CHAPTER I

This chapter includes two performance audits viz., Functioning of the Pondicherry Institute of Post-Matric Technical Education (PIPMATE) Society and Implementation of Rules relating to Management of Waste by Municipalities.

EDUCATION DEPARTMENT

1.1 Functioning of the Pondicherry Institute of Post-Matric Technical Education (PIPMATE) Society

Highlights

The Pondicherry Institute of Post-Matric Technical Education (PIPMATE), a Society registered (1988) under the Societies' Registration Act, 1860, runs four polytechnic colleges in the Union Territory of Puducherry with the objective of imparting post-matric technical education in various engineering and non-engineering subjects. Performance audit of the functioning of PIPMATE revealed inadequate provision of funds by the Government, deficiencies in financial management, non-commencement of courses approved by the All India Council for Technical Education (AICTE), inadequate teaching staff and lack of basic infrastructure in two out of the four polytechnic colleges, weak internal controls and ineffective monitoring. Some of the important audit findings are as under:

- **As against the Tenth Plan outlay of ₹ 49.75 crore for strengthening of technical education through PIPMATE, Government released only ₹ 19.92 crore during the Plan period and the inadequate provision of funds resulted in non-creation of infrastructure in polytechnic colleges.**

(Paragraph 1.1.7.1)

- **While the recurring expenditure of the Government-run polytechnic college was met out of Non-Plan and Plan funds for existing and new courses respectively, Government released grants-in-aid from Plan funds to meet the entire recurring expenditure of the polytechnic colleges under the control of PIPMATE.**

(Paragraph 1.1.7.4)

- **A fashion technology course, started in 2007-08 in the Women's Polytechnic College, had to be discontinued in 2009-10 due to non-posting of teaching staff and non-establishment of a laboratory.**

(Paragraph 1.1.8)

- **The Mahe and Yanam Polytechnic Colleges had inadequate teaching staff and lacked basic infrastructure, resulting in poor performance by students and large dropouts in the colleges.**

(Paragraphs 1.1.9.1 and 1.1.10)

- **Monitoring of the functioning of the polytechnic colleges by PIPMATE was ineffective.**

(Paragraph 1.1.13)

1.1.1 Introduction

Polytechnic education constitutes an important segment of technical education and contributes significantly to economic development. Polytechnic colleges play a vital role in providing skilled manpower to manufacturing and service industries by offering three-year diploma courses. There are five polytechnic colleges in the Union Territory of Puducherry (UT). One college[1] is run by the Government and the remaining four colleges[2] are run by the Pondicherry Institute of Post-Matric Technical Education (PIPMATE), which is an autonomous Society, registered (October 1988) under the Societies Registration Act, 1860 and fully funded by the UT Government. Out of the four colleges, one college is exclusively for women and the total intake capacity in all the four polytechnic colleges was 1,130 as of March 2010.

The objectives of PIPMATE were:

(i) to impart post-matric technical education and training in various engineering[3] and non-engineering[4] subjects and to make it sensitive and relevant to the changing industrial technological and social environment;

(ii) to enlarge the coverage of programmes to new and emerging areas; and

(iii) to increase access to the working personnel in industry and to the weaker sections of the society, especially in rural areas.

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1 Mothilal Nehru Government Polytechnic College, Puducherry

2 (1) Women's Polytechnic College, Puducherry (2) Karaikal Polytechnic college, Karaikal (3) Dr. B.R. Ambedkar Polytechnic College, Yanam and (4) Indira Gandhi Polytechnic College, Mahe

3 Civil, Computer, Mechanical, Electrical and Electronics, Electronics and Communications, Instrumentation and Control engineering and Information Technology

4 Architectural Assistantship and Modern Office Practice

1.1.2 Organisational set up

The functioning of the Society is managed by a Governing Body. The Minister for Higher Education is the Chairman and the Principal Secretary to Government (Education) is the Vice-Chairman of the Governing Body of the Society. The Director of Higher and Technical Education (DHTE) is the Member Secretary. Polytechnic colleges functioning under the control of PIPMATE were established with due approval (1988, 1996 and 2000) of the All India Council for Technical Education (AICTE) and are affiliated to the Board of Technical Education, Chennai, which is responsible for framing of syllabi, conduct of examinations and award of diplomas to students. Norms such as built-up area for classrooms, laboratory and administration, student-teacher ratio, laboratory equipment and library book, etc., and standards stipulated by AICTE for polytechnic colleges are to be followed by PIPMATE. Accounts of the Society as well as four polytechnic colleges are audited by Chartered Accountants appointed by the Governing Body.

1.1.3 Audit objectives

The objectives of the performance audit were to assess whether:

- a proper planning system existed for achieving the objectives of the Society;
- the financial resources made available were managed efficiently;
- the required infrastructure and adequate manpower were provided in the polytechnics to provide quality technical education and
- an effective system existed for monitoring the functioning of the polytechnics.

1.1.4 Audit criteria

The following criteria were adopted to arrive at the audit conclusions:

- Five Year and Annual Plan documents
- The Societies Registration Act, 1860
- Memorandum of Association and Rules and Regulations of PIPMATE
- Norms prescribed by All India Council for Technical Education, New Delhi and the Board of Technical Education, Chennai.
- Policies, guidelines and instructions issued by the Government from time to time.

1.1.5 Scope of audit and audit methodology

The performance audit of functioning of PIPMATE covering the period 2005-10 was conducted under Section 14 of the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971 during April 2010 to July 2010 by test check of records at the Secretariat (Education), DHTE, PIPMATE and all four polytechnics run by the Society. The audit objectives and criteria were discussed with the Principal Secretary to Government (Education) during an entry conference held in March 2010. The findings were discussed with the Principal Secretary to Government in the exit conference held in September 2010 and replies were incorporated in the report at appropriate places.

1.1.6 Planning

1.1.6.1 Non-preparation of long term plan/vision document

One of the objectives of PIPMATE was to devise and conduct courses in engineering and technology that were relevant to the current needs of Society. It was noticed in audit that PIPMATE had not prepared any long-term or short-term plans for carrying out its mandatory activities including a comprehensive programme for faculty development, quality improvement and infrastructure development. PIPMATE admitted (November 2010) that no long-term plan or vision document had been prepared by them and that separate assessment of current and future needs of the Society in the field of technical education had not been done.

1.1.6.2 Diversion of Scheduled Caste Sub-Plan funds

A Scheduled Caste Sub-Plan (SCSP) is prepared as an integral part of Five Year/Annual Plans showing sector-wise and scheme-wise outlays earmarked for SCs. The flow of funds to SCSP should be equivalent to the percentage of the SC population to the total population of the UT. In the Annual Plan outlay of the UT, 16.19 *per cent* of total allocation is earmarked for development of SCs.

As per the instructions of the UT Government, the SCSP funds are not to be diverted for any other purposes. It was observed that DHTE released (September 2007 and March 2008) grants-in-aid of ₹ 1.50 crore from SCSP for meeting administrative expenditure of PIPMATE, violating Government instructions.

When this diversion of SCSP funds was pointed out, the DHTE stated (August 2010) that the amount had been diverted to PIPMATE due to paucity of funds. During the exit conference, the Principal Secretary instructed (September 2010) DHTE to avoid such diversions in future. However, the fact remained that the expenditure was inadmissible.

1.1.7 Financial Management

1.1.7.1 Financial performance during the Tenth Plan period

As per the Tenth Five Year Plan (2002-07) the approved outlay for strengthening of technical education through PIPMATE for the Plan period was ₹ 49.75 crore. The Government was to provide financial assistance to PIPMATE for creation of infrastructure, introduction of new courses, establishment of laboratories, purchase of equipment and library books, recurring costs etc. The Government, however, released only ₹ 19.92 crore during the plan period as against the approved outlay. Reasons for short provision of funds during the Tenth Plan period were not furnished by the department. In the Eleventh Five Year Plan period, out of the total allocation of ₹ 30 crore earmarked for PIPMATE, ₹ 22.83 crore was released to PIPMATE during 2007 to 2010.

1.1.7.2 Release and utilisation of grants-in-aid

Government released grants-in-aid through DHTE for meeting the recurring and non-recurring expenditure of PIPMATE. The details of grants-in-aid received, the Society's own receipts and the expenditure incurred during 2005-10 are given in **Table-1**:

Table-1: - Details of grants released and utilised

(₹ in crore)

Year	Opening balance	Grants from UT Govt.	Grant from GOI	Own Receipts *	Total (3+4+5)	Utilised	Closing balance
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2005-06	6.95	5.00	Nil	0.06	5.06	4.16	7.85
2006-07	7.85	Nil	0.11	0.36	0.47	$6.71	1.61
2007-08	1.61	4.85@	0.16	0.38	5.39	$5.35	1.65
2008-09	1.65	7.65	0.08	0.10	7.83	$6.80	2.68
2009-10	2.68	10.55	0.10	0.10	10.75	10.43	3.00
Total		**28.05**	**0.45**	**1.00**		**33.45**	

Source: Figures furnished by PIPMATE

* Own receipts included fees, fines and interest receipts from bank deposits; @ as per Detailed Appropriation Accounts, it was ₹ 4.83 crore;

$ Figures as per detailed expenditure furnished by PIPMATE for the years 2006-07, 2007-08 and 2008-09 were ₹ 6.60 crore, ₹ 5.28 crore and ₹ 6.73 crore respectively

1.1.7.3 Non-release of grant

Rupees 5.05 crore provided in the budget for 2006-07 for release to PIPMATE was withdrawn by the Government by re-appropriation based on a modification proposal of DHTE, without assigning any reasons, for providing funds for the scheme 'Financial assistance to poor students

undergoing professional courses'. Hence, no grant-in-aid was released to PIPMATE during that year.

Out of grants-in-aid of ₹ 21.71 crore released to PIPMATE during 2005-06, 2008-09 and 2009-10, ₹ 11.76 crore (54 *per cent)* was released by Government in the closing months (February and March) of the year. During the exit conference, the Principal Secretary instructed (September 2010) the DHTE to avoid recurrence of such late releases in future.

1.1.7.4 Release of Plan funds for recurring expenditure

Plan funds of ₹ 27.76 crore were released by Government to meet recurring expenditure of PIPMATE

For meeting recurring expenditure of colleges for the existing courses, funds should be provided under Non-Plan head of account and for the new courses started during the Plan period, under Plan head of account. While the Government provided funds in the budget for the recurring expenditure of the Government-run polytechnic under correct heads of account, entire grants-in-aid were released to PIPMATE from Plan funds which were meant for developmental activities. PIPMATE and the polytechnics spent ₹ 27.76 crore on staff costs and administrative expenses out of the total Plan grants of ₹ 33.45 crore released by Government during 2005-10.

1.1.7.5 Non-investment of surplus funds

As per Rule 10(2) of the Rules and Regulations of PIPMATE, all moneys credited to the Society's fund could be deposited in banks or invested as per the directions of the Governing Body of the Society. Government released annual recurring and non-recurring grants-in –aid to the Society in one to three instalments. The Society required about ₹ 35 lakh to ₹ 87 lakh monthly during 2005-10 for its functioning. The funds kept in excess of three months' requirements could have been invested in short-term deposits (46 days, 91 days and 180 days) to earn interest. PIPMATE opened a current account in a nationalised bank for deposit of grants-in-aid for eventual distribution to the polytechnic colleges depending on their requirements. The current account had minimum monthly balances ranging from ₹ 3.71 crore to ₹ 1.23 crore during April to December 2005, from ₹ 3.62 crore to ₹ 2.60 crore during April 2006 to September 2006 and from ₹ 3.66 crore to ₹ 1.22 crore during November 2009 to March 2010. Failure to invest the surplus funds in short-term deposits resulted in loss of interest of ₹ 15 lakh. PIPMATE stated (October 2010) that the point would be noted for future guidance.

1.1.7.6 Higher per student cost

Details of the number of students on roll and recurring expenditure in respect of the Government-run polytechnic and the polytechnics of PIPMATE are given in **Table 2**.

Table:2: Details of per student cost in Government and PIPMATE colleges

Year	Government run polytechnic			Polytechnics of PIPMATE			Excess cost per student (*percentage*)
	Number of students on roll	Recurring expenditure (₹ in lakh)	Per student cost (₹)	Number of students on roll	Recurring expenditure (₹ in lakh)	Per student cost (₹)	
2007-08	974	188.10	19,312	1,685	522.32	30,998	11,686 (60)
2008-09	982	232.40	23,666	1,718	619.90	36,083	12,417 (52)
2009-10	995	242.59	24,381	2,515	792.07	32,604	8,223 (34)

Source: Figures furnished by PIPMATE and Detailed Appropriation Accounts

A comparison of the per student cost in respect of polytechnic colleges of PIPMATE with that of the Government-run polytechnic revealed that the per student cost in PIPMATE colleges was higher by 34 to 60 *per cent*. One of the reasons for the higher per student cost in PIPMATE colleges was inclusion of the administrative expenditure of PIPMATE in the total recurring expenditure.

1.1.8 Academic activities

The performance of the Society with reference to student enrolment and academic performance is discussed below:

1.1.8.1 Admissions

Admission of students to the diploma courses in the polytechnic colleges of PIPMATE is done following Government orders on reservation of seats for Scheduled Castes, Most Backward Classes and Other Backward Classes, the physically handicapped, sportspersons and wards of ex-servicemen and freedom fighters.

The year-wise details of students admitted against the intake capacity are given in **Table 3**.

Table:3 : Details of students admitted

(in numbers)

Polytechnics	2005-06		2006-07		2007-08		2008-09		2009-10	
	I	A	I	A	I	A	I	A	I	A
Women's Polytechnic, Puducherry	160	160	190	188	220	219	220	209	190	190
Karaikal Polytechnic	240	240	320	320	410	410	410	410	*820	820
Yanam Polytechnic	60	59	60	51	60	44	60	60	60	56
Mahe Polytechnic	60	60	60	60	60	60	60	60	60	60
Total	**520**	**519**	**630**	**619**	**750**	**733**	**750**	**749**	**1,130**	**1,126**

I: Intake capacity A: students admitted

* Two shift system is followed from 2009-10 and hence the intake capacity is more

Source: Figures furnished by PIPMATE and prospectus

Even though there was no considerable shortfall in admission of students against the intake capacity, shortfall was noticed in the admission of the students admitted in the lateral entry quota[5] in the Women's Polytechnic, Puducherry and Yanam Polytechnic as given in **Table 4**.

Table : 4: Details of students admitted under lateral entry quota

(in numbers)

Polytechnics	2005-06		2006-07		2007-08		2008-09		2009-10	
	S	A	S	A	S	A	S	A	S	A
Women's Polytechnic, Puducherry	32	17	32	13	38	28	44	31	44	13
Karaikal Polytechnic	48	48	64	62	82	82	82	82	82	82
Yanam Polytechnic	12	Nil	12	Nil	12	Nil	12	Nil	12	Nil
Mahe Polytechnic	12	12	12	12	12	12	12	12	12	12

S: Seats reserved for lateral entry A: students admitted

Source: Figures furnished by PIPMATE and prospectus

The Principal, Women's Polytechnic, Puducherry stated (August 2010) that admission in the polytechnics normally concluded much ahead of the admission schedule of other colleges and that the students admitted through lateral entry subsequently got admitted in other institutions and hence, there was a shortfall. However, the Principal did not produce any document in support of his reply.

Three *per cent* of the total seats available in the colleges are reserved for physically handicapped students. The details of physically handicapped students admitted in Women's Polytechnic, Puducherry and Karaikal Polytechnic colleges are given in **Table 5**.

Table: 5: Details of physically handicapped students

(in numbers)

Polytechnics	2005-06		2006-07		2007-08		2008-09		2009-10	
	S	A	S	A	S	A	S	A	S	A
Women's Polytechnic, Puducherry	30	Nil	31	1	31	1	31	3	30	Nil
Karaikal Polytechnic	7	3	10	4	12	2	12	3	25	2

S: Seats reserved for physically handicapped **A**: students admitted

Source: Figures furnished by Principal of respective colleges

When the shortfall in admission of physically handicapped students was pointed out, the Principal, Women's Polytechnic, stated (October 2010) that sufficient applications were not received under the physically handicapped category and vacancies were filled up by the students from the general category. The details of number of physically handicapped students admitted in Yanam and Mahe polytechnics were not furnished to audit.

[5] Seats reserved for students passed in higher secondary course in vocational stream to join the diploma course in the second year

1.1.8.2 New diploma courses

As per AICTE norms, the recommendations of the State Level Committee are required for approval for starting new courses/extension of existing courses by AICTE.

- ***Discontinuance of new courses***

A fashion technology course started in 2007-08 was discontinued from 2009-10 due to insufficient infrastructure and faculty

Based on the recommendations of the State Level Committee, a new course of Fashion Technology was introduced (July 2007) in the Women's Polytechnic college, Puducherry with the approval of AICTE. Even though AICTE stipulated provision of adequate infrastructure, course affiliation and appointment of required faculty before admitting students, PIPMATE admitted students (30 in 2007-08 and 26 in 2008-09) for the course even before providing adequate laboratory facilities and recruitment of faculty. The course, started in the year 2007-08, was discontinued by PIPMATE from the year 2009-10, as sufficient infrastructure and faculty as per AICTE norms and the Board of Technical Education's curriculum could not be provided by the Society due to severe financial constraints. However, PIPMATE had not furnished to Audit the details of funds sought for from Government for the course and non-provision of funds by Government for the purpose. Further, it was decided to run the course for the earlier two batches up to the final year by hiring faculty. Thus, commencement of the course without proper planning and provision of required infrastructure and recruitment of faculty resulted in discontinuance of the course within two years from the date of introduction.

- ***Non-commencement of approved courses***

AICTE accorded (October 2000) approval for starting four diploma courses[6] in the polytechnic college at Mahe for the academic year 2000-01 and permitted admission of students for one academic session only subject to the condition that the college was to be shifted to a permanent location within one year. The polytechnic college, however, started (2000-01) functioning with two diploma courses (Instrumentation and Control Engineering and Computer Engineering) in a portion of the building of the Government Industrial Training Institute, Mahe and in a private building taken on rental basis. Even though adequate infrastructure and manpower were not provided to the polytechnic, as discussed in paragraphs 1.1.9.1 and 1.1.10, AICTE granted (June 2005 and May 2008) approval for extension of the courses upto 2007-08 and 2012-13.

[6] (1) Instrumentation and Control Engineering (2) Computer Engineering (3) Electrical and Electronics Engineering and (4) Mechanical Engineering

1.1.8.3 Academic performance and dropouts

Points relating to academic performance and dropouts are discussed below:

Details of the number of students who appeared for the final year examinations and the number of students who passed out from the four polytechnic colleges are given in **Table 6**.

Table 6: Details of academic performance by students

Academic year	No of students appeared for final examinations				No of students passed final examinations				Pass Percentage			
	WPT	KPT	MPT	YPT	WPT	KPT	MPT	YPT	WPT	KPT	MPT	YPT
2005-06	154	229	64	48	136	173	37	8	88	76	58	17
2006-07	134	231	65	35	123	189	50	10	92	82	77	29
2007-08	124	308	53	43	109	194	33	16	88	63	62	37
2008-09	154	402	47	47	134	301	24	19	87	75	51	40

WPT – Women's Polytechnic, Puducherry ; KPT – Karaikal Polytechnic ;
MPT – Mahe Polytechnic ; YPT – Yanam Polytechnic
Source: Figures furnished by Principals of respective colleges

Academic performance of students of Karaikal, Mahe and Yanam polytechnic was unsatisfactory

It was noticed in audit that the performance of the students of Women's Polytechnic, Puducherry, who passed in final year examinations during 2005-09 was more than 80 *per cent*. However, as shown in **Table 6**, the pass percentage in respect of Karaikal, Mahe and Yanam polytechnics ranged between 63 and 82 *per cent*, 51 and 77 *per cent* and 17 and 40 *per cent* respectively**.**

The unsatisfactory performance in respect of Mahe and Yanam polytechnics could be attributed to non-provision of adequate infrastructure and faculty as discussed in paragraphs 1.1.9.1 and 1.1.10.

In all the four polytechnic colleges under PIPMATE, the total annual intake was 1,130. The average annual dropout rate in the Women's Polytechnic, Puducherry, Karaikal Polytechnic, Mahe Polytechnic and Yanam Polytechnic colleges during 2005-10 was 18, 74, 18 and 8 respectively. PIPMATE attributed the dropouts to students' personal reasons for discontinuance of courses in the middle. However, PIPMATE did not produce any document in support of their reply.

1.1.8.4 Non-conduct of part-time courses for working personnel

One of the objectives of PIPMATE was to increase access to the working personnel in industry and to the weaker sections of the society especially in rural areas. When the details of courses conducted for the working personnel and weaker sections was called for, PIPMATE stated (October 2010) that no part time courses/programmes were conducted for working personnel/weaker sections of the society by the polytechnic colleges under the control of PIPMATE Society. As such, one of the main objectives of

the Society envisaged in the Memorandum of Association was not achieved.

1.1.9 Infrastructure

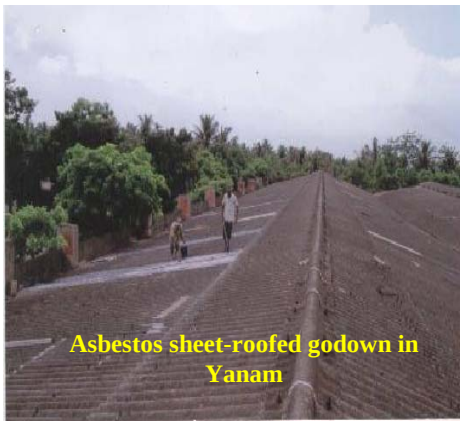
Provision of infrastructure such as classrooms, administrative buildings, workshops, laboratories and equipment plays a vital role in improving the quality of education imparted in technical educational institutions.

During the Tenth Five Year Plan period construction of buildings for Yanam and Karaikal polytechnic colleges at a cost of ₹ six crore and completion of construction of building for Mahe polytechnic at a cost of ₹ nine crore were envisaged. It was observed that while construction of buildings for Mahe polytechnic was taken up during the Tenth Five Year Plan period and was in progress (October 2010), the buildings for Yanam and Karaikal polytechnic colleges were not taken up for execution due to non-provision of adequate funds by Government. Audit noticed the following deficiencies in construction of buildings and providing hostel facilities.

1.1.9.1 Buildings

Yanam Polytechnic College, though started in 1996, continued to conduct classes in an asbestos sheet-roofed godown

(a) Yanam Polytechnic College was started in 1996 in two buildings and in an asbestos sheet-roofed godown, taken over (1996) by the Government from a sick oil factory and continued to function in the same godown till date (November 2010). The office and laboratories were being run in the two buildings and the godown was being used for conducting classes. Two diploma courses with intake of 30 students in each course were offered by the polytechnic from the year 1996-97. The Principal of the college reported as early as in 1999 to PIPMATE that the buildings were unfit for classrooms, the roof of the godown was leaking and during rains, the classrooms were flooded. The Principal forwarded (August 1999) a proposal to Government through PIPMATE for construction of four new blocks for the polytechnic college. When the details of action taken on the proposal were called for, PIPMATE stated that details regarding the subject were not readily available with them. Though ₹ three crore was provided for construction of buildings for Yanam Polytechnic in the Tenth Five Year Plan, no construction activities were taken up during the Plan period. Only temporary repair to the roof of the godown was carried out (October 2010) at a cost of ₹ 0.80 lakh.



Asbestos sheet-roofed godown in Yanam

Construction of a building for Mahe Polytechnic College, though started in September 2006, remained incomplete as of May 2010

(b) Mahe Polytechnic College was started during 2000-01 with two diploma courses viz., Instrumentation and Control Engineering and Computer Engineering in a portion of the building of the Government Industrial Training Institute, Mahe and in a private building taken on rental basis. PIPMATE acquired (2002) 4.16 acres of land for the Mahe polytechnic college at Chalakara for ₹ 67.30 lakh and accorded (January 2005) administrative approval and expenditure sanction for ₹ 6.82 crore for construction of three blocks and a workshop block. The work was entrusted (January 2005) to the Public Works Department (PWD). The work, excluding the workshop block, was awarded only in September 2006 to a contractor for a contract value of ₹ 5.74 crore for completion of work in 18 months. The work, scheduled to be completed by April 2008, was in progress (April 2010). The reasons for delay in award of work by PWD and exclusion of workshop block from the contract were not furnished to Audit. There was abnormal delay in execution and the contractor stopped (May 2008) the work citing non-payment of his bills during 2007-08 and resumed (July 2009) it only after one year, on payment of bills. PIPMATE stated that due to paucity of funds, it could not deposit the funds required by PWD during 2007-08. Further, the contractor requested the PWD to make payments based on the rates in the 2009-10 Schedule of Rates for completing the work. The central and north blocks were structurally completed and flooring, fixing of doors and windows and electrification works were pending. The construction of the south block was in progress (October 2010) as shown in the photos below:

Incomplete building (south block) of Mahe Polytechnic

The present contract did not include construction of the workshop block and even if the main blocks were completed by the end of the year 2010-11 as stated by PIPMATE, the polytechnic would function without any workshop facilities.

PIPMATE had so far (September 2010) released ₹ 4.07 crore to PWD. Even though AICTE extended the approval for starting four courses twice (2005 and 2008) as mentioned in the paragraph 1.1.8.2, two out of four courses could not be started even during 2009-10 due to non-availability of a permanent building and adequate space in the rented building.

Thus, the failure of the Society to provide adequate infrastructure to the Mahe polytechnic resulted in non-commencement of electrical and electronics and mechanical engineering courses in the polytechnic even after 10 years leading to denial of technical education to students of the region in these fields and also avoidable recurring monthly expenditure of ₹ 0.58 lakh towards rent paid to the ITI and the private building which were used for conducting the two courses. Non-provision of adequate infrastructure in the above mentioned two colleges could have also contributed to the poor performance by students and dropouts as mentioned in paragraph 1.1.8.3.

1.1.9.2 Hostel facilities

In the polytechnic colleges at Puducherry and Karaikal, seats are reserved for students belonging to other outlying regions of UT. It was noticed in audit that even though the two colleges were established in 1988, no hostel facilities were provided. Moreover, there were no hostel facilities in Mahe and Yanam polytechnics also. These two colleges offered only two courses each[7] from 1996-97 and 2000-01 respectively. They did not offer courses in core engineering subjects like civil, mechanical and electrical engineering. Test check revealed shortfalls in admission of students from Mahe and Yanam regions in Karaikal polytechnic. It was also noticed that no proposal for construction of hostels was included in the Tenth and Eleventh Five Year Plans. When this was pointed out, PIPMATE stated (October 2010) that a proposal for construction of a women's hostel had been sent to the Ministry of Human Resource Development, New Delhi for getting financial assistance.

1.1.10 Teaching staff

Vacant posts under teaching category of staff were not filled up

(a) AICTE had prescribed a specific number[8] of teaching staff required for each course. Audit noticed that even though the required posts were sanctioned as per AICTE norms, adequate teaching staff were not appointed and vacancies in teaching staff of all colleges under the Society as of October 2010 were as given in **Table-7**:

[7] Mahe Polytechnic : Instrumentation and Control Engineering and Computer Engineering; Yanam Polytechnic: Computer Engineering and Electronics and Communication Engineering

[8] One post each of HOD and Senior Lecturer and seven posts of Lecturers

Table -7: Details of overall vacancies

Sl. No.	Name of the post	Number of posts sanctioned	Number of posts filled up	Vacancy in numbers
1.	Principal	4	1	3
2.	Head of Department (HOD)	15	5	10
3.	Senior Lecturer and Lecturer	134	117	17

Source: Figures furnished by PIPMATE

The duties of Principal were discharged by the senior-most faculty members in addition to their normal routine duties due to non-availability of eligible candidates. PIPMATE stated (October 2010) that at present, HODs had become eligible for promotion to the posts of Principal and that a departmental promotion committee would be convened for filling up the posts of Principal. However, there were vacancies in the HOD (10) and lecturer (17) posts also.

(b) The year-wise vacancy position in teaching staff in Mahe and Yanam polytechnic colleges is given in **Table – 8**:

Table – 8: Details of vacant posts in Mahe and Yanam polytechnics

Name of Post	Sanctioned	Vacant as on 31.3.2006	Vacant as on 31.3.2007	Vacant as on 31.3.2008	Vacant as on 31.3.2009	Vacant as on 31.3.2010
Mahe Polytechnic						
Principal	1	1	1	1	1	1
Head of Department	2	2	2	2	2	2
Senior Lecturer	2	2	2	1	1	1
Lecturer	14	Nil	3	3	8	9
Laboratory Assistant	9	8	4	3	3	8
Total	**28**	**13**	**12**	**10**	**15**	**21**
Yanam Polytechnic						
Principal	1	1	1	1	1	1
Head of Department	2*	Nil	Nil	2	2	2
Senior Lecturer	2	2	1	Nil	1	1
Lecturer	15	6	7	6	7	9
Laboratory Assistant	2	2	1	1	1	1
Total	**22**	**13**	**13**	**12**	**13**	**15**

* Sanctioned during 2007-08

Source: Figures furnished by Principals of respective colleges

It may be seen from the above table that vacancies in teaching staff increased from 13 to 21 and 13 to 15 during the period from March 2006 to March 2010 in respect of Mahe and Yanam polytechnics respectively. As against the total strength of 28 and 22 in Mahe and Yanam polytechnics respectively, 21 and 15 posts were vacant as of March 2010.

PIPMATE had not filled up the vacancies through direct recruitment and the courses were run by the polytechnics by outsourcing faculty and arranging guest lecturers. PIPMATE stated (October 2010) that out of 18 vacant posts of lecturer, 14 were filled up during 2010-11.

1.1.11 Accounts and Audit

Audit noticed several lacunae in the maintenance of accounts by PIPMATE and the polytechnic colleges as discussed below:

1.1.11.1 The annual accounts were prepared separately for PIPMATE and each of the four polytechnic colleges under its control. As PIPMATE is a registered Society and the four polytechnic colleges are only units of the Society, the annual accounts of PIPMATE as a whole should have been prepared.

1.1.11.2 Autonomous bodies under the Government of India are required to compile their accounts from the accounting year 2001-02 in a uniform format of accounts as prescribed by GOI, Ministry of Finance. The GOI prescribed the double entry system for accounting and recognition of financial transactions on accrual basis. All autonomous bodies in the UT followed the financial, service and other rules of GOI. It was noticed that PIPMATE and the four colleges, however, had not switched over to the accrual-based accounting system as prescribed by GOI. Like Government departments, they maintained their accounts on cash basis.

1.1.11.3 The audit reports of the Chartered Accountants on the annual accounts of PIPMATE and the four polytechnic colleges revealed the following discrepancies:

- General Provident Fund (GPF) and Contributory Provident Fund (CPF) accounts in respect of PIPMATE employees were not audited by the Chartered Accountants.

- Income and expenditure accounts and balance sheets were not prepared from 2005-06 onwards in respect of Yanam Polytechnic.

- Even though the accounts were maintained on cash basis and worn-out assets were replaced out of grants-in-aid from Government, the fixed assets were not shown in the balance sheet at their original cost of acquisition. Depreciation on the written down value method was provided in the income and expenditure account.

PIPMATE replied (October 2010) that GPF/CPF accounts would be got audited by Chartered Accountants.

1.1.11.4 Rule 18 of the rules and regulations of PIPMATE stipulates submission of a report, within six months after the close of every financial year, on the working of the polytechnics to UT Government by PIPMATE together with an audited statement of accounts showing the income and expenditure of the previous year. Delay in completion of audited accounts was noticed in respect of accounts for the years 2005-06 and 2006-07 as given in **Table - 9**:

Table 9 : Details of delayed submission of accounts

Year	Due date for Completion of audited accounts	Date of completion of audited accounts	Date of submission of audited accounts to Government
2005-06	September 2006	January 2007	February 2007
2006-07	September 2007	February 2008	March 2008

Source: Data furnished by PIPMATE

1.1.11.5 Employees of PIPMATE recruited upto 31 December 2000 were continued to be governed under the General Provident Fund scheme and employees recruited subsequently were brought under the CPF scheme. Fifty employees were covered under CPF as of March 2009. The employer's contribution payable by the Society upto March 2009 along with interest payable, worked out to ₹ 31.52 lakh. The amount was not transferred to the Bank account maintained for the CPF. Thus, the accounts of PIPMATE did not reflect a true and fair view of the financial position as the liability towards CPF contribution was not included in the annual accounts. PIPMATE had also not sought for funds from the Government for discharging this liability. During the exit conference, the Principal Secretary instructed (November 2010) the DHTE to maintain the accounts properly.

1.1.12 Other points

1.1.12.1 Avoidable payments

Non-reduction of contracted demand resulted in avoidable excess expenditure of ₹ 18.18 lakh

The contracted demands (CD) for High Tension (HT) power supplies provided to the Women's Polytechnic, Puducherry and Karaikal Polytechnic were 500 Kilo Volt Ampere (KVA) and 200 KVA respectively.

In respect of the HT connection provided to the Women's Polytechnic, the actual monthly recorded demand ranged between 37 and 173 KVA only during the period from June 2001 to September 2009 as against the CD of 500 KVA. PIPMATE approached the Electricity Department for reduction of CD from 500 KVA to 150 KVA in July 2005 only. Even though the Electricity Department requested PIPMATE to execute a fresh agreement

and furnish a guarantee letter as envisaged in the terms and conditions of power supply, PIPMATE had not complied (November 2009) with the requirements for the reduction of CD to 150 KVA.

In respect of the HT connection at Karaikal Polytechnic, the monthly recorded maximum demand had never exceeded 100 KVA as against CD of 200 KVA from the month of installation (January 2002). Hence, the demand could have been reduced to 100 KVA by PIPMATE. This was not done as of October 2010.

PIPMATE's failure to initiate timely action to reduce the CD in accordance with the consumption and requirements resulted in avoidable payment of demand charges of ₹ 18.18 lakh to Electricity Department.

1.1.12.2 Non-maintenance of Asset registers

Test check of records revealed that asset registers in respect of immovable properties were not maintained by PIPMATE as well as polytechnic colleges. PIPMATE replied that the registers would be maintained in future. During the exit conference, the Principal Secretary instructed (November 2010) the DHTE to ensure maintenance of asset registers.

1.1.13 Monitoring and review of functioning of polytechnic colleges

1.1.13.1 The Rules and Regulations of PIPMATE stipulate conduct of three Governing Body (GB) meetings every year. It was, however, noticed that only seven meetings were held as against 15 during 2005-10. All decisions were taken by the Member Secretary with the approval of the Chairman without discussion among the members of GB and *post facto* approval was obtained from the members of GB by circulation. During the exit conference, the Principal Secretary, who was also the Vice Chairperson of the GB, instructed (November 2010) the Member Secretary to conduct GB meetings as stipulated in the rules and regulations of PIPMATE.

1.1.13.2 The Finance Committee, Purchase Committee, Academic Committee and Staff Selection Committee of the Society, which were to meet as and when required, to advise the GB in the activities of the Society, had not met at all during the five-year period. The Building Committee met only once during the period. Had the committees met periodically, the performance of the Society in financial management, provision of infrastructure, recruitment of staff and academic performance could have been monitored effectively.

1.1.13.3. As per Rule 208 (a) (v) of the General Financial Rules, 2005 (GFRs), a system of external or peer review of autonomous organisations

every three or five years depending upon the size and nature of activities should be put in place. However, no such review was conducted in PIPMATE even though it was established long back.

1.1.13.4 Rule 212 (1) of the GFRs stipulates that while releasing recurring grants, the department has to look into the reports submitted by the internal audit wing, the inspection reports of the Indian Audit and Accounts Department and the performance reports of the organization. The accounts of PIPMATE were not subjected to internal audit by the Education Department and the GFR provisions were not followed while releasing grants to PIPMATE. The department stated (August 2010) that the above provisions would be followed in future.

1.1.14 Conclusion

Non-implementation of projects proposed in the Tenth and Eleventh Five Year Plans hampered infrastructure development leading to non-availability of critical infrastructure in Mahe and Yanam polytechnic colleges. Due to lack of infrastructure and manpower shortage, two approved diploma courses in Mahe polytechnics were not started. Poor academic performance by students in the final year examinations coupled with increase in the number of dropouts in Karaikal, Mahe and Yanam polytechnic colleges was a matter of concern. The polytechnic colleges lacked infrastructure facilities such as adequate classrooms, hostels, etc due to non-provision of adequate funds by Government. Ineffective monitoring and weak internal controls also contributed to the less than satisfactory performance of the Society and the polytechnic colleges.

Recommendations

- Adequate funds should be provided in the budget for all schemes/components included in the Annual Plans.
- Grants-in-aid to meet recurring expenditure of the Society should be released under the Non-Plan head.
- Necessary infrastructure, including completion of the ongoing building works, should be created for providing quality technical education.
- Vacant posts under the teaching staff category should be filled up.
- Monitoring and internal control should be strengthened.

SCIENCE, TECHNOLOGY AND ENVIRONMENT AND LOCAL ADMINISTRATION DEPARTMENTS

1.2 Implementation of Rules relating to management of waste by municipalities

Highlights

With a view to regulate the management and handling of wastes, Government of India notified (1998/1999/2000) the Bio-medical Waste (Management and Handling) Rules, the Recycled Plastics Manufacture and Usage Rules and the Municipal Solid Wastes (Management and Handling) Rules. Performance Audit of existing practices for management of wastes in the municipal areas of the Union Territory of Puducherry revealed non-adoption of systematic procedure for segregation of solid waste, non-establishment of scientific landfills by the urban local bodies, dumping and burning of solid waste in open dumpsites, violation of Bio-medical Waste Management Rules by health care establishments. The major observations are detailed below:

- **Plan grants released by Government to the municipalities for taking up projects or work connected with waste processing and scientific disposal of municipal solid waste were utilised for daily clearance of garbage in the municipal areas.**

(Paragraph 1.2.6)

- **Incorrect adoption of road length for assessing the requirement of private conservancy workers resulted in avoidable expenditure of ₹ 75.34 lakh.**

(Paragraph 1.2.6.3)

- **The per capita waste reported to have been generated and transported in Puducherry, Oulgaret and Yanam Municipalities was higher than that generated in metropolitan cities.**

(Paragraph 1.2.7.1)

- **Waste processing and disposal facilities were not set up by the test checked municipalities**

(Paragraph 1.2.7.4)

- **Solid waste including plastic waste dumped in dumpsites of two municipalities was being burnt continuously posing environmental and health hazards.**

(Paragraph 1.2.7.5)

- **Out of 211 health care establishments in the Union Territory, 200 including 76 Government health care establishments were functioning without obtaining valid authorisation from Puducherry Pollution Control Committee.**

(Paragraph 1.2.8.2)

- **In Yanam Municipality, bio-medical waste was mixed with municipal solid waste and dumped in the dumpsite**

(Paragraph 1.2.8.4)

- **A large number of plastic manufacturing units were functioning in the UT without obtaining required authorization from Puducherry Pollution Control Committee.**

(Paragraph 1.2.9)

- **Monitoring and enforcement of Rules by the Puducherry Pollution Control Committee was deficient.**

(Paragraph 1.2.10)

1.2.1 Introduction

Municipal solid waste (MSW) comprises residential and commercial wastes generated in a municipal area in either solid or semi-solid form excluding industrial hazardous waste but including treated bio-medical waste. Bio-medical waste (BMW) means any waste which is generated in health care establishments (HCE) during diagnosis, treatment or immunisation of human beings or animals. Waste Management means the collection, transportation, recovery and disposal of waste including the supervision of such operations and after-care of disposal sites.

The Government of India (GOI), in exercise of the powers conferred under the Environment (Protection) Act, 1986, framed rules[9] to regulate the management and handling of municipal solid waste and bio-medical waste to protect and improve the environment and to prevent health hazards to human beings and other living creatures.

The Municipal Solid Waste (Management and Handling) Rules, 2000 require the Secretary in-charge of the Department of Urban Development to have overall responsibility for the enforcement of the provisions of these rules.

[9] (i) The Municipal Solid Wastes (Management and Handling) Rules, 2000
(ii) The Biomedical Wastes (Management and Handling) Rules, 1998
(iii) Plastic Manufacture, Sale and Usage Rules, 1999

1.2.2 Organisational set up

The Puducherry Pollution Control Committee (PPCC) was constituted in April 1992. Special Secretary to Government, (Science, Technology and Environment) is the Chairman and the Director, Department of Science Technology and Environment (DSTE) is the Member Secretary of PPCC. The PPCC is responsible for enforcement of various rules and regulations relating to management of wastes. Municipalities are the implementing agencies of solid waste management. There are five municipalities in the Union Territory, each headed by a Commissioner and they are under the administrative control of the Development Commissioner/Principal Secretary to Government (Local Administration). Director, Local Administration is the head of the Department and is assisted by Deputy Director, Municipal Administration, a Superintending Engineer and Municipal Commissioners.

1.2.3 Audit objectives

The main objectives of the performance audit were to assess whether

- the municipalities and health care establishments comply with the rules governing management of municipal solid waste and bio-medical waste;
- the monitoring and enforcement of Rules by the PPCC was efficient; and
- Financial management of funds available for solid waste management was efficient and effective.

1.2.4 Audit criteria

The criteria adopted to arrive at audit conclusions were:

- Municipal Solid Wastes (Management and Handling) Rules, 2000
- Bio-medical Waste (Management and Handling) Rules 1998 (amended in 2003)
- Recycled Plastics Manufacture and Usage Rules, 1999 (amended in 2003 as Plastics Manufacture, Sale and Usage Rules, 1999)
- Recommendations of Committee on Solid Waste Management constituted by Hon'ble Supreme Court of India
- The Pondicherry Municipalities Act, 1973

- Orders/instructions issued by GOI, UT Government and the PPCC.
- General Financial Rules.

1.2.5 Scope and Methodology of audit

The performance audit relating to implementation of the rules on management of municipal solid waste, bio-medical waste and plastic waste in three[10] out of four regions of the UT for the period 2005-10 was conducted during March-June 2010. Audit test-checked the records of Science, Technology and Environment, Local Administration, Health and Family Welfare, Town and Country Planning, Industries and Commerce departments, the Puducherry Pollution Control Committee, four[11] out of five municipalities and 19 HCEs in the UT selected based on stratified random sampling method. The list of test checked hospitals is given in **Appendix-1.1.** Audit objectives and criteria were discussed with the Development Commissioner, who is in charge of Local Administration Department (LAD) and the Special Secretary to Government (Environment) during entry conferences held separately in March 2010. Joint Inspection of waste disposal sites and selected Government/private HCEs was conducted by audit along with officials of the PPCC and municipalities. Audit findings were discussed with the Special Secretary (Science, Technology and Environment) and the Development Commissioner, who is also the Principal Secretary (Local Administration) during exit conferences held in August and September 2010 respectively. The replies furnished by the Secretaries to the audit observations during the exit conference and their instructions to the departmental officers are included in the report at appropriate places.

Audit Findings

1.2.6 Financial Management

The UT Government provided financial assistance in the form of grants-in-aid every year to the municipalities through Local Administration Department for taking up projects and works relating to disposal of solid waste. The details of expenditure incurred by the test-checked municipalities from grants-in-aid and from own funds are furnished in **Table-1.**

[10] Puducherry, Mahe and Yanam

[11] Puducherry, Oulgaret, Mahe and Yanam

Table-1: Expenditure on solid waste management from Grants-in-Aid and own fund of the municipalities

(₹ in Lakh)

Year	2005-06		2006-07		2007-08		2008-09		2009-10		Total	
	Own fund	Grants-in-aid	Own fund	Grants-in-aid	Own fund	Grants-in-aid	Own fund	Grants-in-aid	Own fund	Grants-in-aid	Own fund	Grants-in-aid
Puducherry	418.08	231.79	456.70	307.51	497.86	373.93	690.79	80.63	782.04	439.12	2845.47	1432.98
Oulgaret	395.48	65.56	493.12	156.72	501.13	193.71	655.40	77.44	898.00	288.00	2943.13	781.43
Mahe	28.39	0.00	27.79.	0.00	38.74	0.00	54.62	1.46	50.99	0.00	200.53	1.46
Yanam	49.71	5.00	56.86	31.19	63.74	68.72	103.14	68.72	102.07	70.25	375.52	243.88
Total	**1194.01**		**1502.10**		**1737.83**		**1732.20**		**2630.47**		**8824.40**	

Source: Details furnished by municipalities

Audit findings on the financial management and management of contracts relating to transportation of municipal solid waste and hiring of machinery are discussed below**:**

1.2.6.1 Utilisation of plan funds for daily clearance of garbage

The Municipal Solid Wastes (Management and Handling) Rules (MSW Rules) which came into force in the year 2000 envisaged creation of facilities for processing as well as scientific disposal of waste. As provided in the Annual Plans, Government released grants-in-aid to the municipalities out of Plan funds for creation of infrastructural facilities during 2005-10. However, the municipalities utilised the plan grants for daily clearance of garbage in the municipal areas and transportation of waste to dumpsites instead of creating facilities for management of municipal solid waste.

1.2.6.2 Non-availing of financial assistance from the Central Pollution Control Board

The proposal (July 2005) of the Puducherry Municipality for setting up of a model facility for demonstration of municipal solid waste management in Puducherry municipal area at an estimated cost of ₹ 5.42 crore[12] with the financial assistance of the CPCB did not materialise as the UT Government failed to furnish a letter of commitment to the CPCB for sharing 50 *per cent* of the project cost. The demonstration project was subsequently shifted to Karaikal Municipality by PPCC as a separate solid waste

[12] For setting up of waste collection storage and transportation mechanism (₹ 1.23 crore), setting up of waste processing plant (₹ 3.37 crore) and improvement in the waste dumpsite and identifying of new sites for disposal (₹ 0.82 crore),

management project was sanctioned (February 2009) to Puducherry region under Jawaharlal Nehru National Urban Renewal Mission (JNNURM).

1.2.6.3 Avoidable expenditure due to incorrect adoption of road length

Oulgaret and Yanam municipalities incurred avoidable expenditure of ₹ 75.34 lakh due to incorrect preparation of estimates.

As per SCMC recommendations, roads which have a central verge or divider are to be considered as two roads for assessing the road length. SCMC also recommended that the urban local body may prescribe norms for assigning road lengths for sweepers by classifying the density of area to be swept as high, medium and low ranging from 250 running meters to 750 running meters. Scrutiny of records of test-checked municipalities revealed that different norms in terms of road length were adopted for assessment of number of labourers required which resulted in engaging of more workers than required and additional expenditure towards labour charges. LAD, however, accorded expenditure sanction without scrutinizing the estimates prepared by the municipalities which led to avoidable additional expenditure of ₹ 75.34 lakh by Oulgaret and Yanam municipalities. Rates adopted by the municipalities in the estimates for road length for assessment of labourers required, labour chargers, supervisor salary, hiring charges of vehicles deployed for transportation are given in **Appendix-1.2**.

1.2.6.4 Avoidable expenditure on hiring of excavator

Hiring of private excavator by Puducherry Municipality even after purchase of excavator resulted in avoidable expenditure of ₹ 19.62 lakh

Puducherry Municipality engaged (December 2007) a private excavator machine (JCB) for the purpose of leveling of garbage at the dumpsite on hire basis at the rate of ₹ 430 per hour. The Municipality purchased (September 2008) a JCB at a cost of ₹ 22.58 lakh for leveling of garbage at the dumpsite. The JCB was put into use at the dumpsite upto May 2009 and thereafter used for demolition of old buildings and other purposes. The private JCB was continued to be engaged for leveling of garbage in the dumpsite and an amount of ₹ 19.62 lakh was paid as hire charges during the period from September 2008 to March 2010. While the entries in the log book showed that the municipal JCB was not used on all days in a week and for eight hours daily, hire charges for private JCB was paid for eight hours or more on all the seven days in a week. Hence, the possibility of extending undue favour to the contractor could not be ruled out. The decision of the municipality to hire a JCB despite availability of one JCB in the municipality led to avoidable expenditure of ₹ 19.62 lakh. Puducherry Municipality replied (June 2010) that the JCB could not be used effectively in the dumpsite due to bad condition of the site and the JCB was being used for the removal of debris, garbage, bushes/shrubs at the roadsides and for removal of blockages in the drains/channels during rainy seasons. As these works are not of routine nature, municipality could have hired JCB for these works during exigencies instead of deploying its own JCB which would have minimised the expenditure on hiring charges.

1.2.7 Municipal Solid Waste

The MSW rules required every municipal authority, within their area, be responsible for collection, segregation, storage, transportation, processing and disposal of waste under various provisions of the rules. The Pondicherry Municipalities Act, 1973, *inter alia* required the municipalities to make adequate arrangements for sweeping, cleaning of streets, removal of rubbish and provision of dustbins and vehicles for removal of filth. The monitoring committee constituted by the Supreme Court on solid waste management recommended the practices to be followed for modernization of solid waste management. The deficiencies noticed in compliance of the provisions of the MSW rules and the recommendations of the Supreme Court Monitoring Committee (SCMC) are discussed in the succeeding paragraphs.

1.2.7.1 Assessment of quantum of waste generated

Scrutiny of records maintained by Puducherry Pollution Control Committee (PPCC) revealed that the Committee had no mechanism to assess the quantity and source of waste generated in the UT but only compiled the data obtained from the municipalities and forwarded them to CPCB. Studies conducted by the National Environmental Engineering Research Institute and Non Governmental Organisations (NGOs) revealed that, on an average, the per capita waste generated in India varied from 200 gms in rural areas to 600 gms in metropolitan cities. Incidentally, it was also noticed that in the project estimate[13] (2007) for Integrated Solid Waste Management Project (ISWMP) to be taken up under JNNURM, the per capita waste generated in the Puducherry and Oulgaret Municipalities was assessed as 562 gms per day. In the absence of such assessment made in respect of other two municipalities, by adopting 562 gms as the assessed generation of waste in the test-checked municipalities, the estimated quantity of waste generated based on the present population is detailed in **Table 2**:

[13] Prepared by Puducherry Agro Service and Industries Corporation Limited and Eco Save Systems Private Limited, Mumbai

Table – 2 : Details of quantum of waste generated in UT of Puducherry

Name of the Municipality	Population (as per 2001 census)	Estimated Population (2010)	As per the data furnished by municipalities		Estimated waste generation @ 562 grams per capita per day (MT)	Variation in reported waste generation to estimated waste generation per day (percentage)
			Quantity of waste generated per day (MT)	Per capita waste per day		
Puducherry	223323	264660	275	1039 gms	149	85
Oulgaret	217707	257970	172	667 gms	145	19
Mahe	36828	40152	9	224 gms	23	NA
Yanam	31394	44057	36	817 gms	25	45

NA : Not applicable as the reported waste generation is less than the assessed waste generation of 562 gms per day

Source: Directorate of Economics and Statistics, Records of Municipalities and ISWMP Project Report

PPCC failed to assess the quantum of waste generated in the UT

The daily quantum of waste reported to have been generated in Puducherry, Oulgaret and Yanam municipalities was abnormal as compared to the assessed per capita waste generation of 562 gms per day. The variation between the reported per capita generation and the assessed per capita generation ranged between 19 and 85 *per cent*. PPCC and LAD failed to monitor and verify the veracity of the report furnished by these municipalities. As the municipalities engaged, through contractors, vehicles for transporting the reported quantities everyday, this aspect needs to be investigated by the Government in view of non-weighment of garbage transported by contractors and improper maintenance of records at dumpsites as discussed in paragraph 1.2.7.6.1.

1.2.7.2 Collection of waste

According to compliance criteria of MSW rules, the municipalities shall adopt any of the methods like house-to-house collection, community bin collection, collection of waste on regular pre-informed timings and scheduling by using bell ringing of musical vehicle etc,. MSW rules required the municipal authorities to establish and maintain storage facilities in such a manner that they do not create unhygienic and unsanitary conditions around it. Stray animals were not to be allowed to move around waste storage facilities. Besides, bins for storage of bio-degradable wastes were to be painted green, those for storage of recyclable wastes be painted white and those for storage of other wastes be painted black.

As per recommendations of Supreme Court Monitoring Committee (SCMC) on solid waste management, the municipalities were to provide community dustbins at a reasonable distance ranging from 25 to 250 metres of road length depending on local condition. The details of community dustbins required and placed by the test-checked municipalities are furnished in **Table-3.**

Table- 3: Details of community dustbins

Name of the municipality	Road length (in metres)	Community dustbins required (@ one bin for every 250 metres)	Dustbins provided	Shortage
Puducherry	230044	920	525	395
Oulgaret	274318	1097	300	797
Mahe	105230	420	0	420
Yanam	48500	194	186	8

Source: Records of Municipalities

Inadequate provision of dust bins resulted in garbage being thrown on roadsides and municipal drains

Devaki Nagar (Rainbow Nagar Ward) in Oulgaret Municipality

In Puducherry and Oulgaret municipalities, door-to-door collection of waste was done partially. Inadequate provision of community bins in Puducherry and Oulgaret Municipalities resulted in wastes being thrown on the roadsides and also in municipal drains blocking free flow of water. A drain blocked due to dumping of garbage in Oulgaret municipality noticed during field visit (October 2010) is shown in the photograph.

In Mahe municipality, neither door-to door-collection was done nor dust bins provided for collection of waste which resulted in dumping of garbage on roadsides. In Yanam region, collection of waste was done both by door-to-door collection as well as from community bins in all the wards. Out of 103[14] wards in the test-checked municipalities, segregation of waste at source was done in only one[15] ward. As segregation of waste was not done, biodegradable and non-biodegradable waste were dumped together in the dumpsites. Though these municipalities had engaged private contractors for clearing of garbage generated in their municipal areas, none of the municipalities had taken action to involve private participation in processing of waste. During exit conference, the Development Commissioner instructed (September 2010) the Director (LAD) to give suitable instructions to the municipalities to provide adequate number of community bins and stated that the proposed ISWMP

Garbage thrown on roadsides in Mahe

[14] Puducherry– 42; Oulgaret – 37; Mahe – 14; Yanam – 10

[15] Raj Bhawan ward where the work was entrusted to an NGO

for Puducherry and Oulgaret Municipalities would cover all the aspects of waste management.

1.2.7.2.1 Non-collection of charges for bulk clearance of waste

As per recommendations of SCMC, municipalities have to make arrangements for collection of waste from marriage halls, community halls, HCEs etc., daily on a full-cost-recovery basis. In the UT, the waste generated by these establishments is collected by the respective municipalities. Three[16] out of the test-checked municipalities had not fixed charges for bulk clearance of waste. Even though Puducherry Municipality had fixed bulk clearance charges, collection was deficient as it had no updated figures of the establishments including HCEs situated in the municipal jurisdiction. During exit conference, the Development Commissioner stated (September 2010) that suitable instructions would be given to the municipalities to collect charges for bulk clearance from hotels, marriage halls and community halls.

1.2.7.3 Landfill sites for disposal of waste

MSW Rules define land filling as the disposal of residual solid waste on a land in a facility designed with protective measures against pollution of ground water, surface water, wind-blown litter, bad odour, fire hazard, bird menace, pests or rodents and erosion. Even though the MSW rules stipulated that the landfill site should be large enough to last for 20 to 25 years, Puducherry Municipality acquired land for an extent of 9.99 hectares (April 2005)in Kurumbapet Village at a cost of ₹ 4.97 crore which would meet the requirement only for 10 years. As specified in MSW Rules, a buffer zone of no development is to be maintained around landfill site and incorporated in the Town Planning Department's land use plans. The municipality, however, failed to assess the adverse consequences such as contamination of water bodies (open wells, tube wells etc), pollution of soil etc. and had not declared buffer zone around the proposed landfill site through Town and Country Planning Department. Puducherry and Oulgaret municipalities however had not commenced their activities in the land acquired for landfill site and the garbage was continued to be dumped in the existing Karuvadikuppam dumpsite. The Mahe and Yanam municipalities had no proposals for setting up landfill site. During exit conference, the Development commissioner assured (September 2010) that the mandatory requirements would be complied without fail.

1.2.7.4 Non-setting up of waste processing and disposal facilities

MSW Rules stipulate that every municipal authority has to obtain authorisation from PPCC for setting up of waste processing and disposal facility including landfills. Every municipal authority was to set up waste processing and disposal facilities by 31 December 2003 or earlier for processing and disposing the waste generated within their jurisdiction.

[16] Oulgaret, Mahe and Yanam Municipalities

Scrutiny of records maintained by PPCC, however, revealed that only two[17] municipalities in Puducherry region had obtained authorisation and that was not renewed since 2003. The other two[18] municipalities had not obtained authorisation as of October 2010. To an audit query, PPCC stated that the municipalities furnished incomplete information and that the applications for grant of authorization were under process. Thus, the municipalities, in violation of MSW rules, continue to dispose the municipal solid waste without authorisation. It was also noticed in audit that none of the five municipalities had set up waste processing and disposal facilities till date (June 2010). As the municipalities continued to dump the waste in open environment without scientific disposal, the risk to human beings due to contamination of soil and ground water was high. PPCC reported (March 2010) that in the surrounding areas of Karuvadikuppam dumpsite, ground water and surface water was contaminated with high levels of nitrate. Waste handlers are exposed to infectious materials everyday in the process of disposal of waste and they are at considerable risk while handling waste.

1.2.7.5 Burning of waste in the dumpsites

The MSW Rules stipulated that the waste collected by the municipal local bodies should not be burnt. During joint inspection of the dumpsites at Karuvadikuppam dumpsite[19] and Kanakalapeta dumpsite[20] by audit with departmental officials, it was seen that the waste was burnt continuously emitting smoke and odour violating the rules. Neither the municipalities nor the PPCC had taken any action to prevent burning of waste including plastic produces which poses serious environment and health hazards. During exit conference, the Development Commissioner instructed (September 2010) the Director, LAD to take steps to avoid burning of waste in the dumpsite.

Burning of garbage at Karuvadikuppam dumpsite in Puducherry

1.2.7.6 Privatisation of garbage clearance

In the UT of Puducherry, the work of cleaning, collection and transportation of garbage to the dumpsites was privatized by all the test-checked municipalities in phased manner. Contractors/self-help groups/service associations were engaged to undertake the work at the rates

[17] Puducherry and Oulgaret municipalities

[18] Mahe and Yanam municipalities

[19] On 2 June 2010 with Assistant Commissioner, Puducherry Municipality

[20] On 15 June 2010 with Junior Engineer, Yanam Municipality.

specified in the estimates prepared by the municipalities. The contracts were extended every year by the Municipal Councils in three municipalities[21]. In Mahe municipality, the work was done by two contractors during the period.

Collection and transportation of waste was done by contractors/self-help groups (SHGs)/NGOs in 102[22] out of 103 wards in the test-checked municipalities. Collection of waste was done in one ward by Oulgaret Municipality. Review of records connected with the works revealed the following:

1.2.7.6.1 Weighment of garbage transported not done

Even though the agreements executed with contractors for collection and transportation of garbage provided for weighment of garbage by the contractor at his/her cost once in a week or as and when required by the Commissioner of municipalities, this agreement condition was not followed by the contractors. It was seen that none of the municipalities had provided weigh-bridge facility in their dumpsites to measure the waste brought to the site. The garbage collected from Puducherry and Oulgaret municipalities are transported to the dumpsite at Karuvadikuppam. In the absence of weighment records, the municipalities did not have the statistics of the actual quantum of waste generated and cleared per day in their areas. Payments were made to contractors on the basis of trips made to dumpsites. As per instructions issued (November 2005) by LAD, the vehicles engaged by private contractors for transportation of garbage to the dumpsite should carry three trip loads of garbage every day and 2.5 MT of garbage each trip. This instruction was not strictly adhered to by the Municipalities citing practical problems in transportation of waste. The quantity of waste cleared daily in terms of metric tons as reported by the municipalities was not based on any record and not susceptible to verification.

1.2.7.6.2. Garbage transportation vehicles not covered with net

As stipulated in MSW Rules, vehicles used for transportation of waste should be covered to prevent scattering and exposure of waste to open environment. Even though this condition was included in the agreements, it was seen during joint inspection that vehicles transporting garbage in Yanam Municipality were not covered with net. During exit conference, the Development Commissioner stated (September 2010) that the Commissioners of municipalities would be instructed to adhere to the agreement conditions without deviations.

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[21] Puducherry, Oulgaret and Yanam Municipalities

[22] Puducherry – 42; Oulgaret – 36; Mahe –14 and Yanam – 10.

1.2.8 Bio-Medical Waste

Bio-medical waste is generated during diagnosis, treatment, immunization of human beings and animals, related research activities etc. HCEs such as hospitals, nursing homes, pathological laboratories, blood banks etc. are the BMW generating establishments. Government of India framed the Bio-Medical Waste (Management and Handling) Rules, 1998 (BMW Rules) under the provisions of the Environment (Protection) Act, 1986, wherein the procedure for treatment and disposal of bio-medical waste was prescribed. PPCC is the prescribed authority to monitor and implement the rules in the UT. The deficiencies noticed in compliance of the provisions of the BMW rules are discussed in the succeeding paragraphs.

1.2.8.1 Non-setting up of common treatment facilities

As per BMW Rules, the municipalities are responsible for providing suitable common disposal/incineration sites for disposal of bio-medical waste generated in the area under their jurisdiction and the waste management treatment facilities should be provided by the generators of bio-medical waste latest by 31 December 2002. It was noticed in audit that none of the test-checked municipalities had set up common treatment facility in their jurisdiction.

To an audit query, the PPCC stated (July 2010) that all HCEs except the major waste generators like Government General Hospitals (GH) and Government Maternity hospital, Puducherry and all medical colleges who disposed their bio-medical waste through incinerators, disposed the bio-medical waste generated from their hospitals through concerned municipalities.

1.2.8.2 Health Care Establishments functioning without authorisation

As per BMW Rules, every hospital/HCE has to take steps to ensure that bio-medical waste is handled without any adverse effect on human health and environment. Also, every occupier of an institution generating, collecting, receiving, storing, transporting, treating, disposing and/or handling bio-medical waste in any other manner, except such occupier of clinics, dispensaries, pathological laboratories, blood bank providing treatment/service to less than one thousand patients per month have to obtain authorisation from prescribed authority.

There are 211[23] hospitals/HCEs including 21 Government veterinary institutions functioning in the UT of Puducherry and the status of authorisation received from PPCC by these hospitals is furnished in **Table 4.**

[23] As per the details obtained from Deputy Director (Public Health), Puducherry and PPCC

Table 4 – Details of Authorisation issued to HCEs

Status as on 30 June 2010	Government	Private	Govt. Veterinary Institutions	Clinics/testing Laboratories	Total
Hospitals with valid authorisation	1	10	-	-	11
Hospitals which have obtained authorisation but not renewed	15	25	-	-	40
Hospitals applied for authorisation	-	2	-	-	2
Hospitals not applied for authorisation	40	34	21	63	158

Source: Records of PPCC and o/o the Deputy Director Public Health

Two hundred HCEs in UT were functioning without valid authorisation

It could be seen from the above table that 200 out of 211 hospitals/HCEs in the UT were functioning without valid authorisation, out of which 76 were Government HCEs. As per the records of Deputy Director (Public Health), there are 190[24] hospitals/HCEs in the UT whereas the records maintained by the PPCC showed only 112 HCEs in the UT. Due to the failure of PPCC to have complete information of HCEs functioning in the UT, many HCEs were functioning without authorisation. Compliance of BMW rules by these HCEs was not monitored by PPCC. Thus, the possibility of instances of improper disposal of bio-medical waste and violation of BMW rules by unauthorised HCEs could not be ruled out. During exit conference, Special Secretary (Science, Technology and Environment) assured (August 2010) that authorisation would be issued to all the HCEs in UT before November 2010.

1.2.8.3 Non maintenance of records by hospitals

As per BMW Rules, every authorised hospital/HCE shall maintain records relating to generation, collection, reception, storage, transportation, treatment, disposal and handling of bio-medical waste in accordance with the rules and guidelines issued. All the records are subject to inspection and verification by PPCC at any time. It was noticed that nine[25] out of 10 test-checked Government HCEs and seven[26] out of nine private hospitals had not maintained the records as required under the rules. Of these, four out of 10 Government HCEs and six out of seven private HCEs were issued authorisation by PPCC. Even though PPCC inspected these HCEs at the time of issue of authorisation, it did not conduct periodical inspections to monitor proper maintenance of records by these HCEs.

[24] Other than 21 veterinary institutions.

[25] Government General Hospital at Puducherry, seven PHCs (Kalapet, Suramangalam, Mettupalayam, Kosapalayam, Gorimedu, Karayamputtur in Puducherry and Pandakkal in Mahe), E.S.I Hospital, Puducherry

[26] St.Joseph of Cluny, PMRC, New Medical Centre, Jothi Eye care, Mahalakshmi Nursing Home, Tersor Nursing Home and Aravind Eye Hospital

1.2.8.4 Collection and segregation of bio-medical waste

As per rules, bio-medical waste has to be segregated into appropriate colour coded containers/bags at the point of generation in the HCEs before their transportation, treatment and disposal. The colour coding and method of treatment are given in **Appendix 1.3.**

Joint inspection of Puducherry GH, and test-checked private hospitals by the audit party along with hospital authorities and officials of PPCC revealed that:

(i) Colour code was not followed in Puducherry GH.

(ii) Though colour code was followed in the test checked private hospitals which do not have their own disposal facilities, the segregated bio-medical waste was handed over to the municipalities which in turn dumped the bio-medical waste in the dumpsite along with municipal waste, defeating the purpose of segregation.

Used needles and syringes thrown without cutting in JIPMER

(iii) In Jawaharlal Nehru Institute of Post Graduate Medical Education and Research (JIPMER), the used needles and syringes were thrown into dust bin without cutting and disinfection.

(iv) The bio-medical waste collected by Yanam Municipality was mixed with municipal solid waste and dumped in the dumpsite. Stray cattle were also noticed at the dumping site.

1.2.8.5 Transportation of bio-medical waste

Vehicles carrying bio-medical waste from HCEs were operating without obtaining authorisation from PPCC

As per rules, untreated bio-medical waste shall be transported only in such vehicle authorised for the purpose by PPCC. Bio-medical waste collected by the municipalities was transported either by contract vehicle or by vehicles owned by municipalities to the dumpsite or deep burial ground. Biomedical waste generated in two[27] Government hospitals, were transported to the incinerator installed in the premises of Government Chest Hospital, Gorimedu, Puducherry through a hospital van. The bio-medical waste generated by Primary Health Centres (PHCs) at Mahe was transported once in a week to the incinerator installed at GH, Mahe. Permission for storing the bio-medical waste beyond 48 hours was not obtained from PPCC by the PHCs. It was also noticed that the vehicles were transporting the bio-medical waste without obtaining authorization from PPCC.

[27] Government General Hospital and Government Maternity Hospital, Puducherry

1.2.8.6 Disposal of bio-medical waste

(i) Disposal through deep burial

As per BMW Rules, human anatomical waste and animal waste has to be incinerated in localities where population is more than five lakh. However, deep burial is permitted where the population is less than five lakh. According to the procedures laid down in the said rules, the location of the deep burial pit should be authorised by the prescribed authority and the pit should be dug two meters deep and half filled with waste. It should then be covered with lime within 50 cm of the surface before filling the rest with soil. The pits should be away from dwelling places and water sources to avoid contamination of water. On each occasion when wastes are added to the pit, a layer of 10 cm of soil shall be added to cover the wastes. The municipalities shall maintain a record of all pits for deep burial.

Deep burial of bio-medical waste not done in accordance with the rules

In Puducherry Municipality, the bio-medical waste from 27[28] hospitals were collected by private contractors and stated to be buried at Kurumbapet dumping site. The municipalities have not maintained any record of pits used for deep burial, as required under the rules. During joint inspection of Kurumbapet site, it was noticed that procedures envisaged in the rules were not adhered to for disposal of bio-medical waste through deep burial. The Municipalities have not purchased lime and the burial pits were not covered with lime as required under the rules. Stray dogs were noticed at the burial site. Thus, due to failure of the municipalities to dispose the bio-medical waste as per rules, the possibility of exposure of hazardous bio-medical waste to environment, contamination of ground water and surface water could not be ruled out.

(ii) Disposal through incineration

As per details furnished by PPCC, eight[29] incinerators are in use in the UT of Puducherry. During joint inspection of incinerators maintained by four[30] test checked hospitals, it was noticed that the incinerators were in working condition.

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[28] Five Government Hospitals (other than the waste sent for incineration to Government Chest Hospital) and 22 private hospitals.

[29] Puducherry region- Gorimedu (for GH and Maternity Hospital), JIPMER, Mahatma Gandhi Medical College and Research Institute (MGMCRI), Aarupadai Veedu Medical College and Hospital, Puducherry Institute of Medical Sciences.

Karaikal region – GH and Vinayaga Mission Medical College and Hospital

Mahe region - GH

[30] Government Chest Hospital at Gorimedu, JIPMER, GH Mahe and MGMCRI


Incinerator chamber dumped in open environment in Yanam

The incinerator purchased by Yanam Government Hospital (January 2004) was not installed due to public protest and the parts of the incinerator were found dumped at the selected site without any protection from the date of purchase. The incinerator could not be installed at the alternative site also as the condition of the incinerator deteriorated due to efflux of time. Approval of Health department for the proposal sent (December 2008) by GH, Yanam to repair the incinerator at a cost of ₹ 9.93 lakh was still awaited (June 2010). The expenditure incurred (₹ 5.68 lakh) on procurement of incinerator remained unfruitful and the lack of incinerator facilities in the region had deprived the public of hygienic environment.

(iii) Disposal of plastic bio-medical waste

Plastic bottles used for intravenous fluid were to be disinfected by autoclaving/micro waving before disposal. The disinfected plastic bio-medical waste should be shredded[31] before disposal to recyclers for recycling. It was noticed that out of 22 test-checked hospitals, only one hospital[32] disposed the used intravenous fluid bottles after shredding.

1.2.9 Manufacture and Usage of Plastics

Plastics have replaced the traditional materials like paper and cloth used for packing. India has witnessed a substantial growth in the consumption of plastics and increased production of plastic waste. Non-bio degradable and non-recyclable plastic waste thrown in the drainage channels block the free flow of liquid waste and create an unhygienic environment resulting in various health hazards like water borne diseases.

According to Plastics Manufacture, Sale and Usage Rules, 1999 (as amended in 2003), every manufacturer of carry bags or containers of virgin plastic or recycled plastic or both shall register with PPCC before commencement of production. Details collected from the Directorate of Industries and Commerce showed that 135 manufacturers of plastic bags and containers were operating in the UT as of May 2010. Out of them, only eight manufacturers have registered with PPCC. The PPCC has not maintained complete data of plastic manufacturers so as to initiate action against the defaulters for non compliance of rules.

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[31] Shredding is a process by which waste are de-shaped or cut into smaller pieces so as to make waste unrecognizable

[32] Aravind Eye Hospital, Puducherry

The UT Government banned (December 2009) the use, sale or store of polythene or plastic disposable cups and carry bags of size less than 8 x 12 inches of thickness 50 microns or below and notified the officers[33] to implement the order with the Member Secretary, PPCC as coordinator for implementation of the order. To an audit query, PPCC stated (August 2010) directions were issued to fifteen traders and manufacturers for adhering to the Government order. However, no case was filed by the officers notified for implementing the rules from the date of issue of ban order. During exit conference, the Development Commissioner replied (September 2010) that ban on use and store of plastic carry bags and containers of less than 50 microns would be strictly enforced.

1.2.10 Monitoring

The PPCC is responsible for monitoring of various quality parameters relating to ground water, surface water, ambient air, noise pollution, operating and emission standards for incinerators, standards for liquid waste etc in the UT of Puducherry. The Municipal Health Officers are responsible for supervising sanitary works, day and night garbage cleaning, monitoring the free flow of liquid wastes in drains etc.

1.2.10.1 Monitoring by PPCC

Monitoring and enforcement of rules by PPCC was deficient

(i) Besides enforcement of various rules and regulations relating to management of municipal solid waste, bio-medical waste and plastic waste, the functions of PPCC include, *inter alia*, planning of comprehensive programme for prevention and control of pollution, advise the UT Government in framing environmental and industrial policy and preparation of action plan on solid waste, bio-medical waste and hazardous management. As per the provisions of the Water (Prevention and Control of Pollution) Act, 1974, a full time Member Secretary possessing qualifications, knowledge and experience of scientific, engineering or management aspects of pollution control should be appointed for PPCC. However, PPCC did not have a full-time Member Secretary. Director, Department of Science, Technology and Environment was holding the additional charge of Member-Secretary during the period covered under audit. It was also noticed that the incumbents did not have the requisite qualification as recommended by the High Powered Committee on management of hazardous wastes constituted by the Hon'ble Supreme Court of India.

[33] Sub Divisional Magistrates, Regional Administrators of Mahe and Yanam, Director, Department of Science, Technology and Environment / Member Secretary PPCC, Puducherry, Director, Department of Civil supplies and consumers affairs, Puducherry, Commissioners of Municipalities and Commune Panchayats, Health officers of Municipalities, Sanitary Inspectors of Municipalities and Commune Panchayats and Food Inspectors of Food and Drug Administration of Health Department, Puducherry.

(ii) Section 15(1) of the Environment (Protection) Act, 1986 provides for appropriate penalties to be levied by PPCC against the violators of rules relating to management of wastes. PPCC issued 16 directions[34] to municipalities during 2005-10 for violation of the MSW rules. The PPCC, however, had not taken any penal action against the municipalities and the municipalities continued to dispose of municipal solid waste without complying with the MSW Rules.

(iii) Though envisaged in the Act, the PPCC had not conducted any study on possible risks to human health from factors like contamination of soil and chemical poisoning from improper disposal of municipal solid waste, bio-medical waste and plastic waste. In the absence of assessment by PPCC, the potential damage to the environment and human health may go unnoticed. When this was pointed out by Audit, PPCC replied (September 2010) that the issue would be addressed by strengthening PPCC with additional manpower. During exit conference, the Development Commissioner instructed (September 2010) Director, LAD to make risk assessment.

(iv) The PPCC had not fixed any norms for inspection of HCEs. In the absence of norms for inspection, shortfall in conduct of inspections could not be ascertained in audit. During the period covered by audit, only five surprise inspections were conducted by PPCC. Further, the PPCC had not inspected the incinerators installed at GH Karaikal and GH Mahe to verify the compliance of standards as required under the Rules.

The PPCC to an audit query stated that as against the requirement of eight officials (5 – technical and 3 – non-technical), the available strength was one (technical) and due to insufficient man power, monitoring of HCEs and local bodies was not done periodically. PPCC replied (August 2010) that the proposal for additional posts has been sent to CPCB.

1.2.10.2 Monitoring by municipalities

As per the Pondicherry Municipalities Act, 1973, a Municipal Health Officer (MHO) should be posted in each municipality to monitor the public health and sanitation activities. It was noticed that MHOs were posted in only two[35] out of the four test-checked municipalities. In Mahe and Yanam municipalities, the post of MHO was not sanctioned by Government. In the absence of MHOs, the public health and sanitation activities in these municipalities were looked after by lower level staff. During exit conference, the Development Commissioner stated (September 2010) that the Commissioners would be instructed to submit proposals for filling up of the post of MHO.

[34] Puducherry Municipality (6), Oulgaret Municipality (5), Karaikal Municipality (2), Mahe Municipality (1) and Yanam Municipality (2)

[35] Puducherry and Oulgaret municipalities

1.2.11 Conclusion

The present arrangements in the municipalities for solid waste management suffer from a number of deficiencies. Landfills had not been established and all the municipalities were dumping the solid waste in open dumpsites and burning the waste posing environmental and health hazards. Almost all health care establishments violated bio-medical waste management rules while handling the bio-medical waste. Monitoring by PPCC, the regulatory authority to enforce the implementation of rules, was deficient.

1.2.12 Recommendations

- Municipal solid waste management rules need to be implemented by giving priority to segregation of different wastes and setting up of processing units and landfills.
- All payments to contractors should be made strictly in accordance with the terms and conditions of the contract.
- Common treatment facility for treatment of bio-medical waste should be provided by municipalities.
- Puducherry Pollution Control Committee should collect information about all the health care establishments in the Union Territory and ensure all these establishments function with valid authorisation.
- Puducherry Pollution Control Committee should conduct periodical inspections of waste generating units and ensure safe disposal of waste.