ABSTRACT

Announcements – 2019-20 – Announcement made by Hon'ble Minister (MA, RD and Impn. of Spl. Programme) – Establishment of Five Fecal Sludge Treatment Plant on pilot basis with an allocation of Rs.5 crore under Swachh Bharat Misson (Gramin) - Sanction – Accorded – Guidelines approved – Orders – Issued.

Rural Development and Panchayat Raj (CGS.1) Department

G.O.(Ms.) No.12 **Dated: 06.01.2020**
விகாரி, மார்கழி 21
திருவள்ளுவர் ஆண்டு 2050

Read:

1. Announcement made by the Hon'ble Minister (MA, RD & Impn. of Spl. Prog.) on the floor of Legislative Assembly on 08.07.2019.
2. From the Director of Rural Development and Panchayat Raj, Letter Roc.No.37152/2019/ SBM(G)-3, dated:24.12.2019.

ORDER:

The Hon'ble Minister for Municipal Administration, Rural Development and Implementation of Special Programme has made the following Announcement on the floor of the Legislative Assembly on 08.07.2019.

"மாண்புமிகு இதய தெய்வம் புரட்சித் தலைவி அம்மா அவர்களின் ஆசியுடன், மாண்புமிகு முதலமைச்சர் அவர்களின் ஆணைப்படி, வீடுகள் மற்றும் பிற நிறுவனங்களில் இருந்து வெளியேற்றப்படும் மலக்கசடு மற்றும் கழிப்பறைகளிலிருந்து வெளியேறும் கழிவுநீர் ஆகியவற்றை விஞ்ஞான முறையில் சுத்திகரித்து, பாதுகாப்பான முறையில் அகற்றிட ஏதுவாக, 2019–20ஆம் நிதியாண்டில், அடர்த்தியான மக்கள் தொகை கொண்ட நகர்ப்புறங்களுக்கு அருகில் உள்ள கிராம ஊராட்சிகளில், முன்மாதிரியாக 5 எண்ணிக்கையிலான மலக்கசடு சுத்திகரிப்பு நிலையங்கள் 5 கோடி ரூபாய் மதிப்பீட்டில் அமைக்கப்படும்".

2. In the letter second read above, the Director of Rural Development and Panchayat Raj has stated that "Muzhu Sugaathaara Thamizhagam, Munnodi Thamizhagam" is the topmost priority of the State Government, which aims at ensuring the provision and availability of safe and quality sanitation facilities in the rural areas. This Campaign under the Swachh Bharat Mission (Grameen) has led all the Village Panchayats in all the Rural Districts in Tamil Nadu to attain Open Defecation Free (ODF) status. The next part of the mission is to embark on ODF Plus activities which include sustaining the ODF status of the Village Panchayats and focusing on Sustainable Solid and Liquid Waste Management which includes Fecal Sludge and Grey Water management so as to create Clean and Green Villages. Most of the toilets

constructed under the Swachh Bharat Mission (Gramin) are of Twin Leach Pit type which are environmentally friendly and the Fecal matter is converted into manure in due course of time within the Leach pits and there is no treatment needed for the disposal of the Fecal Sludge. However, majority of the toilets constructed by the Households on their own, Toilets in Schools, Colleges, Commercial establishments, Industries and Institutions, etc., are of Septic tank type. Hence, there is a need for a Treatment Mechanism/Facility for the scientific collection, transportation, treatment and disposal of the Fecal Sludge.

3. The Director of Rural Development and Panchayat Raj has further stated that the Fecal sludge and Septage generated in Urban areas are handled through Sewage Treatment Plants (STPs) which are capable of Co-treating the Fecal Sludge and also in the Standalone Fecal Sludge Treatment Plants (FSTPs) that are also coming up in various places in Urban Area. Despite the Treatment facilities available in Urban areas, there is a gap in addressing the needs of the Rural areas. Hence, it is proposed to establish Five Fecal Sludge Treatment Plants on Pilot basis with an allocation of Rs.5 crore at the rate of Rs.1.00 crore each plant to cater to the needs of the rural areas.

i. **Criteria for selection of Cluster of Peri-Urban Village Panchayats for establishment of Fecal Sludge Treatment Plants (FSTPs):**

The FSTP facilities are intended for a larger area covering a cluster of Peri-Urban Village Panchayats. Therefore, the Peri-Urban Village Panchayats which are adjacent to Corporation / Municipality / Town Panchayats, in which majority of the toilets constructed by the Households, Multi-Storied Apartments, Schools, Colleges, Commercial establishments, Industries and other Institutions, etc., are of Septic tank and also do not have access to the existing STPs or FSTPs established in Urban areas may be selected for establishment of FSTP. Priority may be given for the Village Panchayats coming under National Rurban Mission or NGT Model Village Panchayats.

ii. **Location of FSTP:**

After identification of the Cluster of Peri-Urban Village Panchayats, ideally, the choice of location of FSTP should be made in such a way that it is accessible to all the Village Panchayats in the Cluster. Environmental norms should be strictly followed in the selection of location of FSTP. The Block Development Officer (Village Panchayats) should identify the Poramboke Land taking into account the above factors carefully, in coordination with the Revenue Department and send the proposal to District Collector for approval. The District Collector has to approve the location after due examination with reference to guidelines including adherence to Environmental norms concerned.

iii. **Technical Committee:**

A Technical Committee may be formed, comprising of the following Technical Experts to provide technical guidance for selection and adaptation of suitable technologies and finalize the Technical Specifications and Type designs.

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Sl. No.	External Technical Experts Name & Designation	Sl. No.	Departmental Technical Experts Name and Designation
1	Dr. Ligy Philip, Professor, Department of Civil Engineering, IIT., Chennai-36.	1	Er. A.Kuttalingam, Superintending Engineer, Directorate of Rural Development and Panchayat Raj, Chennai-15.
2	Dr.S.Kanmani, Professor & Director, Centre for Environmental Studies, Department of Civil Engineering, Anna University, Chennai-25.	2	Er. A.V.Rajesh, Executive Engineer (RD), Directorate of Rural Development and Panchayat Raj, Chennai-15.
		3	Er. V. Murugesan, Regional Executive Engineer, Municipal Administration Department, Chengalpattu Region @ Tambaram, Chennai-600045.

iv. Source of funds:

The Government of India has permitted to utilize the World Bank Performance Incentive Funds for undertaking ODF Plus activities in Villages i.e. Solid and Liquid Waste Management activities. During the year 2019-20, the Government of India have released Rs.137.80 crore as World Bank Performance Based Incentive Fund to Tamil Nadu. Hence, an amount of Rs.5 crore may be met out from the above World Bank Performance Based Incentive Funds for the establishment of Five Fecal Sludge Treatment Plants (FSTPs) on Pilot basis at the rate of Rs.1.00 crore per Plant. Additional Funds required if any, for the provision of additional infrastructure facilities, may be sourced/dovetailed with National Rurban Mission Fund, Self Sufficiency Scheme Fund, General Fund of concerned local bodies etc., as per the respective Scheme guidelines.

v. Sanction for Establishment of FSTP:

The District Collectors concerned after selection of the cluster of Peri-Urban Village Panchayats as per the guidelines may send necessary proposals for establishment of Fecal Sludge Treatment Plant to the Director of Rural Development and Panchayat Raj for sanction.

vi. Administrative Sanction:

The administrative sanction shall be accorded by the District Collector after ensuring that the Village Panchayats have been selected based on the conditions laid down above, viz., Criteria for selection of Peri-Urban Village

Panchayats for establishment of Fecal Sludge Treatment Plants and after obtaining sanction from Director of Rural Development and Panchayat Raj.

vii. Implementing Agency and execution of works:

Since, Fecal Sludge Treatment Plant is to be established in select locations on pilot basis in the District, it should be established under the direct supervision of Project Director, District Rural Development Agency and Executive Engineer (RD).

- Project Director, District Rural Development Agency, shall be the tender inviting authority and the District Collector shall be the Tender accepting authority. After finalization of tender, work / supply order shall be issued by the District Collector.
- The works shall be executed by adopting the Tamil Nadu Transparency in Tenders Act, 1998 and Rules 2000 and also as per the provisions of the Tamil Nadu Panchayats (Preparation of Plans and Estimate of works and mode and conditions of contracts) Rules, 2007 vide G.O.(Ms.) No.203, Rural Development and Panchayat Raj (PR.1) Department, dated: 20.12.2007 and amendments issued thereon in this regard shall be scrupulously followed.

4. The Director of Rural Development and Panchayat Raj has also sent the draft guidelines for the establishment of the Fecal Sludge Treatment Plants for approval.

5. The Director of Rural Development and Panchayat Raj has therefore requested the Government to accord permission to the Director of Rural Development and Panchayat Raj for the utilization of World Bank Performance Based Incentive Fund received under Swachh Bharat Mission (Gramin) during the year 2019-20 for the establishment of Five Fecal Sludge Treatment Plants on Pilot basis in cluster of Peri-Urban Village Panchayats with an allocation of Rs.5 crore at the rate of Rs.1.00 crore per Plant and release of funds to the District Collectors based on the number of Fecal Sludge Treatment Plants established in the District. Further, the Director of Rural Development and Panchayat Raj has requested the Government, to approve the Technical Committee proposed in para 3 (iii) above to provide technical guidance for selection and adaptation of suitable technologies and finalize the Technical Specifications and Type designs. He has also requested the Government to approve the draft guidelines for the establishment of the Fecal Sludge Treatment Plants.

6. The Government after careful examination, have decided to accept the proposal of the Director of Rural Development and Panchayat Raj and accord permission to Director of Rural Development and Panchayat Raj for the utilization of World Bank Performance Based Incentive Fund received under Swachh Bharat Mission (Gramin) during the year 2019-20 for the establishment of Five Fecal Sludge Treatment Plants on Pilot basis in cluster of Peri-Urban Village Panchayats with an allocation of Rs.5 crore at the rate of Rs.1.00 crore per Plant and release of funds to the District Collectors based on the number of Fecal Sludge Treatment Plants established in the District; and approve the guidelines as annexed to this order. The Government also approve the Technical Committee as proposed in para 3 (iii) above to provide technical

guidance for selection and adaptation of suitable technologies and finalize the Technical Specifications and Type designs.

(BY ORDER OF THE GOVERNOR)

HANS RAJ VERMA
ADDITIONAL CHIEF SECRETARY
TO GOVERNMENT

To
The Director of Rural Development and Panchayat Raj, Chennai – 15.
The Commissioner of Municipal Administration, Chennai-28.
All District Collectors (Except Chennai)
(Through Director of Rural Development and Panchayat Raj, Chennai – 15)
All Project Directors, District Rural Development Agencies,
(Through Director of Rural Development and Panchayat Raj,Chennai – 15)
The Municipal Administration and Water Supply Department, Chennai – 9.
Copy to:
The Ministry of Jal Shakti, Department of Drinking Water and Sanitation,
Government of India, New Delhi – 110 003.
The Principal Private Secretary to Additional Chief Secretary to
Government, Rural Development and Panchayat Raj Department, Chennai – 9.
The Rural Development and Panchayat Raj (OP.2) Department, Chennai – 9.
The National Informatics Centre, Chennai – 9.
Spare copy/Stock file.

//FORWARDED BY ORDER//

6.1.2020
SECTION OFFICER

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ANNEXURE

(G.O.(Ms).No.12, Rural Development and Panchayat Raj (CGS-1) Department, dated: 06.01.2020)

Guidelines for establishment of Fecal Sludge Treatment Plants in Rural Areas

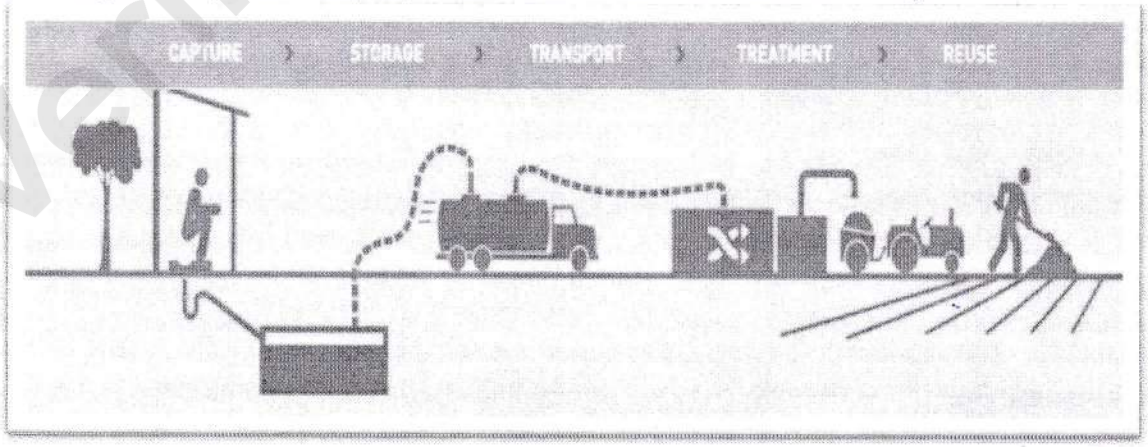
1. Introduction:

"Muzhu Sugaathaara Thamizhagam, Munnodi Thamizhagam" is the topmost priority of the State Government, which aims at ensuring the provision and availability of safe and quality sanitation facilities in the Rural areas. This Campaign under the Swachh Bharat Mission (SBM) has led all the Village Panchayats in all the Rural Districts in Tamil Nadu to attain Open Defecation Free (ODF) status. The next part of the mission is to embark on ODF Plus activities which include sustaining the ODF status of the Village Panchayats and focusing on Sustainable Solid and Liquid Waste Management which includes Fecal Sludge and Grey Water management so as to create Clean and Green Villages. Most of the toilets constructed under the Swachh Bharat Mission (Grameen) are of Twin Leach Pit type which are environmentally friendly and the Fecal matter is converted into manure in due course of time within the Leach pits and there is no treatment needed for the disposal of the Fecal Sludge. However, Majority of the toilets constructed by the Households on their own, Toilets in Schools, Colleges, Commercial establishments, Industries and Institutions, etc., are of Septic tank type. Hence there is a need for a Treatment Mechanism/Facility for the scientific collection, transportation treatment and disposal of the Fecal Sludge.

The Fecal sludge and Septage generated in Urban areas are handled through Sewage Treatment Plants (STPs) which are capable of Co-treating the Fecal Sludge and Standalone Fecal Sludge Treatment (FSTPs) that are also coming up in various places in Urban Area. Despite the Treatment facilities available in Urban areas there is a gap in addressing the needs of the Rural areas. Hence it is proposed to establish Five Fecal Sludge Treatment Plants on Pilot basis to cater to the needs of the Rural areas.

2. Fecal Sludge Management (FSM):

Fecal sludge management (FSM) is the Collection, Transport, and Treatment of fecal sludge from pit latrines, septic tanks or other onsite sanitation systems.



a) Fecal Sludge:

"Fecal Sludge" is raw or partially digested, in slurry or semisolid form, the collection, storage or treatment of combinations of excreta and black water, with or without grey water. Fecal sludge is the solid or settled contents of pit latrines and septic tanks. Fecal sludge (FS) comes from onsite sanitation systems. Examples of onsite technologies include Septic tanks.

The physical, chemical and biological qualities of fecal sludge are influenced by the duration of storage, temperature, soil condition, and intrusion of groundwater or surface water in septic tanks or pits, performance of septic tanks and tank emptying technology and pattern.

b) Septic tank:

A Septic tank is a combined sedimentation and digestion tank where the sewage is held for one to two days. During this period, the suspended solids settle down to the bottom. This is accomplished by anaerobic digestion of settled solids (sludge) and liquid, resulting in reasonable reduction in the volume of sludge, reduction in biodegradable organic matter and release of gases like carbon dioxide, methane and hydrogen sulphide.

The effluent although clarified to a large extent, will still contain appreciable amount of dissolved and suspended putrescible organic solids and pathogens and needs to be treated.

c) Septage:

"Septage" is the liquid and solid material that is pumped out from a septic tank or such onsite treatment facility after it has accumulated over a period of time. It is the combination of scum, sludge and liquid that accumulates in septic tanks. Usually, septic tank retains 60% - 70% of the solids, oil and grease that enter it. The scum accumulates on the top and the sludge settles to the bottom comprising 20% - 50% of the total septic tank volume when pumped.

The accumulating sludge at the bottom of the septic tank has to be removed and treated once it has reached the designed depth or at the end of the designed de-sludging frequency whichever occurs earlier. Such a removal is possible only by trucks. While sucking out the sludge, the liquid in the septic tank will also be sucked out. Such a mixture is referred to as Septage.

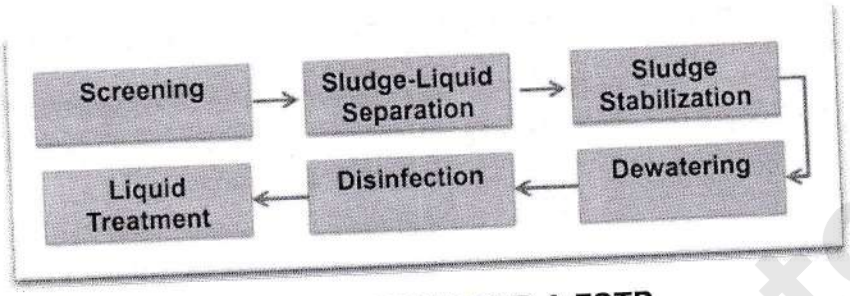
d) Vacuum/ De-Sludging Tankers:

A vacuum tanker is a truck generally used for the collection and transportation of Fecal sludge/Septage to a treatment site such as sewage treatment plant or Fecal Sludge Treatment Plant.

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e) Fecal Sludge Treatment Plant (FSTP):

Fecal Sludge Treatment Plants are designed for the Scientific Treatment and Disposal of the Fecal Sludge/ Septage collected through Under Ground Drainage System or Vacuum Trucks.



FLOW DIAGRAM FOR A FSTP

Treatment Process:

i. **Fecal sludge reception:** Reception of the Fecal Sludge in the treatment plant and sludge is unloaded.

ii. **Preliminary treatment:** Screening to remove garbage, sand, grit, and FOG (fats, oil and grease) from the Septage.

iii. **Primary treatment:** Separation of Solid matter from the liquids by physical method like Sand Bed Filters or separation with microbial digestion like Bio Gas Digester.

iv. **Liquids treatment:** Treatment of the Liquids by using constructed wetlands, waste stabilization ponds, anaerobic digesters, etc., to bring the liquid to the desired standards. The Treated water can be then used for gardening.

v. **Solids processing:** The solids resulting from fecal sludge treatment can be used for beneficial use where ever possible.

3. Criteria for selection of Cluster of Peri-Urban Village Panchayats for establishment of Fecal Sludge Treatment Plants (FSTP):

The FSTP facilities are intended for a larger area covering a cluster of Peri-Urban Village Panchayats. Therefore, the Peri-Urban Village Panchayats which are adjacent to Corporation / Municipality / Town Panchayats, in which majority of the toilets constructed by the Households, Multi-Storied Apartments, Schools, Colleges, Commercial establishments, Industries and other Institutions, etc., are of Septic tank and also do not have access to the existing STPs or FSTPs established in Urban areas shall be selected for establishment of FSTP. Priority may be given for the Village Panchayats coming under National Rurban Mission or NGT Model Village Panchayats.

4. Location of FSTP:

After identification of the Cluster of Peri-Urban Village Panchayats, ideally, the choice of location of FSTP should be made in such a way that it is accessible to all the Village Panchayats in the Cluster. Environmental norms should be strictly followed in the selection of location of FSTP. The BDO (VP) should identify the Poramboke Land

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taking into account the above factors carefully, in coordination with the Revenue Department and send the proposal to District Collector for approval. The District Collector has to approve the location after due examination with reference to guidelines including adherence to Environmental norms concerned.

5. Technical Specifications and Type Design for FSTPs:

The Technology, Technical Specifications, Type Designs and other requirements finalized by the Technical committee will be communicated by the Technical Unit of Directorate of Rural Development and Panchayat Raj, Chennai.

6. Sanction for Establishment of FSTP:

The District Collectors concerned after selection of the cluster of Peri-Urban Village Panchayats as per the above guidelines should send necessary proposals for establishment of FSTP to the Director of Rural Development & Panchayat Raj for sanction.

7. Administrative Sanction:

The administrative sanction shall be accorded by the District Collector after ensuring that the Village Panchayats have been selected by conditions laid down above, viz., Criteria for selection of Peri-Urban Village Panchayats for establishment of FSTP and after obtaining sanction from DRD&PR.

8. Implementing Agency and execution of works:

Since, FSTP is to be established in select locations on pilot basis in the District, it should be established under the direct supervision of Project Director, DRDA and Executive Engineer (RD).

- PD, DRDA, shall be the tender inviting authority and the District Collector shall be the Tender accepting authority. After finalization of tender, work / supply order shall be issued by the District Collector.
- The works shall be executed by adopting the Tamil Nadu Transparency in Tenders Act 1998 and Rules 2000 and also as per the provisions of the Tamil Nadu Panchayats (Preparation of Plans and Estimate of works and mode and conditions of contracts) Rules, 2007 vide G.O.(Ms) No.203 RD& PR (PR.1) Department, dated: 20.12.2007 and amendments issued in this regard shall be scrupulously followed.

9. Registration of Vacuum Tankers/ De-sludging Operators:

The Vacuum Tankers/ De-sludging Operators should register themselves and obtain License with the concerned Block administration in-charge of the FSTP to utilize the Services of the FSTP by paying the prescribed Annual License Fee.

10. Management of Vaccum Tankers/ De-Sludging Operators:

The Block administration shall formulate simple procedures for the benefit of general public in utilizing services of Vacuum Tankers and allot trips to the registered Vacuum Tanker operators.

11. Operational Manpower support for running FSTP:

The Manpower required for the Operation and Maintenance of the FSTP shall be engaged through outsourcing basis by the concerned Block Administration.

12. Technical Supervision:

The Technology, Technical Specifications and Type Designs finalized by the Technical committee in this regard shall be adopted in the establishment of the FSTPs. The AEE (RD) shall be the technical authority responsible for effective functioning of the Fecal Sludge Treatment Plant in their respective jurisdiction under the overall supervision of EE (RD). The Union Overseer and Panchayat Union AE/JE shall monitor the operational aspects and ensure its uninterrupted functioning.

13. Source of Revenue:

The Block Administration concerned operating the FSTP shall fix the charge per Vacuum Tanker for the treatment of Fecal sludge collected from the Village Panchayats / nearby Urban Areas. This amount can be utilized for the Operation and Maintenance including Manpower engaged through Outsourcing.

14. Training Programme:

To implement the scheme effectively, suitable training and awareness programmes shall be organized at the District and Block level for officials and stakeholders.

15. Awareness Creation:

Awareness creation activities shall be carried out to sensitize the public on the importance of Toilet maintenance and periodic De-Sludging of the Septic tanks.

16. Documentation:

Documentation should be done by District Rural Development Agency concerned, detailing the various processes in the establishment of FSTP, starting from identification of the Cluster of Peri-Urban Village Panchayats till the FSTP is put to use.

17. Monitoring:

The implementation of FSTP shall be periodically monitored during inspections undertaken by Project Director (District Rural Development Agency), Executive Engineer (Rural Development), Assistant Executive Engineer (Rural Development), Zonal officers of the concerned Blocks, Block Development Officer (Village Panchayats), Zonal Deputy Block Development Officer, Assistant Engineer / Junior Engineer of the Blocks concerned.

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The Additional Chief Secretary to Government, Rural Development and Panchayat Raj Department, in consultation with the Director of Rural Development and Panchayat Raj, is empowered to modify any of the above guidelines based on exigencies that may arise from time to time.

HANS RAJ VERMA
ADDITIONAL CHIEF SECRETARY TO GOVERNMENT

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SECTION OFFICER

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