL was to construct storage tanks for a total capacity of 55,000 KL though the TEC accorded (July 1996) by the CEA envisaged creation of storage capacity of 30000 KL only. The Promoter has to pay charges for fuel supplied and also throughput charges (representing return on investment on dedicated fuel transportation/storage facilities and annual operation and maintenance charges) at Rs.500 lakh *per annum* for the first five years of the agreement, which would thereafter be reduced by Rs.50 lakh *per annum* for each subsequent five year period. As per the PPA, the Board has to pay the Promoter all charges payable by the Promoter to HPCL under the FSA. By agreeing to creation of excess storage capacity, the Board would be put to an extra expenditure of Rs.18.41 crore during the agreement period of 15 years, besides increased charges towards working capital.

(ii) The FSA does not provide for pro-rata reduction in throughput charges if HPCL, the seller fails to supply the maximum delivery quantity of 3.70 lakh MT of fuel *per annum*. Thus, the Board will have to bear the full throughput charges even if the fuel facilities were used only partially.

(iii) In the event fuel supplied by HPCL fails to conform to specification, the promoter can either reject or accept the fuel, but there is no provision in the FSA for appropriate reduction in the price of fuel accepted by him not conforming to specifications. This is detrimental to the interest of the Board as it would have to bear the full cost of any excess consumption of fuel due to poor quality.

(iv) As per the FSA, the supplier (HPCL) has to provide test certificates to confirm that each parcel of fuel supplied conforms to the specification. The Promoter has also the option to get the fuel tested either independently, or through a third party appointed by both. Though the PPA provides that the Lower Calorific Value (LCV), based on which consumption of fuel is computed, is to be ascertained on the basis of tests as mutually agreed to between the Board and the promoter no such testing procedure have so far been finalised. The tariff invoices were based on the LCV of 9720 Kcal/Kg intimated by HPCL in November 1998. At the time of the performance guarantee tests conducted on Unit III in January 1999, the Board tested the fuel independently, when the LCV was found to be 9927 Kcal/Kg. On this basis, the excess fuel cost paid during the period February 1999 – April 1999 amounted to Rs.53.26 lakh. Despite this, the Board has not insisted on the promoter making independent arrangements for testing the fuel. The Board is thus not in a position to ensure that variable charges for fuel claimed by the promoter are correctly arrived at to avoid substantial recurring loss besides giving room for disputes.

3B.14 Delay in completion of transmission lines

Delay in completion of facility for evacuation of power resulted in extra expenditure of Rs.0.98 crore and loss of revenue of Rs.1.16 crore.

Evacuation of power from the project was proposed (December 1996) to be done through four 110 KV transmission lines to be constructed at a cost of Rs.2845.71 lakh, later (July 1997) revised to Rs.3169.53 lakh due to change in specification of the High Court Sub-station to which one line was linked. Anticipating delay in the establishment of the substation alternative arrangements were proposed (July 1998) for linking to an existing line connecting the Chintadripet substation at a cost of Rs.98 lakh. As the line to the High Court substation has also to be constructed, as envisaged, the delay had resulted in avoidable extra expenditure of Rs.98 lakh. The Board had also agreed (September 1999) to bear the cost (not yet determined) of installing switchgear in the spare bay available in the project to evacuate power through the feeder to the High Court sub-station.

Only two transmission lines were ready before the commissioning of the first two units on 31 December 1998. Though the third and fourth units were commissioned on 30 January 1999 and 15 February 1999, the other two lines were commissioned on 24 January 1999 and 26April 1999, due to delay in receipt of cables and accessories and awarding of contracts. Due to delay in completion of transmission lines, the Board could not take power from the project to the extent of 12.606 million units in March and April 1999, resulting in loss of revenue to the extent of Rs.116.05 lakh.

3B.15 Payment for energy supplied

The project began supplying energy from October 1998. As per terms of the PPA, the Promoter is entitled to receive only variable charges for the energy supplied by each unit till Date of Commercial Operation (COD) and regular tariff for energy supplied thereafter. Since the firm financial package and the final project cost has not yet been approved by the CEA, the Board has been paying variable charges in full, but restricted the payment under regular tariff to Rs.3 per unit.

The following points were noticed:

(i) Lubricant Oil Consumption

As per the PPA lubricant oil consumption is to be calculated at 1.2 gms/kwhr. The Promoter has been computing lubricant oil consumption by taking cylinder oil consumption at 0.9 gm/kwhr and system oil at 0.3 gm/kwhr. Cylinder oil (cost:Rs.61500/Kl) is much costlier than system oil (Cost:Rs.38750/Kl) but the Board has not verified whether the ratio adopted by the promoter is reasonable.

As per amendment to the PPA dated 26 February 1999, Lubricant Oil consumption is to be based on the norms of 1.2 gm/unit, or actuals, whichever is lower, but the Board has not so far made arrangements to verify the actual consumption.

(ii) Use of LDO[1]/HSD[2] instead of LSHS[3]

As per the PPA, the permitted fuels were LSHS, LSWR[4], furnace oil and heavy furnace oil or natural gas. However, in October 1998 and November 1998, fuels such as LDO and HSD have been used, resulting in the Board incurring extra expenditure of Rs.14.05 lakh

(iii) Auxiliary Consumption

As per amendment (February 1999) to the PPA, Auxiliary consumption was to be allowed at 3 *per cent* or actuals, whichever is lower, as against 3 *per cent* in the original PPA. The Board has not so far arranged to ascertain the actual Auxiliary consumption and regulate payment for fuel accordingly.

The above observations were reported to the Board and the Government in September 1999; their replies had not been received (October 1999).

3B.16 Conclusion

Due to unrealistic planning for creation of additional generating capacity, the Board is likely to be left with a huge surplus capacity by the end of the X plan. In respect of the purchase of power under the PPA for the Basin Bridge Diesel Engine Power Project (BBDEPP) some of the terms were not in accordance with the GOI notifications, while some others were detrimental to the financial interest of the Board. The Board should therefore renegotiate some of the terms of the PPA and also consider these aspects in the other PPAs entered into/under finalisation in respect of other projects, and also reassess its plans for additions to generating capacity.

1	**LDO -**	**Light Diesel Oil**
2	**HSD -**	**High Speed Diesel**
3	**LSHS -**	**Low Sulphur Heavy Stock**
4	**LSWR -**	**Low Sulphur Waxy Residue**

SECTION 3C

TAMIL NADU ELECTRICITY BOARD

PERFORMANCE OF ELECTROSTATIC PRECIPITATORS

HIGHLIGHTS

Equipment purchased at a cost of Rs.0.28 crore to monitor the emission levels in the three Thermal Power Stations were either not installed or put to effective use after commissioning.

There was no improvement in emission levels even after installation of Integrated Operating System at a cost of Rs.0.14 crore in Ennore Thermal Power Station.

The Tuticorin Thermal Power Station had not been able to bring down the dust concentration in the exhaust flue gases within the norm of 150 mg/Nm^3 prescribed by the Tamil Nadu Pollution Control Board. Expenditure of Rs.1.71 crore on installation of Micro Processor based Integrated Controllers did not result in any improvement and was thus rendered mostly unfruitful.

(Paragraph 3C.4)

3C.1 Introduction

The Tamil Nadu Electricity Board (Board) owns and operates 4 Thermal Power Stations (TPS) with an installed capacity of 2970 MW. The Ennore Thermal Power Station (ETPS) has 2 units of 60 MW each and 3 units of 110 MW each commissioned during 1970-75. Tuticorin Thermal Power Station (TTPS) has 5 units of 210 MW each of which three units were commissioned during 1979-82 and, the remaining two units during 1991-92. Mettur Thermal Power Station (MTPS) has 4 units of 210 MW each, which were commissioned in 1987-90. The North Chennai Thermal Power Station comprises of 3 units of 210 MW each, 2 units of which were commissioned in 1994-95 and the third in 1995-96.

Excessive Suspended Particulate Matter (SPM) in the flue gases which arise from the ash content in the coal fired boilers of the TPS causes atmospheric pollution. The Government of India under the provisions of Environmental (Protection) Act 1986 had notified the following norms in respect of particulate emissions from TPS having the following generation capacity.

(i)	Generation capacity of 210 MW and above	150 mg / Nm^3
(ii)	Generation capacity less than 210 MW	350 mg / Nm^3

The Tamil Nadu Pollution Control Board had also fixed the same norms.

Electrostatic Precipitator (ESP) is a pollution control equipment which reduces the SPM. The SPM in the flue gases while passing through the precipitator are electrically ionised and are attracted towards the Discharge Electrodes. The SPM from the discharge electrodes are collected at the hoppers for onward disposal. The Board had installed ESPs which were designed, manufactured and commissioned by Bharat Heavy Electricals Limited (BHEL) in all its TPS.

3C.2 Scope of Audit

The performance of the ESP in ETPS, TTPS and MTPS during 1994-95 to 1998-99 was reviewed in Audit between March and May 1999. The findings of Audit are discussed in the succeeding paragraphs.

3C.3 *Status of Electrostatic Precipitators in TPS*

The details of total number of ESPs in position, installed capacity, Pollution Control Board Norms and Designed Norms in respect of all the three TPS are given below :

Sl. No.	Name of the TPS and Unit No	Installed Capacity (MW)	ESP Designed norm (mg / Nm^3)	PCB Norm (mg / Nm^3)
1.	ETPS			
	I	60	100	350
	II	60	100	350
	III	110	100	350
	IV	110	100	350
	V	110	100	350
2.	TTPS			
	I	210	495.0	150
	II	210	495.0	150
	III	210	275.4	150
	IV	210	149.6	150
	V	210	149.6	150
3.	MTPS			
	I	210	150	150
	II	210	150	150
	III	210	150	150
	IV	210	150	150

In ETPS the Mechanical Precipitators which were in existence were converted into Electrostatic Precipitators during 1987-89 at a total cost of Rs.2641.00 lakh. In TTPS & MTPS, the Board had installed ESPs along with the project implementation. Except in units I, II and III of TTPS, the ESPs in all the other units were designed to achieve the emission norms fixed by the PCB. The measures taken by the Board to augment these three units and the performance of ESPs are discussed in paragraph 3C.4.

3C.4 *Performance of ESPs*

The details regarding the actual SPM in the stack emissions of the three TPS during the last five years up to 1998-99 are given in the table below:

Stack Emission Survey Result for the period from 1994-95 to 1998-99.

Range of SPM (Mg/Nm^3) in ETPS, TTPS and MTPS units.

Year	Unit I		Unit II		Unit III		Unit IV		Unit V	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
ETPS										
1994-95	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1995-96	140	271	120	298	180	270	166	260	146	305
1996-97	82	326	217	340	270	340	171	340	78	327
1997-98	162	205	220	250	221	270	225	284	225	286
1998-99	176	220	190	225	210	250	200	250	216	270
TTPS										
1994-95	214	509	182	831	212	773	43	846	68	541
1995-96	206	484	181	691	160	505	27	502	43	268
1996-97	290	672	245	664	114	656	32	380	89	282
1997-98	285	804	165	970	165	973	35	158	50	161
1998-99	293	801	117	803	213	817	37	162	35	139
MTPS										
1994-95	108	580	155	304	229	891	325	969		
1995-96	45	258	126	806	70	580	73	806		
1996-97	29	146	19	148	30	147	45	148		
1997-98	12	140	64	147	12	147	24	145		
1998-99	63	142	125	149	135	149	140	149		

The efficiency of ESP depends on velocity and temperature of the flue gas, ash content of the coal and types of controllers used for ESP. The non-achievement of designed efficiency was stated to be mainly due to higher ash content of the coal. The ESPs were designed based on ash content of coal between 25 *per cent* to 34 *per cent*, whereas the coal actually used had ash content of around 45 *per cent*.

It was observed in Audit that even with the use of coal with high ash content, there were wide variations in the emission level in all the units, which leads to the conclusion that high emission levels could be controlled to a large extent by ensuring optimum velocity and temperature of the flue gas. However, the Board had not ascertained whether these were maintained at optimum levels and institute remedial measures so as to improve the efficiency of the ESPs and control excessive emissions.

The Board had installed Visible Monitoring Systems (VMS) between 1988 and 1997 at a cost of Rs.27.95 lakh in all the three TPS in order to continuously monitor emissions from the TPS and provide warning of excessive emissions, which would facilitate check of emissions and performance of the ESPs. It was observed that in TTPS, out of four units supplied in June 1991 at a cost of Rs.8.51 lakh, only one unit was commissioned in September 1997. The supplier Keltron Controls Limited had not yet commissioned the remaining three units.

Equipment installed at a cost of Rs.0.28 crore to continuously monitor emission levels were not put to effective use.

Readings of VMS in ETPS were not being recorded as the system was stated to be not in order and the readings were erratic and abnormal. The supplier has not responded to the Board's request to rectify the defects so far. Readings were also not being taken from the unit in TTPS, the reasons for which were not on record. The readings from the VMS in MTPS showed wide variation from the readings taken manually by the Technical Services Section (which alone is being communicated to the PCB), and the half-yearly readings taken by the PCB vide Annexure-18. The Board had not ascertained the reasons for the variations so as to rectify the defects. Consequently, the Board had to depend on conventional readings. Thus, the expenditure of Rs.27.95 lakh on installation of VMS had not served the purpose of effectively monitoring emission levels.

The performance of the ESPs in the three TPS are discussed below:

(i) ETPS

(a) Though the SPM in ETPS was within the PCB norm, it exceeded the design norm by up to 240 *per cent*. BHEL, Ranipet informed (March 1993) the Board that as result of their R&D efforts, they had developed an Integrated Operating System (IOS) which would be more effective in collecting the dust besides reducing power consumption. The system was installed in unit V in August 1996 at a cost of Rs.14.20 lakh. Even after installation of the IOS, there was no improvement as the emissions continued to be in the same range as earlier. Even when compared with the units of same capacity where the IOS was not installed the results did not show any improvement as indicated below:

(in mg/Nm^3)

Unit No.	1994-95	1995-96		1996-97 (up to 8/96)		1996-97 (9/96 – 3/97)		1997-98		1998-99	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
III	N.A.	180	270	296	340	270	N.A.	221	270	210	250
IV	N.A.	166	260	247	340	171	301	225	284	200	250
V	N.A.	146	305	225	291	78	327	225	286	216	270

The Board had neither analysed the reasons for the poor performance in order to take remedial action nor made any arrangements to verify whether there was any savings in power consumption as anticipated. Thus, the Board had not derived any benefit from the system installed at a cost of Rs.14.20 lakh.

The emission levels in 3 units of TTPS was in excess of norms prescribed by PCB.

(ii) TTPS

The emission level in TTPS was always more than the PCB norms in respect of Units I, II and III. The emission level in Unit IV and V was within the PCB norms in certain months but was more by as much as 649 *per cent* in certain other months. Out of the readings taken on 282 occasions during the period 1994-95 to 1998-99 in TTPS, emission levels were in conformity with the norms only on 75 occasions while it exceeded the permissible limit on 207 occasions. The PCB had also pointed out during their inspections that the ESPs were not being operated to the full capacity and stressed the need to increase the field area of the ESPs. A show-cause notice was also issued by the PCB in February 1997 for violating the PCB norms.

The Board proposed (March 1991) to replace the existing ESP controllers (Units I, II and III) with Microprocessor based Integrated Controllers (MIC) and fill up the dummy zone in Unit III at an estimated cost of Rs.250 lakh in order to reduce the emission level besides reducing the energy consumption of ESPs in the first phase and provide additional parallel fields in the second phase. After calling (November 1992) for limited tenders, orders were placed (August 1994) on BHEL in respect of works contemplated in the first phase at a cost of Rs.170.83 lakh. The work was completed in October 1996.

BHEL had in their offer guaranteed 20 *per cent* reduction of SPM and also 40 *per cent* reduction in power consumption but during discussions BHEL had stated that the emission level would come down by 40 *per cent*. During the performance guarantee test conducted in June 1997, the MIC had achieved a reduction in SPM of 29 *per cent* to 45 *per cent*, reduction in power consumption of 50 *per cent* to 58 *per cent* and reduction in dust emission achieved in unit III after filling up the dummy zone was 43 *per cent* against 33 *per cent* guaranteed. The details of SPM before and after the installation of MIC and filling up of dummy fields are as given below:

(in mg/Nm^3)

Year	I		II		III	
	Min.	Max.	Min.	Max.	Min.	Max.
Prior to installation 1996-97 (Up to October 1996)	290	657	245	646	322	656
After installation 1996-97 (November 1996 to March 1997)	467	672	456	664	114	556
1997-98	285	804	165	970	165	973
1998-99	293	801	117	803	213	817

Reduction in emission levels achieved during guarantee tests of equipment installed at a cost of Rs.1.71 crore was not maintained.

Even after the installation of MIC and filling up the dummy field, the pollution was not reduced to the level anticipated as lower emission levels were achieved only on a few occasions. The Board had not conducted any study to ascertain the reasons for the MIC not maintaining the reduction achieved during guarantee tests. Thus, the expenditure incurred on installation of MIC had not served the main purpose. The proposal to install three additional ESPs in the second phase at an estimated cost of Rs.65.50 crore to be completed by September 1999 was sent (November 1997) by the Chief Engineer / TTPS to the Board's Headquarters which was awaiting sanction (May 1999) by the Board.

(iii) MTPS

In MTPS, the SPM was more than the norm by up to 512 *per cent* in certain months during the period 1994 to 1996. After installation of MIC in Unit I in June 1994 and Units II, III and IV in January 1996 supplied by BHEL at a cost of Rs.200 lakh, the SPM levels were within norms (except in two months, *i.e.*, January 1995 and January 1996 in respect of Unit I) prescribed by the PCB.

The above observations were reported to the Board and the Government in August 1999; their replies had not been received (October 1999).

3C.5 Conclusion

The Board should analyse the reasons for wide variations in emission levels and take steps to improve the efficiency of the ESPs in order to obtain the maximum benefits from the equipment (IOS and MIC) installed in the TPS. The VMS installed in the TPS should be rectified, so that reliable data is available for continuous monitoring of emission levels. The Board should speedily implement the scheme to install additional ESPs in TTPS so as to ensure that the emission level meet the PCB norms.

CHAPTER 4

MISCELLANEOUS TOPICS OF INTEREST RELATING TO GOVERNMENT COMPANIES AND STATUTORY CORPORATION

SECTION 4A: **GOVERNMENT COMPANIES**

SECTION 4B: **STATUTORY CORPORATION**

SECTION 4A

TAMIL NADU POWER FINANCE AND INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED

4A.1 Non recovery of term loan due to violation of guidelines

Sanction of loan to an unviable wind farm project and release of loan in violation of guidelines resulted in non-recovery of term loan, interest and penal interest amounting to Rs.374.84 lakh

The Company amended its Memorandum and Articles of Association (June 1995) to diversify its activities to provide financial assistance to small wind farm projects developed by private sector organisations. Accordingly, Board of Directors of the Company decided to grant loan and issued guidelines (June 1995), which *inter alia*, provided:

(a) Proof of agreement with Tamil Nadu Electricity Board (TNEB) for power purchase be obtained from the borrower prior to sanction of loan and

(b) Necessary condition be incorporated in Power Purchase Agreement (PPA) to safeguard the repayment of loan to the Company in case of default either through power consumption bills raised by TNEB or adjustment against payments to be made by TNEB for power generated by the said windmill.

However, it was observed that the Company sanctioned (September 1995) a loan of Rs.300 lakh to NEPC Micon Limited to install 1 MW wind farm project at Nallurpalayam, Coimbatore district without fulfilling the conditions at (b) above. On evaluation of the project, further, it was found that the project was unviable on its own profitability and depended on other profitable operations.

An agreement was entered into with NEPC Micon on 27 September 1995 for the term loan repayable in 5 years along with interest at the rate of 17 *per cent* after a moratorium period of one year. Only after signing the agreement, the Company addressed TNEB (28 September 1995) to incorporate the condition to safeguard its interest to recover the dues, in the PPA (entered by TNEB with NEPC Micon), and on the assumption that it would be approved, released Rs.225 lakh (29 September 1995). However, TNEB refused to comply as the same was not feasible (November 1995). Despite this, the Company released the balance amount of Rs.75 lakh (December 1995).

As NEPC-Micon repaid only an amount of Rs.25.87 lakh towards interest till 31 March 1997 and defaulted in payment of principal due amounting to Rs.30 lakh, the Company issued notice initially in May 1997. In view of continued default, a suit for recovery of the loan amount along with interest and penal interest amounting to Rs.374.84 lakh as on 31 March 1998 was filed with High Court, Chennai (April 1998).

Thus, sanction of loan ignoring the appraisal report, release of loan disregarding the guidelines as prescribed by the Board of Directors of the Company resulted in non-recovery of Rs.374.84 lakh.

The matter was reported to the Company and the Government (August 1999); their replies had not been received (October 1999).

TAMIL NADU INDUSTRIAL INVESTMENT CORPORATION LIMITED

4A.2 Non-recovery of overdues due to irregular sanction of term loans

Grant of term loans without adequate collateral security and failure to verify purchase/creation of assets resulted in non-realisation of overdues amounting to Rs.141.39 lakh.

In August 1994 and January 1995 the Company sanctioned term loans of Rs.104 lakh to two parties (Rs.50 lakh for the first party and Rs.54 lakh for the second party) for the purchase of LPG tankers to be mounted on second hand chassis. The terms of sanctions *inter alia* stipulated the following conditions:

i) Prescribed collateral security to be provided by the both parties and

ii) Proportionate contribution of 35.82 *per cent* of the loan to be brought by the first party before taking delivery of the vehicle.

The Company disbursed Rs.15.85 lakh and Rs.52.32 lakh to these parties during December 1994 to June 1995. However, due to heavy overdues and non-production of vehicles for inspection, the Company foreclosed* the loan accounts in February and March 1997. It was also reported (January 1998) by the Internal Audit of the Company that both the parties had not purchased any asset.

The following observations are made:

* **Closure of loan account due to default in repayment of loan to initiate legal action for recovery of overdues.**

The term loan for the first party was disbursed without due verification of the primary condition *viz*. Contribution to be brought in, and based on the statement in their Balance Sheet that Rs.14.41 lakh was paid towards advance to suppliers for purchase of chassis. The collateral security originally offered (house property and a plot owned by the borrower and his wife) by the first party was also permitted to be changed allowing them to offer a land which was purchased after the date of sanction.

The land purchased by both of the borrowers on 7 September 1994 under the same survey number for Rs.50000 and Rs.45000 were accepted at an inflated value of Rs.27.23 lakh and Rs.70 lakh respectively to satisfy the primary condition of collateral security. The Company's efforts to sell the collateral securities in both the cases did not fructify. Further, no legal action has been taken so far.

Thus, the Company's decision to extend loans without due verification and failure to safeguard their interest resulted in non-recovery of over dues amounting to Rs.141.39 lakh.

The matter was reported to the Company and the Government in August 1999; their replies had not been received (October 1999).

4A.3 Non-recovery of overdues

Company's decision to extend loan without adequate collateral security and failure to monitor timely renewal of Insurance Policy had resulted in non-recovery of over dues amounting to Rs.141.33 lakh

A term loan of Rs.72 lakh was sanctioned (August 1994) to East Pacific Safety Industrial (Private) Limited, for manufacture of leather gloves at Urapakkam with a condition that the promoters had to offer the property with a value not less than 25 *per cent* of the term loan as collateral security. However, the Company released (October – December 1994) Rs.70.99 lakh as term loan against the collateral security of land measuring 9.03 acres valued at Rs.1.93 lakh as per guide line value and Rs.20.32 lakh as per market value. Though, the Company goes by guideline value while considering the security, it was decided to value the property based on market value as

the loanee expressed inability to offer any other security and requested to accept the property at market value;

the guideline value was insufficient (2.68 *per cent*) and did not satisfy the stipulated conditions; and

one of the promoters was a Non-Resident Indian.

Further, as per the terms of sanction the borrower had to insure the mortgaged properties (Rs.77.78 lakh) against loss or damages by fire, riot, *etc*., during the currency of loan. Due to fire that broke out in the factory in June 1997, certain machines mortgaged to the Company were damaged. Thereafter, the unit stopped functioning. Though the system of follow-up and recovery required monthly inspection of assisted units, the Company noticed the non-renewal of policy only after the event.

In view of mounting overdues the account was foreclosed in October 1996 and the unit was taken in possession (July 1998). Only machinery worth Rs.9.38 lakh was found at the premises and other machineries were stated to be lost in fire and theft.

The Company's efforts to realise the dues by selling the land, buildings and plant and machinery did not fructify.

Thus, acceptance of inadequate collateral security ignoring the Company's financial interests and failure to ensure renewal of insurance policy resulted in non-realisation of overdues amounting to Rs.141.33 lakh as on 31 March 1999 (principal: Rs.70.99 lakh and interest: Rs.70.34 lakh).

The matter was reported to the Company and the Government in August 1999; their replies had not been received (October 1999).

4A.4 Irregular sanction of term loan

Release of term loan overlooking defective title to land and without ensuring adequate security resulted in non-realisation of dues amounting to Rs.88.71 lakh

The Company sanctioned (January 1994) a term loan of Rs.58 lakh to Sri Mookambika Hotels (Private) Limited for setting up a non-star category hotel at Salem. The borrower offered the land on which the hotel was proposed as collateral security. Scrutiny of the documents of title by Company's lawyer (October 1994) revealed that the borrower did not possess clear and unimpeachable title for the land and hence it was decided not to finance the project. Based on the representation of the promoter that he had already spent Rs.40 lakh for construction, the Company re-examined the issue and decided (March 1995) to grant the loan subject to the condition that additional collateral security equivalent to the loan value is offered by the promoter. As against 100 *per cent* security as stipulated in the sanction order, the Company released Rs.42.69 lakh (April 1995) after obtaining additional collateral security only to the extent of Rs.20.27 lakh in the form of land and buildings.

The construction of hotel was not yet completed and the Company foreclosed (November 1998) the loan as the promoter had not made any payment.

Eventhough, the outstanding dues accumulated to Rs.88.71 lakh as on 31 March 1999, the Company had neither invoked personal guarantee nor taken any action to realise the additional collateral security.

Thus, irregular sanction of loan to a promoter despite knowledge of the defective title to the land and failure to obtain adequate security for recovery resulted in non-realisation of Rs.88.71 lakh.

The Company in reply (May 1999) had stated that legal action has been initiated under SFC Act and steps were being taken to sell the primary assets and also to dispose off the collateral security if required. However, the fact remains that the marketability of the primary assets without clean title is doubtful and the value of collateral security (Rs.20.27 lakh) was grossly inadequate to cover the overdues of Rs.88.71 lakh as on 31 March 1999 (principal: Rs.42.69 lakh and interest: Rs.46.02 lakh).

The matter was reported to Government in July 1999; their replies had not been received (October 1999).

TAMIL NADU BACKWARD CLASSES AND MINORITIES ECONOMIC DEVELOPMENT CORPORATION LIMITED

4A.5 Non-recovery of loan

Disbursal of loan without safeguards and failure to initiate timely legal action resulted in non-recovery of Rs.104.02 lakh

By availing financial assistance of Rs.78.72 lakh from National Backward Classes Finance and Development Corporation (NBCFDC), the Company extended a scheme to improve the business of fisherwomen under which a term loan was given to 11246 beneficiaries. The loan of Rs.101.11 lakh was distributed (November 1993 – February 1994) to 13 Co-operative Societies based on agreements entered into with them and against mortgage of their (society's) land and buildings.

As per the agreement deed entered into with the societies, the loan was to be repaid with 6 *per cent* interest in 20 monthly instalments (ending with October 1995) failing which the Company could initiate legal proceedings for recovery of outstanding dues. As against the total dues of Rs.108.12 lakh (including interest and service charges) as on 31 March 1999 only a sum of Rs.4.10 lakh was recovered.

However, it was observed that as per the instructions issued by the State Government (December 1993), the Company was to enter into individual agreement with adequate provision for mortgage with primary members of Fisher Women Co-operative Society. However, the Company did not do so but entered into agreement with societies themselves and accordingly released the loan to the Special Officers of the co-operative societies based on the mortgage deeds furnished by the societies.

As a result, the Company in spite of poor recovery of overdues, could not initiate any legal action against the individual fisherwomen nor the mortgage deeds furnished by the societies could be enforced in view of non-renewal of the same in time.

Thus, disbursal of loan by the Company without safeguarding its interest by way of not entering into any agreement with the concerned parties (primary members) and without ensuring adequate guarantee/security, and failure to take timely legal action resulted in non-recovery of Rs.104.02 lakh. However, the Company repaid in full the funds received from NBCFDC pending recovery of the same from the beneficiaries.

The matter was reported to the Company and the Government in July 1999; their replies had not been received (October 1999).

TAMIL NADU CEMENTS CORPORATION LIMITED

4A.6 Unfruitful investment on engagement of software consultant

The Company failed to achieve the benefit of integrated computer system due to improper selection of consultant and extension of liberal payment terms in violation of Government guidelines, which had resulted in an infructuous expenditure of Rs.30.85 lakh. Consequently, the hardware costing Rs.66.58 lakh could not be utilised effectively.

To achieve 'online' system inter-linking all sub-systems to get overall Management Information, the Company decided (July 1994) to inter-link the sub-system into an integrated system so that relative data information could be generated by computer itself at the respective areas.

After calling for limited tenders, the offer of DISC Information Technology, New Delhi was found to be the most complete one as compared to others. Hence, the work of development of software modules at various units and covering different operations was given in piecemeal to DISC during August to November 1994, involving a cost of Rs.32.91 lakh. Orders were also placed (September 1994 and November 1994) with HCL on the advice of consultant for purchase of computers, site preparation and cabling at a cost of Rs.66.58 lakh which were supplied/completed in March 1995, October 1995 respectively.

In violation of the guidelines issued (January 1994) by the State Government regulating the payment to software consultants in stages depending on progress, the Company released a total payment of Rs.30.85 lakh without monitoring the progress of work.

Though the consultant had to complete the entire operations before June 1995, a major part of the work remained incomplete and the completed modules also required modification/restructuring. Further, the source codes for the software developed were retained by the consultants rendering the completion of balance work impossible. In view of this, the Company could not switch over to the new system even after a lapse of more than four years. In the absence of any provision in the contract for claiming damages for non-fulfillment of obligations, the Company could not enforce any claim for damages.

Considering the inordinate delay in completion, legal notices were issued (July 1997 and March 1998) to the consultant for which there was no response. Consequently, the Company failed to achieve the benefits of integrated computer system due to improper selection of consultant based on limited tender and not on open tender and the payment of Rs.30.85 lakh without adequate safeguards, thus became infructuous. Further, the hardware costing Rs.66.58 lakh could not be utilised effectively due to non-installation of connected softwares.

In reply, the Government accepted (July 1999) the fact that the work of software development had not borne fruit due to total failure of DISC both in organisational and managerial angle. The Government contended that the guidelines for purchase of computers was released later to the whole process of procurement of hardware and appointment of software consultant for computerisation, which is not acceptable in view of the fact that the revised guidelines were issued on 10 January 1994 *i.e.*, well before the finalisation of the orders in August to November 1994.

TAMIL NADU LEATHER DEVELOPMENT CORPORATION LIMITED

4A.7 Non-collection of lease rent

Leasing of land without determining lease rent and adequately safeguarding Company's interests resulted in non-recovery of rent amounting to Rs.29.57 lakh

Based on the request from the TALCO Estate Manufacturers Association to set up a Common Effluent Treatment Plant (CETP), the State Government directed (April 1996) the Company to lease out 1.03 acres of land at Madhavaram Industrial Estate to the Madhavaram Leather Manufacturers Facility (Private) Limited (MLMF).

The interim agreement (April 1996) entered into with the MLMF at the time of leasing of land inter alia, provided that the lease amount and terms and conditions shall be fixed by the Company with the approval of the Government and the Company shall have the rights to disconnect the functioning of the CETP in case of violation of the terms and conditions or non-payment of lease rent. Pending further decision on lease rent, the land was handed over to the party and CETP was commissioned.

The Company after ascertaining the market value of the land from Revenue Authorities, determined (August 1997) the lease rent at Rs.75826 per month and claimed (August 1997) the dues. Though, the CETP was constructed and started functioning, the MLMF represented that (October and December1997) the allotted land was part and parcel of the basic infrastructural development and requested to give away the land on free of cost. As the lessee had no intention to settle the dues, the Company explored other possibilities of recovering the rent which were not successful. The lease rent dues accumulated to Rs.29.57 lakh (July 1999).

Thus, handing over the land without fixing the lease rent (lease amount and terms and conditions were to be fixed by the Company with the approval of the Government) and failure to safeguard the interest of the Company by obtaining security deposit/bank guarantee resulted in non-recovery of lease rent amounting to Rs.29.57 lakh.

The matter was reported to the Company and the Government in August 1999; their reply had not been received (October 1999).

ELECTRONICS CORPORATION OF TAMIL NADU LIMITED

4A.8 Loss due to non-inclusion of exchange rate variation clause in agreement

Failure of the Company to ensure inclusion of the exchange rate variation clause already quoted in its offer, in the supply order resulted in loss of Rs.29.25 lakh

The Company offered to supply wireless equipment, after importing from Japan to the Police Radio Officer, Police Department, Chennai for a total value of Rs.326 lakh on 14 November 1994. The Company in their offer had stated that any price increase due to exchange rate variation would be claimed from the purchaser. However, agreements were executed (November 1994) on firm price basis without provision for claim of the exchange rate variation. An amount of Rs.293.40 lakh was received (December 1994 and January 1995) towards 90 *per cent* advance and supplies completed between April 1995 and May 1997.

Due to delay in obtaining the import licence by the Police Department (March 1995), there was an appreciation in the exchange rate of Yen by 16.5 *per cent* as compared to the price quoted in the offer. The Company reiterated their conditions in the offer and claimed (June 1996) the additional outgo due to exchange rate variation at actual, which amounted to Rs.29.25 lakh. However, the claim was rejected by the purchaser (September 1996) as there was no provision in the contract for price variation due to increase in foreign exchange rate.

Eventhough the matter was taken up with the State Government in June 1996 to intervene and expedite payment of 10 *per cent* balance and the escalation in cost due to foreign exchange, there was no progress so far (April 1999).

Thus, the failure of the Company to include suitable provision in the agreement for claim of exchange rate variation resulted in loss of Rs.29.25 lakh to the Company. Further, the balance of 10 *per cent* amounting to Rs.32.60 lakh remains unsettled (October 1999).

The Government in their reply (July 1999) while accepting the non-inclusion of the clause in the supply order stated that the claim for exchange rate variation was being taken up again and the balance 10 *per cent* of the contract amount was pending recovery only due to administrative delay.

TAMIL NADU CIVIL SUPPLIES CORPORATION LIMITED

4A.9 Non-recovery of cost of empty gunny bags

Lack of effective action for retrieval of gunny bags from Noon Meal Centres resulted in non-recovery of 24.19 lakh gunny bags valued at Rs.267.56 lakh

The Company was entrusted (July 1985) by the Government with the responsibility of direct distribution of food articles like rice, dhall, *etc*., to noon meal centres in the State set up under the Chief Minister's Noon Meal Programme.

Since the cost of the supplies was exclusive of the value of gunny bags, the centres were required to return the empty bags to the Company's godowns in the respective taluks. In the absence of a system for timely return of gunny bags, the number of unreturned empty serviceable gunny bags got accumulated over the years.

A comment on the non-collection of empty gunny bags (15.21 lakh gunny bags valued at Rs.101.44 lakh) was included in the Report of the Comptroller and Auditor General of India (Commercial) for the year ended 31 March 1989. The Committee on Public Undertakings in its recommendations contained in 287th Report of 1995-96 called for expeditious action considering the delay involved in collection.

A review of the action taken by the Company revealed that though periodical circulars/instructions were issued to all Regions either to retrieve the old gunny bags from the centres or recover the cost thereof from persons responsible, it proved futile as no effective action/monitoring was exercised at the field level. As a result, a total number of 24.19 lakh gunny bags (August 1985 to November 1998) valued at Rs.267.56 lakh remained unreturned by the centres.

Thus, failure of the Company to evolve a system to ensure timely return of gunny bags relating to earlier supplies before releasing fresh supplies and lack of monitoring resulted in non-recovery of Rs.267.56 lakh.

The matter was reported to the Company and the Government in July 1999; their replies had not been received (October 1999).

4A.10 Non-adherence of terms of contract in the purchase of dhall

Extra expenditure of Rs.128.24 lakh on purchase of dhall from other sources due to unilateral revocation of contract.

The Company entered into an agreement (June 1988) with Tamil Nadu Consumer Co-operative Federation (TNCCF) for the purchase of 12500 MTs. of masoor dhall at Rs.5998 per tonne for the Tamil Nadu Government Noon Meal Programme.

According to clause 5 of the agreement a confirmed Letter of Credit (LC) was to be opened for the full value of the contract (Rs.7.5 crore) and supplies effected in two stages *i.e.*, 60 days/90 days from the date of opening of LC. However, the Company initially opened a revolving LC for Rs.75 lakh (June 1988) and later increased to Rs.3.75 crore (August 1988) payable up to Rs.7.5 crore. As TNCCF felt that the revolving LC established was against their interest, which in turn affected their opening a LC in favour of their suppliers, they refused to execute the order.

The Company, in view of inadequate stock of dhall, purchased the quantity from other sources at the risk and cost of TNCCF and claimed (December 1988) the extra expenditure of Rs.128.24 lakh on the purchase (August to November 1988), which was declined (April 1989) by TNCCF.

While the dispute was referred to an arbitrator (February 1990) for settlement as per agreement, the Company also referred the matter to the Government. The arbitrator in his award (May 1991) ordered that the Company was entitled for a claim of Rs.89.16 lakh towards consequential loss as TNCCF had failed to supply within 60 days from the date of LC. Against this, TNCCF filed a petition in the High Court to set aside the award while the Company filed a suit (August 1991) to pass a decree implementing the award.

The Government (November 1994) ordered that TNCCF was not obliged to pay any damages on the ground that the revolving LC opened by the Company was for only 10 percent of the total value which violated the terms of contract besides the purchase of dhall even before expiry of 60 days limit for supply (11 October 1988) amounted to unilateral revocation of contract.

The decision was accepted by both the parties who withdrew their respective cases pending before High Court (August 1996 and June 1997).

Thus, due to opening of the LC by the Company in violation of the terms of agreement and the subsequent revocation of the contract unilaterally resulted in purchase of dhall at an extra cost of Rs.128.24 lakh.

The matter was reported to the Company and the Government in July 1999; their replies had not been received (October 1999).

TAMIL NADU SALT CORPORATION LIMITED

4A.11 Performance of Iron Fortified Salt unit at Alathur

Establishment of an additional unit of Iron Fortified Salt (IFS) without assessing the viability and exploring market potential resulted in under-utilisation of facilities besides incurring loss of Rs.23.18 lakh

The Company set up (January 1991) a salt unit with a capacity of 10000 MTs. at Valinokkam (Unit I) for producing IFS to cater to the Noon Meal Centres and other welfare programmes. In order to meet the anticipated demand, another plant with a capacity of 6000 MTs. was set up (August 1991) at Alathur (Unit II) at a cost of Rs.24.27 lakh. The second unit was expected to earn a profit of Rs.21 lakh *per annum.*

During the period from 1994-95 to 1998-99, the total production of IFS in Unit I was 12763 MTs representing 25.5 *per cent* of its capacity and 7022 MTs was produced in Unit II representing 23.4 *per cent* of its capacity.

Thus, the total demand could have been met by Unit I itself. Moreover, the Company was transporting raw salt for Unit II from Unit I at a distance of 650 KMs., involving additional cost of Rs.341 per MT. Consequently, the cost of production of IFS at Unit II was very high compared to Unit I leading to loss of Rs.23.18 lakh during the last five years as against the expected profit of Rs.21 lakh *per annum.*

After the Audit pointed out (April 1999) under-utilisation of Unit I and II and higher cost of production at Unit II, the Company decided to wind up the Unit II at Alathur and shift the operation to Unit I.

The matter was reported to the Government in August 1999; their replies had not been received (October 1999).

4A.12 Loss due to production of salt in inaccessible beds

Failure to create approach roads to transport the produce resulted in washing away of salt involving loss of Rs.19.05 lakh

As part of the development programme for increasing the salt production at Chippikulam Salt Unit, the Company decided (1991-92) to develop 150 salt beds under Phase II at a cost of Rs.15.33 lakh. Though the salt beds were developed, the necessary infrastructure facilities like roads for movement of salt produced were not developed.

Hence, the produce could not be removed from the salt beds when the production commenced in 1992-93, due to non-availability of roads for movement of vehicles. On account of this, the Company could not produce salt from 1994-95 to 1996-97 rendering the project developed specially for increasing the production idle. Out of 10501 MTs of salt produced during 1992-93, 1993-94 and 1997-98 and stored in heaps, a quantity of 7972 MTs of salt was washed away by rains resulting in loss of Rs.19.05 lakh. The Company could sell the balance quantity of 2529 MTs only by carting to accessible points.

Thus, failure of the Company to ensure creation of well laid roads in the Company's production area to transport its produce from the salt beds to the main roads to facilitate marketing, before commencement of production or make suitable arrangement for carting the salt from the beds to accessible points for sale resulted in loss by rain amounting to Rs.19.05 lakh.

The Company in reply (June 1999) had stated that it had taken up the road works in Chippikulam Salt Unit Phase II during 1998-99.

The matter was reported to the Government in May 1999; their replies had not been received (October 1999).

TAMIL NADU SMALL INDUSTRIES DEVELOPMENT CORPORATION LIMITED

4A.13 Locking up of funds

Faulty decision of the Company to purchase land along with constructed godowns without securing its interests resulted in blocking of Rs.17.27 lakh, which is quite doubtful of recovery besides loss of interest of Rs.16.38 lakh

Considering the space limitation in the existing rented premises at Raw Material Sub Depot, Kovilpatti, it was decided (May 1993) by the Company to purchase land measuring 0.695 acre alongwith constructed godowns thereon from a private party at an estimated cost of Rs.29.29 lakh including Registration Charges of Rs.3.82 lakh.

However, before finalising the purchase, Canara Bank, as creditors of the vendor, informed the Company (August 1993) that the said property was attached by

Court for dues and there was an injunction against sale of the property and offered to have the injunction vacated if its dues were settled. Without safeguarding its interest, the Company released Rs.11.42 lakh to the Bank (January 1994), Rs.2.45 lakh to two other creditors and Rs.0.09 lakh as property tax arrear to Municipality at the request of landowner. The Company also paid an amount of Rs.3.31 lakh towards Stamp Duty and other charges. The final payment of Rs.11.51 lakh to the landowner was, however, withheld due to the refusal (February 1994) of the Sub-Registrar to register the transfer for want of Income Tax clearance certificate. Further, the Income Tax Department informed (July 1994) that the property was attached for non-payment of tax dues amounting to Rs.12 lakh and restrained the vendor from transfer of property until further orders. The Company was also restrained by High Court orders (August 1994) from executing the property transaction based on a Public Interest Litigation on the ground that the Company is making payment of Rs.29 lakh against the market value of Rs.4 lakh.

The Company made a fresh assessment (April 1998) of the need to purchase the property (May 1998) and concluded that the continuance in the rented premises was a cheaper proposition which worked out to less than one *per cent* of the purchase value of the property.

Thus, failure of the Company to ensure clear title before releasing payment and the decision of the Company to purchase the property without assessing the economic viability and need for own depot resulted in locking up of Rs.17.27 lakh, which is quite doubtful of recovery besides loss of interest (from January 1994 to October 1999 at the rate of 16.5 *per cent*) of Rs.16.38 lakh.

The matter was reported to the Company and the Government in May 1999; their replies had not been received (October 1999).

4A.14 Loss due to purchase of inferior quality coke

Purchase of poor quality coke from Bharat Coking Coal Limited, Dhanbad led to avoidable loss of Rs.24.60 lakh

The Company placed (December 1995) an indent with Bharat Coking Coal Limited (BCCL) for one rake (30 wagons) of coke for its raw material depot at Coimbatore at Rs.2452 per MT (excluding freight). As against this, the Company received 1234 MTs on 22 January 1996 and 36 MTs in March 1996. The total cost of the material was Rs.31.14 lakh. The Company got the sample tested at Regional Testing Laboratory, Coimbatore on 31 January 1996, which revealed that the bearing capacity of heat in coke was less and contained abnormal percentage of ash. Though the coke was found to be of poor quality, the Company paid the entire cost (February 1996).

Due to poor quality, the Company could not dispose of the coke to the intended small scale industrial foundries and hence decided (September 1996) to dispose of the same by tender-cum-auction sales. Accordingly, the Company sold (March to December 1997) the entire quantity of 1270 MTs at an average rate of Rs.2074 per MT and realised a sum of Rs.26.34 lakh. Thus, the Company incurred a loss of Rs.24.60 lakh {(Total landed cost = Material cost: Rs.31.14 lakh + Freight: Rs.19.80 lakh) – Amount realised: Rs.26.34 lakh}.

The Company's efforts to get compensation for the poor quality were not successful as BCCL contended (May 1996) that any problem regarding size, quality should be sorted out before despatch of wagons. However, in this connection it is stated that liaison agent of the Company had informed the BCCL about the poor quality of coke at the time of loading for which no action was taken by BCCL.

The Company sought (March 1998) the permission of the State Government to make a complaint with the National Consumer Dispute Redressal Commission, New Delhi to recover the loss (as filing a civil suit would be an expensive remedy) which was awaited (October 1999).

Thus, release of payments even after knowing the bad quality of coke and failure to ensure despatch of good quality coke resulted in an avoidable loss of Rs.24.60 lakh.

The matter was reported to the Company and the Government in May 1999; their replies had not been received (October 1999).

TAMIL NADU SMALL INDUSTRIES

CORPORATION LIMITED

4A.15 Avoidable loss due to supply of defective pipes

Failure to ensure guaranteed performance on supply of pipes resulted in avoidable loss of Rs.20.77 lakh.

Tamil Nadu Water Supply and Drainage (TWAD) Board placed an order (March 1991) with the Company for the supply of 180 numbers of 600 mm x 2 m. CI pipes conforming to ISI specification for a value of Rs.16.52 lakh. The Company supplied 162 numbers valued at Rs.14.48 lakh between April 1991 and January 1993 by manufacturing only 60 numbers from its own unit and the balance through sub-contracts on account of non-availability of production facility.

According to the ISI specification, the Class B CI pipes should conform to a working pressure of 12 KSC and weigh 701 Kgs per pipe. However, the pipes supplied by TANSI were found to weigh only 500 - 580 Kgs and were unable to withstand even the pressure of 4 KSC resulting in leakage and bursts. Further, the pipes procured through the sub-contract were of screw flange type instead of moulded flange type. Hence 144 pipes were rejected by TWAD Board stating that the Company had guaranteed them against manufacturing defects.

As the Company failed to initiate effective steps to replace/rectify the defects even after repeated requests, TWAD Board decided to replace the entire pipe line with pre-stressed concrete pipes (estimated cost Rs.34.40 lakh) at the cost of the Company. An amount of Rs.20.77 lakh was recovered by the TWAD Board as on May 1999, which was protested by the Company. However, the dispute remains unsettled (May 1999).

Thus due to supply of defective pipes and failure to ensure their guaranteed performance resulted in loss of Rs.20.77 lakh.

The Government in reply stated (July 1999) that some of the pipes were inspected by the TWAD Board officials and inspection certificate given for quality acceptance and the Company was requested to carry out further despatches as per the previous supply and the pipes were not tested by them. It was also stated that efforts are being made to get back the recovered amount from TWAD Board.

Since the pipes were rejected for manufacturing defects, the reply of the Company is not acceptable. The effort of the Company to get back the amount from TWAD Board have not yielded any result (October 1999).

TAMIL NADU FISHERIES DEVELOPMENT CORPORATION LIMITED

4A.16 Misappropriation of cash/stock

Ineffective internal control system led to misappropriation of cash, stock, which resulted into a loss of Rs.9.25 lakh.

The Company has been operating 17 diesel bunks in the coastal areas of the State for the supply of diesel, lubricating oil and grease to the mechanised fishing boats. Each bunk is managed by a Sales Assistant under the control of Assistant Manager/Deputy Manager reporting to Regional Manager/Manager (Marine) at Head Office.

The bunks are provided with a revolving fund to meet the purchase requirements, which is maintained in a separate bank account, operated through cheque system. The sales are to be carried on cash basis and the sale proceeds were to be remitted to the bank account. Monthly reports on the purchases, sales and bank remittances have to be sent by the bunk to Head Office.

Three diesel bunks located in Nagapattinam area were under the control of an Assistant Manager from 8 July 1994 till his transfer on 24 November 1997. Based on the report of the new incumbent (December 1997), a detailed check of the transactions of the three bunks covering the period April – November 1997 was conducted by the management (February 1998), which revealed shortages of cash and petroleum products involving misappropriation of Rs.13.51 lakh. The Company could recover Rs.4.26 lakh from the delinquent official, who was placed under suspension (January 1998) and a criminal case was registered (September 1998) against him with the Police Department. Final outcome of the case was awaited (October 1999). In spite of noticing serious irregularities, the Company has not conducted a detailed check of transactions relating to period prior to April 1997.

The above misappropriation was rendered possible due to non-observance/enforcement of various internal control checks, *viz*., non-reconciliation of bank balances, failure to monitor revolving fund through monthly reports, failure to ensure sale on cash basis only and absence of periodical physical verification of stock, *etc*. It is also to be mentioned that in spite of the Internal Audit Report (December 1996) bringing out several deficiencies, no remedial action was initiated by the Company.

Thus, failure of the Company to ensure effective internal control checks and consequent misappropriation of cash, stock resulted in a loss of Rs.9.25 lakh.

The matter was reported to the Company and the Government in July 1999; their replies had not been received (October 1999).

TAMIL NADU EX-SERVICEMEN CORPORATION LIMITED

4A.17 Avoidable payment of Income Tax due to delay in remittance of Provident Fund Contributions

Delay in remittance of provident fund dues resulted in avoidable payment of income tax amounting to Rs.7.60 lakh.

As per the provisions of Section 43 B(b) of Income Tax Act, the Company is eligible to claim deductions of the monthly contributions made towards Provident

Fund in respect of its employees provided the remittances are made within due dates.

During 1997-98, the Company delayed the remittances of Provident Fund dues in spite of having sufficient funds at their disposal and hence could not claim the eligible deduction of Rs.21.72 lakh under Income Tax Act. Consequently, the Company had to make an additional payment of Income Tax amounting to Rs.7.60 lakh.

Thus, failure of the Company to remit the statutory dues in time resulted in avoidable payment of Rs.7.60 lakh.

The Government in reply stated (June 1999) that delay in remittance was not wilful or intentional and the Company would comply with the provisions of the Act for timely remittance in future. However, the fact remains that delay in remittance of provident fund contribution had resulted in an avoidable payment of Income Tax.

TAMIL NADU MINERALS, ELECTRONICS AND SMALL INDUSTRIES DEVELOPMENT CORPORATIONS

4A.18 Foreign travel by officers of Public Sector Undertakings

Irregular payment of Rs.9.72 lakh due to non-adherence of Government instructions on foreign travel by Chief Executive/Officers of Public Sector Undertakings

According to the instructions of Government of Tamil Nadu (September 1995), when the Government officers (Secretaries/Head of the Department) travel on Public Sector Undertakings (PSUs) business and PSUs pay the cost, they can draw a maximum of US dollar 350 per day all inclusive and they can also draw entertainment allowance of total US dollar 1000 for a trip and in respect of State PSUs, the Chairman/Chief Executive Officer shall draw daily allowance at the rate of US dollar 350 per day, all inclusive and in addition entertainment allowance of US dollar 1000 for a trip. The lower grade officers shall draw US dollar 300 per day and no entertainment allowance was admissible.

A review of the expenditure incurred on the foreign travels undertaken by the PSUs officials and Officers of the State Government for the business of PSUs revealed the following points:

I Overdrawal of Daily Allowance

(i) As against eligible daily allowance at the applicable rate for the countries visited and reimbursement of actual rents, maximum daily allowance was allowed without supporting vouchers for stay abroad resulting in overdrawal of daily allowance amounting to US dollar 13115 (Rs.563945♠) in eight occasions as given in Annexure-19 A.

(ii) Chairman-cum-Managing Director/Small Industries Development Corporation Limited on her return from Cairo, Egypt visited Dubai for 5 days (14 to 18 April 1995) without approval of the State Government and was paid Daily Allowance for those days resulting in overpayment of US dollar 2500 (Rs.107500♠) as given in Annexure-19 B.

II Inadmissible payment of entertainment allowance

In violation of the Government guidelines, entertainment allowance of US dollar 1000 per trip was paid to the tune of US dollar 7000 (Rs.301000♠) to three officers, who were not eligible vide details in Annexure-20. It was also noticed that no documents were produced in support of these claims.

Thus, irregular payments of Rs.9.72 lakh was noticed due to non-adherence of Government instructions on foreign travel.

The matter was reported to the Companies and the Government in September 1999; their replies had not been received (October 1999).

♠ **Converted at the rate of US dollar 1 = Rs.43 (approximate) prevailing as on 30 September 1999.**

SECTION 4B

TAMIL NADU ELECTRICITY BOARD

4B.1 Unloading of coal at North Chennai Thermal Power Station – Avoidable extra expenditure of Rs.15.03 crore

By awarding the work to South India Corporation Limited at an exorbitant rate of Rs.69.75 per tonne ignoring the lower offer of Rs.24.05 per tonne, the Board incurred avoidable extra expenditure of Rs.15.03 crore on 32.89 lakh tonnes of coal handled.

The coal handling contract for movement of coal from various collieries by the rail-cum-sea route through the ports at Chennai and Tuticorin to the Board's Thermal Power Stations at Ennore, Tuticorin and Mettur had been awarded to South India Corporation Limited (SIC) since October 1991. On commissioning of the North Chennai Thermal Power Station (NCTPS), coal had to be moved from Chennai port railway siding to NCTPS also, which was not within the scope of the existing contract with SIC.

SIC had indicated (10 May 1995) that if this work was done by another agency, it may result in dislocation of handling operations and shortages of coal for which they would not be in a position to accept responsibility. In view of this, the Board entrusted (22 May 1995) this work to SIC. The rate of Rs.69.75 per tonne, quoted subsequently (29 May 1995) was also accepted (28 July 1995) by the Board.

In this connection, the following observations are made in Audit:

(1) The Chief Engineer (NCTPS), had, after calling for quotations under an open tender, awarded (7 September 1995) the work for a period of four months to Express Clearing Agency (ECA) at the rate of Rs.24.05 per tonne quoted (13 June 1995) by them, but the contract was not acted upon for no reasons available on record. Similar work had also been entrusted at Ennore Thermal Power Station to two other agencies in November 1993 and November 1994 at Rs.10.94 per tonne and Rs.17.14 per tonne respectively. As per the main contract, SIC was being paid Rs.29 per tonne towards shortage cover up to the railway siding at Chennai. Hence, the Board should have either prevailed on SIC to match the rate of Rs.24.05 per tonne obtained in the open tender or awarded the contract to ECA and insisted on SIC accepting responsibility for the shortages, instead of accepting SIC's quoted rate of Rs.69.75 per tonne.

(2) During the period from May 1995 to June 1997, 32.89 lakh MTs of coal was handled by SIC. The Board as such suffered a loss of Rs.15.03 crore due to acceptance of higher rates. Significantly, when open tenders were called for in April 1997, for the same work SIC had quoted only Rs.22.14 per tonne and after negotiation were awarded the work (June 1997) at a rate of Rs.22 per tonne.

The matter was reported to the Board and the Government in August 1999; their replies had not been received (October 1999).

4B.2 Loss of revenue due to irregular extension of tariff concession

Extension of irregular tariff concession in contravention of Government Orders resulted in loss of revenue of Rs.275.93 lakh to the Board.

M/s. Sree Aravindh Steel (Private) Limited, Thuvakudy engaged in the manufacture and job work of mild steel ingots with the aid of electric furnace was given High Tension (HT) supply (Service Connection (SC): 63) under Tariff I (Industry) in November 1975. The consumer was granted tariff concession allowed to new industry for 5 years from 2 January 1976 to 1 January 1981. Subsequently, reduction from sanctioned demand of 4000 KVA (11 January 1994) and 1900 KVA (29 July 1994) was permitted. The consumer reported that the arc furnace could not be operated from 14 November 1994, due to major breakdown. Later (September 1995) the service connection was surrendered on the grounds that the plant and machinery could not be operated as they were obsolete, coupled with labour problems.

While obtaining reduction of load (SC: 63) on 11 January 1994 the consumer simultaneously applied for a separate HT connection (2500 KVA) for establishing a new arc furnace in the same premises as an expansion unit. The new service connection (SC: 152) was effected on 14 November 1994, the day when the existing furnace unit (SC: 63) became inoperative. The consumer was granted tariff concession for 3 years (SC: 152) with effect from 28 November 1994, considering the new service connection as an expansion unit of main industry (SC: 63) eligible for such concession as per Government Order (March 1994). The total concession availed by the consumer amounted to Rs.275.93 lakh.

The new unit (SC: 152) was established only as a replacement of the obsolete equipment of the inoperative main industry (SC: 63) and hence was not eligible for tariff concession for expansion of industry. Thus, extension of irregular tariff concessions in contravention of Government Orders resulted in loss of revenue of Rs.275.93 lakh to the Board.

The matter was reported to the Board and the Government in May 1999; their replies had not been received (October 1999).

4B.3 Loss due to delay in preferring refund claim with Customs Department

Omission to initially obtain provisional assessment and after having paid the duty on regular assessment, failure to prefer the refund claim within the prescribed time limit resulted in loss of Rs.27.85 lakh.

The Board imports coal for consumption in its Power Houses for generation of electricity. Initially customs duty is paid on provisional assessment, based on the invoice value of the coal as the final value could be assessed only after discharge of coal, based on its weight and test report (ash/moisture content, calorific value, *etc.*). The deficiency, if any, between the duty finally assessed and provisionally assessed is paid and in case of excess duty refund claim is preferred.

However, in respect of a consignment of coal (33893.20 Tonnes) imported during March 1996 through M.V. Sanmar Progress, the Board paid Rs.285.63 lakh as customs duty (March 1996) on regular assessment based on the invoice value in the Bill of entry instead of seeking provisional assessment. Subsequently, based on the weight and test report (March 1996), a claim for refund of excess customs duty paid amounting to Rs.27.85 lakh was made during August 1997 after a delay of 17 months.

The Board's refund claim was rejected by the customs authorities (October 1997) on the ground that it was time barred, as the prescribed time limit of 6 months (under Section 27 of Customs Act, 1962) had expired. Against this, the Board preferred an appeal (February 1998) which was also rejected (May 1998) on the same grounds.

Thus, the omission of the Board to initially obtain provisional assessment, and after having paid the duty on regular assessment, its failure to prefer the refund claim within the prescribed time limit despite obtaining test report in March 1996 itself, resulted in loss of Rs.27.85 lakh.

The matter was reported to the Board and the Government in May 1999; their replies had not been received (October 1999).

4B.4	***Loss of generation due to delay in putting the unit to service after completion of rectification works***

Delay in putting the unit back to service resulted in loss of generation amounting to Rs.34.57 lakh.

The work of rectification of the rotor pole coils of Machine 3 in Periyar Power House was entrusted on 28 March 1996 to Edison Electrical Works, Chidambaram and the same was completed on 5 August 1996. However, the unit was put into service only on 21 September 1996 after carrying out alignment work.

It was observed in Audit that the alignment work was taken up only 9 days after the contractor completed the work and even after completion of alignment work, the machine was put into service after a lapse of 10 days.

Thus, the delay of 19 days in putting the unit back to service had resulted in loss of generation amounting to Rs.34.57 lakh (1.998 MUs at Rs.1.73 per unit).

The matter was reported to the Board and the Government in August 1999; their replies had not been received (October 1999).

4B.5	***Extra expenditure of Rs.21.26 lakh on purchase of cables due to non-adherence to Government orders***

Delay in implementing the orders of Government that purchases of items reserved for Small Scale Industries should be made only after calling for open tenders had resulted in avoidable extra expenditure of Rs.21.26 lakh to the Board

As per the purchase policy of Government, Public Sector Undertakings were required to purchase certain items exclusively from registered Small Scale Industries (SSIs) in the State. The Government in their order (19 February 1997) directed that in respect of items so reserved, 50 *per cent* of the requirement shall be purchased by open tender, and the balance may be purchased from SSIs within the State at the lowest prices in the open tender.

The Board had, for supply of 2 X 16 Sq.mm. LTUG cable, invited tenders (9 February 1997) only from local SSIs, who had quoted identical prices. Contrary to the said policy of the State Government, the Board had finalised (March 1997) the tender thus received and placed order on SSI units only for 154 KMs at the lowest rate of Rs.43304 on the grounds of urgency.

However, in the subsequent open tender floated in February 1998, there had been substantial benefit to the Board by way of competitive price of Rs.29498 per KM having been obtained through negotiation, despite increase in the price of the raw material, *i.e.*, aluminium ingots.

The Board had justified the decision of not going in for open tender in March 1997 on the grounds of "stock out position" (31 March 1997). However, it was observed that though the purchase proposal was finalised in March 1997, purchase orders were placed only in May 1997, and deliveries were accepted up to December 1997 against the permitted delivery period of three months only. Thus, the Board's contention of "urgency" for inviting open tender from SSI units of Tamil Nadu only was not justifiable, and as such the Board should have taken the advantage of Government's directive dated 19 February 1997.

The said order was intended to ensure that in view of the new economic policy, SSIs should compete with others in an open market. Despite being aware that the SSIs had taken advantage of the reservation policy and formed themselves into a cartel, the Board showed undue consideration to them by deciding (March 1997) not to call for fresh open tender and thus, suffered a loss of Rs.21.26 lakh.

The matter was reported to the Board and the Government in August 1999; their replies had not been received (October 1999).

T. Theethan

(T. THEETHAN)
Accountant General (Audit) II
Tamil Nadu

Chennai
The

Countersigned

V. K. Shunglu.

(V.K.SHUNGLU)
Comptroller and Auditor General of India

New Delhi
The

ANNEXURES

ANNEXURE - 1

Statement of Companies in which State Government had invested more than Rs.10 lakh in share capital of each of such Companies but which are not subject to audit by the Comptroller and Auditor General of India

(Referred to in Preface and Paragraph 1.11)

(Rupees in lakh)

Sl. No.	Name of the Company	Amount of investment in share capital up to 1998-99
1.	South India Viscose Limited	61.25
2.	Madras Cements Limited	40.00
3.	Binny Limited	41.70
	Total	142.95

ANNEXURE - 2

Statement showing particulars of capital, loans/equity received out of budget, other loans and loans outstanding as on 31 March 1999 in respect of Government companies and Statutory corporations.

(Referred to in Paragraphs 1.2.1, 1.2.2 and 1.4)

(Figures in column 3(a) to 4(f) are Rupees in lakh)

Sl. No	Sector and name of the Company/Statutory Corporation	Paid-up capital as at the end of the current year*					Equity/loans received out of Budget during the year		Other loans received during the year@	Loans** Outstanding at the close of 1998-99			Debt equity ratio for 1998-99 (Previous year) 4(f)/3(e)
		State Government	Central Government	Holding Companies	Others	Total	Equity	Loans		Government	Others	Total	
(1)	(2)	3(a)	3(b)	3(c)	3(d)	3(e)	4(a)	4(b)	4(c)	4(d)	4(e)	4(f)	(5)
	(A) GOVERNMENT COMPANIES												
	AGRICULTURE												
1.	Tamil Nadu Poultry Development Corporation Limited	125.43	---	---	1.25	126.68	---	---	---	63.19	---	63.19	0.50:1 (0.50:1)
2.	Tamil Nadu Sugarcane Farm Corporation Limited	27.50	---	---	---	27.50	---	---	---	---	---	---	---

Note: Except in respect of Companies which finalised their accounts for 1998-99 (Sl.Nos.4, 5, 12, 16, 17, 18, 19, 20, 21, 22, 25, 26, 29, 30, 31, 32, 33, 35, 36, 47, 49, 51, 52, 53, 54, 55, 56, 57, 58, 60, 61, 64, 66, 67, 68, 69, 70, 71, 72, 74, 76, 81 and 82) figures are provisional and as given by the companies.

@ Includes bonds, debentures, inter-corporate deposits, etc.

* Includes share application money.

** Loans outstanding at the close of 1998-99 represents long-term only.

(1)	(2)	3(a)	3(b)	3(c)	3(d)	3(e)	4(a)	4(b)	4(c)	4(d)	4(e)	4(f)	(5)
3.	Tamil Nadu Fisheries Development Corporation Limited	435.52	---	---	---	435.52	---	---	---	12.22	---	12.22	0.03:1 (0.03:1)
4.	Tamil Nadu State Farms Corporation Limited	155.13	---	---	---	155.13	---	---	---	537.46	---	537.46	3.46:1 (3.38:1)
5.	Tamil Nadu Tea Plantation Corporation Limited	596.18	---	---	---	596.18	---	---	---	375.20	---	375.20	0.16:1 (0.32:1)
6.	Tamil Nadu State Tube wells Corporation Limited	31.50	---	---	---	31.50	---	---	---	---	---	---	---
7.	Tamil Nadu Dairy Development Corporation Limited	207.36	---	---	---	207.36	---	---	---	---	---	---	---
8.	Tamil Nadu Agro Industries Corporation Limited	290.90	165.00	---	---	455.90	---	---	---	477.00	---	477.00	1.05.:1 (1.44:1)
	TOTAL	1869.52	165.00	---	1.25	2035.77	---	---	---	1465.07	---	1465.07	0.72:1 (0.54:1)
	INDUSTRY												
9.	Tamil Nadu Industrial Development Corporation Limited (TIDCO)	9779.31	---	---	---	9779.31	---	---	---	---	3135.86	3135.86	0.32:1 (0.258:1)
10.	Tamil Nadu Industrial Explosives Limited (Subsidiary of TIDCO)	---	---	2218.09	481.54	2699.63	---	---	---	3188.06	---	3188.06	1.18:1 (1.85:1)
11.	Tamil Nadu Magnesium and Marine Chemicals Limited (Subsidiary of TIDCO)	---	---	362.00	---	362.00	---	---	---	1282.00	21.83	1303.83	3.60:1 (0.87:1)
12.	Tamil Nadu Paints and Allied Products Limited (Subsidiary of TANSI)	---	---	2.05	---	2.05	---	---	---	---	---	---	---
13.	Tamil Nadu Small Industries Corporation Limited (TANSI)	1505.26	---	---	---	1505.26	---	---	---	1268.74	---	1268.74	0.84:1 (1.32:1)
14.	Tamil Nadu Small Industries Development Corporation Limited (SIDCO)	730.00	---	---	---	730.00	---	---	---	62.38	133.50	195.88	0.27:1 (0.43:1)
15.	State Industries Promotion Corporation of Tamil Nadu Limited (SIPCOT)	5791.25	---	---	---	5791.25	---	---	---	2223.00	2469.00	4692.00	0.81:1 (4.13:1)
16.	Tamil Nadu Ceramics Limited	186.11	---	---	---	186.11	---	---	---	---	---	---	---
17.	Tamil Nadu Salt Corporation Limited	317.01	---	---	---	317.01	---	---	---	---	---	---	---

(1)	(2)	3(a)	3(b)	3(c)	3(d)	3(e)	4(a)	4(b)	4(c)	4(d)	4(e)	4(f)	(5)
18.	Tamil Nadu Magnesite Limited	1665.00	---	---	---	1665.00	---	---	---	1937.75	---	1937.75	1.16:1 (1.16:1)
19.	Tamil Nadu Leather Development Corporation Limited	250.00	---	---	---	250.00	---	---	---	317.93	---	317.93	1.28:1 (1.27:1)
20.	Arasu Rubber Corporation Limited	200.00	---	---	---	200.00	---	---	---	26.45	153.86	180.31	1.1:1 (1.37:1)
21.	Tamil Nadu Graphites Limited	10.00	---	---	---	10.00	---	---	---	---	---	---	---
	TOTAL	20433.94	---	2582.14	481.54	23497.62	---	---	---	10306.31	5914.05	16220.36	0.69:1 (1.80:1)
	ENGINEERING												
22.	State Engineering and Servicing Company of Tamil Nadu Limited (SESCOT) (Subsidiary of TANSI)	---	---	49.71	---	49.71	---	102.00	---	1085.13	---	1085.13	21.83:1 (19.78:1)
23.	Southern Structural Limited	3435.50	---	---	18.80	3454.30	---	---	---	2236.20	---	2236.20	0.65:1 (0.37:1)
24.	Tamil Nadu Steels Limited	392.00	---	---	---	392.00	---	---	---	584.37	465.99	1050.36	2.68:1 (2.71:1)
	TOTAL	3827.50	---	49.71	18.80	3896.01	---	102.00	---	3905.70	465.99	4371.69	1.12:1 (0.73:1)
	ELECTRONICS												
25.	Electronics Corporation of Tamil Nadu Limited (ELCOT)	2593.05	---	---	---	2593.05	---	---	---	12.44	2.94	15.38	0.006:1 (0.025:1)
26.	Tidel Park	1102.88	---	---	---	1102.88	1102.88	---	---	---	---	---	---
27.	Tanitec Limited	1000.00	---	---	---	1000.00	1000.00	---	---	---	---	---	---
	TOTAL	4695.93	---	---	---	4695.93	2102.88	---	---	12.44	2.94	15.38	0.003:1 (0.01:1)
	TEXTILES												
28.	Tamil Nadu Textile Corporation Limited	154.00	---	---	---	154.00	---	---	---	100.87	---	100.87	0.65:1 (0.64:1)
29.	Tamil Nadu Zari Limited	34.40	---	---	---	34.40	---	20.00	---	20.00	30.46	50.46	0.19:1 (0.18:1)
	TOTAL	188.40	---	---	---	188.40	---	20.00	---	120.87	30.46	151.33	0.80:1 (0.71:1)

(1)	(2)	3(a)	3(b)	3(c)	3(d)	3(e)	4(a)	4(b)	4(c)	4(d)	4(e)	4(f)	(5)
	HANDLOOM AND HANDICRAFTS												
30.	Tamil Nadu Handicrafts Development Corporation Limited	171.69	104.00	---	7.77	283.46	30.00	---	---	31.49	---	31.49	0.08:1 (0.09:1)
31.	Tamil Nadu Handloom Development Corporation Limited	267.00	---	---	161.34	428.34	2.33	---	---	3.18	---	3.18	0.008:1 (0.008:1)
	TOTAL	438.69	104.00	---	169.11	711.80	32.33	---	---	34.67	---	34.67	0.05:1 (0.05:1)
	FOREST												
32.	Tamil Nadu Forest Plantation Corporation Limited	300.00	---	---	---	300.00	---	---	---	---	115.00	115.00	0.38:1 (1.61:1)
	TOTAL	300.00	---	---	---	300.00	---	---	---	---	115.00	115.00	0.38:1 (1.61:1)
	MINING												
33.	Tamil Nadu Minerals Limited (TAMIN)	786.90	---	---	---	786.90	---	---	---	---	---	---	---
	TOTAL	786.90	---	---	---	786.90	---	---	---	---	---	---	---
	CONSTRUCTION												
34.	Tamil Nadu State Construction Corporation Limited	500.00	---	---	---	500.00	---	---	---	100.00	---	100.00	0.2:1 (0.32:1)
35.	Tamil Nadu Police Housing Corporation Limited	100.00	---	---	---	100.00	---	---	---	---	12361.08	12361.08	123.61:1 (66.56:1)
	TOTAL	600.00	---	---	---	600.00	---	---	---	100.00	12361.08	12461.08	20.77:1 (11.24:1)
	DRUGS, AND CHEMICALS												
36.	Tamil Nadu Medicinal Plant Farms and Herbal Medicine Corporation Limited	20.75	---	---	---	20.75	---	---	---	---	---	---	---
37.	Tamil Nadu Medical Services Corporation Limited	300.00	---	---	---	300.00	---	---	---	---	---	---	---
	TOTAL	320.75	---	---	---	320.75	---	---	---	---	---	---	---
	SUGAR												
38.	Tamil Nadu Sugar Corporation Limited (TASCO)	311.10	368.05	---	100.00	779.15	---	---	---	63.55	---	63.55	0.07:1 (0.13:1)

(1)	(2)	3(a)	3(b)	3(c)	3(d)	3(e)	4(a)	4(b)	4(c)	4(d)	4(e)	4(f)	(5)
39.	Perambalur Sugar Mills Limited (Subsidiary of TASCO)	---	---	221.49	195.86	417.35	---	---	---	89.60	---	89.60	0.21:1 (0.31:1)
	TOTAL	311.10	368.05	221.49	295.86	1196.50	---	---	---	153.15	---	153.15	0.13:1 (0.20:1)
	CEMENT												
40.	Tamil Nadu Cements Corporation Limited`	1799.13	---	---	---	1799.13	---	---	---	359.00	1918.00	2277.00	0.88:1 (0.4:1)
	TOTAL	1799.13	---	---	---	1799.13	---	---	---	359.00	1918.00	2277.00	1.27:1 (1.29:1)
	AREA DEVELOPMENT												
41.	Dharmapuri District Development Corporation Limited	15.00	---	---	---	15.00	---	---	---	0.40	---	0.40	0.03:1 (0.03:1)
	TOTAL	15.00	---	---	---	15.00	---	---	---	0.40	---	0.40	0.03:1 (0.03:1)
	ECONOMICALLY WEAKER SECTION												
42.	Tamil Nadu Adi Dravidar Housing and Development Corporation Limited	3361.00	2761.41	---	---	6122.41	---	---	---	9.19	---	9.19	0.002:1 (0.002:1)
43.	Tamil Nadu Backward and Minorities Economic Development Corporation Limited	1119.01	---	---	---	1119.01	845.45	---	---	---	1394.54	1394.54	1.17:1 (1.17:1)
44.	Tamil Nadu Corporation for Development of Women Limited	40.00	38.42	---	---	78.42	---	---	---	---	---	---	---
45.	Tamil Nadu Ex-servicemen's Corporation Limited	17.91	---	---	5.00	22.91	---	---	---	53.75	---	53.75	2.35:1 (2.46:1)
	TOTAL	4537.92	2799.83	---	5.00	7342.75	845.45	---	---	62.94	1394.54	1457.48	0.20:1 (0.18:1)
	PUBLIC DISTRIBUTION												
46.	Tamil Nadu Civil Supplies Corporation Limited	3168.10	---	---	---	3168.10	169.25	---	---	---	---	---	---
	TOTAL	3168.10	---	---	---	3168.10	169.25	---	---	---	---	---	---
	TOURISM												
47.	Tamil Nadu Tourism Development Corporation Limited	618.63	---	---	---	618.63	40.00	---	---	205.32	---	205.32	0.33:1 (0.23:1)
	TOTAL	618.63	---	---	---	618.63	40.00	---	---	205.32	---	205.32	0.33:1 (0.23:1)

(1)	(2)	3(a)	3(b)	3(c)	3(d)	3(e)	4(a)	4(b)	4(c)	4(d)	4(e)	4(f)	(5)
	FINANCING												
48.	The Chit Corporation of Tamil Nadu Limited	5.92	---	---	---	5.92	---	---	---	---	---	---	---
49.	Tamil Nadu Industrial Investment Corporation Limited (TIIC)	2502.28	---	---	1747.28	4249.56	---	---	---	---	98163.98	98163.98	23.07:1 (27.49:1)
	TOTAL	2508.20	---	---	1747.28	4255.48	---	---	---	---	98163.98	98163.98	23.07:1 (27.49:1)
	INFRASTRUCTURE DEVELOPMENT												
50.	Tamil Nadu Urban Finance and Infrastructure Development Corporation Limited	3102.00	---	---	98.00	3200.00	---	---	---	---	---	---	NIL (13.15:1)
51.	Tamil Nadu Power Finance and Infrastructure Development Corporation Limited	2200.00	---	---	---	2200.00	---	---	---	89009.79	---	89009.79	15.05:1 (18.91:1)
52.	Tamil Nadu Corporation for Industrial Infrastructure Development Limited	6600.00	1930.00	---	---	8530.00	---	---	---	2883.33	---	2883.33	0.34:1 (0.36:1)
	TOTAL	11902.00	1930.00	---	98.00	13930.00	---	---	---	91893.12	---	91893.12	6.60:1 (7.47:1)
	TRANSPORT												
53.	Metropolitan Transport Corporation (Chennai Division I) Limited	7418.64	---	---	---	7418.64	1490.00	---	---	---	2849.80	2849.80	0.38:1 (0.23:1)
54.	Tamil Nadu State Transport Corporation (Madurai Division I) Limited	3032.57	---	---	---	3032.57	830.01	---	---	---	2102.36	2102.36	0.64:1 (0.45:1)
55.	Tamil Nadu State Transport Corporation (Coimbatore Division I) Limited	2638.24	---	---	---	2638.24	1476.00	---	---	---	3350.45	3350.45	1.27:1 (2.89:1)
56.	Tamil Nadu State Transport Corporation (Kumbakonam Division I) Limited	3563.52	---	---	---	3563.52	949.00	---	---	---	1884.63	1884.63	0.53:1 (0.67:1)
57.	Tamil Nadu State Transport Corporation (Salem Division I) Limited	1862.00	---	---	---	1862.00	1158.00	---	---	---	3363.63	3363.63	1.40:1 (2.72:1)
58.	Tamil Nadu State Transport Corporation (Madurai Division II) Limited	5521.74	---	---	---	5521.74	1717.06	---	---	---	2811.86	2811.86	0.51:1 (0.44:1)
59.	Poompuhar Shipping Corporation Limited	2053.00	---	---	---	2053.00	---	---	---	---	4000.00	4000.00	1.95:1 (2.02:1)

(1)	(2)	3(a)	3(b)	3(c)	3(d)	3(e)	4(a)	4(b)	4(c)	4(d)	4(e)	4(f)	(5)
60.	Tamil Nadu State Transport Corporation (Villupuram Division I) Limited	1394.00	---	---	---	1394.00	744.00	---	---	---	2315.82	2315.82	1.66:1 (3.76:1)
61	Tamil Nadu Transport Development Finance Corporation Limited	4303.01	---	---	1871.18	6174.19	---	---	---	---	64511.98	64511.98	7.53:1 (8.80:1)
62.	Tamil Nadu Goods Transport Corporation Limited	26.56	---	---	6.10	32.66	---	---	---	---	---	---	---
63.	State Express Transport Corporation (Tamil Nadu Division I) Limited	7003.75	---	---	---	7003.75	2107.90	---	---	---	3164.28	3164.28	0.47:1 (0.34:1)
64.	Tamil Nadu State Transport Corporation (Kumbakonam Division III) Limited	2787.04	---	---	---	2787.04	1160.04	---	---	---	1920.68	1920.68	0.69:1 (1.15:1)
65.	Tamil Nadu State Transport Corporation (Villupuram Division II) Limited	1488.94	---	---	---	1488.94	771.00	---	---	---	2864.90	2864.90	1.33:1 (1.32:1)
66.	Tamil Nadu State Transport Corporation (Coimbatore Division II) Limited	1565.00	---	---	---	1565.00	865.00	---	---	150.00	1809.21	1959.21	1.25:1 (2.93:1)
67.	Tamil Nadu State Transport Corporation (Madurai Division III) Limited	2926.79	---	---	---	2926.79	962.17	---	---	294.65	951.39	1246.04	0.23:1 (0.53:1)
68.	Pallavan Transport Consultancy Services Limited	5.00	---	---	---	5.00	3.00	---	---	---	---	---	---
69.	Tamil Nadu State Transport Corporation (Kumbakonam Division II) Limited	1665.00	---	---	---	1665.00	1065.00	---	---	---	2604.91	2604.91	1.56:1 (3.13:1)
70.	Tamil Nadu State Transport Corporation (Madurai Division IV) Limited	1322.00	---	---	---	1322.00	672.00	---	---	---	2103.78	2103.78	0.72:1 (3.14:1)
71.	Tamil Nadu State Transport Corporation (Salem Division II) Limited	1010.00	---	---	---	1010.00	610.00	---	---	179.17	1806.16	1985.33	1.93:1 (4.19:1)
72.	Tamil Nadu State Transport Corporation (Villupuram Division III) Limited	1980.16	---	---	---	1980.16	586.25	---	---	---	1916.29	1916.29	0.97:1 (1.22:1)
73.	State Express Transport Corporation (Tamil Nadu Division II) Limited	1586.32	---	---	---	1586.32	659.36	---	---	---	1191.59	1191.59	0.07:1 (0.02:1)
74.	Metropolitan Transport Corporation (Chennai Division II) Limited	6728.99	---	---	---	6728.99	1214.00	---	---	---	3057.71	3057.71	0.45:1 (1.88:1)
75.	Tamil Nadu State Transport Corporation (Coimbatore Division III) Limited	1396.62	---	---	---	1396.62	392.22	---	---	---	1239.85	1239.85	0.89:1 (1.09:1)
76.	Tamil Nadu State Transport Corporation (Madurai Division V) Limited	399.40	---	---	---	399.40	276.00	---	---	---	868.27	868.27	2.17:1 (8.14:1)

(1)	(2)	3(a)	3(b)	3(c)	3(d)	3(e)	4(a)	4(b)	4(c)	4(d)	4(e)	4(f)	(5)
77.	Tamil Nadu State Transport Corporation (Kumbakonam Division IV) Limited	381.50	---	---	---	381.50	295.00	---	---	---	1236.02	1236.02	3.24:1 (14.06:1)
	TOTAL	64059.79	---	---	1877.28	65937.07	20003.01	---	---	623.82	113925.57	114549.39	1.74:1 (2.15:1)
	MISCELLANEOUS												
78.	Overseas Manpower Corporation Limited	15.00	---	---	---	15.00	---	---	---	---	---	---	NIL (0.67:1)
79.	Tamil Nadu State Sports Development Corporation Limited	0.002	---	---	---	0.002	---	---	---	---	---	---	---
80.	Tamil Nadu Film Development Corporation Limited	1391.00	---	---	---	1391.00	---	---	---	50.00	837.00	887.00	0.41:1 (0.41:1)
81.	Tamil Nadu State Marketing Corporation Limited (TASMAC)	700.00	---	---	---	700.00	360.00	---	---	---	---	---	---
82.	Tamil Nadu Spirit Corporation Limited (Subsidiary of TASMAC)	160.00	---	240.00	---	400.00	---	---	---	800.39	---	800.39	2.00:1 (2.00:1)
	TOTAL	2266.002	---	240.00	---	2506.002	360.00	---	---	850.39	837.00	1687.39	0.67:1 (0.79:1)
	TOTAL(A)	124647.502	5366.88	3093.34	4694.12	137801.842	23552.92	122.00	---	110093.20	235128.61	345221.81	2.50:1 (3.32:1)
(B)	STATUTORY CORPORATION												
	POWER												
83.	Tamil Nadu Electricity Board	104548.00	---	---	---	104548.00	25737.00	---	---	---	482239.00	482239.00	4.61:1 (5.1:1)
	TOTAL (Provisional)	104548.00	---	---	---	104548.00	25737.00	---	---	---	482239.00	482239.00	4.61:1 (5.1:1)
	AGRICULTURE AND ALLIED												
84.	Tamil Nadu Warehousing Corporation	380.50	---	---	380.50	761.00	---	---	---	---	8.90	8.90	0.01:1 (0.04:1)
	TOTAL (Provisional)	380.50	---	---	380.50	761.00	---	---	---	---	8.90	8.90	0.01:1 (0.04:1)
	TOTAL(B)	104928.50	---	---	380.50	105309.00	25737.00	---	---	---	482247.90	482247.90	4.51:1 (5.06:1)
	GRAND TOTAL (A+ B)	229576.002	5366.88	3093.34	5074.62	243110.842	49289.92	122.00	---	110093.20	717376.51	827469.71	3.40:1 (4.03:1)

ANNEXURE - 3

Summarised financial results of Government Companies and Statutory Corporations for the latest year for which accounts were finalised

(Referred to in Paragraphs 1.2.1, 1.2.2, 1.5, 1.6, 1.6.1.1, 1.7 and 1.8)

(Figures in columns 7 to 12 are Rupees in lakh)

Sl. No.	Sector and name of the Company/Statutory Corporation	Name of the Department	Date of Incorpoation	Period of accounts	Year in which accounts finalised	Net Profit(+)/ Loss (-)	Net impact of Audit Comments	Paid-up capital	Accumulated Profit(+)/ Loss (-)	Capital employed[♣]	Total Return on capital employed	Percentage of total return on capital employed	Arrears of accounts in terms of years	Status of the Company/ Corporation
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	(A) GOVERNMENT COMPANIES													
	AGRICULTURE													
1.	Tamil Nadu Poultry Development Corporation Limited	Animal Husbandry and Fisheries	12 July 1973	1996-97	1999-2000	(-)87.36	---	126.68	(-)352.60	17.62	(-)67.34	---	2	Non-working
2.	Tamil Nadu Sugarcane Farm Corporation Limited	Agriculture	22 February 1975	1997-98 (upto 30 June 1998)	1999-2000	(-)0.20	---	27.50	(-)16.36	11.04	(-)0.20	---	1	Non-working
3.	Tamil Nadu Fisheries Development Corporation Limited	Fisheries	11 April 1974	1997-98	1998-99	(-)68.06	---	435.52	(-)560.76	171.30	(-)63.95	---	1	Working
4.	Tamil Nadu State Farms Corporation Limited	Agriculture	8 December 1974	1998-99	1999-2000	(-)88.26	---	155.13	(-)1570.74	1.22	45.10	37.0	---	Non-working

(1)	(2)	3	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
5.	Tamil Nadu Tea Plantation Corporation Limited	Environment and Forest	22 August 1975	1998-99	1999-2000	1323.52	Profit decreased by Rs.53.18 lakh	596.18	1692.72	2694.17	1351.18	50.2	---	Working
6.	Tamil Nadu State Tube wells Corporation Limited	Public Works	19 March 1982	1995-96	1998-99	(-)6.47	---	31.50	(-)199.80	81.36	(-)6.47	---	3	Non-working
7.	Tamil Nadu Dairy Development Corporation Limited	Agriculture	4 May 1972	1992-93	1999-2000	(-)0.03	---	207.36	(-)40.80	166.56	(-)0.03	---	6	Non-working
8.	Tamil Nadu Agro Industries Corporation Limited	Agriculture	15 July 1966	1997-98	1999-2000	(-)64.16	---	455.90	(-)1491.66	2269.80	63.79	2.8	1	Working
	TOTAL					1008.98	---	2035.77	(-)2540.00	5413.07	1322.08	24.4		
	INDUSTRY													
9.	Tamil Nadu Industrial Development Corporation Limited (TIDCO)	Industries	21 May 1965	1997-98	1998-99	272.64	Profit decreased by Rs.928.91 lakh	9779.31	1897.96	16632.31	3622.09	21.8	1	Working
10.	Tamil Nadu Industrial Explosives Limited (Subsidiary of TIDCO)	Industries	9 February 1983	1997-98	1998-99	(-)395.56	---	2699.63	(-)4751.85	4592.58	318.17	6.9	1	Working (BIFR referred)
11.	Tamil Nadu Magnesium and Marine Chemicals Limited (Subsidiary of TIDCO)	Industries	10 February 1987	1997-98	1998-99	(-)115.51	---	362.00	(-)1104.64	557.63	(-)115.50	---	1	Non-working
12.	Tamil Nadu Paints and Allied Products Limited (Subsidiary of TANSI)	Small Industries	18 November 1985	1998-99	1999-2000	0.82	---	2.05	6.03	25.70	3.69	14.4	---	Working
13.	Tamil Nadu Small Industries Corporation Limited (TANSI)	Small Industries	10 September 1965	1997-98	1998-99	(-)334.10	---	1505.26	(-)4918.42	6990.30	(-)85.64	---	1	Working

(1)	(2)	3	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
14.	Tamil Nadu Small Industries Development Corporation Limited (SIDCO)	Small Industries	23 March 1970	1997-98	1998-99	186.39	---	730.00	153.40	1538.92	782.90	50.9	1	Working
15.	State Industries Promotion Corporation of Tamil Nadu Limited (SIPCOT)	Industries	25 March 1971	1997-98	1999-2000	601.39	Profit decreased by Rs.47.76 lakh	5791.25	98.80	29255.52	3808.56	13.00	1	Working
16.	Tamil Nadu Ceramics Limited	Small Industries	14 December 1973	1998-99	1999-2000	0.20	---	186.11	(-)206.33	(-)7.82	0.20	---	---	Non-working
17.	Tamil Nadu Salt Corporation Limited	Industries	22 July 1974	1998-99	1999-2000	90.36	---	317.01	35.85	375.15	90.36	24.1	---	Working
18.	Tamil Nadu Magnesite Limited	Industries	17 January 1979	1998-99	1999-2000	(-)599.73	---	1665.00	(-)2436.23	1876.11	(-)42.17	---	---	Working
19.	Tamil Nadu Leather Development Corporation Limited	Small Industries	21 March 1983	1998-99	1999-2000	(-)199.80	---	250.00	(-)902.31	(-)4.61	(-)139.98	---	---	Working
20.	Arasu Rubber Corporation Limited	Environment and Forest	10 August 1984	1998-99	1999-2000	(-)543.61	---	200.00	850.63	(-)428.41	(-)530.76	---	---	Working
21.	Tamil Nadu Graphites Limited	Industries	19 March 1997	1998-99	1999-2000	---	---	10.00	---	(-)10.29	---	---	---	Under implementation
	TOTAL					(-)1036.51	---	23497.62	(-)11277.11	61393.09	7711.92	12.6		
	ENGINEERING													
22.	State Engineering and Servicing Company of Tamil Nadu Limited (SESCOT) (Subsidiary of TANSI)	Small Industries	25 April 1977	1998-99	1999-2000	(-)80.74	---	49.71	(-)1306.02	(-)74.96	(-)26.38	---	---	Working

(1)	(2)	3	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
23.	Southern Structural Limited	Industries	17 October 1956	1997-98	1998-99	44.04	---	3454.30	(-)5176.19	1674.25	140.32	8.4	1	~~Working~~ referred to BIFR
24.	Tamil Nadu Steels Limited	Industries	17 September 1981	1996-97	1998-99	(-)1116.56	---	392.00	(-)1702.26	707.46	(-)850.66	---	2	Non-working
	TOTAL					(-)1153.26	---	3896.01	(-)8184.47	2306.75	(-)736.72	---		
	ELECTRONICS													
25.	Electronics Corporation of Tamil Nadu Limited (ELCOT)	Information and Technology	21 March 1977	1998-99	1999-2000	11.08	---	2593.05	38.79	1383.31	25.96	1.9	--	Working
26.	Tidel Park	Information and Technology	2 December 1997	1998-99	1999-2000	---	---	1102.88	---	775.45	---	---	---	Under implementation
27.	Tanitec Limited	Higher Education	20 February 1998	1998-99				FIRST ACCOUNTS DUE						Under implementation
	TOTAL					11.08	---	3695.93	38.79	2158.76	25.96	1.2		
	TEXTILES													
28.	Tamil Nadu Textile Corporation Limited	Handloom, Handicraft, Textiles and Khadi	24 April 1969	1997-98	1998-99	44.35	---	154.00	(-)201.22	486.97	76.07	15.6	1	Working
29.	Tamil Nadu Zari Limited	Handloom, Handicraft, Textiles and Khadi	6 December 1971	1998-99	1999-2000	130.68	---	34.40	237.66	322.50	132.26	41.0	---	Working
	TOTAL					175.03	---	188.40	36.44	809.47	208.33	25.7		

(1)	(2)	3	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	HANDLOOM AND HANDICRAFTS													
30.	Tamil Nadu Handicrafts Development Corporation Limited	Handloom, Handicraft, Textiles and Khadi	26 July 1973	1998-99	1999-2000	(-)3.45	---	283.46	97.46	476.78	15.46	3.2	---	Working
31.	Tamil Nadu Handloom Development Corporation Limited	Handloom, Handicraft, Textiles and Khadi	10 September 1964	1998-99	1999-2000	14.14	---	428.34	(-)26.65	952.52	79.57	8.4	---	Working
	TOTAL					10.69	---	711.80	70.81	1429.30	95.03			
	FOREST													
32.	Tamil Nadu Forest Plantation Corporation Limited	Environment and Forest	13 June 1974	1998-99	1999-2000	866.00	Profit decreased by Rs.17.54 lakh	300.01	1509.92	2010.53	1009.84	50.2	---	Working
	TOTAL					866.00	---	300.01	1509.92	2010.53	1009.84	50.2		
	MINING													
33.	Tamil Nadu Minerals Limited (TAMIN)	Industries	6 April 1977	1998-99	1999-2000	985.26	---	786.90	8143.25	6813.06	1002.83	14.7	---	Working
	TOTAL					985.26	---	786.90	8143.25	6813.06	1002.83	14.7		
	CONSTRUCTION													
34.	Tamil Nadu State Construction Corporation Limited	Public Works	8 February 1980	1997-98	1998-99	(-)10.12	---	500.00	(-)1076.43	(-)243.89	(-)38.39	---	1	Working

(1)	(2)	3	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
35.	Tamil Nadu Police Housing Corporation Limited	Home	30 April 1981	1998-99	1999-2000	371.34	---	100.00	422.18	13400.85	413.75	3.1	---	Working
	TOTAL					361.22	---	600.00	(-)654.25	13156.96	375.36	2.9		
	DRUGS, AND CHEMICALS													
36.	Tamil Nadu Medicinal Plant Farms and Herbal Medicine Corporation Limited	Indian Medicine and Homeopathy	27 September 1983	1998-99	1999-2000	38.15	---	20.75	1.06	76.47	39.34	51.4	---	Working
37.	Tamil Nadu Medical Services Corporation Limited	Health and Family Welfare	1 July 1994	1997-98	1998-99	5.75	---	300.00	8.47	361.75	5.75	1.6	1	Working
	TOTAL					43.90	---	320.75	9.53	438.22	45.09	10.2		
	SUGAR													
38.	Tamil Nadu Sugar Corporation Limited (TASCO)	Industries	17 October 1974	1997-98	1998-99	69.50	---	779.15	(-)1146.58	3008.43	702.84	23.4	1	Working
39.	Perambalur Sugar Mills Limited (Subsidiary of TASCO)	Industries	24 July 1976	1997-98	1998-99	298.53	Profit decreased by Rs.8.07 lakh	417.33	(-)321.48	2698.98	871.74	32.3	1	Working
	TOTAL					368.03	---	1196.48	(-)1468.06	5707.41	1574.58	27.6		
	CEMENT													
40.	Tamil Nadu Cements Corporation Limited	Industries	11 February 1976	1997-98	1998-99	1095.79	---	1799.13	3107.93	10572.32	1876.55	17.7	1	Working
	TOTAL					1095.79	---	1799.13	3107.93	10572.32	1876.55	17.7		

(1)	(2)	3	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	AREA DEVELOPMENT													
41.	Dharmapuri District Development Corporation Limited	Rural Development and Local Administration	7 November 1975	1996-97	1998-99	3.10	---	15.00	77.80	134.66	3.84	2.9	2	Working
	TOTAL					3.10	---	15.00	77.80	134.66	3.84	2.9		
	ECONOMICALLY WEAKER SECTION													
42.	Tamil Nadu Adi Dravidar Housing and Development Corporation Limited	Adi Dravidar and Tribal Welfare	15 February 1974	1995-96	1998-99	(-)64.11	---	4794.43	71.04	5552.40	(-)36.26	---	3	Working
43.	Tamil Nadu Backward Classes and Minorities Economic Development Corporation Limited	Backward Classes and Most Backward classes Welfare	16 November 1981	1997-98	1998-99	(-)39.15	---	273.56	(-)15.88	1369.14	9.39	0.7	1	Working
44.	Tamil Nadu Corporation for Development of Women Limited	Social Welfare and Noon-meal Programme	9 December 1983	1996-97	1998-99	(-)15.64	---	78.42	(-)4.81	285.89	(-)15.64	---	2	Working
45.	Tamil Nadu Ex-servicemen's Corporation Limited	Public (Ex-servicemen)	28 January 1986	1996-97	1998-99	49.73	---	22.91	(-)28.44	59.33	67.48	113.7	2	Working
	TOTAL					(-)69.17	---	5169.32	21.91	7266.76	24.97	0.3		
	PUBLIC DISTRIBUTION													
46.	Tamil Nadu Civil Supplies Corporation Limited	Food and consumer protection	21 April 1972	1997-98	1999-2000	---	---	2998.85	(-)2694.65	58114.18	2131.33	3.7	1	Working
	TOTAL					---	---	2998.85	(-)2694.65	58114.18	2131.33	3.7		

(1)	(2)	3	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	TOURISM													
47.	Tamil Nadu Tourism Development Corporation Limited	Information and Tourism	30 June 1971	1998-99	1999-2000	(-)14.64	---	618.63	(-)197.74	975.17	15.29	1.6	---	Working
	TOTAL					(-)14.64	---	618.63	(-)197.74	975.17	15.29	1.6		
	FINANCING													
48.	The Chit Corporation of Tamil Nadu Limited	Commercial Taxes	11 January 1984	1997-98	1998-99	(-)4.05	---	5.92	(-)31.09	(-)3.80	(-)0.45	---	1	Non-working
49.	Tamil Nadu Industrial Investment Corporation Limited (TIIC)	Small Industries	26 March 1949	1998-99	1999-2000	(-)11698.22	---	4249.56	(-)11334.12	115084.80	2036.98	1.8	---	Working
	TOTAL					(-)11702.27	---	4255.48	(-)11365.21	115081.00	2036.53	1.8		
	INFRASTRUCTURE DEVELOPMENT													
50.	Tamil Nadu Urban Finance and Infrastructure Development Corporation Limited	Municipal Administration and Water supply	21 March 1990	1997-98	1999-2000	1927.56	---	3200.00	330.54	28117.73	2479.57	8.8	1	Working
51.	Tamil Nadu Power Finance and Infrastructure Development Corporation Limited	Energy	27 June 1991	1998-99	1999-2000	1774.90	---	2200.00	1427.50	103933.25	15325.38	14.8	---	Working
52.	Tamil Nadu Corporation for Industrial Infrastructure Development Limited	Industries	21 March 1992	1998-99	1999-2000	7.82	---	8530.00	17.96	11424.17	7.86	0.1	---	Working
	TOTAL					3710.28	---	13930.00	1776.00	143475.15	17812.81	12.4		
	TRANSPORT													
53.	Metropolitan Transport Corporation (Chennai Division I) Limited	Transport	10 December 1971	1998-99	1999-2000	(-)3807.73	---	7418.64	(-)20897.67	(-)7190.61	(-)3274.89	---	---	Working

(1)	(2)	3	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
54.	**Tamil Nadu State Transport Corporation (Madurai Division I) Limited**	**Transport**	**10 December 1971**	**1998-99**	**1999-2000**	**(-)3055.71**	**Loss increased by Rs.148.75 lakh**	**3032.57**	**(-)9344.37**	**(-)1171.02**	**(-)2322.78**	**---**	**---**	**Working**
55.	**Tamil Nadu State Transport Corporation (Coimbatore Division I) Limited**	**Transport**	**17 February 1972**	**1998-99**	**1999-2000**	**(-)1777.75**	**Loss increased by Rs.276.50 lakh**	**2638.24**	**(-)5633.16**	**831.37**	**(-)1178.21**	**---**	**---**	**Working**
56.	**Tamil Nadu State Transport Corporation (Kumbakonam Division I) Limited**	**Transport**	**17 February 1972**	**1998-99**	**1999-2000**	**(-)1524.14**	**Loss increased by Rs.200.73 lakh**	**3563.52**	**(-)8441.69**	**(-)995.06**	**(-)870.44**	**---**	**---**	**Working**
57.	**Tamil Nadu State Transport Corporation (Salem Division I) Limited**	**Transport**	**23 January 1973**	**1998-99**	**1999-2000**	**(-)1470.60**	**---**	**1862.00**	**(-)5560.29**	**(-)145.62**	**(-)905.83**	**---**	**---**	**Working**
58.	**Tamil Nadu State Transport Corporation (Madurai Division II) Limited**	**Transport**	**12 December 1973**	**1998-99**	**1999-2000**	**(-)3437.95**	**---**	**5521.74**	**(-)14535.21**	**(-)1395.51**	**(-)2173.52**	**---**	**---**	**Working**
59.	**Poompuhar Shipping Corporation Limited**	**Highways**	**11 April 1974**	**1997-98**	**1999-2000**	**(-)572.52**	**Loss increased by Rs.9.28 lakh**	**2053.00**	**2419.88**	**10160.90**	**153.34**	**1.5**	**1**	**Working**
60.	**Tamil Nadu State Transport Corporation (Villupuram Division I) Limited**	**Transport**	**9 January 1975**	**1998-99**	**1999-2000**	**(-)555.14**	**---**	**1394.00**	**(-)2741.26**	**1378.59**	**(-)119.53**	**---**	**---**	**Working**
61.	**Tamil Nadu Transport Development Finance Corporation Limited**	**Transport**	**25 March 1975**	**1998-99**	**1999-2000**	**1772.81**	**---**	**6174.19**	**2388.69**	**76608.39**	**12312.06**	**16.1**	**---**	**Working**

(1)	(2)	3	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
62.	Tamil Nadu Goods Transport Corporation Limited	Transport	26 March 1975	1989-90	---	0.21	---	32.66	(-)132.55	(-)29.85	6.57	---	---	Non-working under liquidation
63.	State Express Transport Corporation (Tamil Nadu Division I) Limited	Transport	14 January 1980	1997-98	1998-99	(-)3295.22	---	4895.85	(-)12511.71	742.55	(-)1976.58	---	1	Working
64.	Tamil Nadu State Transport Corporation (Kumbakonam Division III) Limited	Transport	1 September 1982	1998-99	1999-2000	(-)1795.38	Loss increased by Rs.0.11 lakh	2787.04	(-)8335.90	(-)577.41	(-)916.28	---	---	Working
65.	Tamil Nadu State Transport Corporation (Villupuram Division II) Limited	Transport	11 November 1982	1997-98	1998-99	(-)517.97	---	717.94	(-)3239.44	1409.15	71.98	5.1	1	Working
66.	Tamil Nadu State Transport Corporation (Coimbatore Division II) Limited	Transport	28 December 1982	1998-99	1999-2000	(-)1079.34	Loss increased by Rs.212.93 lakh	1565.00	(-)2757.02	761.24	(-)734.80	---	---	Working
67.	Tamil Nadu State Transport Corporation (Madurai Division III) Limited	Transport	16 February 1983	1998-99	1999-2000	(-)2139.33	---	2926.79	(-)8663.63	(-)745.63	(-)1384.64	---	---	Working
68.	Pallavan Transport Consultancy Services Limited	Transport	20 February 1984	1998-99	1999-2000	1.50	---	5.00	6.30	21.25	1.97	9.3	---	Working
69.	Tamil Nadu State Transport Corporation (Kumbakonam Division II) Limited	Transport	1 January 1985	1998-99	1999-2000	(-)1467.14	Loss increased by Rs.203.74 lakh	1665.00	(-)3834.55	1093.49	(-)1030.11	---	---	Working

(1)	(2)	3	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
70.	Tamil Nadu State Transport Corporation (Madurai Division IV) Limited	Transport	19 March 1986	1998-99	1999-2000	(-)1381.95	---	1322.00	(-)4261.48	(-)140.09	(-)1329.70	---	---	Working
71.	Tamil Nadu State Transport Corporation (Salem Division II) Limited	Transport	26 March 1987	1998-99	1999-2000	(-)827.51	---	1010.00	(-)2555.42	463.32	(-)508.73	---	---	Working
72.	Tamil Nadu State Transport Corporation (Villupuram Division III) Limited	Transport	24 February 1992	1998-99	1999-2000	(-)1563.20	---	1980.16	(-)6629.45	(-)698.77	(-)978.14	---	---	Working
73.	State Express Transport Corporation (Tamil Nadu Division II) Limited	Transport	1 October 1993	1997-98	1998-99	(-)1164.40	---	926.96	(-)2766.82	1443.20	(-)587.27	---	1	Working
74.	Metropolitan Transport Corporation (Chennai Division II) Limited	Transport	18 October 1993	1998-99	1999-2000	(-)3116.26	---	6728.99	(-)9611.26	431.77	(-)2679.41	---	---	Working
75.	Tamil Nadu State Transport Corporation (Coimbatore Division III) Limited	Transport	29 December 1993	1997-98	1998-99	(-)1131.60	---	1004.40	(-)3680.33	68.20	(-)682.46	---	---	Working
76.	Tamil Nadu State Transport Corporation (Madurai Division V) Limited	Transport	8 March 1996	1998-99	1999-2000	(-)1115.89	---	399.40	(-)1845.15	(-)325.64	(-)966.17	---	---	Working
77.	Tamil Nadu State Transport Corporation (Kumbakonam Division IV) Limited	Transport	8 March 1996	1997-98	1998-99	(-)556.74	---	86.50	(-)1183.27	447.84	(-)362.00	---	1	Working
	TOTAL					(-)35578.95	---	61711.59	(-)134346.76	82446.05	(-)12435.57	---		
	MISCELLANEOUS													
78.	Overseas Manpower Corporation Limited	Labour and Employment	30 November 1978	1997-98	1998-99	0.69	---	15.00	8.67	33.79	2.09	6.2	1	Working
79.	Tamil Nadu State Sports Development Corporation Limited	Education	15 November 1984	1988-89	1996-97	36.38	---	0.002	59.96	77.69	41.32	53.2	10	Non-working

(1)	(2)	3	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
80.	Tamil Nadu Film Development Corporation Limited	Information and Tourism	12 April 1972	1997-98	1998-99	(-)233.18	---	1391.00	(-)768.47	1510.12	(-)36.85	---	1	Working
81.	Tamil Nadu State Marketing Corporation Limited (TASMAC)	Prohibition and Excise	23 May 1983	1998-99	1999-2000	261.60	---	700.00	195.87	655.87	271.76	41.4	---	Working
82.	Tamil Nadu Spirit Corporation Limited (Subsidiary of TASMAC)	Prohibition and Excise	10 July 1989	1998-99	1999-2000	(-)227.21	---	400.00	(-)855.54	1440.70	(-)75.14	---	---	Non-working under merger
	TOTAL					(-)161.72	---	2506.002	(-)1359.51	3718.17	203.18	5.5		
	TOTAL(A)					(-)41077.16	---	130233.672	(-)159295.38	523420.08	24303.23	4.64		
(B)	STATUTORY CORPORATIONS													
	POWER													
83.	Tamil Nadu Electricity Board	Energy	1 July 1957	1997-98	1998-99	27364.00	Net surplus is decreased by Rs.8033.00 lakh	78811.00	231507.00	865904.00	68559.00	8.0	1	Working
	AGRICULTURE													
84.	Tamil Nadu Warehousing Corporation	Food and Consumer protection	2 May 1958	1997-98	1998-99	136.42	---	761.00	1621.45	2442.44	144.17	5.9	1	Working
	TOTAL(B)					27500.42	---	79572.00	233128.45	868346.44	68703.17	7.9	---	---
	GRAND TOTAL (A + B)					(-)13576.74	---	209805.672	73833.07	1391766.52	93006.40	6.7	---	---

♠ Capital employed represents net fixed assets (including capital work-in-progress) PLUS working capital except in case of finance Companies/Corporations where the capital employed is worked out as a mean of aggregate of the opening and closing balances of paid-up capital, free reserves, bonds, deposits and borrowings (including refinance)

ANNEXURE - 4

Statement showing subsidy received, guarantees received, waiver of dues, loans on which moratorium allowed and loans converted in to equity during the year and subsidy receivable and guarantees outstanding at the end of March 1999

(Referred to in Paragraph 1.4)

(Figures in column 3(a) to 7 are Rupees in lakh)

Sl. No.	Name of the Company/Statutory Corporation	Subsidy received during the year				Guarantees received during the year and outstanding at the end of the year**					Waiver of dues during the year				Loans on which moratorium allowed	Loans converted into equity during the year
		Central Govern-ment	State Govern-ment	Others	Total	Cash credit from banks	Loans from other sources	Letters of credit opened by banks in respect of imports	Payment obligation under agreement with foreign consultants or contracts	Total	Loans repayment written off	Interest waived	Penal interest waived	Total		
(1)	(2)	3(a)	3(b)	3(c)	3(d)	4(a)	4(b)	4(c)	4(d)	4(e)	5(a)	5(b)	5(c)	5(d)	(6)	(7)
	(A) Government Companies															
1.	Tamil Nadu Tea Plantation Corporation Limited	---	---	0.07	0.07	---	(395.20)	---	---	(395.20)	---	---	---	---	---	---
2.	Tamil Nadu Agro Industries Corporation Limited	---	---	---	---	---	(616.90)	---	---	(616.90)	---	---	---	---	---	---

** Figures in bracket indicate guarantees outstanding at the end of the year.

(1)	(2)	3(a)	3(b)	3(c)	3(d)	4(a)	4(b)	4(c)	4(d)	4(e)	5(a)	5(b)	5(c)	5(d)	(6)	(7)
3.	Tamil Nadu Industrial Development Corpora-tion Limited (TIDCO)	---	---	---	---	---	(3005.50)	---	---	(3005.50)	---	---	---	---	---	---
4.	Tamil Nadu Small Industries Corporation Limited	---	59.62	---	59.62	925.00 (950.00)	300.00 (300.00)	---	---	1225.00 (1250.00)	---	---	---	---	---	---
5.	Tamil Nadu Small Industries Develo-pment Corporation Limited (SIDCO)	---	---	---	---	---	(133.50)	---	---	(133.50)	---	---	---	---	---	---
6.	State Industries Promotion Corpora-tion of Tamil Nadu Limited (SIPCOT)	100.00	565.00	---	665.00	---	1065.00	---	---	1065.00	---	---	---	---	---	---
7.	Tamil Nadu Leather Development Corporation Limited	---	---	---	---	25.00 (52.00)	---	87.00	---	112.00 (52.00)	---	---	---	---	---	---
8.	Southern Structurals Limited	---	---	---	---	3500.00 (2157.00)	---	---	---	3500.00 (2157.00)	---	---	---	---	---	---
9.	Tamil Nadu Steels Limited															
10.	Tamil Nadu Handi-crafts Development Corporation Limited	11.25	---	---	11.25	---	---	---	---		---	---	---	---	---	---
11.	Tamil Nadu Handloom Development Corpo-ration Limited	---	---	---	---	550.00 (550.00)	---	---	---	550.00 (550.00)	---	---	---	---	---	---
12.	Tamil Nadu Forest Plantation Corporation Limited	---	---	---	---	---	(115.00)	---	---	(115.00)	---	---	---	---	---	---

(1)	(2)	3(a)	3(b)	3(c)	3(d)	4(a)	4(b)	4(c)	4(d)	4(e)	5(a)	5(b)	5(c)	5(d)	(6)	(7)
13.	Tamil Nadu State Construction Corporation Limited	---	---	---	---	(125.00)	---	---	---	(125.00)	---	---	---	---	---	---
14.	Tamil Nadu Cements Corporation Limited	---	---	---	---	---	(600.00)	---	---	(600.00)	---	---	---	---	---	---
15.	Tamil Nadu Adi Dravidar and Housing Development Corpor-ation Limited	2322.27	750.00	---	3072.27		(1316.91)	---	---	(1316.91)	---	---	---	---	---	---
16.	Tamil Nadu Civil Supplies Corporation Limited	---	50000.00	---	50000.00	---	---	---	---	---	---	---	---	---	---	---
17.	Metropolitan Trans-port Corporation (Chennai Division I) Limited	---	1447.20	---	1447.20	---	---	---	---	---	---	---	---	---	---	---
18.	Tamil Nadu Industrial Investment Corporation Limited (TIIC)	---	1750.00	1332.00	3082.00	---	17497.00 (10460.00)	---	---	17497.00 (10460.00)	---	---	---	---	---	---
19.	Tamil Nadu Urban Finance and Infra-structure Development Corporation Limited	---	---	---	---	---	(2791.27)	---	---	(2791.27)	---	---	---	---	---	---
20.	Tamil Nadu State Transport Corporation (Madurai Division I) Limited	---	436.83	---	436.83	---	---	---	---	---	---	---	---	---	---	---

(1)	(2)	3(a)	3(b)	3(c)	3(d)	4(a)	4(b)	4(c)	4(d)	4(e)	5(a)	5(b)	5(c)	5(d)	(6)	(7)
21.	Tamil Nadu State Transport Corporation (Coimbatore Division I) Limited	---	1064.73	---	1064.73	---	---	---	---	---	---	---	---	---	---	--
22.	Tamil Nadu State Transport Corporation (Kumbakonam Division I) Limited	---	1466.29	---	1466.29	---	---	---	---	---	---	---	---	---	---	---
23.	Tamil Nadu State Transport Corporation (Salem Division I) Limited	---	378.70	---	378.70	---	(421.90)	---	---	(421.90)	---	---	---	---	---	---
24.	Tamil Nadu State Transport Corporation (Madurai Division II) Limited	---	484.38	---	484.38	(150.00)	(140.83)	---	---	(290.83)	---	---	---	---	---	---
25.	Poompuhar Shipping Corporation Limited	---	---	---	---	300.00 (0.04)	---	---	---	300.00 (0.04)	---	---	---	---	---	---
26.	Tamil Nadu State Transport Corporation (Villupuram Division I) Limited	---	426.07	---	426.07	---	---	---	---	---	---	---	---	---	---	---
27.	State Express Transport Corporation (Tamil Nadu Division I) Limited	---	---	---	---	350.00 (244.21)	(1549.00)	---	---	350.00 (1793.21))	---	---	---	---	---	---
28.	Tamil Nadu State Transport Corporation (Kumbakonam Division III) Limited	---	318.03	---	318.03	---	(2645.00)	---	---	(2645.00)	---	---	---	---	---	---

(1)	(2)	3(a)	3(b)	3(c)	3(d)	4(a)	4(b)	4(c)	4(d)	4(e)	5(a)	5(b)	5(c)	5(d)	(6)	(7)
29.	Tamil Nadu State Transport Corporation (Villupuram Division II) Limited	---	674.13	---	674.13	---	---	---	---	---	---	---	---	---	---	---
30.	Tamil Nadu State Transport Corporation (Madurai Division III) Limited	---	390.13	---	390.13	(150.00)	(2572.00)	---	---	(2722.00)	---	---	---	---	---	--
31.	Tamil Nadu State Transport Corporation (Kumbakonam Division II) Limited	---	902.64	---	902.64	---	---	---	---	---	---	---	--	---	---	---
32.	Tamil Nadu State Transport Corporation (Madurai Division IV) Limited	---	340.22	---	340.22	---	---	---	---	---	---	---	---	---	---	---
33.	Tamil Nadu State Transport Corporation (Salem Division II) Limited	---	525.65	---	525.65	---	---	---	---	---	---	---	---	---	---	---
34.	Tamil Nadu State Transport Corporation (Villupuram Division III) Limited	---	471.32	---	471.32	---	---	---	---	---	---	---	---	---	---	---

(1)	(2)	3(a)	3(b)	3(c)	3(d)	4(a)	4(b)	4(c)	4(d)	4(e)	5(a)	5(b)	5(c)	5(d)	(6)	(7)
35.	State Express Transport Corporation (Tamil Nadu Division II) Limited	---	---	---	---	---	(1393.79)	---	---	(1393.79)	---	---	---	---	---	---
36.	Metropolitan Transport Corporation (Chennai Division II) Limited	---	1615.35	---	1615.35	---	---	---	---	---	---	---	---	---	---	---
37.	Tamil Nadu State Transport Corporation (Coimbatore Division III) Limited	---	476.11	---	476.11	---	(860.68)	---	---	(860.68)	---	---	---	---	---	---
38.	Tamil Nadu Police Housing Corporation Limited	---	---	---	---	---	10043.82 (14540.88)	---	---	10043.82 (14540.88)	---	---	---	---	---	---
39.	Tamil Nadu Backward Classes and Minorities Economic Development Corporation Limited	---	---	---	---	---	(1394.54)	---	---	(1394.54)	---	---	---	---	---	---
40.	Tamil Nadu Film Development Corporation Limited	---	---	---	---	(31200.00)	(52500.00)	---	---	(83700.00)	---	---	---	---	---	---
41.	Tamil Nadu State Marketing Corporation Limited	---	---	---	---	(1500.00)	---	---	---	(1500.00)	---	---	---	---	---	---
42.	Tamil Nadu Textiles Corporation Limited	---	---	---	---	112.37 (112.37)	---	---	---	112.37 (112.37)	---	---	---	---	---	---
43.	Tamil Nadu Sugar Corporation Limited	---	---	---	---	---	150.00 (100.00)	---	---	150.00 (100.00)	---	---	---	---	---	---
44.	Tamil Nadu Power Finance and Infrastructure Development Corporation Limited	---	---	---	---	---	3000.00 (2200.00)	---	---	3000.00 (2200.00)	---	---	---	---	---	---
45.	Tamil Nadu Corporation for Industrial Infrastructure Development Limited	---	---	---	---	---	---	---	---	---	---	---	---	---	3050.00	---

	(2)	3(a)	3(b)	3(c)	3(d)	4(a)	4(b)	4(c)	4(d)	4(e)	5(a)	5(b)	5(c)	5(d)	(6)	(7)
46.	Tamil Nadu State Transport Corporation (Madurai Division V) Limited	---	157.00	---	157.00	75.00	---	---	---	75.00	---	---	---	---	---	---
47.	Tamil Nadu State Transport Corporation (Kumbakonam Division IV) Limited	---	153.00	---	153.00	---	---	---	---	---	---	---	---	---	---	---
48.	Perambalur Sugar Mills Limited	30.37	---	---	30.37	---	(300.00)	---	---	(300.00)	---	---	---	---	---	---
49.	Tamil Nadu Fisheries Development Corporation Limited	---	---	---	---	---	---	---	---	---	121.70	---	---	---	---	---
50.	Tamil Nadu State Transport Corporation (Coimbatore Division II) Limited	---	337.37	---	337.37	---	---	---	---	---	---	---	---	---	---	---
	Total	2463.89	65189.77	1332.07	68985.73	5837.37 (37190.62)	32055.82 (100352.90)	87.00	---	37980.19 (137543.52)	121.70	---	---	---	3050.00	---
	(B) Statutory Corporation															---
51.	Tamil Nadu Electricity Board	16.77	25000.00	---	25016.77	---	124844.00 (255962.00)	---	---	124844.00 (255962.00)	---	---	---	---	---	---
	Grand Total	2480.66	90189.77	1332.07	94002.50	5837.37 (37190.62)	156899.82 (356314.90)	87.00	---	162824.19 (393505.52)	121.70	---	---	---	3050.00	---

ANNEXURE - 5

Statement showing financial position of Statutory Corporations

(Referred to in Paragraph 1.2.2)

(Rupees in crore)

1. TAMIL NADU ELECTRICITY BOARD

	Particulars	1996-97	1997-98	1998-99 (Provisional)
(A)	LIABILITIES			
	Equity capital	765.69	788.11	1045.48
	Loans from Government	94.38	—	—
	Working capital from banks	120.92	—	—
	Other long term loans (including bonds)	3371.93	3528.04	4822.39
	Reserves and surplus	2589.27	2988.82	2669.65
	Others (subsidy)	1305.13	1397.60	925.69
	Current liabilities and provisions	2710.85	3418.64	3661.68
	TOTAL (A)	10958.17	12121.21	13124.89
(B)	Gross fixed assets	7963.03	8658.30	9473.88
	LESS: Depreciation	1885.17	2268.24	2711.60
	Net fixed assets	6077.86	6390.06	6762.28
	Capital works-in-progress	2327.30	2568.67	2844.71
	Assets not in use	5.40	4.33	—
	Deferred cost	2.15	2.40	2.85
	Current assets	2507.99	3118.95	3471.16
	Investments	37.47	36.80	43.89
	Miscellaneous expenditure	—	—	—
	Accumulated losses	—	—	—
	TOTAL (B)	10958.17	12121.21	13124.89
(C)	Capital employed♣	8202.30	8659.04	9416.47

♣ Capital employed represents net fixed assets (including works-in-progress) PLUS working capital. While working out working capital, the element of deferred cost and investments are excluded from current assets.

2. TAMIL NADU WAREHOUSING CORPORATION

(Rupees in crore)

	Particulars	1996-97	1997-98	1998-99
(A)	LIABILITIES			(Provisional)
	Paid-up capital	7.61	7.61	7.61
	Reserves and surplus	15.48	16.21	18.50
	Borrowings:			
	Loans(others)	0.59	0.34	0.09
	Subsidy	0.26	0.26	0.21
	Trade dues and other liabilities	5.22	6.23	5.24
	TOTAL (A)	29.16	30.65	31.65
(B)	ASSETS			
	Gross block	31.21	31.55	32.12
	LESS: Depreciation	6.13	6.79	7.38
	Net fixed assets	25.08	24.76	24.74
	Capital works-in-progress	---	---	---
	Investments	0.001	0.001	0.001
	Current assets, loans and advances	4.08	5.89	6.91
	TOTAL (B)	29.16	30.65	31.65
(C)	Capital employed*	23.94	24.42	26.41

* Capital employed represents the net fixed assets (including capital works-in-progress).

ANNEXURE - 6

Statement showing working results of Statutory Corporations

(Referred to in Paragraph 1.6)

1. TAMIL NADU ELECTRICITY BOARD

(Rupees in crore)

		Particulars	1996-97	1997-98	1998-99 (Provisional)
1.	(a)	Revenue receipts	4490.49	5311.05	5620.19
	(b)	Subsidy/subvention from Government	586.51	570.06	250.17
		Total	5077.00	5881.11	5870.36
2.		Revenue expenditure (net expenses capitalised including write off of intangible assets but excluding depreciation and interest	4171.55	4767.80	5418.05
3.		Gross surplus(+)/deficit(-) for the year (1–2)	905.45	1113.31	452.31
4.		Adjustments relating to previous years	119.97	(-)48.99	(-)121.87
5.		Final gross surplus(+)/deficit(-) for the year (3-4)	1025.42	1064.32	330.44
6.		Appropriations:			
	(a)	Depreciation (Less: capitalised)	315.12	378.73	435.46
	(b)	Interest on Government loans	47.60	12.74	---
	(c)	Interest on others, bonds, advance, *etc.*, and finance charges	497.61	540.05	589.58
	(d)	Total interest on loans and finance charges (b) + (c)	545.21	552.79	589.58
	(e)	Less: Interest capitalised	164.54	140.84	179.97
	(f)	Net interest charged to revenue (d) – (e)	380.67	411.95	409.61
	(g)	Total appropriations (a) + (f)	695.79	790.68	845.07
7.		Surplus(+)/deficit(-) before accounting for subsidy from State Government (5) – 6(g) - 1(b)	(-)256.88	(-)296.42	(-)764.80
8.		Net surplus(+)/deficit(-) {(5) – 6 (g)}	329.63	273.64	(-)514.63

	Particulars	1996-97	1997-98	1998-99
9.	Total return on capital employed♦	710.30	685.59	(-)105.02
10.	Percentage of return on capital employed	8.7	8.0	---

2. TAMIL NADU WAREHOUSING CORPORATION

(Rupees in crore)

		Particulars	1996-97	1997-98	1998-99
1.		INCOME			(Provisional)
	(a)	Warehousing charges	7.90	9.28	10.83
	(b)	Other income	0.50	0.63	0.72
		Total 1	8.40	9.91	11.55
2.		Expenses			
	(a)	Establishment charges	3.81	4.91	5.85
	(b)	Other expenses	2.26	3.64	3.73
		Total 2	6.07	8.55	9.58
3.		Profit(+)/Loss(-) before tax	2.33	1.36	1.97
4.		Provision for tax	0.005	0.002	0.003
5.		Prior period adjustments	(-)0.85	(-)0.54	0.48
6.		Other appropriations	---	---	---
7.		Amount available for divided	1.47	0.81	2.44
8.		Dividend for the year	0.23	0.08	0.15
9.		Total return on capital employed	2.47	1.45	1.97
10.		Percentage of return on capital employed	10.3	5.9	7.5

♦ Total return on capital employed represents net surplus/deficit PLUS total interest charged to profit and loss account (LESS: interest capitalised).

ANNEXURE - 7

Statement showing operational performance of Transport companies and Statutory Corporations

(Referred to in Paragraphs 1.6.1.3 and 1.6.2.2)

1. STATE TRANSPORT UNDERTAKINGS•

	Particulars	1996-97	1997-98	1998-99
(1)	(2)	(3)	(4)	(5)
	Average number of vehicles held	15879	16326	18536
	Average number of vehicles on road	14607	14976	17164
	Percentage of utilisation of vehicles	92.0	91.7	92.6
	Number of employees	115801	116806	124665
	Employee vehicle ratio	6.0 to 9.2	6.1 to 8.8	6.2 to 9.8
	Number of routes operated at the end of the year	8078	8592	8650
	Route kilometres	11385	12340	11074
	Kilometres operated (in lakh)			
(a)	Gross	21789.81	22285.33	23613.83
(b)	Effective	21306.47	21743.37	23072.06
(c)	Dead	483.34	491.96	541.77
	Percentage of dead kilometres to gross kilometres	2.2	2.2	2.3
	Average kilometres covered per bus per day	417.90	415.57	420.38
	Operating revenue per kilometre (Paise)	1017.16	924.35	946.14
	Average expenditure per kilometre (Paise)	1190.60	1048.72	1132.23
	Profit(+)/Loss(-) per kilometre (Paise)	(-)173.44	(-)124.37	(-)186.09
	Number of operating depots	308	297	290
	Average number of breakdown per lakh kilometres	0.08	0.06	0.04
	Average number of accidents per lakh kilometres	0.71	0.66	0.58

• Represents data of 21 Transport Companies

(1)	(2)	(3)	(4)	(5)
	Passenger kilometre operated (in crore)	10371.79	6396.62	9485.54
	Occupancy ratio	74.8 to 96.0	70.9 to 93.0	72.4 to 95.0
	Kilometres obtained per litre of:			
(a)	Diesel oil	4.2	4.2	4.2
(b)	Engine oil	656.21	681.85	684.32

2. TAMIL NADU ELECTRICITY BOARD

	Particulars	1996-97	1997-98	1998-99 (Provisional)
(1)	(2)	(3)	(4)	(5)
	Installed capacity		(MW)	
(a)	Thermal	2970	2970	2970
(b)	Hydel	1948	1956	1963
(c)	Gas	130	130	130
(d)	Other	19	19	19
	Total	5067	5075	5082
	Normal maximum demand	4875	4918	5196
			(MKWH)	
	Power generated			
(a)	Thermal	18595	17682	17076
(b)	Hydel	4272	5287	4918
(c)	Gas	62	79	124
(d)	Other	20	19	23
	Total	22949	23067	22141
	LESS: Auxiliary consumption			
(a)	Thermal	1640	1589	1561
	(Percentage)	8.82	8.99	9.14
(b)	Hydel	33	17	79*
	(Percentage)	0.8	0.3	1.6
(c)	Gas	3	2	3
	(Percentage)	3.7	2.5	2.4
	Total	1676	1608	1643
	(Percentage)	7.3	7.0	7.4

* Includes Kadamparai Pump Mode 60 MKWH.

(1)	(2)		(3)	(4)	(5)
	Net power generated		21273	21459	20498
	Power purchased:				
(a)	Within the State:				
	(i)	Government	9667	5627	6102
	(ii)	Private	---	994	1579
(b)	Other States		---	---	776
(c)	Central grid		---	4377	4574
	Total power available for sale		30940	32457	33529
	Power sold:				
(a)	Within the State:		25452	26740	27657
(b)	Outside the State		207	203	205
	Transmission and distribution losses		5281	5514	5667
	Load factor (percentage)				
(a)	Thermal		71.5	68.0	65.6
(b)	Hydel		24.9	31.0	28.6
	Percentage of transmission and distribution losses to total power available for sale		17.1	17.0	16.9
	Number of villages/towns electrified (in lakh)		0.64	0.64	0.64
	Number of pump sets/wells energised (in lakh)		15.66	16.08	16.43
	Number of sub-stations		734	782	831
	Transmission/distribution lines (in KMs)				
(a)	High/Medium voltage		1.07	1.27	1.30
(b)	Low voltage		4.04	4.06	4.09
	Connected load (in MW)		19396	20170	22424
	Number of consumers (in lakh)		110.41	117.17	124.03
	Number of employees (in lakh)		0.91	0.96	0.94
	Consumer/employees ratio (in thousand)		8.2	8.1	7.6
	Total expenditure on staff during the year (Rupees in crore)		829.96	1068.88	1279.51
	Percentage of expenditure on staff to total revenue		17.5	19.4	20.8
	Units sold			(MKWH)	
(a)	Agriculture		6678	7275	7556
	Percentage of share to total units sold		26.0	27.0	27.1

(1)	(2)	(3)	(4)	(5)
(b)	Industrial	11059	11514	11054
	Percentage of share to total units sold	43.1	42.7	39.7
(c)	Commercial	2072	2240	2200
	Percentage of share to total units sold	8.1	8.3	7.9
(d)	Domestic	4181	4270	5280
	Percentage of share to total units sold	16.3	15.9	18.9
(e)	Others	1669	1644	1772
	Percentage of share to total units sold	6.5	6.1	6.4
	Total	25659	26943	27862
			(Paise per KWH)	
(a)	Revenue (excluding subsidy from Government)	175	197	202
(b)	Expenditure♠	165	189	210
(c)	Profit(+)/Loss(-)	10	8	(-)8
(d)	Average subsidy claimed from Government	23	21	9
(e)	Average interest charges	20	19	19

3. **STATE WAREHOUSING CORPORATION**

	Particulars	1996-97	1997-98	1998-99 (Provisional)
	Number of stations covered	62	64	64
	Storage capacity created up to the end of the year (in lakh tonnes)			
(a)	Owned	5.98	5.98	5.98
(b)	Hired	0.23	0.26	0.25
	Total	6.21	6.24	6.23
	Average capacity utilised during the year (tonne in lakh)	5.34	5.74	5.11
	Percentage of utilisation	86.0	92.0	82.0
	Average revenue per tonne per year (Rupees)	157.24	172.62	225.95
	Average expenses per tonne per year (Rupees)	129.58	158.26	177.93
	Profit(+)/Loss(-) per tonne (Rupees)	27.66	14.36	48.02

♠ Revenue expenditure includes depreciation but excludes interest on long term loans

ANNEXURE - 8

Financial position of Tamil Nadu Forest Plantation Corporation Limited

(Referred to in Paragraph 2A.6)

		1994-95	1995-96	1996-97	1997-98	1998-99
	LIABILITIES			(Rupees in lakh)		
a)	Paid-up capital (including advances for shares)	200.00	200.00	200.00	300.01	300.00
b)	Reserves and surplus	415.07	421.85	886.76	960.94	1595.53
c)	Borrowings:-					
	i) Short-term and long-term	444.20	641.13	591.28	355.11	115.00
d)	Trade dues and other liabilities (including provisions)	1163.62	1127.93	1466.28	1720.99	1701.41
	TOTAL	2222.89	2390.91	3144.32	3337.05	3711.94
	ASSETS					
a)	Gross block					
	i) Plantation development expenses	1641.81	1769.86	1861.04	2002.01	2024.10
	ii) Other fixed assets	127.59	148.00	158.18	162.50	227.37
b)	LESS: Depreciation	32.89	37.91	49.14	56.49	65.48
c)	Net fixed assets					
	i) Plantation development expenses	1641.81	1769.86	1861.04	2002.01	2024.10
	ii) Other fixed assets	94.70	110.09	109.04	106.01	161.89
d)	Capital works-in-progress	5.55	4.25	1.64	0.81	10.86
e)	Other assets/investments	---	---	---	---	---
f)	Current assets, loans and advances	480.83	506.71	1172.60	1228.22	1515.09
g)	Intangible assets	---	---	---	---	---
	TOTAL	2222.89	2390.91	3144.32	3337.05	3711.94
	Capital employed	1059.27	1262.98	1678.04	1616.06	2010.53
	Net worth	416.65	423.43	913.24	1191.30	1809.92

Note:-

1) Capital Employed represents Net fixed assets (including capital works-in-progress) PLUS Working capital.

2) Net worth represents Paid-up capital PLUS Reserves LESS Intangible assets.

ANNEXURE – 9

Working results of Tamil Nadu Forest Plantation Corporation Limited

(Referred to in Paragraph 2A.6)

(Rupees in lakh)

	1994-95	1995-96	1996-97	1997-98	1998-99
INCOME					
Sales after adjusting inventory	1025.96	901.09	1527.32	1546.63	2888.57
Interest	0.57	0.88	12.55	53.10	51.43
Other income	38.58	40.93	80.07	58.76	106.22
Total	1065.11	942.90	1619.94	1658.49	3046.22
EXPENDITURE					
Operating expenses	556.56	495.03	439.80	785.51	1380.19
Employees' Expenses	230.95	262.79	310.23	372.48	441.39
Repairs and maintenance	16.38	16.49	14.79	17.75	17.68
Other Expenses	44.78	49.89	38.35	45.18	186.96
Interest	80.84	86.98	111.95	153.13	143.85
Depreciation	3.92	5.05	7.57	7.39	10.15
Total	933.43	916.23	922.69	1381.44	2180.22
Net profit for the year	131.68	26.67	697.25	277.05	866.00
Prior period adjustments	3.36	19.89	157.44	11.50	97.67
Net profit before tax	128.32	6.78	539.81	265.55	768.33

ANNEXURE - 10

REGION-WISE PRODUCTIVITY OF EUCALYPTUS

(Referred to in Paragraph 2A.7.1.3)

(Quantity in Metric Tonnes)

Region	1994-95			1995-96			1996-97			1997-98			1998-99		
	Area in hectare	Qty.in MTs	Yield per hectare	Area in hectare	Qty.in MTs	Yield per hectare	Area in hectare	Qty.in MTs	Yield per hectare	Area in hectare	Qty. in MTs	Yield per hectare	Area in hectare	Qty. in MTs	Yield per hectare
Aranthangi*	---	---	---	1028.72	17446.735	16.960	789.93	14953.480	18.930	870.83	15711.765	18.042	1200.65	21456.665	17.871
Karaikudi	990.33	13671.300	13.805	1060.45	13806.400	13.019	638.38	10003.540	15.670	612.80	7859.795	12.826	1235.05	13803.065	11.176
Pudukottai	1088.87	26279.675	24.135	568.64	12601.925	22.162	851.02	18123.115	21.296	915.77	15865.070	17.324	942.85	15091.730	16.007
Tirukoilur	2469.08	20494.350	8.300	2433.52	19590.200	8.050	935.84	10354.585	11.064	1873.5	21940.870	11.711	1726.59	19498.840	11.293
Villupuram**	---	---	---	---	---	---	538.11	8357.565	15.531	1259.55	11621.420	9.227	904.55	12216.085	13.505
Vridhachalam	466.74	10237.150	21.933	293.35	4269.035	14.553	259.68	2760.414	10.630	194.12	2876.237	14.817	538.17	11577.130	21.512
Total	5015.02	70682.475	14.094	5384.68	67714.295	12.575	4012.96	64552.699	16.086	5726.57	75875.157	13.251	6547.86	93643.515	14.301

* Started functioning with effect from 1 April 1995

** Started functioning with effect from 20 December 1996

ANNEXURE - 11

AGE-WISE ANALYSIS OF CASHEW PLANTATIONS IN THE FIVE REGIONS

(Referred to in Paragraph 2A.7.2.1)

Age as on 31 August 1991	Vridha-chalam	Villupuram	Pudu-kottai	Karaikudi	Aranthangi	Total	Percentage to total area
				Area in hectares			
Less than 4 years	911.45	625.53	377.25	347.04	177.33	2438.60	13.9
5 to 10 years	276.05	33.50	114.21	175.53	93.67	692.96	3.9
11 to 20 years	477.84	177.50	34.28	47.76	92.33	829.71	4.7
21 to 30 years	2899.82	173.26	462.66	1641.49	391.36	5568.59	31.6
Above 30 years	4478.71	1275.00	296.81	1502.44	552.06	8105.02	45.9
Total	9043.87	2284.79	1285.21	3714.26	1306.75	17634.88	100.00

ANNEXURE - 12

(Referred to in Paragraph 2B.6.1)

Financial position of Tamil Nadu Industrial Explosives Limited

(Amount - Rupees in lakh)

	Particulars	1994-95	1995-96	1996-97	1997-98	1998-99
I.	Source of funds					(Provisional)
(a)	Share holders fund					
(i)	Share capital (including advance for share capital)	2706.86	2707.16	2699.63	2699.63	2695.68
(ii)	Reserves and surplus	--	--	7.92	7.92	7.92
(b)	Borrowings					
(i)	Short term and long term loans	6579.75	6634.52	6637.46	6636.88	4123.23
(ii)	Cash credit	205.75	--	16.57	--	5.60
(c)	Trade dues and other liabilities including provisions	3327.09	4051.27	4555.14	5373.70	866.82
	Total	12819.45	13392.95	13916.72	14718.13	7699.25
II.	Application of funds					
(a)	Gross block	7727.66	7974.94	8012.02	8107.38	8156.85
(b)	Depreciation	2429.08	2801.34	3909.41	4664.40	5435.21
(c)	Net block	5298.58	5173.60	4102.61	3442.98	2721.64
(d)	Capital work-in-progress	664.28	478.21	467.14	460.00	458.18
(e)	Investments	--	--	--	--	--
(f)	Current assets, loans and advances	2429.91	3356.68	5056.47	6063.30	2965.21
(g)	Intangible assets					
(i)	Miscellaneous expenses	12.73	2.64	1.32	--	--
(ii)	Accumulated loss	4413.95	4381.82	4289.18	4751.85	1554.22
	Total	12819.45	13392.95	13916.72	14718.13	7699.25
	Capital employed[1]	5065.68	4957.22	5071.08	4592.58	5278.21
	Net worth[2]	(-)1719.82	(-)1677.30	(-)1582.95	(-)2044.30	1149.38

1. Capital employed represents net fixed assets (including capital-work-in-progress) PLUS working capital.

2. Net worth represents paid-up capital PLUS reserves LESS intangible assets.

ANNEXURE - 13

(Referred to in Paragraph 2B.6.2)

Working results of Tamil Nadu Industrial Explosives Limited

(Amount - Rupees in lakh)

	Particulars	1994-95	1995-96	1996-97	1997-98	1998-99
	Income					**(Provisional)**
(a)	**Sales**	2824.98	5056.49	5240.41	5154.77	4591.11
(b)	**Interest and other income**	40.38	73.35	289.68	310.09	281.03
(c)	**Increase in stock**	112.66	(-)319.27	151.80	144.22	(-)126.51
	Total	2978.02	4810.57	5681.89	5609.08	4745.63
	Expenditure					
(i)	**Raw materials**	1445.81	2110.39	2055.95	2139.43	1918.32
(ii)	**Packing materials**	135.22	188.11	187.92	177.08	141.06
(iii)	**Stores and spares**	7.24	20.29	14.04	19.40	23.98
(iv)	**Power and fuel**	123.54	161.29	164.90	202.48	210.32
(v)	**Manpower cost**	482.27	597.88	685.21	1014.68	1078.07
(vi)	**Repairs and maintenance**	112.90	171.64	147.31	184.47	172.12
(vii)	**Administration and selling overheads**	436.59	516.67	547.00	787.36	669.82
(viii)	**Interest and finance charges**	645.99	672.89	677.85	722.72	409.83
(ix)	**Depreciation**	371.28	377.43	753.41	757.02	769.33
	Total	3760.84	4816.59	5233.59	6004.64	5392.85
	Profit(+)/Loss(-) for the year	(-)782.82	(-)6.02	448.30	(-)395.56	(-)647.22
	Prior period Expenses(-) / Income(+)	43.96	38.15	(-)355.66	(-)67.11	(-)30.54
	Waiver of interest by Financial institutions	--	--	--	--	3875.39
	Profit(+)/Loss(-) before tax	(-)738.86	32.13	92.64	(-)462.67	3197.63

ANNEXURE – 14

Statement showing estimated requirement and utilisation of funds for Transmission and Distribution Schemes

(Referred to in Paragraph 3A.5)

(Rupees in crore)

	1994-95	1995-96	1996-97	1997-98
A. Transmission				
i) Original estimates	153.51	196.37	243.85	326.96
ii) Revised estimate	151.03	202.65	393.10	317.16
iii) Funds utilised				
a) Plan outlay	256.02	316.51	259.55	260.82
b) Loan from PFC	12.84	12.27	114.01	63.30
Total	268.86	328.78	373.56	324.12
iv) Excess(+)/Savings(-)	(+)117.83	(+)126.13	(-)19.54	(+)6.96
B. Distribution				
i) Original estimates	96.65	98.28	119.82	181.43
ii) Revised estimates	100.28	110.90	129.88	254.55
iii) Funds utilised				
a) Plan outlay	130.91	215.76	304.09	260.74
b) Loan from PFC	4.43	6.60	3.88	16.29
Total	135.34	222.36	307.97	277.03
(iv) Excess(+)/Savings(-)	(+)35.06	(+)111.46	(+)178.09	(+)22.48

ANNEXURE – 15

Statement showing targets and achievements for establishment of new sub-stations and transmission lines

(Referred to in Paragraph 3A.6)

		1994-95			1995-96			1996-97			1997-98			1998-99		
		Target	Achievement	Percentage	Target	Achievement	Percentage	Target	Achievement	Percentage	Target	Achievement	Percentage	Target	Achievement	Percentage
(i)	Number of sub-stations*															
	230 KV	2	2	100	2	---	Nil	10	3	30	6	3	50	8	2	25
	110 KV	25	21	84	66	55	83	37	24	65	31	22	71	48	32	67
	66 KV	---	1	100	5	16	320	2	1	50	2	6	300	--	---	---
	33 KV	11	15	36	27	35	130	18	15	83	22	29	132	25	27	108
(ii)	Laying of transmission lines (circuit kilometres)															
	230 KV	164	187	114	28	---	Nil	561	39	7	628	142	23	628	301	48
	110 KV	460	166	36	1050	373	36	1136	529	47	560	412	74	927	443	48
	66 KV	---	---	---	47	17	36	90	37	43	40	13	33	18	---	Nil
	33 KV (cable)	12	10	81	19	4	21	28	19	67	22	14	61	40	7	17

* Target in each year includes spillover works.

ANNEXURE – 16

Statement showing delays in construction of sub-stations and transmission lines

(Referred to in Paragraph 3A.7.1)

(Rupees in crore)

Sl. No.	Particulars	Estimated cost	Scheduled date of completion	Date of completion	Time over run (in months)	Revised/actual cost	Cost over run	Loss of anticipated savings/additional revenue (MUs)
	230 KV sub-stations and associated lines							
1.	Cuddalore	15.73	May 1995	February 1998	32	22.98	7.25	N.A.
2.	Thanjavur	15.87	January 1996	Not completed	38*	19.11	3.24	122.12
3.	Pudukottai	16.22	September 1995	Not completed	42*	13.33	--	180.75
4.	Shenbagaramanpudur	24.52	March 1996	June 1998	26	45.22	20.70	125.72
5.	Sembatty	12.55	March 1996	September 1996	6	14.61	2.06	259.22
6.	Tiruvannmalai	9.82	December 1994	December 1997	36	17.32	7.50	144.21
7.	Gobichettipalayam (Lines only)	6.23	August 1994	Not completed	55*	9.63	3.40	N.A.
	110 KV sub-stations and associated lines							
8.	Vedasandur	1.93	June 1996	November 1998	28	N.A.	--	Included under Sl.No.5
9.	Natham	5.75	June 1996	December 1997	17	N.A.	--	Included under Sl.No.5
10.	V.Kurumbapatty	2.24	June 1996	July 1997	12	N.A.	--	Included under Sl.No.5
11.	Harur	3.41	April 1995	January 1998	32	7.14	3.73	N.A.
12.	Kallakurichy	4.90	May 1996	August 1997	14	6.99	2.09	14.17
13.	Tiruchitrambalam	3.95	December 1995	March 1998	26	5.05	1.10	16.55
14.	Manmangalam	3.14	November 1995	Not completed	40*	2.21	--	N.A.
							51.07	862.74

* Delay as at 31 March 1999.

ANNEXURE – 17

Statement showing computation of agricultural consumption

(Referred to in Paragraph 3A.9)

	Particulars	1994-95	1995-96	1996-97	1997-98
i)	Total number of agricultural services	1367593	1417096	1450246	1494882
ii)	Total horse power of the total agricultural services	6560321	6955764	7128686	7387399
iii)	Number of agricultural services in 11 distribution circles	311481	*278424	324259	456167
iv)	Horse power of agricultural services in 11 distribution circles	1243876	1282592	1477869	2008907
v)	Number of metered agricultural services in 11 distribution circles	8167	7279	8214	10804
vi)	Horse power of the metered services in 11 distribution circles	49518	39991	44233	60176
vii)	Average consumption per horse power per annum in metered agricultural services in 11 distribution circles (units)	710	611	543	508
viii)	Total agricultural consumption (vii) X (ii) (MUs)	4658	4250	3871	3753
ix)	Agricultural consumption as assessed by Board(MUs)	6228	6626	6678	7275

* Reduction was due to non-availability of data in one distribution circle

ANNEXURE – 18

Statement showing emission readings at Mettur Thermal Power Station

(Referred to in Paragraph 3C.4)

Year	Unit I			Unit II			Unit III			Unit IV		
	TSR	VMR	PCB	TSR	VMR	PCB	TSR	VMR	PCB	TSR	VMR	PCB
1994-95												
Min.	108	N.A.	137	155	N.A.	534	229	N.A.	413	325	N.A.	384
Max.	580	N.A.	154	304	N.A.	600	891	N.A.	449	969	N.A.	389
1995-96												
Min.	45	720	56	126	103	168	70	634	120	73	224	558
Max.	258	720	56	806	194	268	580	783	1230	806	934	622
1996-97												
Min.	29	58	93	19	98	339	30	64	107	45	87	211
Max.	146	400	430	148	316	562	147	329	690	148	471	500
1997-98												
Min.	12	164	171	64	364	260	12	127	316	24	475	354
Max.	140	569	503	147	1215	383	147	731	690	145	723	451
1998-99												
Min.	63	170	213	125	160	242	135	95	230	140	150	151
Max.	142	1031	244	149	850	291	149	954	260	149	945	197

TSR: **Technical Service Section Reading**
VMR: **Visible Emission Meter Reading**
PCB: **Pollution Control Board**

ANNEXURE 19 A

Statement showing excess drawal of Daily Allowance during foreign tours

(Referred to in Paragraph 4A.18)

Sl. No.	Name of the Officer	Dates of visit	Country visited	DA drawn	Normal DA eligible	Excess drawn	Remarks
					(In US dollar)		
1.	Chairman-cum-Managing Director, Small Industries Development Corporation Limited	9.4.95 to 13.4.95	Cairo, Egypt	2500	At 50 X 5 = 250	2250	No supporting vouchers for stay abroad and only ordinary DA is admissible
2.	General Manager, Finance, Tamil Nadu Minerals Limited	10.9.96 to 15.9.96	Kualalampur	1505	At 300 X 4.3 = 1290	215	No supporting vouchers for stay abroad
3.	General Manager, Finance, Tamil Nadu Minerals Limited	1.4.98 to 9.4.98	China and Japan	3150	At 300 X 9 = 2700	450	No supporting vouchers for stay abroad
4.	Additional Secretary to Government, Finance Department	17.2.97 to 24.2.97	Singapore and Malaysia	2800	At 75 X 8 = 600	2200	No supporting vouchers for stay abroad
5.	Member, State Planning Commission	17.2.97 to 24.2.97	Singapore and Malaysia	2800	At 75 X 8 = 600	2200	No supporting vouchers for stay abroad
6.	Secretary to Government, Industries Department	18.6.98 to 5.7.98	U.S.A	4200	At 150 X 12 = 1800	2400	No supporting vouchers for stay abroad
7.	Secretary to Government, Industries Department	6.2.98 to 15.2.98	U.S.A	2100	At 150 X 6 = 900	1200	No supporting vouchers for stay abroad
8.	Deputy Director, Indian Institute of Technology, Chennai	19.6.98 to 1.7.98	U.S.A	3850	At 150 X 11 = 1650	2200	No supporting vouchers for stay abroad
					Total	13115	

Note: **Serial Numbers 4 to 8 relates to Electronics Corporation of Tamil Nadu Limited**

ANNEXURE 19 B

Sl. No.	Name of the Officer	Dates of visit	Country visited	DA drawn	Normal DA eligible	Excess drawn	Remarks
					(In US dollar)		
1.	Chairman-cum-Managing Director, Small Industries Development Corporation Limited	14.4.95 to 18.4.95	Dubai	2500	NIL	2500	Tour performed without the approval of the Government
					Total	2500	

ANNEXURE - 20

Statement showing excess drawal of Entertainment Allowance

(Referred to in Paragraph 4A.18 (II))

Sl.No.	Name of the Officer	Dates of visit	Country visited	Entertainment allowance Drawn	Eligible	Excess	Remarks
				(In US dollar)			
1.	Chairman-cum-Managing Director, Small Industries Development Corporation Limited	9.4.95 to 18.4.95	Cairo, Egypt Dubai	2000	NIL	2000	No entertainment allowance is admissible for the period prior to 4 September 1995.
2.	General Manager, Finance, Tamil Nadu Minerals Limited	10.9.96 to 15.9.96	Kualalampur	2000	NIL	2000	Entertainment Allowance is admissible only for Chief Executives
		1.4.98 to 9.4.98	China and Japan	2000	NIL	2000	Entertainment Allowance is admissible only for Chief Executives
3.	Deputy Director, Indian Institute of Technology, Chennai	19.6.98 to 1.7.98	U.S.A	1000	NIL	1000	Entertainment Allowance is admissible only for Chief Executives
					Total	7000	

Note: **Serial Number 3 relates to Electronics Corporation of Tamil Nadu Limited**

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