

CHAPTER II

PERFORMANCE AUDIT

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This Chapter contains Performance Audit on 'Implementation of Environmental Laws in Union Territory of Puducherry'.

DEPARTMENTS OF SCIENCE, TECHNOLOGY AND ENVIRONMENT AND PUBLIC WORKS

PUDUCHERRY POLLUTION CONTROL COMMITTEE

2.1 Performance Audit on 'Implementation of Environmental Laws in Union Territory of Puducherry'

Executive Summary

With an aim to control pollution and protect the environment, Government of India enacted Environment and Protection Act, 1986. Performance Audit on 'Implementation of Environmental Laws in Union Territory of Puducherry' revealed the following significant audit findings:

There was no comprehensive programme for the prevention, control or abatement of pollution.

There were delays in issue of consent renewal order for industries and 80 *per cent* shortfall was noticed in inspection of industries.

Sewage generated was discharged directly into irrigation canals contaminating water bodies and ground water.

Continuous Ambient Air Quality Monitoring Station for monitoring all the prescribed parameters was not installed.

Laboratories in Puducherry and Karaikal did not have the facilities for conducting microbiological and toxicity tests for water analysis and characterisation of hazardous waste and soil/sludge/sediment/solid waste analysis as prescribed by Central Pollution Control Board.

2.1.1 Introduction

Government of India (GoI) enacted the Environment Protection Act, 1986 as an umbrella legislation to the existing laws with an aim to control pollution and protect the environment, which is implemented by Central Pollution Control Board (CPCB). In order to carry out the functions of CPCB effectively in the Union Territory (UT), the UT Government constituted Puducherry Pollution Control Committee (PPCC) during 1992 under the Department of Science and Technology. It was the responsibility of the PPCC to advise the UT Government on framing environment and industrial policy, preparation of comprehensive programme for prevention and control of pollution, collection and dissemination of information relating to natural resources, environment protection and pollution control. The Committee was also authorised to grant consent for establishing and operation of industries. As of March 2015, there were 3,728¹ industries in Puducherry.

2.1.2 Organisational structure

The Secretary to the Government of Puducherry, Department of Science, Technology and Environment (DSTE) is the Chairman of PPCC. The Director, DSTE is the Head of the Department and also the Member Secretary of PPCC. The PPCC also includes Senior Town Planner, Town and Country Planning Department, Chief Engineer, Public Works Department (PWD), Director, Health and Family Welfare Services and Director, Local Administration Department as members.

2.1.3 Audit objectives

Audit aimed to assess whether:

- environmental policies and strategies existed and were adequate for ensuring compliance with Water, Air Pollution Acts and Rules,
- funds were utilised in an efficient and economic manner in schemes implemented for protection of Environment and
- implementation of Environment Protection Acts/Rules was effective in prevention and control of air and water pollution.

2.1.4 Audit criteria

The Audit findings were benchmarked against the following:

¹ Green - 2,106, Orange - 1,354 and Red - 268

- The Environment (Protection) Act, 1986, Water (Prevention and Control of Pollution) Act, 1974 (Water Act) and Air (Prevention and Control of Pollution) Act, 1981 (Air Act)
- The Water (Prevention and Control of Pollution) Cess Act, 1977
- The Batteries (Management & Handling) Rules, 2001
- Instructions/circulars issued by GoI/UT in relation to environmental protection.

2.1.5 Scope of audit and methodology

The Performance Audit on Implementation of Environmental Laws was conducted with special emphasis on control of air and water pollution. An Entry Conference with the Secretary to Government was held in March 2015 to discuss the audit objectives, criteria and scope of audit. Related records of PPCC, DSTE and PWD were test checked between March and August 2015 covering the period 2010-15. A sample size of 230 industries was also selected for check of renewal of consent. An Exit Conference was held with the Secretary to Government in October 2015 wherein the outcomes of audit were discussed. Replies of the UT Government, wherever received, have been taken into consideration while finalising the audit findings. Audit findings are discussed below:

Audit Findings

2.1.6 Planning

Section 17 of the Water/Air Acts stipulate that Pollution Control Committees have to formulate a comprehensive programme for the prevention, control or abatement of pollution of streams, wells and air pollution and secure the execution thereof. It was noticed that PPCC had not formulated any comprehensive plan to combat air and water pollution. When pointed out, Government directed (October 2015) the Department to prepare comprehensive action plan.

Mention was made in paragraph 3.2.5.1 (i) of Audit Report 2000-01 that PPCC had requested (November 1999) Town and Country Planning Department to prepare a Zoning Atlas to have a clear idea about categorisation of different industries in the UT and such an atlas was not submitted by March 2001. During the PAC meeting, PPCC stated that scientific approach of pollution could be adopted once Zoning Atlas was notified and PAC had directed (April 2005) PPCC to take immediate action for notification of Zonal Atlas. It was, however, noticed that Zonal Atlas was prepared only for Puducherry and Yanam regions (April/December 2004) and the same was not prepared for Karaikal and Mahe regions.

When pointed out, the Department replied (December 2015) that Town and Country Planning Department was preparing a comprehensive development plan for the whole of the UT which would cover land use mapping and notifying specific industrial areas.

2.1.7 Finance

The main source of revenue for PPCC was collection of consent fees/water cess and it earned ₹ 4.17 crore (2010-15) as revenue. During 2010-15, UT Government incurred an expenditure of ₹ 4.23 crore towards strengthening and maintenance of environment and pollution control infrastructure. Apart from this, PPCC incurred an expenditure of ₹ 2.67 crore mainly towards establishment. As of March 2015, PPCC had a balance of ₹ 6.61 crore including previous years' closing balance.

2.1.7.1 Non-remittance of Water Cess collected

Section 8 of the Water (Prevention and Control of Pollution) Cess Act, 1977 provides that the proceeds of the cess levied on water utilised shall be collected by PPCC and credited to the Consolidated Fund of India. Upto 80 per cent of the cess amount collected by PPCC would be allocated to it by GoI for meeting the approved expenditure requirements. It was seen that though PPCC had collected ₹ 65.44 lakh as water cess, it did not remit the same to GoI. When pointed out, UT Government replied (October 2015) that water cess was not remitted during 2010-14 due to administrative delays. It was, further, stated that an amount of ₹ 38.49 lakh was remitted during March 2015. However, PPCC was yet to remit the remaining amount of ₹ 26.95 lakh to GoI.

2.1.7.2 Non-availing of second instalment of laboratory grant

GoI sanctioned (October 2011) ₹ 29.80 lakh towards purchase of laboratory equipment for strengthening the existing laboratories at Puducherry and Karaikal and released ₹ 22.35 lakh as first instalment (October 2011). As per the terms and conditions of the sanction order, the grant was to be utilised before the end of the financial year *i.e.*, March 2012 and release of second instalment would be considered only on submission of UC for the grant already received. Out of ₹ 22.35 lakh released, PPCC spent ₹ 18.16 lakh towards purchase of laboratory equipment and refunded (January 2014) the remaining ₹ 4.18 lakh to GoI.

Audit scrutiny revealed that though the amount was received in November 2011, proposal for purchase of laboratory equipment was initiated by PPCC only in December 2012, after a delay of 13 months. As this was well beyond the due date prescribed by GoI, PPCC could not avail of the second instalment and failed to create the required infrastructure for the laboratory as discussed in paragraph 2.1.13.1. When pointed out, the Department stated (October 2015) that delay was due to belated receipt of

sanction order. The reply is not acceptable, as the letter conveying the release of funds was received in November 2011 itself.

2.1.7.3 Deficiencies in collection of water cess

Under the provision of Section 3 of Water (Prevention and Control of Pollution) Cess Act, 1977, every person carrying on any industrial activity is liable to pay cess for utilisation of water, calculated based on the quantity of water consumed. If the same is not paid within due dates, then penal interest at the rate of two *per cent* for every month on the outstanding amount is to be levied.

In the UT, the minimum rate towards collection of water cess from hazardous waste generating industries was fixed as ₹ 500 per year (January 2011). Audit scrutiny revealed that out of 106 hazardous waste industries in the UT, PPCC had not collected water cess from 31 industries for the period from January 2011 to September 2015 resulting in loss of revenue of ₹ 0.84 lakh, including penal interest. When pointed out, the Department replied (October 2015) that action has been initiated to collect the cess amount.

2.1.8 Grant of Consent

Based on the Prevention and Control of Pollution (Uniform Consent Procedure) Rule 1999, industries are classified into Green (less polluting), Orange (moderately polluting) and Red (highly polluting) categories. The industries, which are likely to discharge sewage or trade effluent or pollute the air by process/emission, have to get consent of PPCC under Section 21 of Air Act and Section 25 of Water Act. Scrutiny of records revealed the following:

2.1.8.1 Discrepancies in issue of consent/renewal orders

The Water Act stipulated that a Consent Register was to be maintained by PPCC containing particulars of industries to which consent were granted and consent fees²/renewal of consent fees to be collected from them. It was, however, observed that PPCC did not maintain any such Register though it was mandatory. Due to non-maintenance of Consent Register, PPCC had no consolidated information of the industrial units running without consent and, hence, it could not monitor the industrial units. When pointed out, the Department replied (December 2015) that maintenance of Consent Register was laborious and time consuming and computerised data of industries was available with PPCC with all relevant details. However, a sample check of renewal of consent orders revealed the following deficiencies:

² A minimum of ₹ 500 and maximum of ₹ 25,000 depending on investment

Audit called for details of 230 selected industries out of 3,728³ industries for verification of consent renewal but PPCC produced details of 193 industries only. It was noticed that out of these 193 industries, 62 (32 per cent) industries were either operating without renewing the consent or their respective functional status was not known to PPCC. Further, a review of renewal of consent orders issued during 2010-15 revealed that out of 3,728 industrial units, only 1,396 (37 per cent) industries had renewed their consents and the remaining 2,332 industries (63 per cent) were operating without renewal of consent. In the absence of the consent register, it was observed that PPCC could not initiate action against the defaulters.

When pointed out, the Department stated (December 2015) that out of 3,728 industrial units, 2,105 units were green industries which required grant of one time consent only and the balance alone came under consent renewal purview. It further admitted that large number of industries were in operation after lapse of consent validity and consent renewal drive would be intensified.

2.1.8.2 Inadequate inspection of industries

As per the norms specified by PPCC, the red, orange and green industries were to be inspected once in a year, once in three years and once in five years respectively. Scrutiny of inspection reports revealed that there was a shortfall of 80 per cent in inspection of these industries during 2010-15 as per the norms prescribed by PPCC. When pointed out, the Department replied (October 2015) that sampling was necessary only if there was emission or discharge and all the industries did not discharge effluent or emission. The reply is not acceptable, as PPCC did not fulfil its own norms for inspection as 80 per cent of the industries were not inspected during 2010-15.

2.1.8.3 Non-adoption of pollution norms

CPCB had identified (February 2014) 17 industries⁴ as highly polluting industries as they were discharging environmental pollutants directly or indirectly into the ambient air and water. CPCB prescribed that these industries had to be directed to install and commission online monitoring system to check the emission and effluents.

It was noticed that two paper industries⁵ involved in processing of Paper, Pulp and Boards were not classified under this category and PPCC had not directed these industries to install online monitoring system. Similarly,

³ Red – 268, Orange-1,354 and Green-2,106

⁴ Pharmaceuticals, Chlor Alkali, Fertilizer, Oil Refinery, Dye and dye Intermediate, Pesticides, Petrochemical, Large Power Plants, Cement, Aluminium, Zinc, Copper, Iron and Steel, large Pulp and Paper, Distillery, Sugar and Tannery

⁵ M/s Nithya Packaging Limited and M/s Entice Paper

Puducherry Co-operative Sugar Mill, which also falls under this category, had not installed online monitoring system. A joint physical inspection revealed that during non-season period, the accumulated water in Effluent Treatment Plant of the Sugar Mill was let out in the adjoining vacant ground.

When pointed out, the Department accepted (October 2015) that both the industries fall under the category of industries requiring online monitoring. They have since been directed to install online monitoring device.

2.1.9 Water Pollution

2.1.9.1 River Pollution

Pandit Jawaharlal Nehru College of Agriculture and Research Institute, Karaikal conducted a comprehensive study during the year 2013-14 about the polluted stretch of Arasalar river downstream of Karaikal and Chunnambar downstream of Puducherry which revealed the following:

(i) The test report revealed (January 2015) that Chunnambar downstream had high concentration of nitrate and chromium due to mixing of sewage water into the river stream and industrial activities respectively. PPCC accepted (June 2015) that pollution was due to untreated sewage water in respect of nitrate content. It was, further, replied that there was no known source of chromium in Puducherry region and inspection along the bank of river has been intensified to trace any unauthorised activity (December 2015).

(ii) The CPCB identified (July 2013) Arasalar river as polluted since the average Biochemical Oxygen Demand (BOD) was found to be 7 mg/l constantly, which was above the CPCB prescribed level of 6 mg/l and required remedial action. PPCC replied that monitoring was done (November 2014) by it during the flow period and the level of BOD was found Nil. When Audit called for the details of test conducted, PPCC could not furnish the same. When pointed out, UT Government instructed (October 2015) the Department to do fresh sampling of Arasalar river water.

However, the above study indicated that both rivers were polluted by high concentration of nitrate/chromium and high level of BOD content respectively and PPCC had not taken any concrete action to bring down the level of pollutants.

2.1.9.2 Unabated contamination of irrigation canals and sea due to sewerage influx

According to Section 17 of the Water Act, the PPCC was required to evolve economical and reliable methods for treatment of sewage and trade effluents. Puducherry region generates waste water of about 45 mld as per

the report of Ministry of Earth Sciences, GoI. However, three Sewage Treatment Plants (STPs), operated by PWD, had a capacity to treat only 17.5 mld of waste water.

In respect of the areas which were not provided with the underground drainage system, the accumulated sullage water was being let into the erstwhile irrigation canals. There were 19 such canals in Puducherry region which carried the blackish sullage water for ultimate disposal into sea. Ministry of Earth Sciences, GoI had also confirmed that during 2012-15, Puducherry shore locations possessed significantly high level of pathogenic bacteria indicating contamination due to domestic sewage. It was observed that continued discharge of sullage water would only endanger the species in the water bodies.

When pointed out, PWD stated (October 2015) that sewerage would be completed in the remaining major urban areas by the end of financial year 2015-16.

It was, further noticed that existing STPs were operating without renewal of consent. PPCC had inspected the STPs during July 2012 and observed that consent conditions were violated and directed PWD to rectify them. However, neither PWD took any corrective action nor PPCC followed it up to ensure adherence to norms, resulting in continued pollution of ground water. At the instance of Audit (July 2015), PWD applied for renewal of consent to operate (August 2015).

2.1.9.3 Non- functioning of Water Quality Review Committee

The UT Government constituted (March 2003) State Level Water Quality Review Committee (WQRC) with the objective of protecting quality of National Water Resources in which Member Secretary, PPCC was also a member. The Committee was to meet every quarter to examine and discuss specific water quality related tasks to be carried out and recommend the mode of executing such tasks. Audit noticed that the Committee had met only twice (August 2003 and December 2003) and no meeting was conducted thereafter.

Though the Ministry of Water Resources requested (July 2008) the UT Government to reconstitute WQRC in order to make it more result oriented and to have relevant linkage with Water Resource Management at state level, the Committee was not reconstituted. When pointed out, the Department stated (December 2015) that formation of WQRC was in the domain of PWD and as a member of WQRC, PPCC would pursue with PWD to reconstitute the Committee.

2.1.10 Air Pollution

2.1.10.1 Shortcomings in air pollution monitoring

Ministry of Environment and Forest, GoI had notified (January 1988) the whole Union Territory area as designated air pollution control area. PPCC presently monitors ambient air quality at six stations (three each in Puducherry and Karaikal Districts) by measuring three standard air pollutants viz., PM, SO₂ and NO₂. As per the revised National Ambient Air Quality Standards (NAAQS) (November 2009), nine parameters⁶ have to be measured in addition to SO₂ and NO₂. With the objective of achieving this standard, CPCB proposed (March 2010) to establish Continuous Ambient Air Quality Monitoring Station (CAAQMS) in Puducherry at a cost of ₹ 110 lakh. The cost of installation was to be borne at the ratio of 50:50 by CPCB and UT and PPCC had to procure and install the system by inviting global tenders. PPCC, however, requested (May 2010) the CPCB to supply the equipment with 100 per cent financial assistance, which was not agreed to by CPCB.

When GoI sought (July 2014) acceptance for installation of CAAQMS on 50:50 basis, UT Government again addressed (November 2014/ April 2015) to provide 90/100 per cent assistance for installation of CAAQMS. As a result, CAAQMS was not established even after six years after revising NAAQS standards and air pollution was being measured only by three parameters instead of nine parameters.

When pointed out, the Department stated (October 2015) that action would be taken to install CAAQMS under Corporate Social Responsibility scheme to monitor all the parameters.

2.1.10.2 Air pollution caused by Karaikal Port

Karaikal Port, which handles coal, had a fixed tower mounted mistifier and a mobile mistifier to reduce air pollution. Apart from this, water sprinklers were also installed to reduce air pollution. Audit, however, observed that no such mistifiers were installed on the seaward side and this may lead to air pollution. Further, the Trade Merchants Union, Nagore of nearby Tamil Nadu State complained (April 2015) to Tamil Nadu Pollution Control Board (TNPCB) regarding water pollution on account of coal particles mixed with sea water and TNPCB had forwarded the complaint to the Port Authorities for necessary action.

When pointed out, the UT Government directed (October 2015) the Department to analyse the issue and give necessary directions.

2.1.11 Management of Batteries

The Batteries (Management and Handling) Rules, 2001 (BM Rules) stipulated that the manufacturer, importer, assembler or re-conditioner were to ensure that the used batteries were collected back and sent to

⁶ PM_{2.5}, CO, O₃, NH₃, C₆H₆, BaP, Pb, As and Ni

registered recycler for disposal/recycle. Every manufacturer/dealer was to submit a half yearly return regarding sale of new batteries and buyback details of old batteries by May/November to PPCC. PPCC was to ensure compliance of BM Rules and in turn had to submit annual compliance status report to CPCB by 30th April of every year.

Scrutiny of records revealed that PPCC had only 20 dealers registered with it as of 2010-11 and the same was not updated thereafter. However, as per the information collected (April 2015) from the Commercial Taxes Department (CTD), there were 13 dealers and two battery manufacturers in the UT. It was noticed that only two battery dealers submitted their Annual return upto 2012-13 and none of them submitted their returns thereafter. It was further noticed that PPCC had not coordinated with CTD to obtain the details of manufacturer/dealer in batteries. Due to non-submission of returns, the quantum of batteries recycled could not be assessed by PPCC. When pointed out, the Department stated (October 2015) that necessary remedial action would be taken.

2.1.12 Manpower

PPCC had eight posts⁷ with manpower of 12 personnel for implementation of the provisions of the Act. Scrutiny of records revealed that the Ministry of Environment and Forest had sanctioned eight posts (six technical and two non-technical) in December 2002 with salary support till the end of Tenth Five Year Plan. Though PPCC approved creation of all these posts in October 2003, no formal orders were issued, as Recruitment Rules for the same were framed and creation of posts were ratified only in February 2015. As of September 2015, PPCC had only one Environment Engineer (on deputation), one Scientist (on deputation), one Junior Scientific Assistant, two Junior Lab Assistants and one Data Entry Operator.

When pointed out, the UT Government instructed (October 2015) PPCC to conduct work assessment study.

2.1.13 Deficiencies in infrastructure facilities

2.1.13.1 Non-accreditation of PPCC laboratories under Environment Act

PPCC had a Central Laboratory at Puducherry and one Zonal Laboratory at Karaikal. As per CPCB guidelines, every laboratory should have facilities for a minimum of five essential group tests⁸ for water analysis. An environmental laboratory should also be equipped to conduct biological tests and characterisation of hazardous waste and

⁷ Scientist C (1), Scientist B (1), Junior Scientific Assistant (2), Junior Lab Assistant (2), Environment Engineer (1), Assistant Environment Engineer (1), Data Entry Operator (2) and Field Attendant (2)

⁸ Physical, Inorganic, Organic, Microbiological and Toxicity

soil/sludge/sediment/solid waste analysis. Scrutiny of related records revealed that:

- both laboratories did not have the facilities for conducting microbiological and toxicity tests for water analysis,
- there was no facility for biological tests and characterisation of hazardous waste and soil/sludge/sediment/solid waste analysis and
- in absence of these facilities, the test samples were referred to private labs which were accredited by National Accreditation Board for Testing and Calibration Laboratories (NABL) as PPCC labs were not approved by NABL due to staff constraints.

When pointed out, the Department stated (December 2015) that as and when suitable space is available for expansion, facilities would be expanded to analyse other parameters also and recognition under Environment Act would be obtained.

2.1.14 Conclusion

PPCC did not have a comprehensive programme for prevention and control of pollution. Discrepancies were noticed in issue of consent renewal and PPCC was not aware of the functional status of industrial units. Besides, shortfall in inspection of units was also noticed. Sewage generated was discharged directly into irrigation canals contaminating the water bodies and ground water. Continuous Ambient Air Quality Monitoring Station for monitoring all the prescribed parameters was not installed. PPCC laboratories did not have facilities to conduct tests as specified by CPCB.

2.1.15 Recommendations

Government may consider:

- formulation and implementation of a comprehensive action plan for prevention and control of pollution in a time bound manner,
- conducting regular inspections of industries,
- prioritising the improvement of sewage treatment.