



<p>Through Wides Covering the October 22, 2018 dv</p>	<p>dumping yard was found to be used unscientifically causing severe hardship to the people and deleterious to the environment. Amongst the various directions issued was appointment of an Advocate Commissioner for inspection of the dumping yard in question and to submit a report.</p> <p>3. The Advocate Commissioner's Report placed before us reveals the alarming conditions prevailing at the site in as much as there was gross violation of the Solid Waste Management Rules, 2016 as well as various directions issued by the Tribunal from time to time. The record is replete with manifestation of total lack of interest and casual approach on the part of the Municipal Corporation. The Advocate Commissioner's Report filed way back on 05.10.2016 had made certain recommendations which are as follows:</p> <p><i>"Recommendations:</i></p> <ul style="list-style-type: none"> <li>(i) Proper segregation at source to be implemented effectively.</li> <li>(ii) Proper composting should be carried out as per Central Pollution Control Board norms.</li> <li>(iii) Proper scientific sanitary landfill site should be constructed as per Central Pollution Control Board guidelines</li> <li>(iv) Implementation of newly notified rules on "Solid Waste Management Rules, 2016" to be done on time bound manner.</li> <li>(v) The structural collapse of the facility is to be repaired or reconstructed immediately at appropriate place in the site.</li> <li>(vi) The unsegregated waste dumped in the open land near to the water body is to be removed and disposed properly to avoid carryover of the waste during rainy season into the river.</li> <li>(vii) Proper lined/concreted leachate collected system should be made around the composting plant.</li> <li>(viii) Proper lined collection tank for leachate is to be provided with facility for treatment of the same</li> <li>(ix) Temporary collection points/areas/segregation location should be</li> </ul>
---	---

175

<p>Through Video Conferencing Item Nos. 03 to 05 October 22, 2018 dv</p>	<p>covered."</p> <p>4. Although, it is a conceded position on both the sides that no direction has been passed in terms of the recommendations of the Advocate Commissioner Report, this did not absolve the Municipal Corporation of the responsibility of having considered the recommendations and to take appropriate steps for the implementation. This obviously has not been done.</p> <p>5. In terms of the directions of this Tribunal, the Environmental Engineer of the State Pollution Control Board (SPCB) had submitted a report which clearly reflects that the Kochi Municipal Corporation, respondent no. 1 has also failed to act in terms of the recommendations of the Monitoring Committee appointed by the High Court. The solid waste treatment and disposal facility of Kochi Municipal Corporation was found to be operating in violation of the Solid Waste Management Rules, 2016 in as much as leachate from the processing farm was being discharged with the storm water drain constructed around the proposed vermi composting building that drains into the Kasambrayar River. Contaminated effluent was holding in the land area near the leachate collection area which was suspected to have surfaced due to settlement of floor. No interest had been shown by the respondent, Kochi Municipal Corporation, to provide treatment of the leachate. There were also other serious inadequacies that had led the Kochi Municipal Corporation to submit a proposal for leachate treatment based on bio-logical process and had applied for renewal for authorization of the Board. This</p>
--	---

<p>Through Video Conferencing          on 19.10.2018          October 22, 2018          dv</p>	<p>proposal, however, was found to be inadequate. Later, discussions were held on 04.04.2017 with the authorities of the Kochi Municipal Corporation when it was informed by the Corporation that a detailed project report for installation of a thermal gasification for discharge of the solid waste had been prepared and was going to be implemented. It was also informed that they would submit the detailed project report and apply for Consent to Establish.</p> <p>6. The situation that existed at the time when the Advocate Commissioner had inspected the site and later by the Environmental Engineer of the SPCB, still appears to persist and nothing of substance has been achieved by the Kochi Municipal Corporation in dealing with the garbage/solid waste. We have been informed by the learned Counsel appearing for the Kochi Municipal Corporation that though a contract agreement had been entered with the concessionaire into on 07.02.2017, land transfer was made only on 26.02.2018 which is more than a year after contract agreement had been entered into. Thereafter, other than laying foundation stone and undertaking other peripheral works, nothing further obviously appears to have been done. Although, Consent to Establish had been obtained from the SPCB on 30.08.2018, no application has been submitted for Environmental Clearance.</p> <p>7. The above facts and circumstances of the case undeniably reflect the indifferent attitude on the part of the Kochi Municipal Corporation totally disregarding the severe and adverse effects of the huge quantity of solid</p>
--	---

17/2/2016

177

<p>Through Video Conferencing</p> <p>Mem Nos. 03 to 05</p> <p>October 22, 2018</p>	<p>waste being dumped at the site in the manner it is being done. The photographs filed by the applicant demonstrate the alarming condition that prevails at the moment.</p> <p>8. It is submitted that Kochi Municipal Corporation has undertaken steps to establish a new integrated solid waste treatment plant but is silent on the steps being taken to deal with the present site which would include treatment of the legacy waste.</p> <p>9. We are of the considered opinion that the Kochi Municipal Corporation ought to take up the work by according to topmost priority in the interest of the environment and health of the people. Accordingly, we direct as follows:</p> <p>i. The entire process of establishment of the new integrated solid waste treatment processing plant, stated to have been undertaken, be completed within a period of six months from hence. This timeline shall be strictly adhered to.</p> <p>ii. The Kochi Municipal Corporation shall also undertake treatment of the legacy waste at the present site i.e. Brahamapuram Yard, which shall commence forthwith and shall be carried out in accordance with the procedure laid down under the Solid Waste Management Rules, 2016.</p> <p>iii. For the inordinate delay caused in taking up the work, we impose a penalty of Rs. 1 Crore upon the Kochi Municipal Corporation, 50% of which shall be deposited with the Kerala SPCB and 50% with Central Pollution Control Board (CPCB).</p> <p>iv. The Kochi Municipal Corporation shall deposit a</p>
--	--

22

<p>Through        Vide        No. 63        of 25        October 23,        2018        etc</p>	<p>Performance Guarantee of Rs. 8 Crores with the SPCB within a period of 15 days from hence. Failure to maintain this timeline, recorded shall entail forfeiture of the Performance Guarantee and additional penalty of Rs. 2 lakhs per day until completion of the project.</p> <p>10. Let a Report of compliance be filed within six months from hence.</p> <p>11. List the case again on 2nd May, 2019 for consideration of the report.</p> <p>.....JM        S.P. Wargdi)</p> <p>.....EM        (Dr. Mani Nanda)</p> <p>24.10.2018</p>
---	---

193

SHAJI P. CHALY, J.

W.P. (C) No. 36204 of 2018

Dated this 9<sup>th</sup> day of November, 2018

ORDER

Learned Government Pleader takes notice for R8, R13, R21, R23, and R26. Urgent notice by speed post to all other respondents, returnable in three weeks. Post immediately after service is complete.

There will be a stay of further proceedings of Ext.P17 for a period of two months on condition that, the petitioner provides bank guarantee for an amount of Rs.1 Crore in accordance with the conditions contained under paragraph 9(iii) of Ext.P17 order issued by the National Green Tribunal, within a period of three weeks. Petitioner to address this court with respect to the maintainability of the writ petition ~~before this court~~ in view of the provision contained under Section 22 of the National Green Tribunal Act

sd/- Shaji P. Chaly, Judge.

True Copy,

  
Assistant Registrar

11/11/18

uu

09.11.2018

11 11/01/2018

11/01/2018 - A TRUE COPY OF THE COMMON ORDER DATED 22.10.2018 IN O.A.No.533/2018, IN O.A.No.534/2018 AND IN O.A.No.535/2018 OF THE NATIONAL GREEN TRIBUNAL, PRINCIPAL BENCH, NEW DELHI INVER ALIA DIRECTING THE PETITIONER TO PAY A PENALTY OF RS. 1 CRORE AND TO DEPOSIT A PERFORMANCE GUARANTEE OF RS.2 CRORES.IN O.A.No.534/2018 AND IN O.A.No.535/2018 OF THE NATIONAL GREEN TRIBUNAL, PRINCIPAL BENCH, NEW DELHI .

\*\*\*





**കേരള സർക്കാർ**

സംഗ്രഹം

തദ്ദേശസ്വയംഭരണ വകുപ്പ് - ബ്രഹ്മപുരത്തെ ഖരമാലിന്യ സംസ്കരണ പ്ലാന്റിൽ നിന്നും ഊറി വരുന്ന മലിനജലം (Leachet) സൃഷ്ടിക്കുന്ന മലിനീകരണം ഒഴിവാക്കുന്നതുമായി ബന്ധപ്പെട്ട് സ്വീകരിക്കേണ്ട പ്രായോഗിക നടപടികൾ തീരുമാനിക്കുന്നതിന് തദ്ദേശസ്വയംഭരണ വകുപ്പ് അഡീഷണൽ സെക്രട്ടറി ഡോ. മിത്ര ടി. IAS-ന്റെ നേതൃത്വത്തിൽ ഒരു ടീമിനെ ചുമതലപ്പെടുത്തി ഉത്തരവ് പുറപ്പെടുവിക്കുന്നു.

**തദ്ദേശ സ്വയം ഭരണ (ഡി.സി) വകുപ്പ്**

സ.ഉ.(സാധാ)നം.3105/2018/തസഭവ

തിരുവനന്തപുരം, തീയതി: 06.12.2018

പരാമർശം:- OA No.533/2018, 534/2018 ,535/2018 കേസുകളിൽ നാഷണൽ ഗ്രീൻ ട്രിബ്യൂണൽ 22.10.2018 - ൽ പുറപ്പെടുവിച്ചിട്ടുള്ള ഉത്തരവ്

**ഉത്തരവ്**

ബ്രഹ്മപുരം മാലിന്യ സംസ്കരണ പ്ലാന്റിന്റെ പ്രവർത്തനം കാര്യക്ഷമാക്കി കൊച്ചിയിലെ മാലിന്യ സംസ്കരണം ഫലപ്രദമായി നടപ്പിലാക്കുന്നതിൽ വന്ന കാലതാമസത്തെ തുടർന്ന് ആയതുമായി ബന്ധപ്പെട്ട് കൊച്ചി കോർപ്പറേഷൻ ഒരുക്കോടി രൂപ പിഴ ചുമത്തിക്കൊണ്ട് മേൽ പരാമർശം പ്രകാരം ദേശീയ ഹരിത ട്രിബ്യൂണൽ ഉത്തരവിട്ടിരുന്നു. പ്രസ്തുത ഉത്തരവിന് ഹൈക്കോടതി സ്റ്റേ നൽകിയിരുന്നെങ്കിലും ഒരുക്കോടി രൂപയുടെ ബാങ്ക് ഗ്യാരന്റി കോർപ്പറേഷൻ നൽകേണ്ടതുണ്ട് എന്നും ആറ് മാസത്തിനുള്ളിൽ പൂർണ്ണമായ മാലിന്യ സംസ്കരണ സംവിധാനം ഏർപ്പെടുത്തിയില്ലെങ്കിൽ വീണ്ടും പിഴ ഒടുക്കേണ്ടിവരുമെന്നും നിഷ്കർഷിക്കുകയും ചെയ്തിരുന്നു. ദേശീയ ഹരിത ട്രിബ്യൂണൽ, സോളിഡ് വേസ്റ്റ് മാനേജ്മെന്റ് മോണിറ്റർ ചെയ്യുന്നതിനായി നിയമിച്ചിട്ടുള്ള റീജിയണൽ മോണിറ്ററിങ് കമ്മിറ്റി (സൗത്ത്) 19/12/2018 ന് ബ്രഹ്മപുരം പ്ലാന്റ് സന്ദർശിക്കുന്നതാണ് എന്ന് അറിയിച്ചിട്ടുണ്ട്.

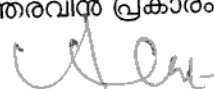
ബ്രഹ്മപുരത്തെ ഖരമാലിന്യ സംസ്കരണ പ്ലാന്റിൽ നിലവിലുള്ള മാലിന്യത്തിൽ നിന്നും ഊറി വരുന്ന മലിനജലം (Leachet) വലിയതോതിൽ പരിസര മലിനീകരണം സൃഷ്ടിക്കുന്ന സാഹചര്യത്തിൽ ഈ സ്ഥിതിവിശേഷം പരിഹരിക്കുന്നതിന് അടിയന്തിരമായ ഇടപെടലുകൾ നടത്തുന്നതിനായി ബ്രഹ്മപുരത്തെ നിലവിലുള്ള മാലിന്യ സംസ്കരണ പ്ലാന്റിന്റെ കാര്യത്തിൽ സ്വീകരിക്കേണ്ട പ്രായോഗിക നടപടികൾ അടിയന്തിരമായി തീരുമാനിക്കേണ്ടതുണ്ട്. ബ്രഹ്മപുരത്തെ ഖരമാലിന്യ സംസ്കരണ പ്ലാന്റിൽ നിന്നും ഊറി വരുന്ന മലിനജലം സൃഷ്ടിക്കുന്ന മലിനീകരണം ഒഴിവാക്കുന്നതിന് ഉൾപ്പടെ പ്രസ്തുത പ്ലാന്റുമായി ബന്ധപ്പെട്ട് സ്വീകരിക്കേണ്ട പ്രായോഗിക നടപടികൾ തീരുമാനിക്കുന്നതിന് തദ്ദേശസ്വയംഭരണ വകുപ്പ് (അർബൻ) സെക്രട്ടറിയുടെ ചാർജ് വഹിക്കുന്ന അഡീഷണൽ സെക്രട്ടറി ഡോ.മിത്ര ടി. IAS-ന്റെ നേതൃത്വത്തിൽ ശ്രീ രഞ്ജു ആർ പിള്ളെ, എൻവയൺമെന്റൽ എൻജിനീയർ, ശുചിത്വ മിഷൻ, ശ്രീ. ശ്രീകുമാർ എസ്, എൻവയൺമെന്റൽ എക്സ്പെർട്ട്, അമൃത് മിഷൻ, ശ്രീ കിരൺ സൂര്യ, എൻവയൺമെന്റൽ എൻജിനീയർ, കൊച്ചി കോർപ്പറേഷൻ എന്നിവർ അടങ്ങുന്ന ഒരു ടീമിനെ ചുമതലപ്പെടുത്തി ഉത്തരവ് പുറപ്പെടുവിക്കുന്നു.

പ്രസ്തുത ടീം 48 മണിക്കൂറിനുള്ളിൽ അടിയന്തിരമായി ബ്രഹ്മപുരം പ്ലാന്റ് സന്ദർശിച്ച് 19/12/2018-ന് മുമ്പായി ചെയ്തതീർക്കേണ്ട കാര്യങ്ങൾ (എമർജൻസി അടിസ്ഥാനത്തിൽ ചെയ്യേണ്ട കാര്യങ്ങൾ), അടുത്ത രണ്ടു-മൂന്നു മാസത്തിനുള്ളിൽ ചെയ്ത തീർക്കേണ്ട കാര്യങ്ങൾ (ഹ്രസ്വ കാല ഇടപെടലുകൾ), രണ്ടു മുതൽ ആറ് മാസത്തിനുള്ളിൽ ചെയ്യേണ്ട കാര്യങ്ങൾ (മധ്യകാല ഇടപെടലുകൾ), ബ്രഹ്മപുരം വേസ്റ്റ് ടു എനർജി പ്ലാന്റ് പ്രവർത്തനക്ഷമമാവുന്നതുവരെ സ്വീകരിക്കേണ്ട നടപടികൾ (ദീർഘകാല ഇടപെടലുകൾ) എന്നീ വിധത്തിൽ അടിയന്തിര റിപ്പോർട്ട് തയ്യാറാക്കി 48 മണിക്കൂറിനുള്ളിൽ സമർപ്പിക്കേണ്ടതുമാണ്.

(ഗവർണ്ണറുടെ ഉത്തരവിൻപ്രകാരം)

**ടി കെ ജോസ്**  
**അഡീഷണൽ ചീഫ് സെക്രട്ടറി**

മേയർ ,കൊച്ചി മുനിസിപ്പൽ കോർപ്പറേഷൻ  
 ചെയർമാൻ, കേരള സംസ്ഥാന പൊലീഷൻ കൺട്രോൾ ബോർഡ്,  
 ഡോ.മിത്ര റ്റി. IAS, അഡീഷണൽ സെക്രട്ടറി, തദ്ദേശസ്വയംഭരണ വകുപ്പ്  
 ശ്രീ രഞ്ജു ആർ പിള്ളെ , എൻവയൺമെന്റൽ എൻജിനീയർ, ശുചിത്വ മിഷൻ  
 ശ്രീ. ശ്രീകുമാർ എസ്, എൻവയൺമെന്റൽ എക്സ്പെർട്ട് അമൃത് മിഷൻ  
 ശ്രീ കിരൺ സൂര്യ, എൻവയൺമെന്റൽ എൻജിനീയർ കൊച്ചി കോർപ്പറേഷൻ  
 നഗരകാര്യ ഡയറക്ടർ, തിരുവനന്തപുരം  
 എക്സിക്യൂട്ടീവ് ഡയറക്ടർ, ശുചിത്വ മിഷൻ, തിരുവനന്തപുരം  
 മിഷൻ ഡയറക്ടർ, അമൃത് മിഷൻ, തിരുവനന്തപുരം  
 സെക്രട്ടറി, കൊച്ചി മുനിസിപ്പൽ കോർപ്പറേഷൻ  
 പ്രിൻസിപ്പൽ അക്കൗണ്ടന്റ് ജനറൽ (ആഡിറ്റ്/എ&ഇ) കേരള, തിരുവനന്തപുരം  
 എക്സിക്യൂട്ടീവ് ഡയറക്ടർ, ഇൻഫർമേഷൻ കേരള മിഷൻ, തിരുവനന്തപുരം  
 ഡയറക്ടർ, ഐ&പി.ആർ.ഡി/ വെബ് & ന്യൂ മീഡിയ  
 കരുതൽ ഫയൽ/ ഓഫീസ് കോപ്പി

ഉത്തരവിൻ പ്രകാരം  
  
 സെക്ഷൻ ഓഫീസർ

പകർപ്പ്- ബഹു.തദ്ദേശ സ്വയം ഭരണ വകുപ്പ് മന്ത്രിയുടെ പ്രൈംവർട്ട് സെക്രട്ടറിയ്ക്ക്  
 തദ്ദേശ സ്വയം ഭരണ വകുപ്പ് അഡീഷണൽ ചീഫ് സെക്രട്ടറിയുടെ പി.എ.യ്ക്ക്  
 പരിസ്ഥിതി വകുപ്പ് അഡീഷണൽ ചീഫ് സെക്രട്ടറിയുടെ പി.എ.യ്ക്ക്  
 തദ്ദേശ സ്വയം ഭരണ വകുപ്പ് സ്പെഷ്യൽ സെക്രട്ടറിയുടെ സി.എ.യ്ക്ക്  
 തദ്ദേശ സ്വയംഭരണ വകുപ്പ് അഡീഷണൽ സെക്രട്ടറിയുടെ സി.എയ്ക്ക്

47

# **REPORT**

**Solid Waste Management (SWM)  
at Brahmapuram of Kochi Corporation  
submitted vide  
G.O (Rt) No.3105/2018/LSGD dated 06/12/2018**

11-12-2018

# REPORT

## **Measures to be adopted for the treatment of leachate being generated and for the proper functioning of the Solid Waste Management (SWM) facility at Brahmapuram of Kochi Corporation.**

As per the G.O(Rt) No.3105/2018/LSGD dated 06/12/2018, a team was formed to visit and report on the immediate, short term, medium term and longterm measures to be taken to mitigate the adverse impact of leachate on the environment and for the proper and decent functioning of the SWM facility at Brahmapuram of Kochi Municipal Corporation.

The team visited the Brahmapuram Plant on 7/12/2018. This report is being submitted after taking cognizance of the plant’s current condition and the issues to be addressed for its decent and proper functioning. It is prepared based on the site visit and the data from the Corporation.

### **1. Solid waste generated in Kochi Coporation**

**Table 1**

1.	<i>Estimated quantity of solid waste generated in the local body area in Tonnes per day (TPD)</i>	305
2.	<i>Average quantity of biodegradable waste processed in TPD</i>	196
3.	<i>Average quantity of plastic/non-bio-degradable waste disposed at dumpsite/landfill in TPD</i>	100

*Source: Kochi Corporation*

### **2. Collection system for Solid Waste in KochiCorporaton**

The Corporation workers and Kudumbashree are engaged in the primary collection of wastes. Hand carts, tipper auto rickshaws are used for the collection of wastes. The collected wastes are loaded to larger tipper trucks and compactor trucks to transport the waste to the treatment facility at Brahmapuram where the organic fraction is composted and the plastic/non-biodegradable wastes are tipped at dumping yard.

### 3. Solid Waste Management facility at Brahmapuram

To treat the solid waste generated in the city, a treatment plant was established by the Corporation in 2008 having a design capacity of 250 tonnes per day. The solid waste management facility situated in 110 acres of land consists of:

- a. Windrow Composting facility to process only 250 TPD of Municipal Solid Waste
- b. A non-functional Refuse Derived Fuel (RDF) facility to convert waste into usable fuel for combustion, 100TPD
- c. A non-functional Vermicomposting plant, 50TPD
- d. Plastic shredding and Baling unit, 1 TPD (Installed as a pilot project in 2016), not functioning at the time of visit

#### 3.2. Details of the MSW Management Facility

**Table 2**

#### **Brahmapuram MSW management facility**

<b>Item</b>	<b>Particulars</b>	<b>Remarks</b>
<i>Village</i>	Puthencruz	
<i>Taluk</i>	Kunnathunadu	
<i>GP/Mun./Mun.Corp</i>	Vadavukode-Puthencruz	GramaPanchayath
<i>Survey Number</i>	32/17	
<i>Area</i>	110 acre	44.5 hectares
<i>Built up area</i>	17456Sq.m	Compost plant alone 10000sq.m
<i>Capacity</i>	250 TPD	
<i>Facilities</i>	Windrow composting	250 TPD
	Vermicomposting	50 TPD, Not operated
	RDF Facility	100 TPD, Not

operated  
1TPD, Not  
functioning at the  
time of visit

Plastic shredding unit

*Waste collected from* Kochi Corporation  
Angamaly Municipality  
Aluva Municipality  
Kalamassery Municipality  
Thrikkakkara Municipality  
Thrippunithura Municipality  
Cheranallur GP  
Vadavukode-Puthencruz GP

*Source: Kochi Corporation*

### **3.3. Solid Wastes coming into this facility:**

3.3.1 The municipal solid waste (MSW) is brought from the 21 Circles of the Corporation of Kochi, food waste from certain hotels are regularly brought to the plant. In addition, MSW from five nearby Municipalities (Aluva, Angamaly, Kalamasseri, Thrikkakkara, Thrippunithura) and one Grama Panchayat (Cheranallur) is received in the plant on payment of tipping fee of Rs. 1420/- per tonne. Further, MSW from Vadavukode GP in which the plant is located is also received whenever brought without any tipping fee.

3.3.2 The total waste received in the plant on a normal working day (i.e. 30.11.2018), is 383.45 Tonnes which includes 64% of biodegradable waste (BD) and 36% of plastic and such other non-biodegradable (NBD) waste. On a holiday (i.e. 25.11.2018), the MSW received in the plant is 282.05 Tonnes which includes 65% is BD waste and 35% is NBD waste (See Table 3 for details).

55  
Table 3

30.11.2018 (Friday)							
Sl No	Locations from where MSW is brought	Biodegradable waste		Non-Biodegradable Waste		Total No. of Truck Load	Total MSW brought to the plant (T)
		No. of Truck Load	Qty of MSW (T)	No. of Truck Load	Qty of MSW (T)		
1	W-Zone. Circle. 1-10	7	32.65	10	22.97	17	55.62
2	E-Zone. Circle 11-21	28	132.17	39	87.40	67	219.57
3	5 Municipalities & 1 GP	13	60.74	--	--	13	60.74
4	Food waste in Corp. truck	4	21.26	7	26.28	11	47.54
	<b>Total</b>	<b>52</b>	<b>246.82</b>	<b>56</b>	<b>136.65</b>	<b>108</b>	<b>383.47</b>
25.11.2018 (Sunday)							
1	W-Zone. Circle. 1-10	5	19.46	8	20.07	13	39.53
2	E-Zone. Circle. 11-21	14	71.53	27	63.83	41	135.36
3	5 Municipalities & 1 GP	13	61.90	--	--	13	61.90
4	MSW brought in Corp. truck	5	29.70	7	15.56	12	45.26
	<b>Total</b>	<b>37</b>	<b>182.59</b>	<b>42</b>	<b>99.46</b>	<b>79</b>	<b>282.05</b>

Note: 1. Average quantity of biodegradable waste received is 250 TPD and non-biodegradable waste received is 100 TPD (Source: Kochi Corporation)

2. The estimated quantity of manure generated from the composting process is 20 TPD. (The manure generated is sold by the contractor @Rs.5 per kilogram)

**Concern1.** It can be concluded therefore that the compost plant is currently functioning at its capacity, but frequently there are

cases wherein the loads are beyond the capacity and it is expected that it will only increase in future.

**4. Location details and current scenario of the plant**

4.1 The Composting Plant has six sheds (See Photo 1 for location of sheds near Kadambayar). A view of the Composting Plant is given as Photo-2. The details of sheds and their status are given in Table 4. The floor area of the main composting shed is found adequate for composting the biodegradable waste received in the plant, if the windrow composting is done as per protocol and the shed is in a condition for proper use.

**Photo - 1**



**Table 4**

Sl. No	Name of shed	Size (m x m)	Area (m2)	Remarks on status
1	Main composting shed	100X100	10000	Structure dilapidated at places; therefore, prima facie found unsafe.
2	Trommel shed	48X9	432	Not maintained properly
3	Manure shed	58X26	1508	Structure of the shed not intact, floor area not maintained properly



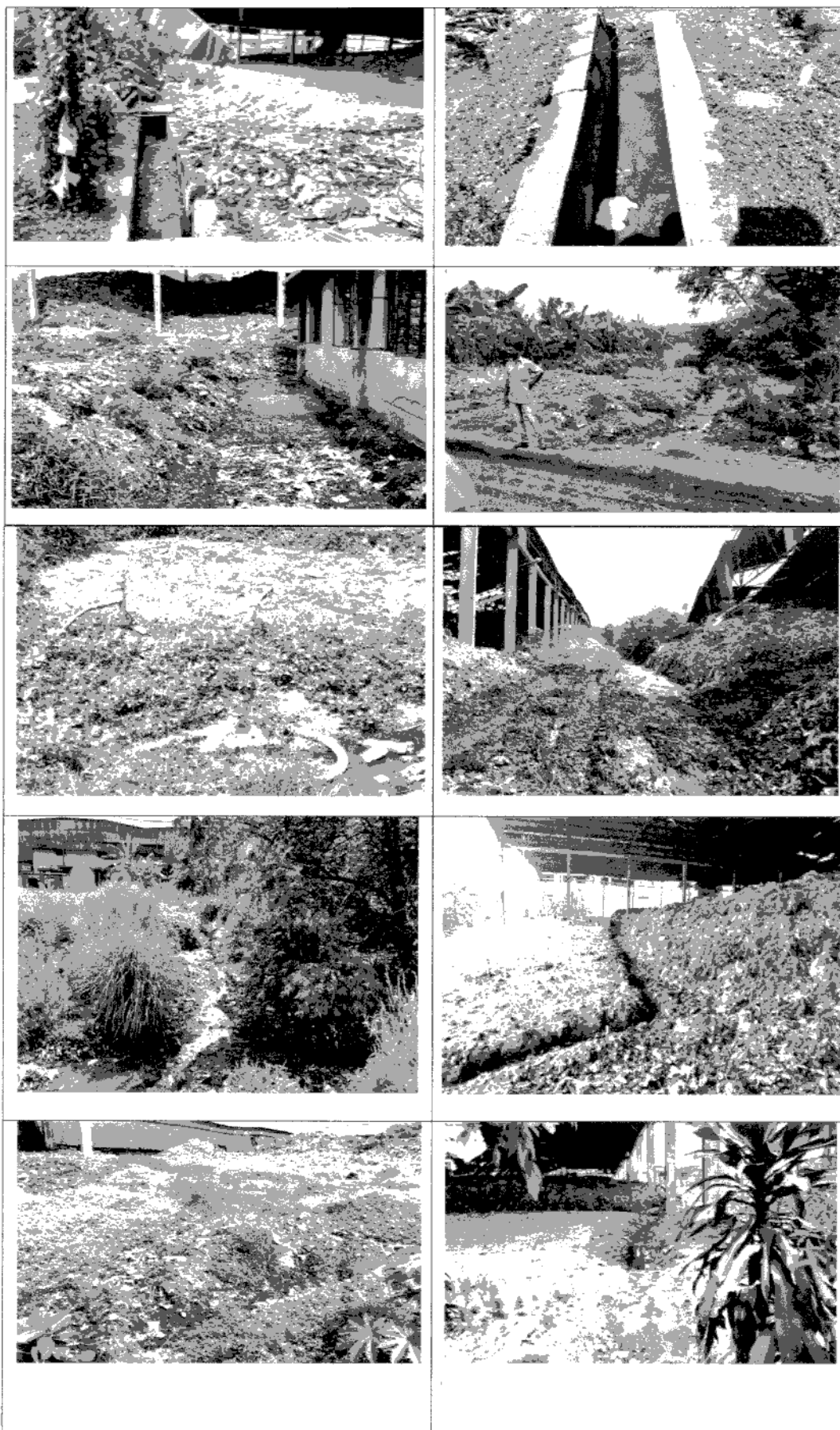
4	Auxiliary shed	23X7	161	Not under proper use
5	Pre-sorting shed	33X15	495	Structure intact, Not under use
6	RDF/Vermi-composting shed	243X20	4860	Structure not intact, old waste dumped inside reportedly for use when the waste to energy plant will be in place
<b>TOTAL</b>			<b>17456</b>	

Photo- 2



4.2 In the composting plant, the inner garland drain is unable to be delineated. The outer garland drain is traceable on south, south-east and south-west sides. The drain is fully clogged almost everywhere and is not properly functional. The plastered drain is now dilapidated at many places. There is no proper drainage available in the north, north-east and north-west sides. Only earthen channels are found available which are silted/ clogged and it has no proper slope or continuity. (See Photo 3)

Photo - 3



**Concern 2.**The plant is in a dilapidated condition. No proper drainage is available to collect and channelise the leachate generated to any particular collection system. This causes the leachate to be seen accumulated at various points and in the drains which are silted/ clogged.

4.3 Leachate generation: Considering that the plant receives an average of 250 ton/day of biodegradable waste and the current situation of the plant, the quantity of leachate generation assessed by Kochi Corporation and agreed by Kerala State Pollution Control Board is 10 KLD.

**Concern 3.**The segregation of the waste cannot be carried out properly since the trommels and the conveyor systems are not fully functional. Hence there is a situation of biodegradable wastes going into rejects which accumulate and generate leachate.

**5. Waste Recovery**

At source level, plastic carry bags and similar kind of plastics are recovered, shredded and supplied through Clean Kerala Company Ltd for use in road tarring. Of the estimated 100 tonnes of plastic/non-biodegradable waste tipped in the plant, about 1 ton of waste is recovered and sent for recycling. A huge dump of legacy non-biodegradable waste of an estimated quantity of 65000 tonnes is spread over an area of about 16 acres within the solid waste management facility. Apart from this, around 2200 Tonnes of flood waste is found accumulated in about 4 acres of land.

**Concern 4.**Inefficient waste recovery leads to accumulation of dry wastes.

**6. Remedial Measures**

Kochi Corporation is in the process of establishing a Waste to Energy (W2E) Plant nearby, expected to be functional in around two years. Once the

W2E plant is in place and functional, the concerns regarding managing the solid wastes are expected to be addressed.

Therefore remedial measures to be taken are grouped as follows:

- 6.1.Immediate Measures to be taken up on an emergency basis before 19.12.2018: To address the uncontrolled flow of leachate in the premises of the plant, polluting the surroundings.
- 6.2. Short Term Measures to be carried out in 2-3 months
- 6.3. Mid Term Measures to be taken up in 2-6 months
- 6.4. Long Term Measures to be addressed until the W2E plant will be in place and functional.

**6.1. Immediate Measures to be taken up on an emergency basis before 19.12.2018**

- a) The outer drains that are clogged and silted need to be cleaned and continuity of flow ensured. This will help in identifying the current slope and as well as the flow direction.
- b) Currently leachates are flowing from the waste processing plant as kucha drains at various spots. This can be corrected by PVC closed conduits or semicircular PVC gutters. These pipes shall be properly channeled to the outer drains. This will prevent any infiltration of leachate into the soil there.
- c) In the open space between the main plant and the RDF/Vermi composting unit on northern side where currently only an earthen drain is found, the same shall be cleared, the slope checked to properly drain all the leachate flowing from that side.

Since construction of concrete drains at this end on an emergency basis is impossible, these drains may be lined with LDPE/HDPE sheets properly anchored to check infiltration of

leachate into the soil. The leachate drains emanating from that side could be channelised in the same way as mentioned in b) above.

- d) Based on the activities a, b and c above the collection points for the entire leachate emanating from the treatment plant can be located. If proper gradient is ensured, the leachate can be got accumulated at one point, i.e. the South West end. Otherwise, more than one collection point may be required.
- e) The space is lost for forming windrows because of the indiscriminate dumping and heaping of waste in the windrow composting yard. The existing dumps should be arranged to form windrows in a sequential manner.
- f) Two or three Ferro-cement collection tanks/sumps as found necessary, of 5000 litre capacity each may be used in series to collect the leachate. This can address the immediate leachate conveyance and collection issue.
- g) Treatment of Leachate: The characteristics of leachate are such that it contains high BOD (~8000 ppm) & COD (~20000 ppm) and such leachates are expected to have higher heavy metal concentrations. Biological or Non-biological Treatment processes may be adopted for treating this leachate. Given the emergency situation, processes like Chemical & Physico-Chemical processes may be considered. The processes like electrolytic flotation-coagulation techniques can be considered in the present scenario.

Service providers/ agencies capable of installing portable/mobile Electrolytic Treatment Systems can be considered to address the issue of leachate treatment on an emergency basis.

The treated effluent shall be tested and it shall be ensured that it meets the discharge standards as per Kerala State Pollution Control Board norms.

**6.2. Short Term Remedial Measures to be initiated in two to three months:**

Although the immediate measures can deal with the containment of leachate and since it is assumed that the proposed W2E plant will take at least two years to be fully operational, measures have to be initiated to find solution for:

- a) Proper segregation, collection and treatment of bio degradable waste
  - i. Kochi Corporation needs to take active measures towards educating the waste collection units for a properly segregated waste collection system so that only the biodegradable part of the wastes comes for treatment.
  - ii. The proper segregation of wastes in the other local bodies is extremely important to reduce the environmental stress on the plant.
- b) Repair of the malfunctioning trommels: Steps to be initiated and taken by the Corporation in repairing the trommels, the sieves and the conveyor systems to meet the design requirements. This will lead to a proper segregation of the non-degradable content, thereby reducing rejects and also minimizing the leachate generated from the dumps.
- c) Proper collection and drainage arrangements:
  - i. Measures to construct drains for capture, conveyance and collection of leachate can be initiated. These

drains are to be regularly maintained to ensure proper flow.

- ii. Separate drains for storm water and leachate can be considered as it will reduce the quantity of leachate to be managed. Appropriate measures shall be taken like providing temporary cover to the existing drain conveying leachate to prevent rain water intrusion.

d) Solution for Treatment of Leachate:

- i. Measures may be taken to establish a proper treatment system considering the viability and feasibility.
- ii. Tenders may be invited from experienced suppliers of suitable technology to establish a semi permanent leachate treatment system. The technology adopted has to be one that can be commissioned within a definite timeframe, cost effective, easy to install, operate and maintain.

e) Steps to be taken so that the currently dysfunctional plastic shredding and baling unit have to be functional.

f) The capacity of the plastic shredding unit has to be increased in consultation with Clean Kerala Company.

g) Recovery of Non-biodegradable Legacy Wastes and Land Reclamation:

Considering the huge quantity of non biodegradable wastes in dump, competitive bids can be invited from those who can manage, mine, recover and remove the accumulated legacy wastes, so that only inert rejects are landfilled to save the available land. Such reclaimed land can be used for

73

constructing engineered sanitary landfill for disposing of the rejects generated after recovery and generation of compost.

In the case of flood waste, it is understood that the district administration is in the process of its disposal in the nearby engineered landfill of Kerala Enviro Infrastructure Ltd (KEIL) in consultation with LSGD & Kerala State Disaster Management Dept.

**6.3 Mid-Term Remedial Measures to be initiated in two to six months:**

The short-term measures initiated can be implemented within this period.

- a) Proper segregation to be in place. Only segregated bio degradable waste shall be processed in the composting plant. There will be reduction in the quantity of waste entering the plant.
- b) The suggested repairs of the trommels as in 6.2.b to be completed for qualitative functioning of the Plant. This will reduce the amount of rejects and further increase recovery of biodegradable waste for composting.
- c) Given the fact that segregated bio degradable waste of manageable quantity will only come into the plant in two to three months and proper windrow composting will be in place, separate leachate collection system within the windrow system can be considered. The leachate thus generated will be bio degradable and can be reused for spraying in the windrow composting improving the quality of compost.
- d) A fully functional suitable leachate treatment facility to be in place.



75

#### **6.4 Long-Term Remedial Measures until the Waste to Energy Plant will be in place:**

With the functioning of the W2E plant, it is expected that all MSW from of Kochi Corporation will be treated there. No waste of any form will come into the current treatment plant for processing and the plant will be decommissioned.

However, until the W2E plant starts functioning, segregated waste has to be treated using the current treatment processes.

- a) The actions with regard to non-biodegradable waste mentioned in Para 6.2 e, f and g when implemented will ensure that the non-biodegradable waste is recycled and inert rejects only are landfilled.
- b) Only fully segregated biodegradable waste need to be accepted for Windrow Composting. This has to be ensured by awareness generation measures and training of all waste collectors/segregators of Kudumbasree/Haritha Karma Sena. This is of paramount importance.
- c) Regular de-silting and de-clogging of the garland drains for conveying leachate has be carried out.
- d) Ensuring that measures are taken to implement the short and midterm targets, only inert rejects need to be land filled. This has to be done scientifically. Therefore there arises a requirement for a scientifically engineered sanitary landfill having adequate capacity to dispose of the rejects generated after recovery of legacy waste and from the compost plant over a period of two years.

A strict monitoring mechanism has to be in place which will also ensure sound environmental management measures for the plant and its surroundings.

  
11/12/18

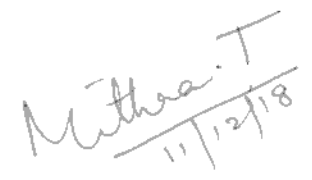
Renju R Pillai  
Senior Consultant (Design)  
Suchitwa Mission

  
11/12/18

Sreekumar S  
Environmental Expert  
AMRUT Mission

  
11/12/2018

Kiran Surya K.T  
Environmental Engineer  
Kochi Corporation

  
11/12/18

Dr. Mithra.T. IAS  
Additional Secretary  
LSGD

11-12-2018.



കേരള സർക്കാർ

നം. 427/ഡിസി1/2018/ത.സ്വ.ഭ.വ

തദ്ദേശ സ്വയംഭരണ (ഡി സി) വകുപ്പ്,  
തിരുവനന്തപുരം, തീയതി : 07.12.2018.

അഡീഷണൽ ചീഫ് സെക്രട്ടറി.

ശ്രീമതി.സൗമിനി ജെയിൻ.

മേയർ, കൊച്ചി കോർപ്പറേഷൻ.

ശ്രീ.കെ.ജെ.ആന്റണി.

കൗൺസിലർ (പ്രതിപക്ഷനേതാവ്), കൊച്ചി കോർപ്പറേഷൻ.

ചെയർമാൻ.

ആരോഗ്യകാര്യ സ്റ്റാന്റിംഗ് കമ്മിറ്റി , കൊച്ചി കോർപ്പറേഷൻ.

നഗരകാര്യ ഡയറക്ടർ, തിരുവനന്തപുരം.

ഡോ.മിത്ര റ്റി. ഐ.എ.എസ്.. അഡീഷണൽ സെക്രട്ടറി, തദ്ദേശസ്വയംഭരണ വകുപ്പ്.

ജോയിന്റ് ഡയറക്ടർ (ഫെൽത്ത്), നഗരകാര്യ ഡയറക്ടറേറ്റ്, തിരുവനന്തപുരം.

എക്സിക്യൂട്ടീവ് ഡയറക്ടർ, ശുചിത്വമിഷൻ.

സെക്രട്ടറി, കൊച്ചി കോർപ്പറേഷൻ.

മുനിസിപ്പൽ എഞ്ചിനീയർ, കൊച്ചി കോർപ്പറേഷൻ.

എൺവയോൺമെന്റൽ എഞ്ചിനീയർ, കൊച്ചി കോർപ്പറേഷൻ.

സർ.

വിഷയം :- ത.സ്വ.ഭ.വ - ബ്രഹ്മപുരത്തെ ഖരമാലിന്യ സംസ്കരണ പ്ലാന്റിൽ നിന്നും ഉഠിവിരുന്ന മലിന ജലം (ലീച്ചർ) സൃഷ്ടിക്കുന്ന മലിനീകരണം - അടിയന്തിര യോഗം ചെരുന്നത് - സംബന്ധിച്ച്.

- സൂചന (1) OA No. 533/2018, 534/2018, 535/2018 കേസുകളിൽ നാഷണൽ ഗ്രീൻ ട്രിബ്യൂണൽ 22.10.2018 ൽ പുറപ്പെടുവിച്ചിട്ടുള്ള ഉത്തരവ്.
- (2) ജി.ഒ.(ആർ.ടി.) നം 3105/2018/തസ്വഭവ തീയതി 06.12.2018.

ബ്രഹ്മപുരത്തെ ഖരമാലിന്യ സംസ്കരണ പ്ലാന്റിലെ മാലിന്യത്തിൽ നിന്നും ഉഠിവിരുന്ന മലിനജലം (ലീച്ചർ) വലിയതോതിൽ പരിസരമലിനീകരണം സൃഷ്ടിക്കുന്ന സാഹചര്യവും, ദേശീയ ഹരിതട്രിബ്യൂണലിന്റെ സൂചന ഉത്തരവും കണക്കിലെടുത്ത് പ്രസ്തുത പ്ലാന്റുമായി ബന്ധപ്പെട്ട്

സ്വീകരിക്കേണ്ട അടിയന്തിര നടപടികൾ ചർച്ച ചെയ്യുന്നതിനായി 2018 ഡിസംബർ 11 ഉച്ചയ്ക്ക് ശേഷം 4 മണിക്ക് ബഹു.തദ്ദേശസ്വയംഭരണ വകുപ്പ് മന്ത്രിയുടെ അദ്ധ്യക്ഷതയിൽ നിയമസഭാ സെക്രട്ടേറിയറ്റിലെ ബഹു.മന്ത്രിയുടെ ചേമ്പറിൽ വച്ച് ഒരു അടിയന്തിര യോഗം ചേരുവാൻ തീരുമാനിച്ചിട്ടുണ്ട്. പ്രസ്തുത യോഗത്തിൽ താങ്കൾ പങ്കെടുക്കണമെന്ന് അഭ്യർത്ഥിക്കുന്നു.

വിശ്വസ്തതയോടെ,

മിനിമോൾ ഡി.

ഡെപ്യൂട്ടി സെക്രട്ടറി,

അഡീഷണൽ ചീഫ് സെക്രട്ടറിക്കു വേണ്ടി.



കേരള സർക്കാർ

നം. 427/ഡിസി1/2018/ത.സ്വ.ഭ.വ  
അഡീഷണൽ ചീഫ് സെക്രട്ടറി.

തദ്ദേശ സ്വയംഭരണ (ഡി സി) വകുപ്പ്,  
തിരുവനന്തപുരം, തീയതി: 19.12.2018

ശ്രീമതി സൗമിനി ജെയിൻ  
മേയർ കൊച്ചി കോർപ്പറേഷൻ

ശ്രീ കെ ജെ ആന്റണി  
കൗൺസിലർ ( പ്രതിപക്ഷ നേതാവ്), കൊച്ചി കോർപ്പറേഷൻ

ചെയർമാൻ  
ആരോഗ്യ സ്റ്റാന്റിംഗ് കമ്മിറ്റി, കൊച്ചി കോർപ്പറേഷൻ

നഗരകാര്യ ഡയറക്ടർ, തിരുവനന്തപുരം  
ഡോ. മിത്ര റ്റി ഐ എ എസ്, അഡീഷണൽ സെക്രട്ടറി, തദ്ദേശ സ്വയംഭരണ വകുപ്പ്,  
ജോയിന്റ് ഡയറക്ടർ, ഹെൽത്ത്, നഗരകാര്യ ഡയറക്ടറേറ്റ്, തിരുവനന്തപുരം  
എക്സിക്യൂട്ടീവ് ഡയറക്ടർ , ശുചിത്വ മിഷൻ  
സെക്രട്ടറി, കൊച്ചി കോർപ്പറേഷൻ  
മുനിസിപ്പൽ എൻജിനീയർ, കൊച്ചി കോർപ്പറേഷൻ  
എൻവയോൺമെന്റൽ എൻജിനീയർ, കൊച്ചി കോർപ്പറേഷൻ

സർ,

വിഷയം :- ത.സ്വ.ഭ.വ - ബ്രഹ്മപുരത്തെ ഖരമാലിന്യ സംസ്കാരണ പ്ലാന്റിൽ നിന്നും ഉറവിടം വരുന്ന മലിന ജലം സൃഷ്ടിക്കുന്ന പരിസരമലിനീകരണം ഒഴിവാക്കുന്നത് സംബന്ധിച്ച് ചർച്ച ചെയ്യുന്നതിന് ബഹു തദ്ദേശ സ്വയംഭരണ വകുപ്പുമന്ത്രിയുടെ അധ്യക്ഷതയിൽ ചേർന്ന യോഗത്തിന്റെ നടപടിക്കുറിപ്പ് -സംബന്ധിച്ച്.  
സൂചന :- 07.12.2018 ലെ ഇതേ നമ്പർ സർക്കാർ കത്ത്

ബ്രഹ്മപുരത്തെ ഖരമാലിന്യ സംസ്കാരണ പ്ലാന്റിൽ നിന്നും ഉറവിടം വരുന്ന മലിന ജലം സൃഷ്ടിക്കുന്ന പരിസരമലിനീകരണം ഒഴിവാക്കുന്നത് സംബന്ധിച്ച് ചർച്ച ചെയ്യുന്നതിന് ബഹു തദ്ദേശസ്വയംഭരണ വകുപ്പ് മന്ത്രിയുടെ അധ്യക്ഷതയിൽ 11.12.2018 -ന് ചേർന്ന യോഗത്തിന്റെ നടപടിക്കുറിപ്പ് തുടർ നടപടികൾക്കായി ഇതോടൊപ്പം അയയ്ക്കുന്നു.

വിശ്വസ്തയോടെ,  
ശ്രീജിത്ത് വി.പി  
അണ്ടർ സെക്രട്ടറി

അംഗീകാരത്തോടെ

  
സെക്ഷൻ ഓഫീസർ

പകർപ്പ്-

- ബഹു. തദ്ദേശ സ്വയം ഭരണ വകുപ്പ് മന്ത്രിയുടെ പി എസ്-ന്
- തദ്ദേശ സ്വയം ഭരണ വകുപ്പ് അഡീഷണൽ ചീഫ് സെക്രട്ടറിയുടെ പി.എ-യ്ക്ക്
- തദ്ദേശ സ്വയം ഭരണ വകുപ്പ് സ്പെഷ്യൽ സെക്രട്ടറിയുടെ സി.എ യ്ക്ക്
- അഡീഷണൽ സെക്രട്ടറിയുടെ സി.എ യ്ക്ക്
- ഡെപ്യൂട്ടി സെക്രട്ടറിയുടെ സി.എ യ്ക്ക്
- അണ്ടർ സെക്രട്ടറി

**Minutes of the meeting held in the chamber of Hon'ble Minister (LSG) on 11/12/2018 at 4.00 P.M. to discuss the measures to be adopted for the treatment of leachate generated from the waste accumulated at Brahmapuram and also for the proper functioning of the Solid Waste Management (SWM) plant at Brahmapuram of Kochi Corporation.**

The meeting started at 4.00 P.M. with Hon'ble Minister (LSG) in chair. List of participants attached.

The measures to be adopted for the treatment of leachate generated from the waste accumulated in the premises of Brahmapuram Solid Waste Management Plant of Kochi Corporation and for the proper functioning of the plant was discussed in detail. A Power Point Presentation was also made by Shri.S.Sreekumar, Environmental Expert, AMRUT Mission on the basis of the site visit conducted by the team headed by Dr.Mitra T., IAS, Additional Secretary, constituted vide G.O(Rt) No.3105/18/LSGD dated 6/12/2018.

The Municipal Solid Waste from 21 circles of Kochi Corporation and five nearby Municipalities (Aluva, Angamaly, Kalamasseri, Thrikkakara and Thrrippunithura) and Solid Waste from Cheranalloor, Vadavukode-Puthencruz Grama Panchayats are regularly brought to the Plant. The design capacity of the plant is 250 tonnes per day (TPD). The average quantity of waste received in the Plant on a normal day is 383.45 TPD which includes 64% Biodegradable Waste and 36% of plastic and such other non-bio degradable waste ie; the plant is receiving waste beyond its capacity. Moreover the plant is now in a dilapidated condition. The Refuse Derived Fuel (RDF) facility, Vermi Composting Plant (50 TPD) and Plastic Shredding & Bailing Units are not functioning. No proper drainage is available to collect and channelize the leachate generated to any particular collection system. This causes the accumulation of leachate at various points and in the drains which are silted /

clogged. Since the trommels and the conveyor systems are not fully functional, the segregation of waste cannot be carried out properly. Hence there is a situation of biodegradable waste going in to rejects which accumulate and generate leachate. In addition to this a huge dump of legacy non bio-degradable waste is also spread over an area of about 16 acres within in the Solid Waste Management Plant at Brahmapuram. The inefficient waste recovery at Brahmapuram leads to accumulation of dry waste. The Hon'ble National Green Tribunal has imposed a fine of Rs.1 crore on Kochi Corporation for delay in setting up of efficient Solid Waste Management mechanism. Besides the Regional Monitoring Committee (South) constituted by Hon'ble NGT for monitoring Solid Waste Management is also decided to visit Brahmapuram plant shortly.

After detailed discussion the following decision are taken:

### **Decisions**

- (i) The following emerging measures are to be taken in the Solid Waste Management Plant at Brhmapuram before 19/12/2018, in the light of the order of Hon'ble National Green Tribunal and also considering the proposed visit of Regional Monitoring Committee (South) at the plant.
- (a) Formation of windrows.
  - (b) Drains should be cleaned.
  - (c) Collection points should be identified and provide collection <sup>Tanks</sup> Tracks / Sumps.
  - (d) Leachets to be channelized to the drains
    - Lining of external earthen drains with LDPE / HDPE sheets
    - Provide PVC pipes or gutters for the leachate streams within the plant.
- Action** :- Shri.H.Titus, Executive Engineer, Kochi Corporation.
- Monitoring** :- C.M.Sulaiman, Superintending Engineer, Cochin Corporation.
- **Time Limit** :- 19.12.2018.

- (e) Service providers / Agencies capable of installing Portable / Mobile Electrolytic Leachate Treatment Unit Should be engaged at the Plant for the scientific treatment of existing leachate.

**Action :-** Secretary, Kochi Corporation.

**Time Limit :-** One week.

- (ii) The following short term measures should be initiated in 2 to 3 months.

- (a) Kochi Corporation should take active measures to ensure proper segregated collection and treatment of waste.

- (b) Repair of trommels (2 nos.) should be carried out urgently.

- (c) Proper collection and drainage arrangement should be established.

- Permanent drainage system.
- Separate drains for storm water and leachate.
- Temporary covers to existing drain to prevent rainwater intrusion.

**Action :-** Shri.H.Titus, Executive Engineer, Kochi Corporation.

**Monitoring :-** C.M.Sulaiman, Superintending Engineer, Kochi Corporation.

**Time Limit :-** 15.03.2019.

- (d) Leachate treatment - Semi permanent system should be established.

**Action :-** Health Supervisor, Kochi Corporation.

**Monitoring :-** Secretary, Kochi Corporation.

**Time Limit :-** 15.03.2019

- (e) To establish fully functional plastic shredding unit with capacity addition.

**Action :-** Secretary, Kochi Corporation.

**Time Limit :-** 15.03.2019

- (f) To place an Agenda before Corporation Council for inviting competitive bids for remediation of existing legacy waste and take further action for the effective disposal of legacy waste



accumulated in Brahamapuram Plant.

**Action :-** Secretary, Kochi Corporation,  
Environmental Engineer, Kohci Corporation.  
**Time Limit :-** 15.03.2019

- (g) The Executive Director , Suchitwa Mission shall consult Kerala Enviro Infrastructure Lintied authorities and take further action for the disposal of flood waste accumulated at Brahamapuram.

**Action :-** Executive Director, Suchitwa Mission,  
Secretary, Kochi Corporation.  
**Time Limit :-** 15.03.2019

- (iii) The following Mid term measures are to be initiated in 3-6 Months.

- (a) All activities initiated in short term to be completed in midterm.  
(b) Fully functional leachate treatment facility should be established.

**Action :-** Secretary, Kochi Corporation  
Shri.H.Titus, Executive Engineer, Kochi Corporation.  
Health Supervisor, Kochi Corporation

**Monitoring :-** Secretary, Kochi Corporation.  
C.M.Sulaiman, Superintending Engineer, Kochi Corporation.

**Time Limit :-** 3 to 6 months.

- (iv) The following Long term measures are to be taken :-

- (a) To ensure that fully segregated waste are only accepted for vindrow composting.

**Action :-** Health Supervior, Kochi Corporation.  
**Time Limit :-** 6 months

- (b) There should be a strict monitoring mechanism for the smooth operation of the plant.

**Action:-** A sub-committee to be appointed by the Corporation Council.  
**Time Limit :-** One month

(c) A Sanitary Landfill for rejects should be constructed.

**Action:-** Shri.H.Titus, Executive Engineer, Kochi Corporation.

**Monitoring:-** Superintending Engineer,

**Time Limit :-** One month

(d) There should be a daily monitoring mechanism for monitoring the activities mentioned above.

**Action:-** Team headed by Dr.Mithra T., IAS.

(v) Kochi Corporation should take urgent steps to bring the action taken so far and future plan of action that will be implemented in the Solid Waste Management sector, to the notice of Hon'ble NGT through the Counsel appointed for the purpose

**Action :-** Secretary, Kochi Corporation.

**Time Limit :-** 15 days

(vi) In order to prevent outsiders from dumping waste at Brahmapuram plant a gate should be installed. A Security Officer should also be appointed.

**Action:-** Shri.H.Titus, Executive Engineer, Kochi Corporation.

Secretary, Kochi Corporation.

**Time Limit :-** One week.

The meeting concluded at 5.30 PM.

**List of Participants**

1. Smt. Soumini Jain, Mayor, Kochi Municipal Corporation.
2. Sri. K.J. Antony, Councilor (Leader of Opposition), Kochi Corporation
3. Adv. Minimol. V.K, Chairperson, Health Standing Committee.
4. Smt.R. Girija, Director of Urban Affairs.
5. Dr. Mithra. T, Additional Secretary, LSGD
6. Sri. Ajaykumar Varmma, Executive Director, Suchitwa Mission.
7. Dr. Ummuselma C., Joint Director (Health), Directorate of Urban Affairs
8. Sri. B.K. Balaraj, Joint Director, Urban Affairs.
9. Smt. A.S.Anuja, Secretary, Kochi Corporation .
10. Sri. Ansar. J, Assistant Executive Engineer, Kochi Corporation.
11. Sri. C.M.Sulaiman, Superintending Engineer, Kochi Corporation.
12. Sri. Sreekumar. S, Environmental Expert, AMRUT Mission.
13. Sri. Kiran Surya. K.T, Environmental Engineer Kochi Corporation.



Dr. Mithra.T. IAS  
Additional Secretary

113  
Office of the Additional Secretary to Government  
Local Self Government Department  
Secretariat Annexe - 1  
Thiruvananthapuram 695 001  
Tel: 91-471-2517053  
Email : [aslskd@kerala.gov.in](mailto:aslskd@kerala.gov.in)  
Date:01-01-2019

---

D.O No: 427 DC1/18/LSGD

Dear Smt. Anuja,

Please refer to the decisions taken in the meeting held by the Hon'ble Minister (LSGD) on 11-12-2018 regarding the measures to be adopted for the treatment of leachate generated from the waste accumulated at Brahmapuram Solid Waste Treatment Plant and for its proper functioning. The daily reports on Brahmapuram being send are found to be incomplete and lacking clarity, seem to be forwarded without much application of mind from your side. For instance, with regard to the measure of proper segregation, it is reported that there is a delay in assigning charge or responsibility. The reason for the same shall be explained. In the case of repair of trommel, there is a lack of clarity in the reasons given. With regard to the plastic shredding unit, it is reported that "there are no takers for the plastic...", the "Government shall intervene in this matter". The action/steps taken in the case of shredded plastic shall be explained. The steps taken for the flood waste disposal shall also be explained. The report shall be clear, specific and self-explanatory.

You are also directed to visit the site and send a report by tomorrow. A plan of action for activities in the immediate, short-term, medium term and long term till 23<sup>rd</sup> of January 2019 shall also be sent immediately.

Yours sincerely,

Mithra T  
01/01/19

Smt. A.S.Anuja,

Secretary, Kochi Corporation

145

**Letter No.4/RMC1/2018**  
**Regional Monitoring Committee (Southern States)**  
**for Solid Waste Management**

183, Poonamallee High Road,  
Kilpauk, Chennai - 600 010.  
Ph. & Fax : 044-2645 3200  
E-mail : rmcsouthswm@gmail.com

26<sup>th</sup> December 2018

**Sub : RMC (S) for SWM - 4<sup>th</sup> Meeting of the Apex Monitoring  
Committee (AMC) - Instructions - ensure compliance  
activities - Regarding.**

\*.\*.\*.\*.\*

As per the decision of Apex Monitoring Committee held on 19.12.2018 by Video Conferencing, the Cities / Towns having morethan 1 Lakh population must be closely monitored for period of 3 months and take intensive measures for implementation of Solid Waste Management and Plastic Waste Management rules 2016. A list of town / cities of your state is enclosed.

I request you to furnish the details of the steps taken so far and request intensive steps continuously for 3 months and send frequent and periodical reports in this regard to the Regional Monitoring Committee Chennai Office. Regional Monitoring Committee propose to make periodic inspection in this regard.

**Sd/- Harmander Singh,**  
Member Secretary,  
Regional Monitoring Committee  
(Southern States)

To

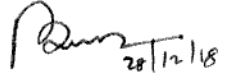
1. Shri.Harmandar Singh, I.A.S., The Principal Secretary, Municipal Administration and Water Supply Department, Government of Tamilnadu.
2. Shri.Mahendra Jain, I.A.S, Additional Chief Secretary to Government of Karnataka, Urban Development Department, Room No.436, Vikasa Soudha, Bangalore.

3. Shri.T.K.Jose, I.A.S., Principal Secretary to Government, Governme. Kerala, Urban Development and Local Self Government, Room No.403, Floor, Secretariat Annexe, Thiruvananthapuram.
4. Shri.R.Karikal Valaven, I.A.S., Principal Secretary to Government, Government of Andhra Pradesh, Municipal Administration and Urban Development, 'L' Block, 'G' Floor, Room No.105, A.P. Secretariat, Hyderabad.
5. Shri.Aravind Kumar, I.A.S., Principal Secretary to Government, Government of Telungana, Municipal Administration and Urban Development, N.T.R.Marg, Public Gardens, Telengana Secretariat, Hyderabad.
6. Shri.P.Jawahar, I.A.S., Secretary, Local Administration Department, Chief Secretariat, Puducherry.
7. Shri.Rajiv Yaduvanshi, Commissioner-cum-Secretary, Urban Development Department, Andaman & Nicobar Administration Secretariat, Portblair.
8. Shri.A.T.Damodar, I.F.S., Secretary, Department of Urban Development, UT of Lakshadweep Administration, Kavaratti.
9. Shri.S.Suresh, Regional Director, CPCB, 81<sup>st</sup> and 2<sup>nd</sup> Floors, Nisarga Bhavan, A9-Block, Thimmaiah Main Road, 7<sup>th</sup> D Cross, Shivnagar, Bengaluru.
10. Shri.D.Sekhar, Member Secretary, Tamil Nadu Pollution Control Board, No.76, Mount Salai, Guindy, Chennai.
11. Shri.Vivek Yadav, I.A.S., Member Secretary, Andhra Pradesh State PCB, Door No.33-26-14, D/2, Near Sunrise Hospital, Pushpa Hotal Centre, Salamvari Street, Kasturibai pet, Vijayawada.
12. Shri.Manoj Kumar, I.F.S., The Member Secretary, Karnataka SPCB, Parisara Bhavan, 4<sup>th</sup> and 5<sup>th</sup> Floor, No.49, Church Street, Bengaluru.
13. Shri.T.A. Thankappan, Member Secretary, Kerala SPCB, Plamoodu Junction, Pattom Palace P.O., Thiruvananthapuram.
14. Shri.P.Sathyararyana Reddy, I.A.S., The Member Secretary, Telangana SPCB, Paryavaran Bhawan, A-3, I.E. Sanath Nagar, Hyderabad.
15. Shri.Nabanita Ganguly, The Member Secretary, Andaman & Nicobar PCC, Department of Science and Technology, Dollygung van sadan, Haddo P.O., Portblair.
16. Shri.Dr.M.Syed Ismail Goya, The Member Secretary, Lakshadweep PCC, Department of Science, Technology and Environment, Kavaratti.
17. Smt.R.Smita, Member Secretary, Pondicherry PCC, Housing Board Complex, Anna Nagar, Pondicherry.

Copy to :

1. The Commissioner, Commissionerate of Municipal Administration, Chennai -5.
2. The Director, Directorate of Town Panchayats, Chennai-108.
3. The Commissioner, Greater Chennai Corporation, Chennai-3.

//Forwarded by Order//

  
28/12/18  
Superintendent

38	ANDHRA PRADESH	Dharmavaram (M)	121,992	62,186	59,806	962
39	ANDHRA PRADESH	Hindupur (M)	151,835	76,625	75,210	982
40	ANDHRA PRADESH	Tirupati (M Corp.)	287,035	145,977	141,058	966
41	ANDHRA PRADESH	Madanapalle (M)	135,669	67,432	68,237	1012
42	ANDHRA PRADESH	Chittoor (M)	153,766	76,566	77,200	1008
43	KARNATAKA	Belgaum (M Corp.)	488,292	246,407	241,885	982
44	KARNATAKA	Bagalkot (CMC)	112,068	56,837	55,231	972
45	KARNATAKA	Bijapur (CMC)	326,360	165,122	161,238	976
46	KARNATAKA	Bidar (CMC)	211,944	109,435	102,509	937
47	KARNATAKA	Raichur (CMC)	232,456	117,408	115,048	980
48	KARNATAKA	Gangawati (CMC)	105,354	52,678	52,676	1000
49	KARNATAKA	Gadag-Betigeri (CMC)	172,813	86,165	86,648	1006
50	KARNATAKA	Hubli-Dharwad *(M Corp.)	943,857	475,980	467,877	983
51	KARNATAKA	Ranibennur (CMC)	106,365	53,933	52,432	972
52	KARNATAKA	Hospet (CMC)	206,159	102,923	103,236	1003
53	KARNATAKA	Bellary (M Corp.)	409,644	206,026	203,618	988
54	KARNATAKA	Chitradurga (CMC)	139,914	70,304	69,610	990
55	KARNATAKA	Davanagere (M Corp.)	435,128	220,544	214,584	973
56	KARNATAKA	Shimoga (CMC)	322,428	161,978	160,450	991
57	KARNATAKA	Bhadravati (CMC)	150,776	75,020	75,756	1010
58	KARNATAKA	Udupi (CMC)	125,350	62,031	63,319	1021
59	KARNATAKA	Chikmagalur (CMC)	118,496	58,859	59,637	1013
60	KARNATAKA	Tumkur (CMC)	305,821	155,406	150,415	968
61	KARNATAKA	BBMP (M Corp.)	8,425,970	4,401,299	4,024,671	914
62	KARNATAKA	Mandya (CMC)	137,735	68,748	68,987	1003
63	KARNATAKA	Hassan (CMC)	133,723	66,380	67,343	1015
64	KARNATAKA	Mangalore (M Corp.)	484,785	240,651	244,134	1014
65	KARNATAKA	Mysore (M Corp.)	887,446	443,813	443,633	1000
66	KARNATAKA	Gulbarga (M Corp.)	532,031	272,451	259,580	953
67	KARNATAKA	Kolar (CMC)	138,553	70,064	68,489	978
68	KARNATAKA	Robertson Pet (CMC)	146,428	72,378	74,050	1023
69	KERALA	Kozhikode (M Corp.)	432,097	206,494	225,603	1093
70	KERALA	Palakkad (M)	131,019	63,833	67,186	1053
71	KERALA	Thrissur (M Corp.)	315,596	151,999	163,597	1076
72	KERALA	Kochi (M Corp.)	601,574	296,668	304,906	1028
73	KERALA	Alappuzha (M)	174,164	83,888	90,276	1076
74	KERALA	Kollam (M Corp.)	349,033	168,076	180,957	1077
75	KERALA	Thiruvananthapuram (M Corp.)	752,490	364,657	387,833	1064
76	TAMIL NADU	Chennai (M Corp.)	4,681,087	2,357,633	2,323,454	986
77	TAMIL NADU	Avadi (M)	344,701	175,055	169,646	969
78	TAMIL NADU	Tiruvottiyur (M)	248,059	124,852	123,207	987

Provisional Population Totals, Census of India 2011

Cities having population 1 lakh and above

Sl.No	State Name	Name of City	Population			Sex Ratio
			Persons	Males	Females	
1	ANDHRA PRADESH	Adilabad (M)	117,388	59,232	58,156	982
2	ANDHRA PRADESH	Nizamabad (M Corp.)	310,467	155,163	155,304	1001
3	ANDHRA PRADESH	Ramagundam (M)	229,632	116,920	112,712	964
4	ANDHRA PRADESH	Karimnagar (M Corp.)	260,899	131,769	129,130	980
5	ANDHRA PRADESH	Greater Hyderabad (M Corp.)	6,809,970	3,500,802	3,309,168	945
6	ANDHRA PRADESH	Secunderabad (CB)	213,698	111,664	102,034	914
7	ANDHRA PRADESH	Mahbubnagar (M)	157,902	79,423	78,479	988
8	ANDHRA PRADESH	Suryapet (M)	105,250	52,138	53,112	1019
9	ANDHRA PRADESH	Nalgonda (M)	135,163	67,749	67,414	995
10	ANDHRA PRADESH	Miryalaguda (M)	103,855	52,048	51,807	995
11	ANDHRA PRADESH	Warangal (M Corp.)	620,116	310,400	309,716	998
12	ANDHRA PRADESH	Khammam (M)	184,252	91,019	93,233	1024
13	ANDHRA PRADESH	Srikakulam (M)	126,003	62,583	63,420	1013
14	ANDHRA PRADESH	Vizianagaram (M)	227,533	111,596	115,937	1039
15	ANDHRA PRADESH	GVMC (MC)	1,730,320	875,199	855,121	977
16	ANDHRA PRADESH	Rajahmundry (M Corp.)	343,903	169,786	174,117	1026
17	ANDHRA PRADESH	Kakinada (M Corp.)	312,255	152,596	159,659	1046
18	ANDHRA PRADESH	Tadepalligudem (M)	103,577	51,176	52,401	1024
19	ANDHRA PRADESH	Eluru (M Corp.)	214,414	105,707	108,707	1028
20	ANDHRA PRADESH	Bhimavaram (M)	142,280	70,066	72,214	1031
21	ANDHRA PRADESH	Vijayawada (M Corp.)	1,048,240	524,918	523,322	997
22	ANDHRA PRADESH	Gudivada (M)	118,289	58,941	59,348	1007
23	ANDHRA PRADESH	Machilipatnam (M)	170,008	83,561	86,447	1035
24	ANDHRA PRADESH	Narasaraopet (M)	116,329	58,898	57,431	975
25	ANDHRA PRADESH	Guntur (M Corp.)	651,382	323,151	328,231	1016
26	ANDHRA PRADESH	Chilakaluripet (M)	101,550	50,201	51,349	1023
27	ANDHRA PRADESH	Tenali (M)	164,649	81,324	83,325	1025
28	ANDHRA PRADESH	Ongole (M)	202,826	101,728	101,098	994
29	ANDHRA PRADESH	Nellore (M Corp.)	505,258	257,043	248,215	966
30	ANDHRA PRADESH	Proddatur (M)	162,816	81,368	81,448	1001
31	ANDHRA PRADESH	Kadapa (M Corp.)	341,823	171,797	170,026	990
32	ANDHRA PRADESH	Kurnool (M Corp.)	424,920	211,875	213,045	1006
33	ANDHRA PRADESH	Adoni (M)	166,537	82,743	83,794	1013
34	ANDHRA PRADESH	Nandyal (M)	200,746	100,770	99,976	992
35	ANDHRA PRADESH	Anantapur (M Corp.)	262,340	131,506	130,834	995
36	ANDHRA PRADESH	Guntakal (M)	126,479	62,695	63,784	1017
37	ANDHRA PRADESH	Tadpatri (M)	108,249	54,027	54,222	1004



79	TAMIL NADU	Madavaram (M)	118,525	59,631	58,894	988
80	TAMIL NADU	Ambattur (M)	478,134	241,181	236,953	982
81	TAMIL NADU	Alandur (M)	164,162	82,190	81,972	997
82	TAMIL NADU	Pallavaram (M)	216,308	108,381	107,927	996
83	TAMIL NADU	Tambaram (M)	176,807	90,803	86,004	947
84	TAMIL NADU	Kancheepuram (M)	164,265	81,990	82,275	1003
85	TAMIL NADU	Vellore (M Corp.)	185,895	91,464	94,431	1032
86	TAMIL NADU	Ambur (M)	113,856	56,052	57,804	1031
87	TAMIL NADU	Tiruvannamalai (M)	144,683	72,351	72,332	1000
88	TAMIL NADU	Salem (M Corp.)	831,038	418,337	412,701	987
89	TAMIL NADU	Erode (M Corp.)	156,953	78,094	78,859	1010
90	TAMIL NADU	Dindigul (M)	207,225	102,927	104,298	1013
91	TAMIL NADU	Tiruchirappalli (M Corp.)	846,915	418,128	428,787	1025
92	TAMIL NADU	Neyveli (TS) (CT)	105,687	53,442	52,245	978
93	TAMIL NADU	Cuddalore (M)	173,361	85,593	87,768	1025
94	TAMIL NADU	Nagapattinam (M)	102,838	50,809	52,029	1024
95	TAMIL NADU	Kumbakonam (M)	140,113	69,350	70,763	1020
96	TAMIL NADU	Thanjavur (M)	222,619	109,291	113,328	1037
97	TAMIL NADU	Pudukkottai (M)	117,215	58,601	58,614	1000
98	TAMIL NADU	Karaikkudi (M)	106,793	53,425	53,368	999
99	TAMIL NADU	Madurai (M Corp.)	1,016,885	509,313	507,572	997
100	TAMIL NADU	Rajapalayam (M)	130,119	64,624	65,495	1013
101	TAMIL NADU	Thoothukkudi (M Corp.)	237,374	118,039	119,335	1011
102	TAMIL NADU	Tirunelveli (M Corp.)	474,838	234,643	240,195	1024
103	TAMIL NADU	Nagercoil (M)	224,329	110,132	114,197	1037
104	TAMIL NADU	Hosur (M)	116,821	59,411	57,410	966
105	TAMIL NADU	Coimbatore (M Corp.)	1,061,447	531,017	530,430	999
106	TAMIL NADU	Kurichi (M)	125,800	63,033	62,767	996
107	TAMIL NADU	Tiruppur (M Corp.)	444,543	227,469	217,074	954
108	PUDUCHERRY	Puducherry (M)	241,773	118,205	123,568	1045
109	PUDUCHERRY	Ozhukarai (M)	300,028	148,154	151,874	1025
110	ANDAMAN & NICOBAR ISLANDS	Port Blair (MC)	100,608	53,247	47,361	889

151

**Letter No.3/RMC1/2018**  
**Regional Monitoring Committee (Southern States)**  
**for Solid Waste Management**

183, Poonamallee High Road,  
Kilpauk, Chennai - 600 010.  
Ph. & Fax : 044-2645 3200  
E-mail : rmcsouthswm@gmail.com

28<sup>th</sup> December 2018

**Subject : Minutes of the 4<sup>th</sup> Meeting of the Regional  
Monitoring Committee (Southern States) held on  
20.12.2018 at Trichirappalli.**

♦♦♦♦♦

The 4<sup>th</sup> meeting of the Regional Monitoring Committee (Southern States) was held under the Chairmanship of Hon'ble Justice Dr.P.Jyothimani, Chairperson, Regional Monitoring Committee (Southern States) for Solid Waste Management on 20<sup>th</sup> December 2018 at Trichirappalli.

The Minutes of the meeting enclosed for necessary action by all concerned.

Sd/- Harmander Singh,  
Member Secretary,  
Regional Monitoring Committee (South)

To

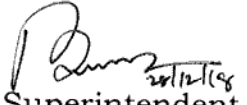
1. Shri.Harmandar Singh, I.A.S., The Principal Secretary, Municipal Administration and Water Supply Department, Government of Tamilnadu.
2. Shri.Mahendra Jain, I.A.S, Additional Chief Secretary to Government of Karnataka, Urban Development Department, Room No.436, Vikasa Soudha, Bangalore.
3. Shri.T.K.Jose, I.A.S., Principal Secretary to Government, Government of Kerala, Urban Development and Local Self Government, Room No.403, 4<sup>th</sup> Floor, Secretariat Annexe, Thiruvananthapuram.
4. Shri.R.Karikal Valaven, I.A.S., Principal Secretary to Government, Government of Andhra Pradesh, Municipal Administration and Urban Development, 'L' Block, 'G' Floor, Room No.105, A.P. Secretariat, Hyderabad.

5. Shri.Aravind Kumar, I.A.S., Principal Secretary to Government, Government of Telungana, Municipal Administration and Urban Development, N.T.R.Marg, Public Gardens, Telungana Secretariat, Hyderabad.
6. Shri.P.Jawahar, I.A.S., Secretary, Local Administration Department, Chief Secretariat, Puducherry.
7. Shri.Rajiv Yaduvanshi, Commissioner-cum-Secretary, Urban Development Department, Andaman & Nicobar Administration Secretariat, Portblair.
8. Shri.A.T.Damodar, I.F.S., Secretary, Department of Urban Development, UT of Lakshadweep Administration, Kavaratti.
9. Shri.S.Suresh, Regional Director, CPCB, 81<sup>st</sup> and 2<sup>nd</sup> Floors, Nisarga Bhavan, A9-Block, Thimmaiah Main Road, 7<sup>th</sup> D Cross, Shivnagar, Bengaluru.
10. Shri.D.Sekhar, Member Secretary, Tamil Nadu Pollution Control Board, No.76, Mount Salai, Guindy, Chennai.
11. Shri.Vivek Yadav, I.A.S., Member Secretary, Andhra Pradesh State PCB, Door No.33-26-14, D/2, Near Sunrise Hospital, Pushpa Hotal Centre, Salamvari Street, Kasturibai pet, Vijayawada.
12. Shri.Manoj Kumar, I.F.S., The Member Secretary, Karnataka SPCB, Parisara Bhavan, 4<sup>th</sup> and 5<sup>th</sup> Floor, No.49, Church Street, Bengaluru.
13. Shri.T.A. Thankappan, Member Secretary, Kerala SPCB, Plamoodu Junction, Pattom Palace P.O., Thiruvananthapuram.
14. Shri.P.Sathyanarayana Reddy, I.A.S., The Member Secretary, Telungana SPCB, Paryavaran Bhawan, A-3, I.E. Sanath Nagar, Hyderabad.
15. Shri.Nabanita Ganguly, The Member Secretary, Andaman & Nicobar PCC, Department of Science and Technology, Dollygung van sadan, Haddo P.O., Portblair.
16. Shri.Dr.M.Syed Ismail Goya, The Member Secretary, Lakshadweep PCC, Department of Science, Technology and Environment, Kavaratti.
17. Smt.R.Smita, Member Secretary, Pondicherry PCC, Housing Board Complex, Anna Nagar, Pondicherry.

Copy to :

1. The Commissioner,  
Commissionerate of Municipal Administration, Chennai - 600 005.
2. The Director,  
Directorate of Town Panchayats, Chennai - 600 108.
3. The Commissioner,  
Greater Chennai Corporation, Chennai - 600 003.

//Forwarded by order//

  
Superintendent

**Minutes of the 4<sup>th</sup> Meeting of the Regional Monitoring Committee (Southern States) for Solid Waste Management held on 20<sup>th</sup> December 2018 at Tiruchirappalli**

The meeting chaired by Hon'ble Justice.Dr.P.Jyothimani, Chairman, Regional Monitoring Committee (Southern States) was held in Tiruchirappalli on 20<sup>th</sup> December 2018.

The Commissioner of Municipal Administration, Chennai welcomed all the participants. List of participants is annexed.

- (i) The Chairman, Regional Monitoring Committee (Southern States) narrated briefly about the purpose of the meeting as below :

In order to implement the Solid Waste Management Rules 2016 more effectively, The National Green Tribunal formed The Regional Monitoring Committee (Southern States) to oversee the Solid Waste Management activities in the Southern States. The National Green Tribunal formed four Regional Monitoring Committees namely East, West, South and Central, each headed by a Chairman.

The 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> meeting was conducted in Chennai, Bangalore and Tirupathi respectively and Fourth meeting is presently being held in Trichy. The Chairman shared experience of using RFID at household level by Tirupathi Municipal Corporation by whichs Collection of Garbage is being monitored directly from the Commissioner's Office for better co-ordination with all the concerned authorities and general public.

The chairman also informed that Bio-mining of legacy waste is permissible. The legacy waste should be reused, recycled or retained for safe disposal. Dumping is not allowed in any form. Wastes shall be separated in every house hold as compostable wastes and non-compostable wastes and from the compostable wastes manure shall be prepared and non-compostable wastes shall be used/recycled and then safely disposed off.

- (ii) The Member-Secretary, Regional Monitoring Committee (South) stressed the need to achieve 100% door to door collection, Source Segregation and Processing of Solid Waste.
- (iii) Thereafter, the Central Pollution Control Board Officials, Bangalore have made a powerpoint presentation regarding Hazardous and Other Wastes (Management and Trans boundary) Rules 2016. In his presentation he has narrated as follows :

Hazardous and Other Wastes (Management and Trans boundary Movement) Rules, 2016 comprises of 6 Chapters, 8 Schedules and 12 Forms and the relevant portions are explained in detail.

He has brought out the significance of the word “hazardous waste” under the rule. He has also explain the Basel convention of United Nations Environment Programme apart from various treat facilities.

**The following are the Hazardous Waste handling facilities in Southern Region :**

State	HW generated in lakhs (TPA) (2016-17)	No. of TSDF
AP	2.82	1 (Vizag)
Karnataka	4.20	2 (Bengaluru)
Kerala	0.38	1(Kochi)
Puducherry	0.15	0, Captive incinerator, SLF
Tamil Nadu	6.40	2 (Gummidipundi, Virudhnagar)
Telangana	2.77	1 (Dindigul Village)

*(taken from website)*

The member Secretary requested CPCB to share the details of the operators with ULBs concerned. Chairman also endorsed their suggestion.

- (iv) On behalf of the State Government of Kerala, the Additional Secretary Local Self Government Department made a brief presentation on the implementation of Waste Management Rules. The Additional Secretary narrated as follows :

**Rural Kerala declared 100% Open defecation free on 1st November 2016**

- 1,74,720 new toilets constructed in critical areas- remote tribal hamlets, water-logged areas and coastal stretches- last mile connectivity
- Urban Kerala is all set to declare 100% ODF – 99.7% completed
- Behaviour change through Inter Personal Communication by ASHA & Kudumbasree workers
- Mission accomplished through Total Sanitation Campaign, Swach Bharath Mission & State Plan Fund

**Approach to waste management**

- The focus is on Reduce, Reuse & Recycle of waste, finally achieving **zero waste**
- Segregation of waste at source
  - i. House hold :  
Devices (Kitchen bin, bucket composter, ring compost, tri-bin compost, pipe compost, bio-gas plant, pot compost and tri-pot compost) of various capacities distributed to households to manage kitchen wastes.
  - ii. Community / Institutional :  
Aerobic bins, bio-gas plants, organic waste converters for housing colonies, apartment complexes and public places like markets to manage the wastes.

- Cleaning public places
- Source level composting of bio-degradables
- Door-to-Door collection of non-biodegradables
- Resource Recovery Facility
- Captive facilities for Bulk Waste Generators
- Enabling Legal framework - Penalties for violation and enforcement of rules
- Green protocol for waste reduction
  - Green protocol focuses on waste reduction, primarily to prevent the use of disposables through reusable alternatives like glass/stainless/porcelain plates/cups/cutleries, 1369 Government offices in the State following green protocol.
- They conduct regular pre-monsoon cleaning (Arogyajagratha)

**Waste management – Progress so far**

- *Total waste generation in Kerala is - 9000 tpd. About 45% of the biodegradable waste generated is handled through these systems*
- 1,39,851 biogas plants at households
- 1320 biogas plants at institutions
- 98 biogas plants at community level
- 314205 composting plants at HH level
- 29420 composting plants at institutions
- 2003 composting plants at community level
- About 30 lakh composting pits
- 10 centralized composting plants
- 261 Material Collection Facilities (MCFs)
- 88 Resource Recovery Facilities (RRFs)
- 106 Plastic shredding units

**Door to door Collection of non-biodegradables**

**Harithakarmasena (HKS) formed in 1005 LSGIs out of 1034**

- 26358 trained HKS by the Kudumbasree Mission
- 355 HKS units operational for door-to-door collection of non-biodegradables
- Haritha Karma Sena (HKS) or Green Task Force - a Micro Enterprise Unit formed in each LSGI with 2 persons in each ward to do door to door collection of non-biodegradable waste & assist in biodegradable waste management by charging a user fee (Rs.60/- Rs. 800/- depending on services provided)

The Commissioner of Municipal Administration, Tamil Nadu has insisted need to create awareness and encourage the public in practicing the Source Segregation, Trichy Corporation has awarded 4 lucky winners with 1 Gram Gold Coin on every Wednesday from July 2017 to October 2017 through private sponsorship as a part of awareness programme. So far 31 Nos. of Gold Coins were distributed

**WAY FORWARD**

- **93 ULBs to become zero waste on ground** over a period of next 18 months
- **Source level biowaste management** at Household, Institutional & Community level
- **Establishment of MCFs** for secondary storage of non-biodegradables
- **Establishment of RRFs** for facilitating recycling

(v) The Commissioner of Vijayawada Municipal Corporation (Andhra Pradesh) made a PowerPoint Presentation about various initiatives taken by them in order to keep the City Clean. Special emphasis is given on



Construction & Demolition Waste Management in the City, which is outsourced to a Private Firm on PPP Model. The Plant put up by them is processing 100 MT every day. Transportation of waste is in the scope of bidder, in turn the bidder will collect fee for transportation and processing of C&D waste from the public.

### **Sanitation Profile of the city**

#### **Profile of the City**

- Total area of the city - 61.88 Sq Kms
- Total population - 10,34,358 ( 2011 census)
- No of sanitary wards & Circles - 59 Sanitary Wards & 3 Circles
- No of Sanitary workers engaged - 3357
- Quantity of garbage generated and lifted - 550 MTs /day
- Approximate Quantity of Wet waste - 275 MTs/day (50% of 550 MTs)
- Approximate Quantity sent to Vermi Compost units – 20 MTs/day
- Approximate Quantity sent to Onsite Compost units – 207 MTs/day
- Available Onsite Compost units in VMC -12 No's (5 Centralized & 7 De-centralized Units)

#### **Decentralised Composting**

- 19 decentralized units
- 4 methods – OWC, VERMI, BED, WINDROW
- Reduced Transportation Cost
- Efficient turnout time
- All Mandis/ Rythu Bazars
- Compost Selling – 5Rs/Kg
- Capacity - 210 MT
- Shredding increases windrow composting efficiency

### **Door to Door basket collection/primary collection**

- 100% door to door Collection aimed
- 1400 workers engaged
- Twin bin not mandatory
- Apartment – Critical Area
- Land fill reduction

### **Usage of Technology**

- Compactor bins – Insitu emptying
- Time of lifting reduced to 1/5<sup>th</sup>
- Solar CC Camera Monitoring of Dumper Bin Station.
- 24/7 Monitoring
- Effective Surveillance

### **C & D Waste Plant**

- 100 MT processing Capacity
- PPP basis
- Transportation scope included in bidder part
- Processing and Transportation fee collected by bidder
- 5 sizes of separation 40mm, 20mm, 6mm, +2mm, -2mm

### **School Toilets**

- Setting standards high
- Automatically motivated towards Sanitation and hygiene
- Sanitary Napkin vending Machine
- Reduced drop outs
- Proving a point

- (vi) The CPCB officials explained the need for disposal of medicines with expired date and bio-medical wastes effectively. The Government of Karnataka has instructed that all the Hospitals in the State shall have their own bio-medical waste disposal facilities and permission to any Hospitals shall be given only if they have bio-medical waste disposal facility of their own.

- (vii) The Member Secretary, Tamil Nadu Pollution Control Board informed that the Government of Tamil Nadu will ban the use of 14 environmentally dangerous items of plastics from 01.01.2019.
- (viii) The Member Secretary of Regional Monitoring Committee in his remarks has stated that in the first and second meetings efforts were to ascertain policy framework accomplished by the States. And all the ULBs in each state should have publish their own solid Waste Management Rules in compliance of the Solid Waste Management Rules, 2016 by 31.01.2019. Each ULB can adopt their own programme. Further Cities / Towns having more than 1 Lakh population must be closely monitored for a period of 3 months and take intensive measures (awareness activities in Schools, Institutions, Offices) for implementation of Solid Waste Management as per the suggestions by the Apex Monitoring Committee that the video conference. He also addressed the States to furnish immediately the list of Town/Cities being made their one lakh population and to furnish the details of the steps taken so far and requested to take intensive steps continuously for 3 months and send frequent and periodical reports to the office of Regional Monitoring Committee in this regard. It is also suggested that Railway premises including stations may also be monitored Railways should also be engaged in the monitoring process.

He also requested all States to furnish action plan to achieve 100% door to door collection, source segregation and processing of Solid Waste to the Committee with particulars of the local bodies which have already achieved the same.

The Hon'ble Justice and Chairman, Regional Monitoring Committee (Southern States) requested the members to inspect the Hospitals and to create awareness about the danger involved in mishandling the bio-medical wastes. If any hospitals found violating the rules, they shall be dealt with severely.

The Chairman also insisted the presence of Principal Secretaries of Urban Development of concerned States as they are member of the Regional Monitoring Committee.

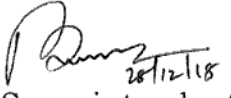
It was also decided that the next meeting will be held at Kochi for two days from 24.01.2019 to 25.01.2019.

The meeting ended with a vote of thanks.

Sd/- Harmander Singh,  
Member Secretary,  
Regional Monitoring Committee  
(Southern States) /  
Principal Secretary,  
Municipal Administration and Water  
Supply Department,  
Chennai.

Sd/- Justice Dr.P.Jyothimani,  
Chairman  
Regional Monitoring Committee  
(Southern States),  
Chennai.

// Forwarded by Order//

  
28/12/18  
Superintendent

The list of participants :

- Shri.Harmandar Singh, IAS, The Member Secretary, Regional Monitoring Committee South and Principal Secretary, MA&WS Department, Government of Tamilnadu
- Shri.G.Prakash, IAS, The Commissioner of Municipal Administration, Chennai
- Dr.T.Mithra, IAS, Additional Secretary Local Self Government Department, Government of Kerala
- Shri.J.Nivas, IAS Commissioner, Vijayawada Municipal Corporation, Government of Andhra Pradesh
- Shri.Sibi Adhithya Senthil Kumar, IAS, Sub-Collector, Srirangam.
- Shri.K.Sajeevan, Chairman, Kerala State Pollution Control Board
- Shri.T.A.Thankappan, Member Secretary, Kerala State Pollution Control Board
- Shri.A.Vijayakumar, Joint Chief Environmental Engineer, Andhra Pradesh Pollution Control Board
- Shri.P.Viswanatham, Chief Environmental Engineer, Telangana Pollution Control Board
- Shri.D.Sekar, Member Secretary, Tamilnadu Pollution Control Board
- Shri.S.Suresh, Regional Director, Central Pollution Control Board, Bengaluru
- Smt.V.AnjanaKumari, Environmental Engineer, Central Pollution Control Board, Bengaluru
- Shri.D.Narendar, Environmental Engineer, Telangana State Pollution Control Board
- Shri.K.Sreenivasa Reddy, Senior Environmental Engineer, Telangana State Pollution Control Board
- Shri.G.Malar Kannan, Director of Local Administration, Puducherry
- Shri.M.Adharsh, Commissioner, Pondicherry Municipality
- Smt.R.Smita, Member Secretary, Pondicherry Pollution Control Committee
- Dr.Ramesh, Senior Environmental Engineer, Pondicherry Pollution Control Committee

**Meeting held on 09/01/2019 in the chamber of Additional Chief Secretary, LSGD to discuss the further course of action to be taken in connection with the 5<sup>th</sup> meeting of Regional Monitoring Committee (Sothern States) scheduled on 24<sup>th</sup> and 25<sup>th</sup> January 2019 at Kochi.**

The 4<sup>th</sup> meeting of Regional Monitoring Committee (Sothern States) constituted by National Green Tribunal, held under the Chairmanship of Honb'le Justice P. Jyothimani, Chairperson on 20/12/2018 has decided to conduct the next meeting of the Committee at Kochi on 24<sup>th</sup> & 25<sup>th</sup> January 2019. The Committee also decided to visit Brahmapuram Solid Waste Management Plant. Therefore a preliminary meeting was held by ACS, LSGD on 09/01/2019 to discuss the further course of action to be taken in connection with the aforesaid meeting and site visit.

List of Participants attached.

**RECORD OF DISCUSSION**

1. The Executive Director, Suchitwa Mission shall prepare and submit a tentative schedule for the meeting on today itself. The same shall be forwarded to the Regional Monitoring Committee for their confirmation.

**[Action: Executive Director, Suchitwa Mission]**

2. The Chairman, Kerala State Pollution Control Board shall issue a notice to Kochi Municipal Corporation regarding the urgent actions to be taken at Brahmapuram Waste Management Plant before the visit of the NGT RMC at the plant on 24.1.2019.

**[Action: Member Secretary, Kerala State Pollution Control Board]**

3. The Secretary, Kochi Municipal Corporation shall visit Brahmapuram Waste Management Plant in person and to certify that no leachate generated from the plant is flowing to Kadambayar and other water sources.

**[Action:- Secretary, Kochi Corporation.]**

4. Kochi Municipal Corporation shall arrange accommodation, food and transport from airport to place of stay and local transportation of team members of Regional Monitoring Committee from 23<sup>rd</sup> evening to 25<sup>th</sup> and also arrange liaison officers to assist the team members.

**[Action: - Secretary, Kochi Corporation.**

**Monitoring: - Director of Urban Affairs/ Joint Director (HQ), Directorate of Urban Affairs]**

5. Secretary, Kochi Corporation, Kerala State Pollution Control Board, Suchitwa Mission and Clean Kerala Company Ltd. shall also arrange necessary supporting staffs for liaison works.

**[Action: Secretary, Kochi Corporation.**

**Member Secretary, Kerala State Pollution Control Board.**

**Executive Director, Suchitwa Mission.**

**Managing Director, Clean Kerala Company Ltd.]**

6. Clean Kerala Company shall take necessary steps to establish 2 new plastic shredding units at Brahmapuram with funds from Kochi Corporation and purchase the shredded plastic from Brahmapuram.

**[Action: Managing Director, Clean Kerala Company Ltd.]**

7. A WhatsApp group shall be created for the 5<sup>th</sup> meeting of Regional Monitoring Committee at Kochi which shall be administered by the Secretary, Kochi Corporation (she may use the services of Environmental Engineer, Kochi Corporation) and monitored by Joint Director (HQ), Directorate of Urban Affairs.

**[Action:- Secretary, Kochi Corporation.]**

**Monitoring :- Directorate of Urban Affairs]**

8. The Health wing of Kochi Municipal Corporation / other ULBs in Ernakulam District shall inspect the Solid and Liquid Waste Management systems functioning in the Malls in Ernakulam District and to submit report to Joint Director (Health), Office of the Director of Urban Affairs.

**[Action:- Health Officer / Health Supervisors / Health Inspector of the concerned ULBs)**

**Monitoring :- Joint Director (Health), Director of Urban Affairs]**

The meeting ended at 01.00 PM.



## LIST OF PARTICIPANTS

<b>SL No</b>	<b>NAME</b>	<b>DESIGNATION</b>
1	Shri. T. K. JOSE IAS	Additional Chief Secretary, Local Self Government Department
2	Shri. K. SAJEEVAN	Chairman, Kerala State Pollution Control Board
3	Dr. T. MITHRA IAS	Additional Secretary, Local Self Government Department
4	Shri. T. A. THANKAPPAN	Member Secretary, Kerala State Pollution Control Board
5	Dr. R. AJAYA KUMAR VARMA	Executive Director, Suchitwamission
6	Smt. L. SINDHU	Special Secretary, Local Self Government Department
7	Shri. B. K. Balaraj	Joint Director (Admn.), Urban Affairs Directorate
8	Shri. P. Kesavan Nair	Managing Director, Clean Kerala Company
9	Shri. L. K. Sreejith	Project Manager, Clean Kerala Company



**GOVERNMENT OF KERALA**

No.427/DC1/2018/LSGD.

Local Self Govt (DC) Dept.  
Thiruvananthapuram, 10.01.2019

From

The Additional Chief Secretary to Govt.

To

Mayor,  
Kochi Municipal Corporation.

Chairman,  
Kerala State Pollution Control Board.

Member Secretary,  
Kerala State Pollution Control Board.

Director of Urban Affairs

Secretary,  
Kochi Municipal Corporation.

The Executive Director  
Suchitwa Mission.

Managing Director  
Clean Kerala Company Ltd.

Joint Director (Admn)  
Urban Affairs Directorate.

Joint Director (Health)  
Urban Affairs Directorate.

Sir,

Sub: LSGD – Minutes of the meeting held on 09.01.2019 to discuss the further course of action to be taken in connection with the 5<sup>th</sup> Meeting of Regional Monitoring Committee (Southern States) - reg

Ref: Government letter of even number dated 31.12.2018

I am to invite your attention to the reference cited and to forward herewith copy of minutes of the meeting **held on 09.01.2019 in the**

**chamber of Additional Chief Secretary** to discuss the further course of action to be taken in connection with the 5<sup>th</sup> Meeting of Regional Monitoring Committee (Southern States) **for strict compliance** under intimation to Government.

Yours faithfully



Minimol D  
Deputy Secretary  
for Additional Chief Secretary

Copy to:- PA to Additional Chief Secretary (LSGD).  
CA to Special Secretary  
CA to Additional Secretary (Urban)  
CA to Deputy Secretary